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ORIGINAL ARTICLES.

ENCEPHALITIS LETHARGICA — DIFFICULTIES IN THE DIFFERENTIAL DIAGNOSIS AND THE LATE SEQUELAE.*

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In the study of encephalitis lethargica our knowledge is still in the making. Cruchet of Bordeaux and Economo of Vienna were the first to write upon this subject. The former called it subacute encephalo-myelitis, while the latter termed it lethargic encephalitis. It is a systemic infectious disease, the virus of which selects certain definite local areas upon which to spend its energies. These areas lie for the most part in the brain stem. No disease produces so many different clinical pictures except it be syphilis; in fact, not a single series of cases can include all of the symptoms produced by this organism. It requires the observation of many clinical cases to bring out the manifold symptoms. In some instances the picture may be that of a general toxemia with slight local manifestations. On the other hand, focal symptoms may be the outstanding features in the case. Lethargy and cranial nerve paralysis in some cases, myoclonic movements in others, epileptiform attacks or mental diseases in still other cases are evidences of its "polymorphous nature." In spite of the vast literature which consists of many hundreds of articles contributed by almost as many authorities, one can only conclude that all the cases reported are not encephalitis and likewise numerous cases which belong to this group have not been correctly classified. Another point of importance is that the different epidemics have demonstrated that there are differences in the form and virulence of the disease, no doubt due to a differently accentuated organism. The scope of this paper must necessarily be limited to the differential diagnosis and sequelae of the disease.

*Paper read before a joint meeting of Milwaukee Academy of Medicine and Milwaukee Neuropsychiatric Society, February 23, 1923.

In attempting to make a diagnosis of encephalitis from other ailments one may consider it from the standpoint of localizing symptoms. As it is a disease which attacks different levels of the brain it has been suggested that the following classification be made: A cerebral group, a pontine-bulbar group, a spinal group, a peripheral nerve group, and a psychotic group. In the first of these, that of the brain proper, subdivisions may be made, such as a cortical group and striatal group. Although many rare, mild, so-called form fruste types and other atypical forms have to be included in the clinical picture, fever, asthenia, lethargy, disorders of ocular movements, such as strabismus, diplopia, nystagmus, and ophthalmoplegia, are the primary diagnostic factors. In the cerebral type a change in the patient's mental attitude, as emotional disturbances, apathy, lethargy, and drowsiness, compose the chief symptoms. If these symptoms are accompanied by diplopia and a diminution of visual acuity, the diagnosis is, of course, strengthened. But such a train of symptoms attend other diseases, so that one of these diseases which we will consider first in the differential diagnosis is uremia.

Uremia. I have had occasion to observe several cases in which it was quite a task on first examination to differentiate between the two diseases and the laboratory was called upon to lend assistance. The coma in uremia is deeper, the nitrogen content of the blood is increased and the spinal fluid shows no changes. Clinically, however, in uremia, one may get ocular palsies, mental disturbances, etc., which so frequently accompany encephalitis.

Drug Intoxication. Drug intoxications with their mental accompaniments, such as delirium, loss of orientation and other mental confusions, including hallucinations and drowsiness, with or without pupillary and speech disturbances, render it a difficult task to differentiate such states from encephalitis, unless a definite history accompanies the case. I recall one instance where the patient had taken over 50 grains of veronal, following which he could be aroused and would answer questions but immediately fall asleep again. He had definite hallucinations of sight and was disorien-

tated as to time, place and person. Later he admitted having taken the veronal. I had occasion to examine a physician during the epidemic in 1919 who in every day life was sober of mind and thought. He became jocular rather suddenly, imagined his wife was a neighbor lady, and was disoriented as to time and place. He had diplopia with evidence of paresis of the external muscles of one eye. There was an increased cell count in the spinal fluid. The symptoms entirely cleared up in the course of two or three weeks and a diagnosis of encephalitis was made. I mention these two cases in conjunction because of their similarity of symptoms.

Food Poisoning or Botulism. Botulism has been mistaken for encephalitis, in fact the English during the epidemic in 1918 thought they were dealing with botulism instead of encephalitis and it was some time before they were set right. Likewise the physicians in Vienna the year previous thought that they were dealing with botulism due to sausage poisoning. On the other hand, the ¹United States Public Health Service reported from San Francisco cases of botulism resembling encephalitis. ²Morel and St. Martin called attention to epidemic botulism affecting 11 patients who had eaten salmon in which the bacillus botulinus was found. In some of these cases there was complete paralysis of accommodation, amblyopia, restriction of the visual field and retinal congestion. One case presented a slight ptosis of one eyelid and two presented mydriasis. Extreme lassitude and depression with visual disturbances were the important symptoms brought out. Botulism, as you well know, causes bulbar paralysis, ocular disturbances, especially internal ophthalmoplegia. A diagnosis can be made when the disease occurs in groups of individuals where the trouble can be traced to the consumption of contaminated food from which the organism can be obtained.

Cerebral hemorrhage, thrombosis and embolism. We shall not dwell upon the possible difficulty of having to differentiate between encephalitis and cerebral hemorrhage, thrombosis and embolism, although ³Buzzard has reported two cases of encephalitis occurring simultaneously in mother and son, each of whom developed hemiplegia with recovery in both instances. It might be suggested by way of parenthesis that these cases are examples of the possibility of the selective action of this organism in definite stages.

Parkinson's Disease. In the involvement of the striatal region, which is the extra-pyramidal region located just outside the internal capsule and which includes the putamen, caudate nucleus, and globus pallidus, the amyostatic symptom-complex as described by Strümpell is developed. Such involvement leads to the so-called Parkinsonian type of the disease, which may in some instances come on rather acutely. It may be unilateral or bilateral, accompanied by tremor or the tremor may be absent. Lethargy, however, is always present and is usually associated with the expressionless or mask face, characteristic position of the hands, and statue-like attitude, so that one may be called upon to differentiate between this type of the disease and true Parkinson's disease. In the latter the onset is gradual because it is dependent on vascular degeneration or sclerosis; it occurs, as a rule, after



Fig. 1.

(Permission Medical Staff, Speedway Hospital, Chicago.)

40 years of age, and is most frequently associated with tremor, while in encephalitis the onset is rapid because of the fact that the lesion is due to a toxic process; it may occur at any age and, as you

well know, it has been reported in very young infants, less than two years of age.

Cataleptic Stupor. The cataleptic stage of hysteria may have to be differentiated from cataleptic or catatonic type of this disease. The other accompanying physical findings present in the latter should offer no difficulty in its differentiation. From the catatonic type of dementia praecox, however, mistakes have been made in differential diagnosis. I will show you a picture of one case where the presence of a typical picture of Parkinson's disease at the present time was earlier in its course diagnosed as the catatonic type of dementia praecox. ⁴Barker reports a similar case in a physician who lay like an image devoid of spontaneous movements. He was unable to swallow. He answered questions slowly, was unable to read, but made a good recovery. In the institutions for the insane this type of the disease has been wrongly diagnosed in several instances.

Syphilis. The virus of encephalitis, as you know, frequently involves the bulbar and pontine structures, producing definite ocular paralysis and paresis, including both internal and external ophthalmoplegia, and often resembling the picture of the meningeal type of syphilis. Both produce ocular paralysis, convulsions, hemiplegias, monoplegias, etc. The laboratory as a rule may assist in making the differential diagnosis but that is not always the case. One would expect the optic nerve to be involved more constantly in syphilis, but optic nerve changes, such as mild or severe papilloedema, may also occur in encephalitis as does optic atrophy. ⁵Howe reports in his statistics that in 4 per cent of the cases of encephalitis the optic nerve is involved. The history may help to differentiate in some cases. A reliable history as to the time of onset and general train of symptoms is of value. We must remember that encephalitis and syphilis may occur in the same patient and I will show on the screen a picture of such a case. A young man, aged 18, gives a history of having had influenza some two years before his present illness, at which time he had diplopia and lethargy. At present he presents an advanced amyostatic syndrome. He has Hutchinson's teeth, mental deterioration, has a 4+ Wassermann on the blood and spinal fluid, with a paretic curve by the Lange test. In this case I made a diagnosis of both encephalitis and juvenile paresis.

This leads us to the consideration of the spinal fluid in encephalitis. We should not, of course,

obtain a positive Wassermann in the spinal fluid of encephalitis. The other findings, however, may be almost identical with the spinal fluid of syphilis.

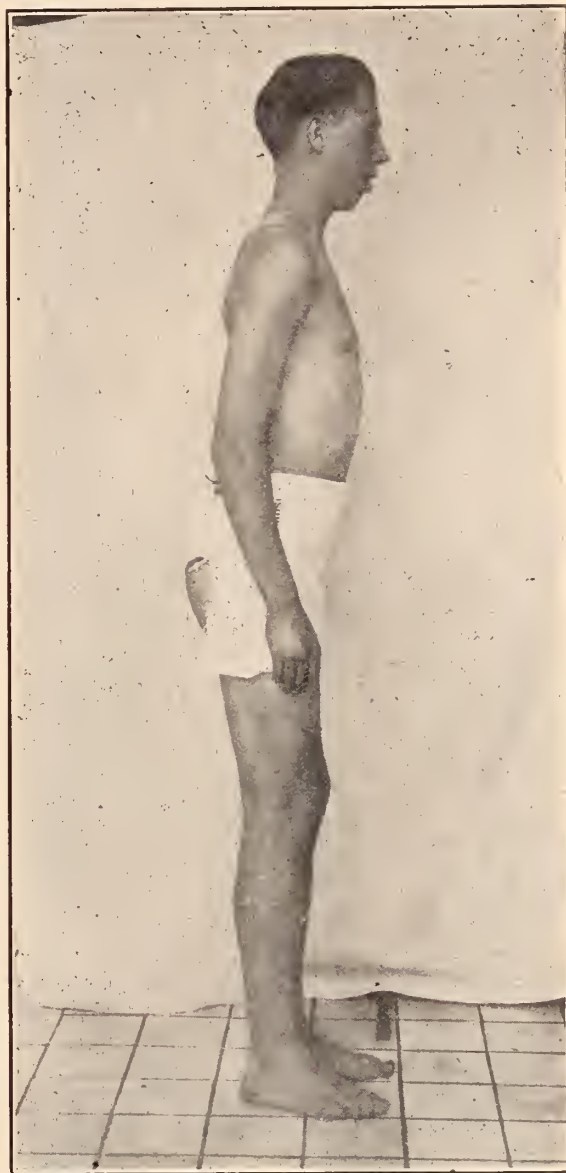


Fig. 2.
A patient the subject of both encephalitis and Juvenile Paresis.

On the other hand, we know that the spinal fluid in some cases of syphilis, especially the vascular type of syphilis involving the brain or spinal cord, may show a negative Wassermann. The sugar content in such instances may serve as an aid in differential diagnosis, for we know in epidemic encephalitis that the sugar content of the spinal fluid is either normal or, as a rule, increased, while in syphilis we do not find such constant change. ⁶Barker again reports two cases who exhibited

mental deterioration, loss of memory for recent events, facial paresis, trembling, inability to calculate, change in behavior, and in each instance a diagnosis of dementia paralytica was made by skilled neurologists but in both patients the Wassermann was negative in both blood and spinal fluid. A careful history revealed a period of drowsiness which in Barker's opinion made encephalitis more probable.

Brain Tumors. The general train of symptoms correspond closely to those found in encephalitis in many instances. I say this from personal experience and I use the word experience advisedly. A white male, age about 35, was found wandering

asked to do so. He had a paresis of all the external muscles of both eyes, a paralysis to accommodation and light. There was a slight paresis of the left side of the face. The optic disks showed mild papillo-edema. The spinal fluid on two or three different occasions showed a cell count ranging from 50 to 75 lymphocytes. The sugar content registered .09. The Pandy test was positive and the Wassermann on both the blood and spinal fluid was negative. He had a transitory Babinski, a temperature of 101, pulse of 85, no rigidity of the neck, no Kernig's sign. A diagnosis of encephalitis was made after excluding syphilis and the different forms of meningitis. An unfavorable prognosis was given in the clinic and that was the only thing which we made correctly. The anatomic findings showed a glioma of the right cerebral hemisphere with recurrent hemorrhages around it. I wish to emphasize the point that there was an increased cell count in the spinal fluid.

In this case a history of headaches extending over a period of weeks would have been a valuable asset or a change in personality or conduct of the patient would have been of great assistance. From the records of the Cook County Hospital I have obtained five instances where a diagnosis of encephalitis was made and where the anatomic diagnoses were glioma, tuberculoma with tubercular meningitis, abscess in the cerebellum, tumor of the third ventricle and multiple tuberculoma.

⁷Sands in the Medical Record, March 25, 1922, reports three cases of encephalitis where a diagnosis of brain tumor had been made and decompression advised in two of them.

⁸L. M. Crafts of Minneapolis in discussion of House's paper at the last meeting of the American Medical Association in St. Louis reported a case of encephalitis resembling brain tumor, with cerebellar nystagmus, tendency to fall backward, etc. He had bilateral papillo-edema which receded after spinal puncture, and diplopia. Decompression was made in this case following the diagnosis of brain tumor. The case went to autopsy and the microscopic examination revealed the characteristic perivascular infiltration about the vessels, nothing else. The same author reported a case resembling cord tumor with a definite zone of pain in the lower back which after several months developed delirium, diplopia, etc.

The initial symptom of lethargic encephalitis may be a tinnitus in one or both ears, as may be



Fig. 3.

This patient had lethargic encephalitis 3 years ago. (Personal observation.) She now has an Argyll-Robertson pupil emotional disturbance and mental deterioration with negative Wassermann on blood and spinal fluid. A diagnosis of general paresis had been made in her case.

aimlessly on the street, was picked up by the police and brought to the Psychopathic Hospital. The landlady where he roomed and his roommate could give no information as to previous complaints and conduct. On admission to the hospital he was somewhat delirious, picking at the bed clothes, could be aroused and answered questions in monosyllables, would put out his tongue when

the case in tumors of the cerebellar pontine angle. I recall one instance where a business man was sitting at his desk when he had a sudden buzzing in the right ear, like that of an aeroplane, followed by vertigo, and blurring of the vision. He came under the care of an aurist who was puzzled as to the origin of the trouble, whether labyrinthine or centrally located in the brain stem. The spinal fluid in this case was normal but the patient soon developed respiratory and cardiac disturbances, associated with paresis of some of the external muscles of the eyes, and slight facial paralysis, which led to death within a period of ten days.

I wish to state in this connection before I forget it that the spinal fluid may be of significance in rendering a prognosis, as was the case here. My personal experience has led me to believe that a normal spinal fluid, that is, a spinal fluid showing no increased cell count, indicates a prognosis more grave than does one where the spinal fluid shows a decided increase in cell count. I think that position is well taken because in the first instance it means that we are dealing more especially with the brain substance proper, while in the latter instance the disease is more superficial, involving the meninges.

*Spiller reports a girl, 15 years of age, who presented headache, vomiting, twitching, mental impairment, lethargy, numbness and weakness of the right limbs, nystagmus, incoordination of station and gait, exaggerated tendon reflexes of the lower limbs, Babinski sign, paralysis of the left facial nerve and ocular paralysis. A diagnosis of epidemic encephalitis was made, although cerebellar tumor and multiple sclerosis were considered. The autopsy with microscopic study confirmed the diagnosis of encephalitis. Spiller believes had death been delayed a year or more the structure of these sclerotic areas would have resembled that of multiple sclerosis.

Sicard describes a paraplegic type of the disease.

Meningitis. The different forms of meningitis must be considered in the differential diagnosis and that can be done as a rule by the laboratory. We as clinical men do not enjoy having the laboratory make a diagnosis for us and on most occasions where the clinical manifestations are sufficiently strong we hesitate to have the laboratory change our opinion. I have found, however, to my sorrow in some instances that it would have been better to have been more flexible. That form of meningitis presenting the greatest difficulty in

the differential diagnosis is tubercular meningitis, especially occurring in children, as in both encephalitis and tubercular meningitis the ocular symptoms may be similar and also the cell count in the spinal fluid. The Lange colloidal gold test may not aid in the differentiation. The tubercle bacillus is seldom found, though it should be more often found. So that the only really valuable differential point that has not failed me in any case up to this time is the estimation of the sugar content in the spinal fluid. I have never found it below normal in epidemic encephalitis and, as has been stated, more frequently it is above normal, while in tuberculous meningitis the rule is that the sugar content is below normal. I might say by way of parenthesis, however, that cases of tubercular meningitis seen early in the course may have a normal sugar content. The presence of the formation of a film in tubercular meningitis which is absent in encephalitis has been emphasized by some authorities. Clinically the Kernig and other signs of meningitis are not so frequently found in encephalitis as in the different forms of meningitis. I will not take the time to go over the other forms of meningitis and the differential diagnosis, as such difficulties do not arise as in tubercular meningitis.

Malignant Endocarditis. As I said in the beginning of my paper, the symptoms of general toxemia may overshadow the focal manifestations of this disease and in this connection I wish to mention one case of a young girl, 16 years of age, a patient of Dr. N. C. Gilbert's, who rather suddenly developed severe evidence of toxemia, associated with a high temperature of 103.5 to 104, with a large palpable spleen, a very audible mitral systolic murmur, recurrent crops of petechial hemorrhages in the skin, marked drowsiness and delirium, with tremor of the lips and hands. The case was diagnosed early in the disease by two of our leading internists in Chicago as probably one of malignant endocarditis. It was ten days after the onset of the disease when the diplopia and facial paresis were detected. The spinal puncture showed a normal fluid. The course of the disease was a stormy one in which the general toxemia overshadowed the focal symptoms, as she remained in a semi-stuporous condition for about three weeks and at the end of two months she developed a neuritis involving the peroneal group upon one side. She recovered entirely but remained weak for several months and now after two years has

a rather severe sialorrhoea. As you know, sialorrhoea is one of the not infrequent complications or sequelae of encephalitis. I have a picture tonight of such a case.

I wish to report one other case, a picture of which I will also present tonight, of a young man, age 21, admitted to my service at the Cook County Hospital on the 31st day of March, 1919, complaining of drowsiness, general weakness, diplopia, and retention of urine. In January, 1919, he had influenza for three days. He returned to work as a coal miner and was able to work only one day a week for several weeks. He had slept for eight days previous to entering the hospital and later was unable to sleep, became drowsy and showed diplopia. Examination at the time of entrance showed that the pupils were sluggish to light and accommodation, temperature 99. The deep reflexes were present, the Babinski absent. The right pupil was larger than the left, irregular in outline and there was nystagmus to the right. The ears were negative. A few days later he developed paralysis to accommodation. On the 5th of April the right internal rectus showed a paresis, with ptosis of the right lid. Two days later the

patient became blind to light and to the finger test. There was bilateral ptosis, bilateral facial paresis, complete external and internal ophthalmoplegia. He became very deaf and was cataleptic. On the same day the disks were examined by Dr. E. V. L. Brown and found to be normal. On the following day the symptoms became so advanced that we obtained an autopsy permit from the father. At the time the spinal fluid showed a cell count of 43 cells. On the following day the patient was able to see objects and the disks were normal and on the 10th of April he could move the eyes in almost any direction. He was discharged on the 7th of May recovered.

Typhoid Fever and Typhus Fever. Occasional mistakes have been made in the diagnosing of typhoid fever in the early part of the disease, whereas the case has proven to be epidemic encephalitis. I have had the occasion to observe two such cases presenting late sequelae in the form of Parkinsonianism and in both instances the diagnosis of typhoid fever had been made at the time of the original sickness. Dr. G. B. Hassin makes the statement that typhus fever, both clinically and pathologically, resembles epidemic en-



Fig. No. 4. Showing the cataleptic state.

cephalitis. He had occasion to make observations along this line during a recent visit to Russia.

Anterior Poliomyelitis. ¹⁰Riley reports two types of epidemic encephalitis representing a spinal group: first, the poliomyelitic type, and second, the transverse myelitic type. The poliomyelitic type he divides into (a) the irritating type and (b) the paralytic type. The irritating may entirely clear up or may pass to paralysis. The paralytic type may resemble precisely anterior poliomyelitis. I might say in this connection that cases have been reported where it seemed practically impossible to differentiate. I have had the privilege of observing one such case. The spinal fluid in such instances may help out in showing



Fig. No. 4.

increased sugar content in encephalitis and decreased sugar content in poliomyelitis. The transverse myelitic type which may be accompanied by xanthochromia resembles the picture following myelitis from other infections or that due to compression of the cord by fracture or neoplasm.

¹¹Teschendorf reports 5 cases with paralyzes resembling those of acute anterior poliomyelitis. He

made a diagnosis of encephalitis, however, as the patients came from regions in which there were a number of other similar cases. He points out the difficulty in making a diagnosis between the two diseases. He mentioned the fact that in anterior poliomyelitis there is quite often a pronounced leukopenia with a relative lymphocytosis, while in encephalitis the leucocyte count may be normal or slightly increased.

¹²Weimann observed a case which presented the clinical picture of Landry's paralysis and ended fatally. The clinical diagnosis was that of the poliomyelitic form of Landry's paralysis. He mentioned several other cases with spinal symptoms of various types and conditions which, as a rule, give a good prognosis.

¹³Winkelmann and Weisenburg found the cord involved in one case as well as lesions in the brain. The pathology extended to the mid-dorsal region while Spiller's case showed involvement even in the lumbar region. I had occasion to observe a case in my clinic a month ago in which I had made a clinical diagnosis of multiple sclerosis and upon investigating his record found that he had been a patient in the Cook County Hospital two years previous to my examination and was discharged with a diagnosis of epidemic encephalitis. ¹⁴Barker has also observed two instances in which on account of sluggish pupils, abolished deep reflexes and lancinating pains the disease was mistaken for tabes. He refers to two similar observations by Wolff in Munich in 1918 and Nonne in Hamburg in 1919-20.

I wish to mention the possibility of making a mistake in the differential diagnosis in the ordinary forms of peripheral neuritis. The virus of encephalitis may attack the posterior root ganglion, producing pains very closely resembling those of peripheral neuritis from other diseases. I remember one instance in which a diagnosis of encephalitis had been made but which proved to be a typical post-diphtheritic paralysis. The mistake, I think, was made because of the presence of an accommodation paralysis which, as you know, is so frequently present in both diseases. We might go on *ad infinitum* in attempting to differentiate encephalitis from other diseases but time will not allow us to do so.

The last group, the psychotic or mental group.— In the early stages certain mental manifestations may arise in the form of acute delirium, presenting a toxic syndrome in some instances similar to

that of a Korsakoff's psychosis. Other mental disturbances arising later may resemble the picture of certain types of dementia praecox. According to ¹⁵Hohman certain syndromes are present and they appear as follows in the order of their diagnostic importance: first, great push of talk without much mental alteration; second, euphoria, jocularity, feeling of well-being; third, alertness and mental clearness immediately on being aroused; fourth, delirium; fifth, stuporous state; sixth, behavior oddities; seventh, depression; eighth, emotional excitability, irritability; ninth, memory defects.

SEQUELAE.

This brings us to the possible sequelae of this disease. We are unable as yet to estimate the



Fig. 5.

A patient showing a Parkinsonian syndrome.

end-results in so many of these cases. We know that they do become chronic and produce certain sequelae. In this connection I also want to em-

phasize one important fact, namely, the initial symptoms may be extremely light and even presenting a so-called form fruste type of the disease, where the diagnosis of encephalitis has perhaps never been made. In such cases the sequelae may be most severe. These late manifestations may come on within a few weeks following the initial disease, while on the other hand a few months or a few years may elapse before such symptoms arise.

The Parkinsonian group, as will be shown by one of the pictures on the screen, occurred in a young lady who had an acute encephalitis and apparently made a complete recovery, married, became pregnant and gave birth to a normal child and then developed these late manifestations of the disease during a second pregnancy. As ¹⁶Neville truly states, "we are not able to tell in those cases of relapse, chronicity and late sudden death, whether it is because of the persistent action of the virus which remains active throughout the dormant period or whether these late manifestations are complications due to local lesions and secondary cellular atrophy". ¹⁷Netter prefers the first opinion. ¹⁸Leviditti and Havier were able to show that the virus persists, although attenuated, at least six months in the nerve centers. ¹⁹Economo speaks of so-called smoldering cases lasting for two years with involvement of the central nervous system here and there. Of the so-called sequelae Parkinsonianism in my experience is by far the most frequent and I think that expresses the general opinion. ²⁰Staehlin in 1920 noted that ten cases out of forty followed up, showed sequelae after more than a year. Spiedel in 1920 noted five sequelae cases out of six after one year; there was day torpor, amnesia, sexual frigidity, apathy, Parkinsonian states, insomnia, visual disturbances and pain.

The sequelae may assume a hypo-kinetic form, such as paresis or paralysis of the part or a hyper-kinetic form including the myoclonias, choreas, athetotic or convulsive movements. There may be disturbances of coordination, asynergy; fourth, autonomic disturbances, including vasomotor, secretory, trophic, respiratory, circulatory, digestive and nutritional disturbances; fifth, sensory syndrome, such as anesthetics; seventh, mental disturbances. A case under my observation will be reported in the April number of the *Journal of Medical Sciences*, where a young man developed acute encephalitis from which he made

an uneventful recovery. This was followed later by very pronounced polyuria or diabetes insipidus, during which time he passed enormous amounts of urine, reaching the maximum of 30 liters per day. He also developed certain mental disturbances and was arrested on two occasions for exhibitionism.

²¹Holst emphasizes the fact that recovery from the acute stage of the disease does not necessarily render the prognosis good. In eight cases observed by this author one year after the acute stage, six of them showed persistent pathologic conditions. He also calls attention to the fact that there is no relation between the severity of the primary disease and the sequelae. He mentions a man, age 63, who, one year after the acute disease, would fall asleep in the day time. I also observed two cases, one a school teacher, who has gained some 40 pounds in weight since the acute attack and who falls asleep for a few moments several times during the day while in the classroom; another case, a young man, 24 years of age, a collector for the Chicago Telephone Company, who sits on the stairway of the buildings which he enters for the purpose of collecting money and sleeps sometimes for as long as half an hour. This may be repeated several times a day. In his case the acute attack occurred three years ago, at which time the onset was extremely mild, as the patient was ill for only two or three days, during which time he complained of drowsiness and diplopia. Holst mentions another case, a patient, age 29, who suffered from severe weakness, insomnia, nystagmus, diplopia, fifteen months after the onset of the disease. He also mentions a third patient who showed persistent glycosuria and chorea.

Encephalitis lethargica may present quite a number of hypophyseal symptoms as complications, such as amenorrhoea, dysmenorrhoea, decreased generative power, increased or decidedly deficient nutrition, polydipsia and polyuria.

²²H. Royer and L. Montagnier report the case of a girl, age 19, who became very obese following an attack of encephalitis. Her weight increased 28 kilograms in 6 months.

²³Max Keischbaum reports four cases in children in which there was a change of personality without the development of any defect of intelligence or dementia. In some cases there was a high-spirited, cheerful, mild manic attitude. The author seems to think that the toxins of encephali-

tis may thus affect the infantile brain in a different way from that of adults. ²⁴Bonhoeffer reports six children who showed peculiar psychic disturbances after epidemic encephalitis. There were disturbances of sleep, increased disturbance of motility, delirium, changes in the pupil and eye muscles, in some cases there was an exaggerated disturbance of respiration. Later the children became more dictative, nasty, oppressive, bold, without respect and inhibition. Some of them were asocial and predisposed to emotional outbreaks. The asocial phenomena were sometimes marked and resembled moral insanity. He also states that analogous residual psychotic phenomena are almost completely absent in adult en-

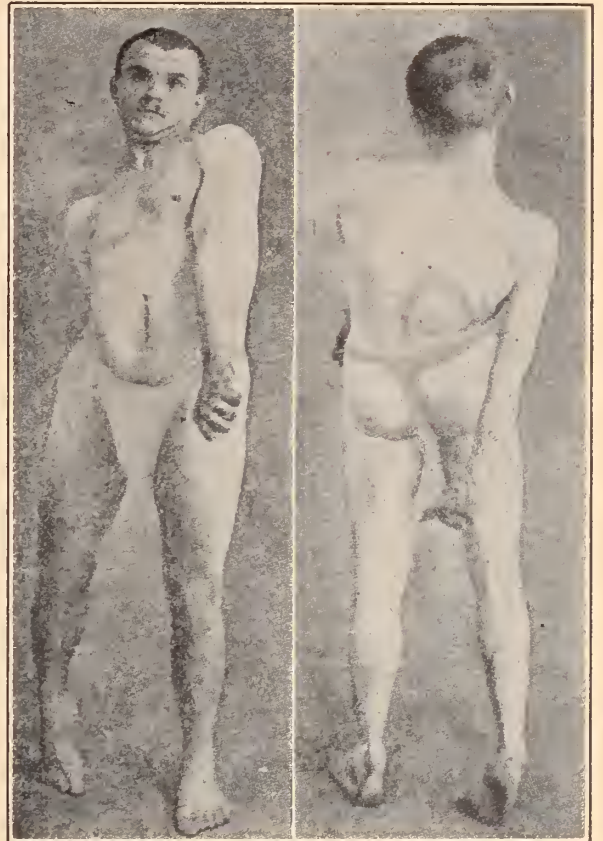


Fig. No. 6.

Taken from Mourgue, *Schweizer Archiv. fur. neurop. w. Psych.*

cephalitis. ²⁵Parker reports eight cases showing respiratory disturbances.

SPINAL FLUID.

²⁶Escutcheon in 53 cases reported an increased sugar content in 82 per cent of the cases; poikilocytosis in 60 per cent; increased globulin content in 77 per cent; a gold curve in 57 per cent. The

Wassermann reaction was only occasionally positive. He also mentions the fact, as we have done earlier in this paper, that no definite relationship can be established between the fluid reactions and the clinical picture.

²⁷R. Mourgue reports the only case of torsion spasm following lethargic encephalitis in which he discusses both the clinical picture and the pathology. I take the privilege of showing one or two of his illustrations.

We could also go on indefinitely relating the complications and sequelae but it seems that we have given a sufficient review to remind one of the fact that we are dealing with a very dangerous disease, not only in its early form, but in its late manifestations, so that time must be an important factor before the final results can be accurately given.

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REMARKS ON THE DIAGNOSIS AND TREATMENT OF UTERINE RETRO-DISPLACEMENTS.*

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The retrodisplacement of the uterus being, as a rule, easily detected on bimanual examination it was perfectly natural that it should have been charged with the causing of various and sundry symptoms. However, experience has shown that the uncomplicated retrodisplacement does not cause symptoms. While it is not a desirable condition and predisposes to pelvic disorders, gynecologists do not consider it, when uncomplicated, an indication for surgery.

Uterine retrodisplacements are relatively common. In an examination of medical cases with no pelvic symptoms. Schroeder found that 25 per cent of women examined had some type of retrodisplacement. Polak found that one woman in five had a retrodisplacement, congenital or acquired. Routine examination of 1,000 unmarried women at the Mayo clinic, according to Stacey, showed that 20.2 per cent had some type of retro-position of the uterus without symptoms.

The uncomplicated retrodisplacements are most commonly found in virgins, yet it must be remembered that virginity does not insure against associated pelvic pathology. Gonorrhoea is by no means the only cause of diseased tubes and ovaries. Dr. Rosenow and I grew streptococci from the ovary of a girl who had extensive infection of both tubes and ovaries in the presence of congenital defects which made an ascending infection impossible. In our studies of chronic cystic degeneration of the ovary we came to believe that blood borne pelvic infections are relatively common. Lawson Tait had made similar observations over forty years ago when very little was known regarding the nature of infections. In his monograph on "Diseases of the Ovaries" he says: "In

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1870 and 1871, and still more in 1874, my attention was drawn to the occurrence of acute pelvic peritonitis in women after attacks of scarlet fever and smallpox, these attacks leaving indications which showed clearly that the mischief began in the ovaries." And regarding chronic ovaritis he says: "I have only once had an opportunity of dissecting a case where I had recognized chronic ovaritis in life, and then it certainly was the result of acute rheumatism."

Retrodisplacements with symptoms are more common in married women. They are prone to all of the inflammatory and infective processes which may afflict the unmarried, and to the disorders which may follow childbirth as well. The chronically retroverted or retroflexed uterus, because of its prolapsed adnexa, favors passive congestion and predisposes to pelvic infection. It is therefore natural that as the woman grows older she is more apt to develop pelvic symptoms. The retrodisplacement increases the probability of abortion in early pregnancy and of subinvolution after delivery; either may lead to pelvic symptoms.

One of the difficulties in differential diagnosis is to distinguish the fundus of the uterus from the swellings which may be low in the pelvis. Without an anesthetic examination one may easily mistake a fibromyoma on the posterior wall of the uterus, a diseased ovary such as a cyst or ovarian abscess, a pyosalpinx or tubal pregnancy for the fundus of the uterus in a retroflexed position. In a fair number of cases even the most experienced will make serious errors in pelvic differential diagnosis. Pneumo-peritoneum is one of the new methods which makes a more accurate differential diagnosis possible. It should be used in all doubtful cases.

A careful correlation of the information obtained from a complete history and physical examination must serve as a guide in determining the type of treatment which will give the best results. The patient's age, type, and marital state must also be kept in mind. At times a patient must be kept under observation for a considerable period before one can be certain whether the symptoms are due to a general condition or to some pelvic pathology. Many neurotics have been subjected to surgery for a retroversion or retroflexion with very disappointing results because the trouble was not in the pelvis. On the other hand, impressed by certain unsatisfactory results, there are some physicians who advise against the

surgical correction of any retrodisplacement, with equally unsatisfactory results so far as the patients are concerned.

Treatment will be considered under three headings:

First. No treatment; second, medical treatment; and third, surgical treatment.

No Treatment: As stated previously about 20 per cent of the unmarried women have retrodisplacements without symptoms. Such a condition may be discovered accidentally and it is only necessary to make a record of it and assure the patient that it is a relatively common condition, or still better, do not tell her of it if she is inclined to be nervous or introspective. So far as possible medical palliative treatment should be avoided in young unmarried women. Neither does the symptomless atrophic uterus of women past the menopause require treatment.

Medical Treatment consists of all palliative measures such as knee chest position, pessary, tampons, high frequency, etc. This type of treatment is generally indicated during the child bearing period.

The knee chest position is of great value in giving relief from bearing down sensations. Every woman who has symptoms from a passive congestion accompanying a retrodisplacement should be taught this position. Multiparae who must lift their children get much relief from its use during the early months of pregnancy. Women with retrodisplacements should use it several times daily both in early pregnancy and after delivery. Sleeping on the stomach is also advisable. The Kangaroo walk or the knee chest position may be used to advantage by all women during the period of involution.

A pessary when properly used is a most useful little appliance. It is indicated after replacing the uterus during the early months of pregnancy and later during the period of involution. An untreated retrodisplacement after delivery results in subinvolution and leads to definite symptoms. With proper care at this time the uterus will return to a normal condition and the displacement should cause no more trouble than before the pregnancy. Some of the congenital retrodisplacements are accompanied by a short anterior vaginal wall and a deep posterior fornix. A pessary will not support the uterus in such cases and is useless. If the puerperal retrodisplacement is not of the

congenital type the use of a pessary may be curative.

A pessary may well be used during the first four months of pregnancy and during the puerperium as a prophylactic measure in cases which have been operated for a displacement. It may be used to keep the uterus in place if there is reason to believe the displacement is causing sterility. It should be used for a few weeks after replacing a traumatic retroflexion. Should an occasion arise when its use is indicated in a virgin it should be introduced and removed under nitrous oxid oxygen anesthesia.

There is another valuable use for a pessary. When in doubt as to the relation of a displacement to the patient's symptoms, replace the uterus and insert the proper pessary. If the symptoms are due to passive congestion they will soon be relieved. If due to a subacute salpingo-oophoritis they will probably be increased. The use of a pessary in these cases is also an aid in determining the degree of relief which may be expected after an operation.

A pessary is contra-indicated if the uterus cannot be replaced. It should never be used when there is an acute vaginitis. Its presence will act as an irritant to acute or sub-acute inflammations of the adnexa or parametrium. It is best not used when there is an inflamed cervix with a marked leucorrhoeal discharge. An exception may be made during the period of involution. Whenever a pessary is used the patient should use a daily salt and soda douche.

The other palliative measures such as douches, tampons, high frequency, etc., may be used to advantage during acute and subacute inflammatory processes. They may be used preparatory to pessary treatment in the younger women on whom surgery is undesirable. They may be tried for a time in the hope of avoiding surgery in cases where pessaries may not be used.

Surgical Treatment of retrodisplacements being necessary because of associated pathology, must be varied according to the conditions found at the time of operation. It is impossible to formulate rules to govern the modifications of the many different types of operations, yet there are certain general principles which should always be kept in mind.

1. During the child-bearing period the operation should not be one which will complicate a future pregnancy and labor. This eliminates such

operations as ventro-fixation and the Watkins' transposition operation.

2. When adnexal disease is such that both tubes and ovaries must be removed, it is usually better to remove the fundus of the uterus. If there are many adhesions the sigmoid and caecum may then be used to cover the raw pelvis and thereby prevent adhesions of the small intestines. When possible a piece of ovary should be transplanted into the rectus muscle according to the technic of Blair Bell. It will at least have a good psychological effect and often ovarian internal secretions are maintained.

3. Diseased tissue should not be left unless there is a possibility of pregnancy. However, the psychology of the patient must always be kept in mind when making a decision. It is sometimes better to risk a second operation if the patient is young. Future child-bearing is obviously the consideration of prime importance in selecting the operative procedure. The Webster-Baldy, the Simpson and the Coffey operations are among the best. I have employed the Webster-Baldy or posterior shortening so far as possible, since that gives a support to the prolapsed ovaries. Shortening of the utero-sacral ligaments is advisable in many cases. I have had a number of deliveries subsequent to the Webster-Baldy operation and thus far there has been no recurrence of a displacement.

Retrodisplacements with prolapsus are usually found near the end or after the child-bearing period. For many of these the Watkins' transposition operation and a plastic repair is the operation of choice. For others a plastic repair followed by the procedure of Crile, Gilliam, or a ventro-fixation must be considered. Whenever a ventro-fixation or Watkins operation is employed the tubes should be resected unless the patient is past the menopause.

In conclusion I would emphasize the following points:

1. Most retrodisplacements are due to congenital weakness of the uterine supports. They are present in about 20 per cent of unmarried women and cause very few symptoms, if any, until other pelvic trouble develops. Surgery is not indicated in uncomplicated cases.

2. Not more than 25 per cent of women who have had children ever have a retrodisplacement and I believe this figure too high. In checking over the records of 100 primiparae whom I had examined in early pregnancy, 15 had a retrover-

sion or retroflexion in early pregnancy and 16 had a similar condition four or five weeks after delivery. In three of these patients the uterus staid in position following the use of a pessary during the puerperium. After involution was complete most of them had no symptoms. A few must wear a pessary part of the time to relieve congestion, and eventually these women will require a surgical correction. I hesitate to advise it now as there is always a possibility of recurrence following a future delivery.

3. When a retrodisplacement is the apparent cause of two or more miscarriages I advise the surgical correction of the condition and thus far the results have been very satisfactory. The Webster-Baldy operation is the one of choice. The utero-sacral ligaments should be shortened in most cases. Recurrences are very rare.

4. Symptomatic relief can be given in many cases by medical treatment. The pessary is still used in the handling of certain retrodisplacements with very gratifying results. It may remove the immediate indication for surgery.

5. Careful pelvic diagnosis is of paramount importance. One should not be in a hurry to advise surgery unless it is because of demonstrable pathology. Pneumo-peritoneum is indicated in all borderline cases.

6. Repair of the pelvic floor when relaxed is an essential part of any operation.

7. A traumatic retroflexion is an extremely rare condition. It probably will not occur unless there is an overdistended bladder. The symptoms are very definite. It is easily corrected by recto-vaginal-abdominal manipulation and does not cause future trouble.

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SYMPTOMATOLOGY, DIAGNOSIS AND CLASSIFICATION OF GOITER.

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Although Mobius, as early as 1886, pointed out that in exophthalmic goiter the activity of the thyroid gland is abnormally increased, and although the classical signs and symptoms are well established early in the disease, this condition is still often confused with the form of hyperthyroidism seen in certain patients with adenoma. In 1913, Plummer distinguished exophthalmic goiter from adenoma with hyperthyroidism, and noted distinct clinical types of hyperthyroidism, each associated with a definite pathologic change in the



Courtesy of the American Journal of Surgery.

Fig. 1. Multiple adenoma with substernal projection in woman, aged forty years.

thyroid gland. In exophthalmic goiter, there is always hypertrophy and hyperplasia of the thyroid; in adenoma with hyperthyroidism, hyper-

trophy and hyperplasia do not occur. The clinical syndrome in patients with toxic adenoma may readily be distinguished from that which is characteristic of exophthalmic goiter.

We have found the following classification most useful in a consideration of the diagnosis and symptomatology of goiter:

1. Exophthalmic goiter (Basedow's or Graves' disease).
2. Adenoma
 - A. With hyperthyroidism (toxic adenoma)
 - B. Without hyperthyroidism (simple adenoma).
3. Colloid goiter.
4. Tuberculosis, cysts of the thyroid; malignancy, thyroiditis, actinomycosis, and so forth.

EXOPHTHALMIC GOITER.

A history of rather rapid onset of symptoms with an average duration of nine months is typical of exophthalmic goiter. Young men and women (in a ratio of 1 to 8) between eighteen and thirty-five years of age are most commonly affected. Plummer has shown that exophthalmic goiter

patients, who are unable to hold their extremities quiet. The slightest noise causes them to start and stare like frightened animals. They may not sleep or eat for days at a time. Fever of 104 or more is present only during a crisis. The pulse rate is rapid and seldom drops below 110. The



Fig. 2. Gross specimen removed from patient in Figure 1, showing multiple small adenomas and substernal projection.

progresses in a series of waves, at the crests of which all symptoms are increased and a crisis occurs. Painless vomiting may continue over a period of weeks; there may be diarrhea, or both conditions may be present. Picking at the bed clothes is a characteristic mannerism of these



Fig. 3. Roentgenogram of patient in Figure 1, showing shadow of substernal projection.

pulse pressure is high; the systolic blood pressure usually registers between 120 and 140, and the diastolic pressure seldom rises above 75. Acute cardiac decompensation is frequently present, with edema of the extremities as a sequela. There is marked loss in weight and strength, and excessive sweating is always a feature.

In exophthalmic goiter the basal metabolic rate reaches a higher point than in any other disease of the thyroid gland. The average basal metabolic rate in the last thirty-five patients with exophthalmic goiter operated on at this Clinic was plus 53 per cent, the maximal rate being plus 88 per cent and the minimal plus 26 per cent. After two ligations the average rate dropped to plus 36 per cent, and after thyroidectomy it fell to plus 7 per cent.

During the intervals between crises the patient may experience a false sense of well-being. Although his appetite is so enormous at times that he will eat five or six meals a day, he may gain little or no weight, due to increased metabolism. The patient's capacity for work, especially that



Fig. 4. Colloid goiter. Symmetrical enlargement of the gland, pseudo-exophthalmos, but no thrills, bruits, or loss of weight or strength. Basal metabolic rate plus 5 per cent.

requiring mental and not physical effort, may be greatly increased at first because of his highly strung nervous system. Soon, however, general muscular weakness, especially of the quadriceps group of muscles, renders him unable to perform the usual physical tasks of every-day life. He has great difficulty in going up and down stairs and tires easily on walking. Friends may have noticed that he is more nervous than usual, or that his eyes have become unduly prominent. His heart pounds excessively and beats rapidly. In summer he suffers greatly with the heat; in winter a light covering is sufficient to keep him comfortable. Perhaps he has discovered a fine tremor of his hands. Enlargement of the thyroid gland is seldom noticed by the patient, and if he has an "inward goiter," it is difficult to convince him of its existence. Occasionally, the enlargement is such that even the patient detects a goiter. Once his attention has been called to the growth, he may complain of tight or choking sensations or of sensitiveness to touch.

The test for loss of strength in the quadriceps group of muscles is obtained by having the patient

mount the examining table, and is one of the most valuable indications of his ability to withstand the shock of operation. If he is unable to step up without assistance, he is not in condition for immediate thyroidectomy. Thrills or bruits over the superior thyroid vessels are present in nearly 80 per cent of all cases of exophthalmic goiter.

In 1913, Plummer pointed out the important points for differential diagnosis between exophthalmic goiter and adenoma with hyperthyroidism. In the latter condition enlargement of the thyroid gland is noted from five to ten years earlier in life; that is, between ten and twenty years of age. In exophthalmic goiter the symptoms of hyperthyroidism develop within one year after the



Fig. 5. Multiple toxic adenoma of the thyroid with cystic degeneration; gradual loss in weight and strength, rapid heart and dyspnea. Basal metabolic rate plus 35 per cent. Thyroidectomy performed under local anesthesia with uneventful recovery.

onset of the goiter, while in adenoma with hyperthyroidism a period of fourteen and one-half years elapses before symptoms of hyperthyroidism become manifest. Exophthalmos occurs in about 87 per cent of cases of exophthalmic goiter in which the duration of symptoms is more than two years:

it is only rarely noted in cases of adenoma with hyperthyroidism.

ADENOMA OF THE THYROID WITH HYPERTHYROIDISM.

The onset of toxic symptoms in patients with adenoma is both more gradual and less severe



Courtesy of the American Journal of Surgery.

Fig. 6. Lymphosarcoma of the thyroid. Three-fourths of the growth removed with immediate relief of pressure symptoms.

than in patients with exophthalmic goiter. The symptoms are of a slow, insidious type with a serious and lasting effect on the heart and kidneys. Acute crises do not occur, and thrills and bruits are very rare. An adenoma is present on an average of sixteen years before toxic symptoms become marked enough for the patient to seek medical aid.

Sudden loss of weight and an erratic appetite are not so marked in toxic adenoma as in exophthalmic goiter, but both the weight and the appetite may be affected. In long standing and severe cases there is evidence of cardiac insufficiency with slight edema of the legs and ankles. Myocardial degeneration, evidenced by irregularities in heart rhythm, is common. The average age of our last series of thirty-five patients with adenoma with hyperthyroidism was forty-four years at the time of examination. The average age of patients with exophthalmic goiter is approximately ten years younger, thirty-six years. There

is a tendency to hypertension in adenoma with hyperthyroidism, while exophthalmic goiter is characterized by a high pulse pressure with a low diastolic and a rather high systolic reading; the latter, however, is not so high as in adenoma. The average basal metabolic rate of our patients with hyperthyroidism was plus 28 per cent.

ADENOMA OF THE THYROID WITHOUT HYPERTHYROIDISM.

Simple adenomas usually appear during or shortly after the age of puberty. They may enlarge so slowly that they become apparent to the patient only after many years; or, they may grow rapidly and early undergo degenerative changes through hemorrhage within the capsule of the adenoma, thus forming one of the various clinical types of cystic, hemorrhagic, or calcareous goiter. In these cases the thyroid is asymmetrically enlarged, and one or more nodular tumors may be palpated. In order to palpate a small adenoma successfully it is necessary to grasp the gland firmly between the index finger and thumb while the patient swallows. Adenomas usually do not cause symptoms until they have been present many



Fig. 7. Case of early exophthalmic goiter: beginning exophthalmos with slight symmetrical enlargement of the gland. Thrills and bruits present, but loss in weight only 10 pounds. Basal metabolic rate plus 35 per cent. Ligations preliminary to thyroidectomy not required.

years, unless they press on the trachea. Frequently, however, if a patient is inclined to be neurotic, he will attribute a great many complaints to the goiter. Disfigurement of the neck often causes a patient to have the adenomas removed. Malignant

nant degeneration occurs more often in cases of adenoma without hyperthyroidism than in any other type of goiter.

Symptoms of hyperthyroidism develop in about 25 per cent of the cases of adenoma. Adenomatous goiters rarely cause toxic symptoms in persons under thirty years of age.

SUBSTERNAL AND INTRATHORACIC GOITER.

Judd has defined intrathoracic goiter as goiter in which the greater part of the enlargement of the thyroid is situated within the thorax. This type is to be distinguished from substernal goiter in which there is a projection of only part of the growth into the chest. The most common type of substernal or intrathoracic goiter is the fetal adenoma. The hypertrophied gland of the exophthalmic type is never totally intrathoracic.

Lahey has suggested that the pressure exerted by the depressor muscles of the hyoid and the sternomastoid bones may be a factor in causing adenomatous tumors to descend into the thorax. The influence of swallowing, ptosis of the larynx, gravity, flexion and extension of the head, and the development of an adenoma in an abnormally low



Fig. 8. Severe case of exophthalmic goiter with loss in weight of 50 pounds, and quadriceps loss, 3. History of vomiting and diarrhea; thrills and bruits present. Note marked symmetrical enlargement of gland and asthenia of facial muscles.

thyroid are possible contributing factors. The anatomy of the region is such that extension of growths which have developed in the lower poles should be downward behind the sternum, along the path of least resistance. The influence of deep

respiratory movements of the thorax in coughing, straining and so forth is equally important.

Patients with intrathoracic or substernal goiter usually have had growths of many years duration, and in rare cases these have gradually disappeared as they descended into the thorax. Some patients do not give a history of goiter, but come for ex-



Fig. 9. Patient shown in Figure 8 following ligations and thyroidectomy. Restored to normal health with gain in weight of 50 pounds. Basal metabolic rate reduced from plus 85 per cent to plus 9 per cent.

amination because of suffocation and choking spells, difficulty in swallowing, or gradually increasing huskiness of the voice. About 25 per cent of these patients have definite hyperthyroidism, as evidenced by the symptoms and physical examination, and corroborated by an increased basal metabolic rate. The pressure symptoms are not dependent on the size of the tumor, but on its location and the degree of compression.

A few cases have been noted in which the growth became so large that the manubrium of the sternum was displaced forward. Dilated veins on the neck and wall of the chest, due to venous obstruction, are seen in about 10 per cent of the patients. Laryngeal examination reveals partial or complete paralysis of one or both cords in about the same per cent of cases. Percussion of the growth is possible in some instances, but roentgenographic and fluoroscopic examinations permit the most accurate localization of the tumor.

COLLOID GOITER.

Without definite knowledge of the exact mechanism it may be assumed that the normal stimula-

tion of the thyroid is brought into play by partial exhaustion of the thyroxin in the tissues. Factors interfering with the production of this agent lower the amount delivered from the gland. One of these factors is an actual or relative shortage of iodine. A thyroid so handicapped, if sufficiently stimulated, will produce a normal or even an excessive amount of thyroxin. In relation to the

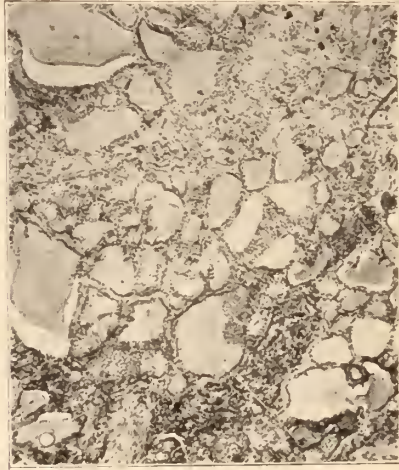


Fig. 10. Multiple simple adenoma. (x 50.)

normally functioning gland, however, it tends to lag behind the demands of the tissues; it does not respond quantitatively to stimulation as does the normal thyroid. The human gland, thus handicapped, deposits an excess of colloid in its acini. The resulting growth constitutes the diffuse colloid goiter of adolescence. Diffuse colloid considered as an entity probably never hyperfunctions.

The terms *simple*, *physiologic*, or *adolescent* goiter have been used to denote what we here call *colloid goiter*; this is definitely a goiter of youth and may be considered as composed of colloid alone. It most frequently appears in young girls at puberty and is often spoken of as a physiologic enlargement. The growth is soft and globular and causes a symmetrical enlargement of the neck. With advancing age adenomas often develop in association with colloid goiter. In a small percentage of goiters of the so-called vascular type, thrills and bruits are found. When nervous symptoms, tachycardia, and palpitation are present, it is difficult to distinguish these cases from the early cases of exophthalmic goiter. It is rare, however, to find a history of rapid loss of weight and strength, of exophthalmos, or of crises in these patients. Moreover, the basal metabolism is usually between 8 and 15 per cent below the av-

erage normal. The goiter itself does not produce symptoms, but it may be the causative factor in the production of many nervous manifestations.

TUBERCULOSIS OF THE THYROID; THYROIDITIS.

While tuberculosis of the thyroid does not properly belong under a discussion of goiter, it must be considered because of its diagnostic importance. Mosiman, in 1917, drew attention to the striking relationship between hyperthyroidism and tuberculosis of the thyroid. Plummer and Broders suggested that either a hypertrophic gland is rendered more susceptible to invasion by the tuberculosis bacillus, or the infection stimulates the parenchyma to an abnormal activity and is thus indirectly responsible for the hyperthyroidism with its attendant symptoms. They reported a series of seven cases in which the condition had not been diagnosed previous to operation. These patients were classified into three groups: (1) those with a high degree of hyperthyroidism; (2) those with a moderate degree of hyperthyroidism; and (3) those in whom hyperthyroidism is mild or absent. The basal metabolic rates of the patients in Group 1 were plus 87 per cent and plus 48 per cent; in Group 2, plus 26 per cent; in Group 3, plus 21 per cent. From these figures it is seen that a severe grade of hyperthyroidism may be present. The greater the tuberculous in-



Fig. 11. Colloid goiter. (x 50.)

volvement, the less severe the toxic symptoms; this may be explained by the more extensive destruction of the gland. Tuberculosis of the thyroid is probably secondary to a tuberculous process elsewhere in the body, but it has not been possible to demonstrate the primary lesion. Since the completion of this paper, however, Dr. Plummer in-

forms me he has observed cases in which his diagnosis of tuberculosis was later confirmed by the pathologist.

With regard to the differential diagnosis, Plummer and Broders state that patients with a high degree of hyperthyroidism (Group 1) cannot be distinguished clinically from those with ordinary exophthalmic goiter. In patients with mild hyperthyroidism, or without hyperthyroidism (Group 3) tuberculosis may at least be suspected before operation. Carcinoma of the thyroid may be associated with hyperthyroidism, but the growth is usually more nodular than in tuberculosis and not so apt to involve the entire gland without causing a much larger tumor. Chronic, simple thyroiditis may produce the same symptoms as tuberculosis of the thyroid, but is not associated with hyperthyroidism.

With regard to the prognosis of tuberculosis of the thyroid, Plummer and Broders reported one patient was in perfect health two years after operation; one patient had myxedema; three had only recently been operated on; and two had not been heard from.

MALIGNANCY OF THE THYROID.

Carcinoma of the thyroid was once considered a rare disease, but since methods of diagnosis have become more accurate, the number of reported cases has greatly increased. The diagnosis of carcinoma of the thyroid in the early stages, be-

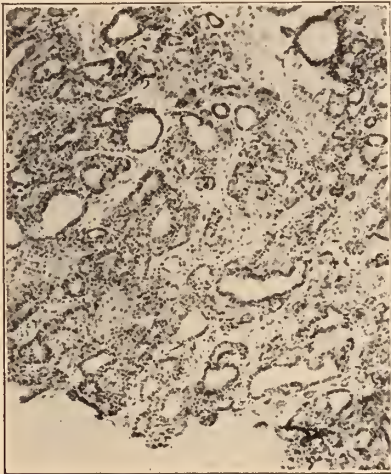


Fig. 12. Multiple toxic adenoma. (x 50.)

fore the development of a board-like resistance and fixity of the gland, is extremely difficult. Wilson finds that although a sudden increase in the rate of growth of a long standing, nodular tumor of the thyroid in a patient more than thirty-

five years is strongly indicative of beginning malignancy, a slow, continuous growth may be almost equally indicative. In the series reported by Balfour, a positive clinical diagnosis of cancer was made in only 18 per cent. In 36 per cent malignancy was considered as a possibility, while in 46 per cent it was not even suspected. The subjective symptoms depend on the structures affected and are usually due to pressure on the

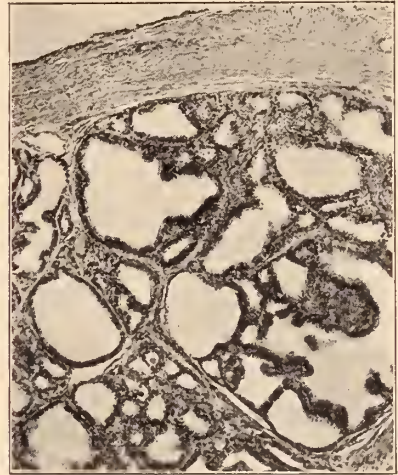


Fig. 13. Exophthalmic goiter. (x 50.)

trachea, esophagus, larynx and nerves. Coughing and choking spells are of common occurrence. Paralysis of the recurrent laryngeal nerve is often seen, with consequent change in the voice. Dysphagia is usually present in advanced cases. Pressure on the nerves, causing referred pain, may be an early symptom. Edema of the trachea may occur early or late. As malignant changes may develop in substernal and intrathoracic goiters, all the signs and symptoms of these conditions may be present. The general signs of malignancy, such as loss in weight, secondary anemia, and cachexia, appear late in the disease. There may be referred symptoms from metastatic deposits in the liver, lungs, brain, or bones.

In considering the differential diagnosis in early cases of goiter, one must attempt to distinguish between benign adenomas and cancer. This is very difficult because it may be almost impossible to palpate the tumor through the muscles and thyroid tissue. As the surgeon, and even the pathologist, often have great difficulty in distinguishing between the two, it is advisable to remove all tumors of the thyroid gland after the age of twenty-five, unless there is a definite contra-indication. As chronic, simple thyroiditis is

usually associated with hypothyroidism, it may be difficult to distinguish it from malignancy. The hyperthyroidism usually accompanying tuberculosis rules out the possibility of confusing it with carcinoma.

THYROIDITIS, ACTINOMYCOSIS, AND SO FORTH.

Bacterial thyroiditis is caused by the settlement of the micro-organism itself in the thyroid; toxic

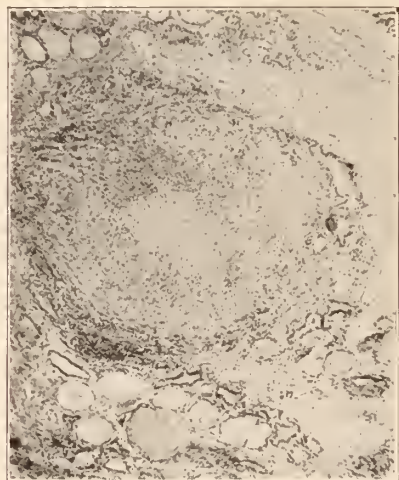


Fig. 14. Tuberculosis of thyroid. (x 50.)

thyroiditis is due to the inflammatory reaction of the thyroid when in contact with chemical poisons or microbial toxins in the blood stream.

Although the presence of bacteria had not yet been proved, Kocher believed that acute thyroiditis resulted from the extension to the gland of some infectious organism located elsewhere in the body. We now know that infection of the thyroid gland may be caused in several ways, namely: by direct inoculation, by contiguity, and by a metastatic process through the blood stream. It may occur as a sequel to an acute infectious disease, as inflammatory rheumatism, pneumonia, influenza, typhoid, malaria, erysipelas, pharyngitis and tonsillitis.

The diagnosis may be made by finding a hard tumor in the gland. There is history of acute onset; the patient complains of pain and a feeling of constriction in the neck. The region of the thyroid is swollen, tense, hot and tender. There may be involvement of the laryngeal nerves, and pain is more severe during movements of the larynx. The cardiovascular symptoms are characteristic; the pulse rate, which is out of proportion to the temperature, may be 140 or more and the blood pressure is lowered. There is distressing palpitation.

Thyroiditis must not be confused with hemorrhage, in which the symptoms are usually more acute and severe, nor with malignancy, in which the physical findings are usually characteristic and the history more prolonged.

Woody thyroiditis is a condition that, on first examination, appears to be malignancy. The trachea, esophagus, thyroid and all the muscles form one hard mass. The thyroid region is often painful and tender. Since the larynx is immobilized, the growth does not move up or down on deglutition. Besides being extremely hard, the surface of the gland is regular in contrast to that in carcinoma. The duration of the disease before the patient seeks medical aid is usually shorter than in malignancy. Severe dyspnea may occur early. This condition is more apt to occur in younger patients than is malignancy. Sarcoma and actinomycosis of the thyroid are very rare conditions; we have had one case of actinomycosis of the thyroid.

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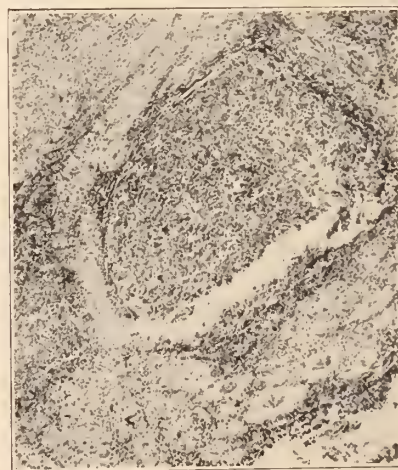


Fig. 15. Lymphosarcoma of thyroid. (x 50.)

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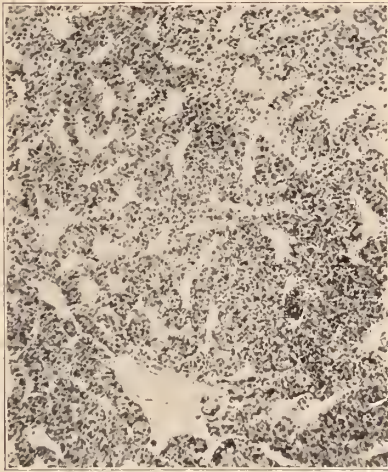


Fig. 16. Carcinoma of thyroid. (x 50.)

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NOTES ON SOUTH AMERICA.

BY D. J. HAYES, M. D.,

MILWAUKEE.

We, more than one hundred members of the American College of Surgeons and their families representing every state in the Union and Dominion of Canada, left New York on the S.S. Vandyke, of the Lamport & Holt Line, February 10th, 1923, for a sixty-four day cruise to South America.

The objects of the cruise were to assist in the laying of the cornerstone of the Gorgas Memorial Institute for Tropical Medicine in the city of Panama; to cultivate a closer co-operation and friendship with the medical profession of our sister Republics; to visit the institutions in which they teach, the hospitals in which they do their work, and to observe their methods of surgery.

Dr. Franklin H. Martin of Chicago, Illinois, Director-General of the American College of Surgeons, accompanied the cruise.

We visited Havana in Cuba, Cartagena in Columbia, Caracas in Venezuela, Port au Spain in the Island of Trinidad, Rio de Janeiro and Sao Paulo in Brazil, Buenos Aires in Argentine and Montevideo in Uruguay. In each of these cities the members of the college were tendered a reception by the presidents of the various Republics and most of the American ambassadors.

On crossing the Isthmus of Panama from Cristobal to the city of Panama, the members of the cruise were given an excellent opportunity to view the locks and Gatun Lake.

On reaching Panama City, the ceremony of laying the cornerstone of the Gorgas Memorial Institute for Tropical Medicine, by his Excellency Dr. Belisario Porras, assisted by the American College of Surgeons, took place, in the presence of the officers of the Canal Zone and a large concourse of people.

The address given by the president of the Panama Republic, Dr. Belisario Porras, follows:

"Ladies and Gentlemen:

"I experience profound satisfaction from the fact that it is my privilege to lay the cornerstone of the Institute of Tropical Medicine which Panama dedicates to William Crawford Gorgas, to perpetuate his memory here, on the shores of the Murmuring Pacific and in close proximity to that thoroughfare which—hurriedly in former days as though pursued by the phantom of death and lingeringly

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today as though regretting the brevity of time which compels them to forego the delights of our benign and even climate, the beauty of our country's unchanging verdure and the incomparable blue of our sky—has been used by men of every nationality for whom Gorgas cherished only sentiments of deep humanity which prevailed always over every prejudice of race, nationality, birth or class.

“This sense of satisfaction that I experience now is derived primarily from the fact that I was a friend of this man whose memory we are today assembled here to tribute, and as such I was in an admirable position to fully judge the purity of his noble and good heart and further, being one of the old men of the days when he lived in our midst, I am better able, from experience, to appreciate more fully than the men of the younger generation, the great work of health, life and happiness which this great man accomplished for my country.

“The monument which we will erect here will be an expression of Panama's gratitude to the man who proved beyond the peradventure of a doubt that the tropics could be made habitable for all the races of the earth. We are indebted to the genius of Gorgas for the transformation of Panama from a fever-ridden land to the paradise we now live in and the benefits of health which engenders content, activity, clear-mindedness, energy and even valor. Therefore, we consider that Gorgas, to a certain extent belongs to us also, because it was here that he saw his greatest effort to lighten the burden of a suffering humanity crowned with success.

“It is the privilege of great men, sages, discoverers, heroes and martyrs, whose activities, teachings and examples are not circumscribed to the narrow confines of the land of their birth and whose achievements in the world have been beneficial to the majority if not to all their fellow-beings, to be universally loved. Such men—and Gorgas was one of them—cannot be citizens of one particular city, town or village; every city and every nation of the earth claims them; they are the real citizens of the world.

“As in the case of Esculapius, when it was found necessary to enlist the services of an oracle to determine which of the cities of ancient Greece that disputed this honor, was his birthplace, and, as in the case of Christopher Columbus, who has been declared an Italian, a Spaniard and more recently a Jew, the birthplace of Gorgas, I am informed, is

disputed, both Alabama and Georgia claiming this honor. However, Gorgas does not belong exclusively to the United States of North America where he was educated. Cuba and Serbia, Bulgaria and Ecuador, Panama and South Africa, all have claims to him as a result of his having lived and worked among them for the good of the human family.

“The work accomplished in the world by the great Gorgas is immense, immeasurable. Of Hippocrates it may be said that he was the first to divorce medicine from witchcraft and the ecclesiastical mysticism of his times; of Galen, that he was a great physician and writer to whom is attributed the authorship of about 500 books intended to popularize the practice of medicine; of the great Pasteur, Koch, Ramon y Cajal, Ehrlich, Finley and Rose, that they penetrated far into the hidden secrets of the invisible, the infinitesimal world; of Metchnikoff that he evolved the famous phagocyte theory and with Roux, Chamberland and Calmette, collaborated in and continued the work of the great Pasteur; but how can we describe Gorgas, who solved the apparently impossible problem of making the tropics habitable, thus complementing the marvelous work of God Who created us in order that we might live on this terrestrial globe and be happy on it? Gorgas destroyed the morasses of death and gave us pure drinking water and purified the air of our exuberant tropical forests and our colonial cities. Gorgas redeemed the tropics.

“I can still remember, and it seems to me a horrible nightmare, the time, fifty years ago when, on my way to Bogota to finish my studies I found it indispensable to spend a night in Colon. Sleep during that night was impossible for me because of the constant and tormenting bites of the mosquitoes whose incessant buzzing smote on my ears as though they were the discordant notes of an infernal serenade. These minute tormentors were so numerous that by clutching at the apparently empty air I caught handful after handful of these tormenting pests. Neither can I forget conditions as they prevailed when I returned from college ten years later and entered the employ of the French Canal Company. From that time I was able to realize or at least suspect the underlying cause of the Frenchmen's failure in their attempt to construct the trans-Isthmian waterway. They constructed beautiful residences and tree-lined avenues

and admirably organized their offices; but they did nothing, in fact they knew nothing about tropical sanitation and apparently never suspected its worth.

"In those days of long ago, it was the most natural thing for one to promenade the city's thoroughfares holding a handkerchief to one's nostrils, to keep out or lessen the stench contaminating the air as a result of decaying vegetation, stagnant or putrid puddles and primitive or defective sewerage. On every hand one encountered well beloved friends hastening home in the grip of malarial chills or some other equally pernicious fever; or encountered on every street, people clothed in the somber black garb of mourning with the marks of grief and despair deeply impressed on their features; or daily heard the lugubrious tolling of church bells announcing the death of a friend or a relative; or was frequently summoned to attend the last rites of a departed friend laid low by the deadly miasmas of our unsanitated tropical homeland.

"However, thanks to William Crawford Gorgas, these days have passed never to return and our tropical home has become one of the world's health resorts.

"In the days of ancient Greece, shrines and temples were erected in the mountains and at the Springs of Health in Honor of Esculapius, the God of Medicine. To these places of worship and thanksgiving an endless stream of sick and afflicted persons came to offer sacrifices and deposit votive tablets on his alters. And it is a temple such as these that we will erect here as a living testimonial to the memory of the man who brought so much comfort to the Isthmian family and the tropical world in general.

"On this first stone, there will arise a great temple dedicated to this great man and to this shrine of Gorgas will come in a never ceasing pilgrimage, not only our sick compatriots but also the afflicted thousands from other points of the tropics to seek health with undying faith in the name of Gorgas. And they will depart hence for their distant homes, healed and happy, with tears of gratitude in their eyes and blessing our beloved country and the great and humane work of William Crawford Gorgas, the benefactor of humanity and the redeemer of the Tropical World."

After a short address by Dr. Franklin Martin, acting president of the Gorgas Memorial Institute

and Director-General of the American College of Surgeons, while the band played the National Anthem, the cornerstone was lowered in place by President Porras.

What General Gorgas did for the eradication of yellow fever in Panama and Cuba, Dr. Oswaldo Cruz of Rio de Janeiro, following the principles which Gorgas used in Panama and Cuba, was in less than one year successful in conquering this great plague in Rio de Janeiro and other fever-stricken cities of Brazil.

The great institution known as Dr. Oswaldo Cruz Institute, was founded by him in 1899. This great scientist and humanitarian, who had studied in France and Germany, was confident that he could clean up the fever-stricken country. He was a Brazilian physician, and made an appeal to his Government to furnish him necessary money to build, equip, and partially maintain, this wonderful institution.

But the president was skeptical, and hesitated about favoring such an enormous appropriation to perform what he considered would be a miraculous feat. Dr. Cruz, however, persevered until the appropriation was granted.

For their generosity and faith in Dr. Cruz, the people were rewarded in seeing Rio de Janeiro transformed from a fever-stricken city to a city now bearing the reputation of being one of the healthiest and finest cities in the world.

Dr. Oswaldo Cruz, the conqueror of yellow fever in Brazil, and therefore the redeemer of his country, died some years ago, at the age of forty-two, a national hero. The Brazilian people have not forgotten him and, to perpetuate his memory, one of the most beautiful boulevards of the city, lined with beautiful trees and plants, bears the name of "Avenida Oswaldo Cruz." His monument and busts are seen throughout the city, and his picture was given a prominent place in the Brazilian Building where the International Exposition was recently held in the city of Rio de Janeiro. The Cruz institute continues its great work as an experimental center for tropical diseases. Dr. Carlos Chagas is head of the institution at present and was one of the committee of surgeons of Rio de Janeiro who welcomed the members of the cruise, after landing.

It is to be regretted that our own country, which boasts of its enormous wealth, has not seen fit to erect and maintain an institution for experimental

medicine, which would be an honor to the country and a benefit to the human race. Up to the present time, the burden of this work has been left to the generosity of a few wealthy citizens.

We arrived at Rio de Janeiro on March 7th. The promenade deck of the Vandyke was lined on both sides with passengers, to view the greatest harbor in the world. The first mountain that came into view was sleeping Giant Corcovado (Hunchback), next Sugar Loaf, keeping eternal watch over the entrance to the bay. Behind the city Tijuca Range rises toward the heavens.

These mountains are covered by a thick coating of deep green moss, which when stripped off, leaves solid granite rock. This moss and luxuriant tropical vegetation gives the bay, at times, a beautiful turquoise green color.

The Beire Mor (edge of the sea) is one of the most beautiful drives of Rio de Janeiro. It pursues a serpentine course around the harbor for miles and is lined by beautiful trees and pretentious residences. One never loses sight of the Sugar Loaf and other mountains throughout the drive.

Automobiles are plentiful and charges are moderate. A party of four or five may rent a machine at a charge of \$2.50 per hour. The majority of the machines are of United States manufacture, and as usual the Ford takes the lead.

The Medical Schools of Rio de Janeiro and Buenos Aires, are large commodious buildings, government owned, and are fully equipped to demonstrate every specialty in medicine and surgery. Both have very large medical libraries with books and journals from all nations, French works taking the lead. There are 2000 students taking the course of medicine, dentistry and pharmacy in Rio de Janeiro and 4000 in Buenos Aires. The medical course extends over six years in Rio de Janeiro and seven years in Buenos Aires, before the degree is granted. The requirements made of the students before they are licensed to practice their profession, are higher than in our own country. No tuition fee is charged, except in Buenos Aires, where two hundred pesos, equal to about \$80.00, is charged for the course.

The visiting surgeons were given special opportunity to observe surgery as practiced in the various Latin Republics of South America, the surgeons of Rio de Janeiro, Montevideo and Buenos

Aires having arranged in advance, a program for clinics at their various hospitals.

The hospitals are mostly state or municipality owned and are fairly well equipped, most of them being built on the pavilion plan with large corridors connecting the buildings where convalescents lounge. A few are privately owned but members of the medical profession have no property interest in any of them, and no voice in their management except by suggestion. The greatest handicap the South American surgeons have is an insufficient number of good training schools for nurses. The difficulty is in getting a sufficient number of pupils of ability, because nursing in South America is looked upon as a menial occupation. The operating surgeon or his assistant, prepares the case to be operated upon and the surgeon waits on himself, even to threading his own needles. He certainly has no one to blame but himself, if any infection should chance to follow the operation. The patients in the hospitals are attended by persons untrained in the care of the sick, and in many cases, by relatives or friends. The surgeon cannot be held responsible for this condition as it is extremely difficult to make the governing bodies see the need of specially trained nurses.

The British Hospital in Buenos Aires has a training school and at present has about forty nurses, thanks to Dr. Robert Halahan, who is one of the surgeons of the Hospital and a member of the American College of Surgeons from South America.

At one time there was in our own country a large number of hospitals in worse condition than those in South America, but when the American College of Surgeons began to classify our hospitals, conditions soon improved. The public soon learned about this classification as it did about the fee-splitting by surgeons, a practice said to prevail in South America, and hospital boards then saw the necessity of the rating "A" instead of "B" or "C."

While visiting the snake farm at San Paulo, Brazil, an interesting lecture on poisonous snakes and scorpions, was given by Professor Rudolph Kraus from the University of Vienna, who has charge of the institution.

The serum which is manufactured in this institution, is sent all over the world for treatment of the effect of bites from venomous snakes.

Buenos Aires, the capital of Argentine, is the largest city south of the equator and is often

termed the Paris of South America. Its phenomenal growth for the past thirty-five years, has been exceeded by only one other American city—Chicago. It is the largest Spanish speaking city on the globe and is second only to Paris among the Latin cities of the world. It is equal to Philadelphia in population (1,500,000) and rivals New York in many of its metropolitan features, and outdoes every city in our land in some of its civic improvements. Its palatial buildings, beautiful boulevards, museums, universities, art galleries, numerous fountains, and groups of statues throughout the parks and other open spaces, were a revelation to us. We were astonished to note the miles of wharves along the river, capable of accommodating the largest ships in existence, and long lines of warehouses capable of accommodating millions of tons. Ships come into the harbor from all the principal countries of Europe, loaded with emigrants, and it is claimed that of these about 3,000 land in Buenos Aires weekly, most of them from Italy. It is said that immigration to Buenos Aires has notably increased since there is limited immigration into our own country.

Buenos Aires has no skyscrapers. Its city ordinance forbids the height of a building to exceed one and one-third the width of the street it faces. Parks are so numerous that it is impossible to take a short stroll around the city without running into several of them. City ordinances control the laying out of streets, the size and kind of buildings to be erected thereon, plans for parks, etc.

Buenos Aires is well supplied with surface and sub-way transportation, both lines being owned by the Transvias Anglo Argentina, a British corporation, the concession requiring the company to pay the city 6 per cent of its gross earnings for fifty years, at the end of which time both lines become automatically the property of the city. The Argentine seems to have driven a better bargain in this respect than we have.

On our return home the cruise stopped at the Island of Barbados for one day. While there we had a rare opportunity to visit the Leper settlement, and the members of the cruise were invited to attend a clinic given by the attending physician. There were over two hundred patients confined to the hospital and grounds, in all stages of the disease. Patients ranged from fourteen to seventy-five years of age, many having been confined to the colony for more than thirty years.

Next we passed closely to Martinique Island. We were reminded of the volcanic eruption which took place there in May, 1902, destroying St. Pierre and killing the total inhabitants of the city numbering 25,400.

At no time during our cruise of fourteen thousand miles, was the temperature above 84 degrees at sea. The temperature fluctuated between 80 and 90 degrees on land, but the nights were quite cool. The sea was so calm that it was difficult at times to determine whether the steamer was actually moving or not. At the end of this very enjoyable and profitable cruise, it was with regret that we said goodbye to the many warm friends made aboard ship.

The courteous treatment tendered us by the profession of South America, and above all, the receptions given us by the various presidents of the South American Republics which we visited, will linger in our memories for the remainder of our lives.

OBSERVATIONS ON THE PRECIPITIN REACTION FOR SYPHILIS.

Parallel tests of Wassermann and precipitin reactions made by WILLSON B. MOODY, Omaha (*Journal A. M. A.* Feb. 10, 1923), on 1,500 serums yielded complete agreement in 1,483 serums. The Wassermann reaction was positive and the precipitin negative in fourteen instances, and the Wassermann was negative and the precipitin positive in three. In three instances in which the Wassermann was positive and the precipitin negative, the tests were repeated and the reactions were found to agree (positive). In one case, the Wassermann was negative and the precipitin positive, and at necropsy syphilitic aortitis with aneurysm was found. In one instance with repeated tests, the Wassermann was always positive, and at no time could any trace of precipitation be made out. It is assumed that failure to agree the first time in the three serums was due to error in technic or in interpretation. It may also be noted that among the discrepancies the majority occurred early in the study and so may in large part be due to inexperience. Numerous tests were made on cerebrospinal fluids, without success, the precipitin test being very unreliable. Positive reactions occurred clearly only when considerable traumatic blood was present. In all Wassermann tests, the antisheep system was used, with amounts approximating 0.1 c.c., and with three antigens (10 units).

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EXTRACTS TAKEN FROM LETTERS OF
DR. JAMES A. EVANS, PARIS, FRANCE.

Paris, Jan. 22, 1923: -

"Today Madame Girod de l'Ain gave me a card of introduction to Pasteur Vallery-Radot, a grandson of Pasteur, who is a famous present day Parisian physician. She also said I must visit St. Joseph's—the big Catholic hospital here where the Rockefeller people built a wonderful tuberculosis service and gave it to the French people.

"Saturday night I was an usher at the great Franco-American ball. All the field service men had some part in it through Mme. Tauffliet. It was a wonderful sight to see the magnificence of the gowns and jewels. I stood right next to President Millerand and Marshal Foch for about ten seconds, not to mention every ambassador to Paris.

"Our little society is getting along quite famously. Friday night we had a Round Robin discussing experiences and it was most interesting. All of the meetings so far had been held at our apartment but this one we held at the American University Union and had refreshments, and everyone brought their wives—those that have them. We are sending information of the French clinics not only to the American Medical Association but also to all the medical schools for their bulletin boards.

"One of the men at Hotel Dieu wants me to translate some work of his, for which he won the Dieulafoy prize, for an American journal, and he has very nicely offered to have it published with me as co-author. It is on diaphragmatic eventration—a very nice bit of work.

"At present I spend most of my time in a gastroenterological clinic, mostly in front of the fluoroscope—six or seven patients in the morning with full opportunity of studying those of them that are on the ward. There are very many general medical patients also. The service is smaller and more compact than at the Hotel Dieu and no crowd of students around, the laboratory more accessible, and altogether much more satisfactory for me. I have been casting around for some kind of a serious medical article to write, but believe I will have to give it up, as a gastroenterological article to be worth while would demand follow-ups and my time over here being limited runs that out, naturally.

"Another fellow and I got hold of some British Army medical supplies to sell, but we got cheated out of half the commission we expected on selling them to a second-hand surgical instrument dealer who double-crossed us.

"We got our passage home the other day on the United States Line "President Adams," a cabin boat sailing June 16th from London, whither we plan going by airplane. We shall land on the 26th or 27th in New York.

"They ankylose t. b. joints here with radium and deep X-ray."

Under date of February 1, 1923:

"One thing I have learned over here is the treatment of fissure ani and hemorrhoids by high frequency current. Perfectly painless dilatation. About eight treatments suffice and then if the hemorrhoids still resist this treatment injection of quinine urea is used. As the newspapers advertise, The Knife Abolished!

"I have just finished an article on The History of Hotel Dieu, which I found most interesting to prepare. I am going to read it before our medical society here, which, by the way, is beginning to function in a way to keep its secretary head over heels in work.

"Professor Gilbert showed me his wonderful collection of old prints and woodcuts of Hotel Dieu, some of them way back to the fourteenth century—very quaint, and some of them very beautiful. The collection must be worth thousands of dollars and I would like to have lantern slides made from them. I could prepare a most interesting address on the History of Medicine as represented at Hotel Dieu.

"Also, I am trying to get permission to translate a monograph on Pseudo-Appendicitis—just the word we used to discuss last year and a thing I think it would pay to publish in English in America.

"On our program tomorrow night is a talk on Intestinal Flora, by Dr. Gros, and one on Chronic Arthritis as treated in France, by a member of Widal's clinic; and possibly a talk by an electrical engineer who worked with Coolidge in Schenectady and who is a trustee of the Albany Medical School."

Feb. 17, 1923.

"What do you think of the stationery of the American Medical Society of Paris for Students and Graduates? Its organization has proved to be

quite an undertaking, and its possibilities are infinite not only medically but politically in the way of Franco-American rapprochement.

"I have been very busy since I changed hospitals and I am working much harder. Was rather stagnating at Hotel Dien. Gilbert is too old and the whole service suffers from lack of pep. His heyday was about 1912. At present I get to St. Antoine's about 9:00 and run off all the fluoroscopic exams I can until the X-ray man comes along and then we do the rest together or he leaves me to do some more alone; also I have free run of the beds and laboratories. The only trouble is, there is not much of a direct surgical follow-up.

"Last night we had a very good meeting of our American Medical Society of Paris, though our program as planned broke down the day before because all the speakers got grippe, so that I had to fill the gap by giving a paper on Mechanical Diseases of the Abdomen, illustrated by blackboard anatomical diagrams. We had quite a large meeting and several strangers who happened to pass through Paris were also present and we had an hour of very interesting discussion.

"I have been busy translating a French book "Les Fausses Appendicites"—pseudo-appendicitis, for publication in America. It is a small book about the size of the Army Manual and is very interesting. I have now four articles about ready for publication, and Dr. Bensaude is anxious for me to prepare another on some work done in his clinic."

Feb. 22, 1923:

"We hope to go to England about June 1st. When there I will run up to St. Andrew's and see Sir James MacKenzie's clinic, which I understand is unlike anything else in the world.

"Dr. O'Brien and an artist friend of his are going on a bumming trip around the Mediterranean, third class railroad fares, tramp boats, fishing vessels, etc. They are going to Marseilles, then take the next cheapest boat north, south, east or west, preferably to Corsica, from there to Constantinople, then to Strygia via Asia Minor, Palestine, Smyrna, Cairo, Algeria back to Paris. I would give much to go with them.

"Everyone gets sick over here. Americans living in these unheated, damp stone French houses of the sixteenth, seventeenth and eighteenth centuries all get grippe and colds and t. b. and what not, during the winter months, and it has been

especially damp and rainy this winter. Luckily, we have this modern apartment, while students in the Latin Quarter go without heat, hot water, baths and plumbing of any kind.

"A lady doctor friend of ours, Dr. C. F., of Massachusetts, is quite a wag. Mrs. D., who is a friend of hers and likes to take a dig at her name, is very proud of her Puritan ancestry, as well as childless, so that when she talks too much of this Dr. C. F. tells her that people of no posterity of course have to boast much of their ancestry."

THE NEEDS AND DUTIES OF DERMATOLOGY.

The duty of dermatology to the profession, Ernest Dwight Chipman, San Francisco (*Journal A. M. A.*, Aug. 5, 1922), says, is cooperation. Dermatologists owe it to the profession to make known in plain terms the significance of dermatologic lesions as they interpret them. They need to write for the man in general practice as well as for their confrères in dermatology. They need to make of dermatology a clearing house for the subject of syphilis. The teaching and treatment of this disease is today, as in former times, an integral part of dermatology. Before the development of the Wassermann test, there was never doubt as to the destination of a syphilitic patient. Because of the training of dermatologists in the recognition of the objective signs of the disease, the matter was by common consent left in their hands. Today, syphilis is diagnosed in the laboratory and is treated by any or by all. It is the dermatologist's duty to demonstrate such proficiency in respect to this disease that the profession at large will willingly regard it as belonging to dermatology.

POSTOPERATIVE LUNG COMPLICATIONS.

Isabella C. Herb, Chicago (*Journal A. M. A.*, July 29, 1922) analyzes a series of cases of lung complications following operations in which the mortality was 46.7 per cent. The complications were: lung abscess, four cases, with three deaths, a mortality of 75 per cent; pneumonia, seventy-six cases, with forty-eight deaths, a mortality of 63 per cent. There were 153 operations on the stomach. Nine patients developed pneumonia; eight died. Operations on the gallbladder and bile traets numbered 1,381. There were ten cases of pneumonia, followed by six deaths. There were 1,560 appendectomies, followed by nine cases of pneumonia, with five deaths; 1,872 herniotomies, followed by nine cases of pneumonia, with five deaths; 174 prostatectomies, followed by nine cases of pneumonia, with eight deaths. Attention is called to the remarkable record of 12,045 tonsil and adenoid operations, with only four lung complications, two cases of pneumonia and two of lung abscess; also to the fact that about three times as many men developed lung complications as women in the total number of cases cited.

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Vol. XXII.

June, 1923

No. 1

EDITORIALS

SCIENTIFIC EXHIBITS.

Space will soon be allotted for scientific exhibits at the state meeting on October third, fourth and fifth. Any planning to enter such exhibits will please notify Dr. J. Gurney Taylor, Wells Building, Milwaukee, indicating the nature of the exhibit and space required.

CORRECTING A MISAPPREHENSION.

"THIS is a fight between chiropractors and the State Medical Society."

Such was the remark of a Senator last month during course of the debate on medical legislation. We quote the Senator, not because he did not vote wisely—for he did, but because that one sentence sums up an unfortunate attitude found in the minds of the public on every question relating to medical legislation.

Through legislative action, society long ago assumed the right to regulate the practice of medicine. The right to make laws protecting the public against the incompetent and unscrupulous is inherent in modern society. This is true in banking, engineering, and even such trades as plumbing, as well as in the field of medicine.

Now we are faced with the fact that the public,

having once asserted its right, has generally withdrawn its interest. An attitude is now prevalent that medical practice acts are for the benefit of the physicians.

Some cult desires the bars lowered and reputable practitioners point out the dangers to the public. And then you will hear it said that the "medical doctors" are trying to exterminate someone and thus deprive the common people of great beneficial service.

This attitude is used as a jimmy by those who are ever prying at the lock of self-protection society has fastened. Those who disdain the pass key of adequate basic education use this jimmy as the basis for every attack upon the well-founded principles of health legislation.

When leaders among the laity realize that medical practice acts and similar laws are solely for public protection—that medical practice acts which allow the incompetent or unscrupulous to parade as the educated and the reputable are probably more dangerous than no medical practice acts at all—just then will physicians be relieved of a responsibility that should not be theirs.

We believe that lay education is the solution to the problem. Is it not a goal for 1925?

Q FOR QUANTITY

THE Milwaukee Electric Railway and Light Company has been making such a success of transportation problems (or is it that they have not? it has entered the field of medical practice—or "near-practice." They recently ad-

vertised the curative value of a violet ray machine in such extravagant terms that one wonders whether they may not be extending their field of transportation to other worlds.

"No matter in what respect the body is ailing—acute disease, or merely general weakness—the * * * Generator will prove its merits. It is a scientific means for the relief of pain, the cure of sickness and the upbuilding of the whole body."

And again they say this Generator is "used for—

- | | |
|----------------------------|------------------------------|
| "Abscess | "Insomnia |
| "Anemia | "Lameness |
| "Arteriosclerosis | "Locomotor Ataxia |
| "Baldness | "Lumbago |
| "Brain Fag | "Nervous Affections |
| "Bronchitis | "Neuralgia |
| "Bruises | "Neuritis |
| "Catarrh | "Obesity |
| "Circulatory Disorders | "Paralysis |
| "Colds | "Piles |
| "Chilblains | "Pyorrhoea |
| "Deafness and Ear Diseases | "Rheumatism |
| "Eczema | "Scars |
| "Enlarged Prostate | "Sciatica |
| "Female Complaints | "Skin Diseases |
| "Goiter | "Sore and Throat Diseases |
| "Gout | "Sprains |
| "Hemorrhoids | "Toothache |
| "Hay Fever | "Weak Eyes |
| "Infantile Paralysis | "Wrinkles, Warts and Moles." |

Nine letters of the alphabet have been thrown into the discard, namely and to-wit: J, K, M, Q, U, V, and that famous trio of X, Y, Z.

A very limited bit of library research upon the part of the advertising copy writer would have completed his alphabetical symphony of absurd quackish claims. Why not, for example, add the following, which are no worse than those of the original contribution:

Juvenile incontinence, Kleptomania, Menstrual disorders, Quickening, Uterine displacements, Varicocele, Xenomenia, Yellow atrophy, and Zoster?

WORTH WHILE

FOR many months a busy executive has taken the time to write articles for this JOURNAL which are receiving most favorable comment. We refer to "The Business Side of the Physician's Life."

It has been said by many that they turn to this series each month just as they open the Journal of the A. M. A. to the "Tonics and Sedatives" column—first. Based on the little every-day happenings in the life of every physician, the articles are written in a style that fully justifies these compliments. We take this opportunity to express our appreciation to the author and in so doing we are but expressing the thoughts of our readers.

A GOOD VETO

IN the legal column of this issue we publish the veto message of the Governor in which he refuses to sign a bill that would destroy, to a considerable extent, the confidential relationship between physician and patient. The bill, had it become a law, would have permitted and caused physicians to testify against the interest of their patients.

The veto is based, we believe, on sound public policy. The proposed law might have met the particular need of justice in some particular cases. But in the majority of cases it had the potential power of destruction.

At present a patient knows that his physician will not divulge the nature of the patient's troubles. Such confidence is the basis for a complete understanding between the public and the physicians. Testimony will be given at the request of the patient and not over his protest.

A law that would be cause for the public to conceal that which the physicians should know, would be a poor law. We believe the veto was in the interest of the physician as well as that of the public.

AN APPRECIATION.

June 2, 1923.

"Dr. Rock Sleyster, Editor,

"THE WISCONSIN MEDICAL JOURNAL.

"My Dear Mr. Editor:

"Because of the very marked improvement in the contents of the STATE JOURNAL during the last few months, I am sure that a word of appreciation by a member of the State Medical Association will not be amiss. The May number is one that shows a very high standard of professional work. The original articles—every one of them—are a credit to the reporter, and are of great interest. They are well reported, and cannot fail to be of great help to the general practitioner.

"Reading the extracts of the letters from Paris, one cannot help feeling that it would be a very desirable thing if we could have some information from foreign clinics.

"If we are going to have a successful four year medical school at Madison—and I see no reason at all why we should not—then it is necessary that the medical faculty at Madison show a greater interest in the profession of the state by frequently publishing in the JOURNAL such articles as those

by Dr. Lorenz and his associate and that by Dr. Eyster. These articles are not only of great scientific interest, but they are of great educational value to the general practitioner. I hope therefore that the medical faculty at Madison will accept this hint and by frequent contributions such as those mentioned above show the profession of the state that they are deeply interested, not only in the advancement, but also in the spread, of medical science.

"The editorial pages are above the average in suggestive information in the May number. The JOURNAL Clinic, I am glad to see, is becoming a medium of real value to the general practitioner.

"The section on preventive medicine which has always been excellent and shows painstaking preparation, is up to the high standard set long ago by this department.

"I therefore wish, Mr. Editor, to congratulate you on the splendid work you are doing in giving us a journal of which any state medical society might be proud.

"A MEMBER."

AS OTHERS SEE US

TO HAVE HIGHFLYERS ON MEDICAL BOARD.

On Tuesday, Governor Blaine attached his signature to a bill which gives him the right to appoint whom he pleases to the State Board of Medical Examiners. A provision of the old law made it necessary for the governor to make appointments from a list furnished by the State Medical society. The new bill was probably the outgrowth of the controversy over the appointment of Dr. R. B. Cunningham of Cadott to the state board a year or two ago, and whose right to act on the board has been contested by the Milwaukee physician who held the place prior to the appointment of Dr. Cunningham. It was contended that the Cunningham appointment was illegal because his name had not been furnished the governor by the State Medical society. The contest to determine the legality of the Cunningham appointment is still pending in the courts. The incident will probably be closed by the reappointment of Dr. Cunningham under the new law.—*Chippewa Falls Daily Gazette.*

THE JOURNAL CLINIC

Edited and Published by

THE BUREAU OF POST GRADUATE MEDICAL INSTRUCTION

UNIVERSITY EXTENSION DIVISION

The University of Wisconsin.

SPECIAL STAFF MEETING OF THE JACKSON CLINIC.

BY WILLIAM R. MEEKER, M. D.,

ROCHESTER, MINNESOTA,

AND

OTTO FOERSTER, M. D.,

MILWAUKEE.

A special staff meeting of the Jackson Clinic was held April 19 in honor of Dr. William R. Meeker, in charge of the Section of Local Anesthesia at the Mayo Clinic, and Dr. Otto Foerster, of Milwaukee. Dr. Meeker's subject was "Local Anesthesia in Gynecology and Obstetrics;" Dr. Foerster spoke on "Various Skin Conditions of Interest to the Surgeon" and exhibited lantern slides with a discussion of the salient features of each disease illustrated.

Dr. Meeker described in detail the technic of field block and nerve block methods as applied to gynecologic operations and illustrated his technic with lantern slides. While terminal infiltration methods suffice for the more superficial operations on the perineum, such as the removal of benign tumors of the vulva, excision of superficial perineal fistulas, hemorrhoidectomy, and perineorrhaphy in which the defect is not large, for the deeper operations this will not suffice because of the traction necessary in surgical manipulations. These same operations may be performed in by far the greater number of cases by injection of an anesthetic solution into the sacral canal, called epidural, sacral, extradural and caudal anesthesia.

For the deeper operations on the pelvic floor and viscera, the local anesthetic procedure of choice is the association of a low epidural injection with transsacral block of the upper four sacral nerves. This procedure gives a uniformly satisfactory anesthesia in surgery of the pelvic floor and viscera by the perineal route. It has been found sufficient for posterior resections of the carcinomatous rectum, both the single stage and two stage resections, the posterior wall of the vagina often being removed with the growth. Excision of multiple

perineal fistulas and malignant growths of the vulva and vagina, perineorrhaphy, anterior colporrhaphy, repair of vesico-vaginal and recto-vaginal fistulas, vaginectomy, trachelorrhaphy, the Watkin's interposition operation, vaginal hysterectomy and excision of the carcinomatous urethra have been painlessly performed under this anesthesia. Resection of the bladder may be performed without pain under this anesthesia when field block is added for the suprapubic incision.

In order to determine the value of sacral nerve block anesthesia in obstetrics, a series of ninety parturient women were anesthetized at the Cook County Hospital in Chicago by Dr. Bonar, then resident obstetrician, and Dr. Meeker. As a result of these experiences it was determined that the epidural method is more practical than the transsacral method, although block of the lower four nerves by the latter technic with the aid of a low epidural injection gives satisfactory anesthesia. A great advantage of the method is the relaxation of the pelvic floor. The forceps operation, version and extraction, manual dilatation of the cervix, rotation and repair of cervical and perineal tears may all be painlessly performed under epidural anesthesia.

The pains of normal labor may be controlled by this method, although the abolition of the pain reflex also takes away the voluntary effort of bearing down. Uterine contractions continue, however, so that the patient must be instructed when and how to bear down. The feature of greatest difficulty is the selection of the proper time to induce anesthesia. In most cases labor could be made to terminate painlessly if anesthesia could be administered an hour to an hour and one-half before delivery. In our experience the maximum value of the anesthesia results when it is not given until the os has reached at least 7 cm. in primipara and at least 4 cm. in multipara for average cases. The field of usefulness in spontaneous delivery will greatly increase when a means has been devised to prolong the action of an epidural injection. Further investigation needs to be carried out on this subject. It is possible that the drugs are already at hand whose proper combination and use will anesthetize the entire floor and viscera for five or six hours without repetition. Such an anesthetic should prove a great blessing in obstetrics and become the anesthetic of choice in normal delivery.

Dr. O. H. Foerster exhibited lantern slides of

various dermatologic conditions and discussed the salient features of each disease. There are two types of epithelioma: the spino-cell and basal-cell types. The former tends to involve the glands early, is usually located on the extremities, tongue, lips, or penis, and cautery excision followed by X-rays is the method of election for its removal. Baso-cellular epitheliomata are relatively benign and respond readily to radium and X-rays. When they are located on the nose and on or near the eye-lids radiotherapy is always preferable to excision.

Melano-sarcoma on the sole of the foot is usually nevo-carcinoma. The prognosis is bad, for metastasis to the inguinal and pelvic lymphatics occurs early although it may not become evident for several months after the primary lesion on the plantar surface has been excised or has disappeared under radiotherapy. In a case of squamous-cell epithelioma on the leg, the malignancy developed in the scar twenty years following an extensive burn.

In ulcerative lesions of the tongue the possibility of gumma must be considered. If the tongue is found to be sclerotic, either diffusely or in plaques, with atrophic changes in the mucosa, the process is probably syphilitic. Buried tubes of radium emanation have given good results in some cases of epithelioma of the tongue. Lymphangioma of the tongue responds well to radium.

Molloscum contagiosum is characterized by numerous small, elevated, white or waxy papular lesions, each with a central depression, and often surrounded by an inflammatory zone. Treatment consists in puncturing each lesion and stirring the contents with a needle or sharp-pointed instrument, following which the lesion dries into a crust and drops off.

Factitious dermatitis is observed in neurotic individuals, or may represent a form of mutilation employed by malingerers in their efforts to shirk their duties or gain sympathy. Superficial linear and rectangular lesions, and deep ulcers, due to the action of carbolic acid and various caustics, or to continued trauma, are present.

Blastomycosis is not an uncommon disease in Wisconsin. It occurs not only as a cutaneous disorder, but often involves the bones and lungs. The typical cutaneous lesion is a circumscribed, vegetative ulcer or patch, often located on the face or extremities, in the margin of which are numerous

miliary abscesses filled with pus, in which the specific organism is readily found. Potassium iodid given in large doses over a prolonged period, and X-rays to the lesions, constitute the treatment.

Sporotrichosis is usually characterized by the development of several nut-sized nodules arranged in linear manner along the course of the lymphatics of an extremity, usually the arm. Material for culture is best aspirated from the unopened lesions. This disease may also occur as an osteomyelitis, synovitis, pyelitis, without involving the skin. Potassium iodid is a specific remedy. A number of workers in a tree nursery near Milwaukee developed cutaneous sporotrichosis, and the disease is, in some instances at least, an occupational one.

Extragenital chancres are apt to be unusually large, indolent, painless, only moderately indurated ulcerations, with marked enlargement of the regional lymph-glands. Recent indolent ulcerations, wherever situated, which do not respond to the usual methods of treatment, should be investigated for the presence of spirochetes without further delay.

JOINT MEETING OF THE WISCONSIN
SECTION AMERICAN CHEMICAL SO-
CIETY, SIGMA XI & UNIVERS-
ITY OF WISCONSIN
MEDICAL SOCIETY

Wednesday, April 11, 1923.

PROGRAM.
RECENT ADVANCES IN COLLOID
CHEMISTRY.

BY PROFESSOR SVEDBERG.

Professor Svedberg addressed the combined groups above stated, on the different aspects of his subject.

The paper was discussed by Professors Allen, Bradley, Mason, Peterson and Truog, representing respectively the Departments of Biology, Physiological Chemistry, Physics, Agricultural Chemistry and Soils.

The Publication Committee has sanctioned a request of the Managing Editor that all communities desiring physicians may advertise their needs in this Journal without charge. This will not only be a service to the public but one to our members as well.

PREVENTIVE MEDICINE

Edited by
W. D. STOVALL, Chairman
Section on Preventive Medicine, State Medical
Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

A STUDY OF THE MILK SITUATION IN GREEN BAY, WIS.*

BY R. L. COWLES, M. D., AND LYDIA LACEY

We as members of the medical profession must be aware that during the past year there has been considerable controversy among the milk producers, dealers and the general public in regard to the proper methods of handling milk as well as the safety and value of different kinds of milk. This warfare, as we might call it, has been carried on by newspaper advertising, distribution and circulation of pamphlets and in one instance an attempt was made to bring the medical profession into it by means of a petition signed by us, advocating a certain kind of milk and the method of distributing it.

The proper distribution of safe milk is an important subject and the controversy has been the cause of many inquiries which I, and no doubt the rest of you, have received from people wanting advice as to what particular brand of milk to use, or perhaps inquiring if this or that milk is a safe milk to feed babies. I was unable to give first-hand reliable information and so was stimulated to investigate conditions. Later it occurred to me that the subject might be of interest to the Society and I, with the assistance of Miss Lydia Lacey of the State Laboratory, began a more comprehensive study, the results of which I am going to present to you tonight. I am not presenting these findings because there is anything particularly startling to be found in them, but so that we have on record facts in regard to our milk and a definite knowledge of what it contains, laying particular stress on the cleanliness which is most interesting to us as physicians.

SCOPE OF THE STUDY.

Green Bay is supplied by several dairies. Some produce their own milk, but by far the largest part is produced by the farmer who sells it to

*Read before the Brown County Medical Society.

dealers, and they, after subjecting it to certain processes, sell it to the public. There are three kinds of milk delivered:

1. Raw milk.
2. Raw milk from tuberculin tested herds.
3. Pasteurized milk.

After studying the situation I chose five dairies as representative of them all and studied them. This took place in June and July, 1922, and was entirely unknown to the dairies concerned. I made arrangements with several families to order an extra pint of milk on each Tuesday morning. These were placed on ice until I collected them about eight o'clock. They were taken to the laboratory immediately and again placed on ice until they were examined, which was usually between nine and ten A. M. the same day. This we did for eight weeks, and as June and July are our warm months, we can assume that the figures are about as high as they ever run.

GENERAL REVIEW.

Before I present my findings, let us review the composition of milk, the United States, Wisconsin and local standards.

The United States says that "Milk is the fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows properly fed and kept, excluding that obtained within fifteen days before or ten days after calving, and containing not less than 8½% of solids not fat, and not less than 3¼% of milk fat."

The State of Wisconsin differs in requiring not less than 3% of milk fat instead of the 3¼% of the United States. As there is no local standard set we are governed by the Wisconsin standard.

So we have five primary conditions to be met with. Milk must be:

1. Fresh.
2. Clean.
3. From healthy cows.
4. Contain not less than 8½% solids not fat.
5. Contain not less than 3% of milk fat.

FRESHNESS.

Freshness is obtained by prompt collection and distribution of the product. In general milk should be in the hands of the consumer within twenty-four hours after milking. In addition proper methods of cooling and refrigeration must be used during its progress from producer to consumer. The freshness of milk is determined by testing its acidity. This is done by a variety of

methods, most of which consist in titrating milk with deci-normal sodium hydrate solution, using phenolphthaline as an indicator. Milk immediately when drawn is amphoteric in reaction to litmus papers and the acidity gradually increases with the age being influenced by cleanliness and refrigeration. This test is carried out by dairies buying milk and any highly acid milk is refused. This test was not carried out in our investigation.

CLEANLINESS.

Cleanliness in milk from our point of view is of utmost importance. Milk is secreted from the udder in a sterile condition, free from bacteria or dirt of any kind. From this time on it gathers dirt and bacteria. Dirt comes from the cows themselves, the utensils used, from the air in the form of dust or from the milkers, and is found in the form of manure, hair, dust, hay, grain, soil and other foreign substances found about the stables. All of these foreign substances carry with them bacteria, and as milk is an excellent culture media, especially when warm, they rapidly multiply and soon we have them present in great numbers. Cleanliness is determined in two ways. First, by testing for macroscopic dirt, and second, by counting the bacteria which are the microscopic impurities and are a reliable index in determining cleanliness.

The test for macroscopic dirt is made by straining a pint of milk through a cotton disc, using pressure to lessen the time consumed. All particles of dirt will remain on this disc which is then dried and can be preserved for reference. A clean milk should show no sediment.

The bacterial count was determined in these examinations by means of the agar plate method. The bottle of milk to be examined is agitated thoroughly. A small quantity, 1/10 c.c., is removed with a sterile pipette and diluted up to 1 c.c. with sterile water. This 1 c.c. of diluted milk is placed on the agar plate and placed in an incubator at 37.5° C. for twenty-four hours, at which time the colonies are counted, and multiplying by the dilution gives the number in a cubic centimeter. Dilutions of 1 to 10,000—1 to 50,000, or 1 to 100,000 are used. Control plates are run at the same time to avoid error. When we speak of a bacterial count of twenty or twenty-five thousand we mean that number in one cubic centimeter of milk.

We can readily see that the only way to have a

really clean milk bacterially is to keep out the dirt, and in the production of certified milk all the precautions are taken toward this end. You are all familiar with these methods, so I will not burden you with details. We do know that all milk produced by the ordinary methods contain bacteria in large numbers. These bacteria are fairly uniform in type, so much so that in the past they have given rise to the term "milk bacteria." They do vary somewhat according to the kind of dirt which has gained access, and as many as 270 different bacteria have been described. At the present time the tendency is to divide them into large groups. These ordinary organisms found are saprophytes and are as follows:¹

1. Lactic acid bacteria:

Staphylococcus pyogenes, *streptococcus lacticus*, *bacillus coli* and *bacillus lacticus*, the latter the so-called *bacillus bulgaris*.

2. Spore bearing bacteria:

Proteus, hay-bacilli and butyric acid bacteria.

3. Bacteria causing abnormal conditions:

Pigmentation, stringing, etc.

4. Molds and yeasts:

Present in all milk.

Occasionally pathogenic organisms gain access to milk. These gain access in two ways: First, from the cows themselves, and second, from outside sources. Those in the first class are the organisms of bovine tuberculosis, foot and mouth disease and streptococcus infection (Garget's disease). Those in the second class are typhoid, diphtheria, scarlet fever, streptococcus infection, Vincent's angina and tuberculosis.²

The study of pathogenic bacteria in milk is a difficult one and the absolute demonstration of their presence almost impossible. In fact, as you know, there is no causative organism known for scarlet fever. On account of this difficulty, where milk is suspected of being the carrier of disease a general survey of the dairies is made and then if suspicion points to any particular dairy it is examined for persons harboring the disease. That so-called milk-borne epidemics of these diseases have occurred is without doubt true, although the general opinion among investigators is that it has been exaggerated. Kelly³ in an exhaustive study shows that of all cases of these diseases reported in Massachusetts only 3.9% were proven to have been caused by milk. Isolated reports of pure milk-bred epidemics are frequent.

Probably the ever interesting subject of the transmission of tuberculosis by milk should be taken up separately, and I shall do so. We have bovine and so-called human tuberculosis to deal with, the first being transmitted direct from the cows, the latter from tubercular individuals handling the milk. This latter, while conceivable, is not of great importance and my further remarks will deal entirely with the bovine form.

According to the most conservative authorities about 10% of cows are tubercular, the different authorities vary, some going as high as 18% or 20%. The dejecta of all tubercular cattle contain the tubercular organism and it is usually through contamination of the milk by the manure that they gain entrance to the milk. The organism is not secreted in the milk except in cases of tuberculosis of the udder, which is relatively rare. We see that one tubercular cow in a herd can cause the contamination of the entire milk supply. Does this actually happen? The most conservative authorities state that 6% to 8% of market milk contains live organisms of tuberculosis (Heineman, "Milk," p. 446), and in actual examinations results show:

144 samples in Chicago, 10.5% are positive.

Ramsey, "Care and Feeding of Infants," p. 100.

107 samples in New York, 16% positive.—

Hess.

77 samples in London, 22% positive—MacFayden.

Holt "Text Book," p. 145.

As to the actual transmission of the disease to humans, I am going to quote excerpts from the authorities and you can form your own conclusions.

I. Heineman⁴ says, "That bovine tubercle bacilli are infectious for man, especially during infancy, is not to be questioned, and many investigators have shown that a considerable portion of raw market milk harbors living bovine tubercle bacilli. They reach the milk either from a diseased animal directly when the udder is affected, or through the dust from the dejecta of tubercular animals." Also⁵ "Dissemination of human tuberculosis through milk is conceivable, although it does not seem to happen frequently."

II. Holt⁶: "We do not believe the danger of acquiring tuberculosis through milk as great as many have represented; yet milk must be regarded as one of the sources of tuberculous infection. The sale of milk from cows showing evidence of tuber-

culosis on physical examination or from those with tuberculosis of the udder should not be permitted; also the milk of every cow reacting to the tuberculin test unless pasteurized." Also "Infection through milk is of not infrequent occurrence. It has been repeatedly shown that a considerable percentage of milk offered for sale contains tubercle bacilli. In almost all cases of the bovine type, however, they are usually present in small numbers and in most cases doubtless pass through the digestive tract without inducing infection."

III. Ramsey⁸: "It is now practically proven that bovine tuberculosis may infect human beings, although for many years Koch taught the contrary."

IV. Pottenger⁹: "About 10% of all tuberculosis in human beings is due to the bovine bacillus."

V. Hill says in his book on infant feeding: "Many cows are infected with tuberculosis, and the bovine tubercle is definitely pathogenic for man, particularly for young babies and children."

As to whether the milk from a herd which undergoes the tuberculin test every six months is a safe milk is not definitely settled. Authorities can be found for either side of the question. Personally, I would not hesitate to use the milk of a properly tested herd if it was certified also, but the mere testing of a herd and then taking only ordinary precautions in producing the milk does not seem to be sufficient.

It is not the occasional pathogenic organism which holds our entire interest, but the ordinary saprophytes which occur and when present in large numbers cause serious intestinal and gastric disturbance. They do not invade the tissues themselves but attack the food in the bowel, causing fermentation and putrefaction and the formation of toxic end products which cause acute intoxication and gastro-intestinal disturbances. There are the so-called summer diarrhoeas of infancy and childhood, ranging in severity from slight disturbance to a morbid cholera.

TOTAL SOLIDS.

The next requirement of milk is that it should contain at least 8½% solids not fat. These are measured by means of the lactometer, a specific gravity instrument; they consist of the milk albumen, casein, milk sugar and ash.

MILK FAT.

A minimum of 3% of butter or milk fat is re-

quired. The fat is determined by means of the Babcock test, which consists of adding strong sulphuric acid to the milk, which separates the fat, centrifuging in a special tube and the readings made. This is a very accurate and reliable test and considered a standard.

PASTEURIZATION.

In our study we have two different types of milk to deal with: raw and pasteurized. The process of pasteurization is used to destroy bacteria which may be present in the milk. There are three methods used: (1) the flash process, (2) the holding process, and (3) pasteurization in the final package.

In the flash process milk is heated to a relatively high temperature for a short period of time, usually 85° C. (185 F.) for one-half minute. This is the old method and rather discarded at the present time.

In the holding process the milk is placed in a large vat and brought to a temperature of 60° C. (140 F.) for thirty minutes, constantly stirring in order that the heat may be uniform. This is the process now used, and while the apparatus is rather expensive, the machine is so perfected that it is almost automatic and a novice can secure an almost perfect pasteurization.

In pasteurizing in the final package the bottles containing the raw milk are subjected to a heat of 60° C. for thirty minutes.

It has been found by experiment that a heat of 60° C. for thirty minutes will destroy most of the saprophytic and all of the pathogenic bacteria, tuberculosis included. This in no way seriously changes the milk either in taste or physical properties. Of course, in studying a pasteurized milk there is no way of telling the cleanliness of the milk before it was heated. Again, clarifiers are often used which remove all of the macroscopic dirt and so a filthy milk can be made to conform to the local standards.

In regard to the anti-scorbutic properties, Johnson and Hooper¹⁰ state that there is very little, if any, difference between raw, pasteurized or dry milk, and that some anti-scorbutic food, such as orange juice, should be used with all of them.

LOCAL STANDARDS.

There is no local ordinance controlling the milk supply of Green Bay. The Health Officer is guided entirely by the State laws, which are very general in their scope. It must be clean, contain

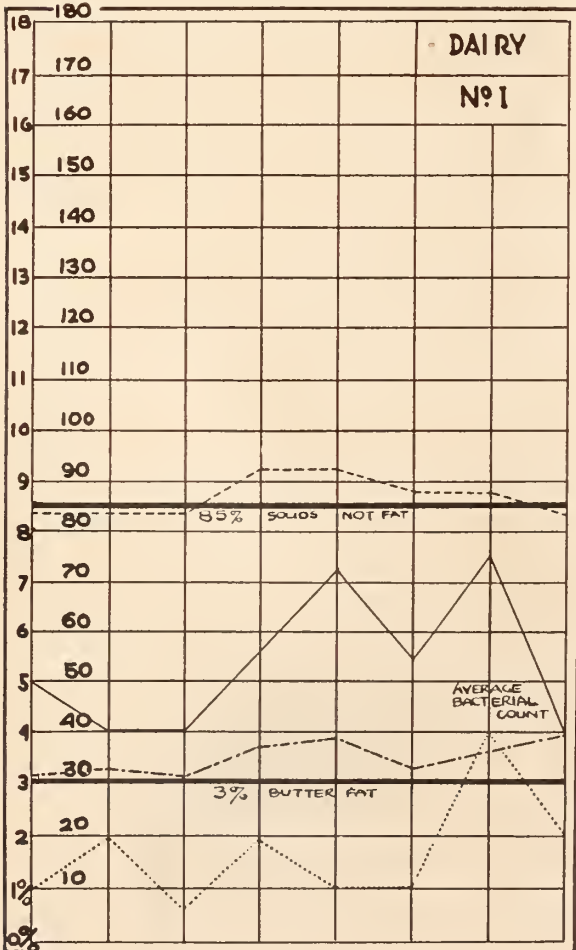
8½% solids not fat and 3% milk fat. There are no set standards in regard to the bacterial counts; however, 10,000 is universally used as a maximum for certified milk, and some states have set a limit of 50,000 for first class market milk.

RESULTS OF STUDIES.

Remember that these tests were carried out during the most unfavorable months of the year, and the bacterial counts during the winter months probably run much lower. First, let us again look over the requirements of standard milk and then take up dairies Nos. 1, 2, 3, 4, 5 and 6 in their order.

Standard Milk. Should be:

- Fresh
- Clean
- From healthy cows.
- Should contain:
 - Not less than 8.5% solids not fat
 - Not less than 3.0% milk fat—Wisconsin
 - 3.25% milk fat—United States.



Bacterial count:
 Good market milk—50,000.
 Certified milk—10,000.

DAIRY NO. 1.

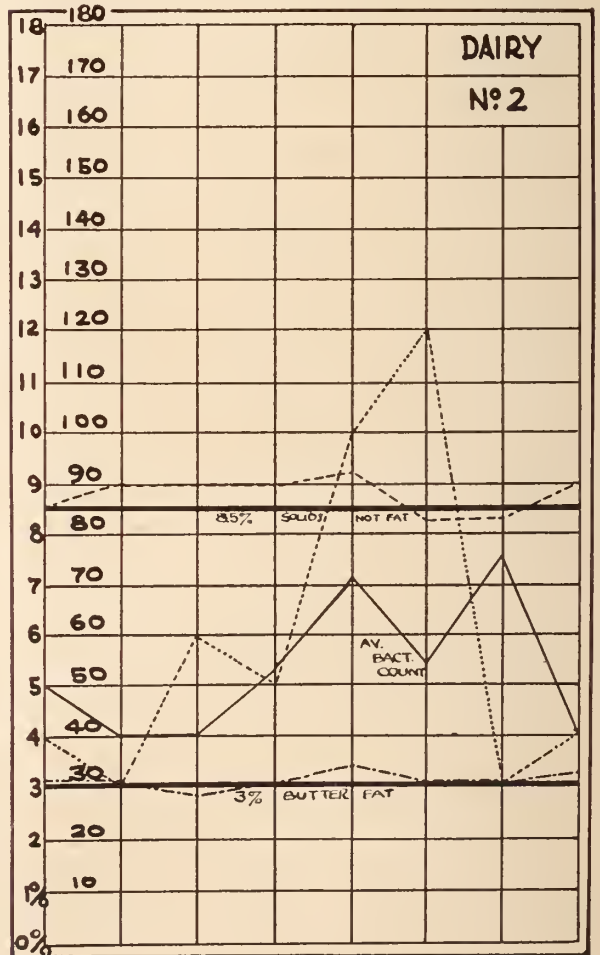
Milk produced by farmers—Clarified—Centrifugal—Pasteurized—Holding process—Utensils and final package—Washed, strained and rinsed in running water.

Total Solids: Low, 8.3%—High 9.2%—Average 8.53%.

Milk Fat: Low, 3.0%—High 3.8%—Average 3.4%.

Bacterial count: Low 5,000—High 40,000—Average 17,000.

Sediment: Excellent 7—Good 1—Fair 0.



DAIRY NO. 2.

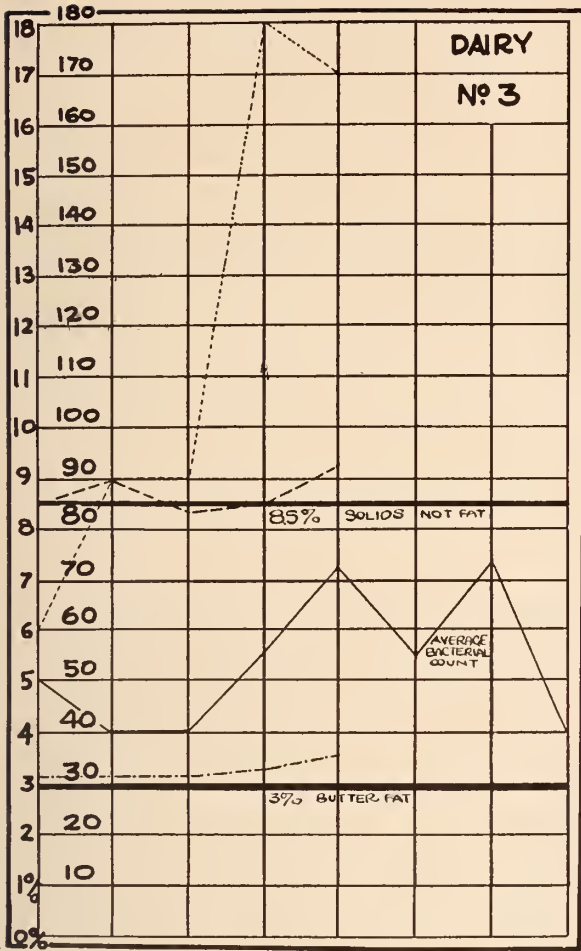
Milk produced by farmers—Clarified,—Straining through cotton—Pasteurized—Holding process—Utensils and final package—washed and steamed.

Total Solids: Low 8.31% — High 9.29% — Average 8.78%.

Milk Fat: Low 2.8%—High 3.4%—Average 3.06%.

Bacterial count: Low 30,000—High 120,000—Average 59,000.

Sediment: Excellent 3—Good 4—Fair 1.



DAIRY NO. 3.

Same milk as Dairy No. 2—Milk bought at several stores.

Bacterial count: Low 60,000—High 180,000—Average 118,000.

Bacteria exactly doubled.

DAIRY NO. 4.

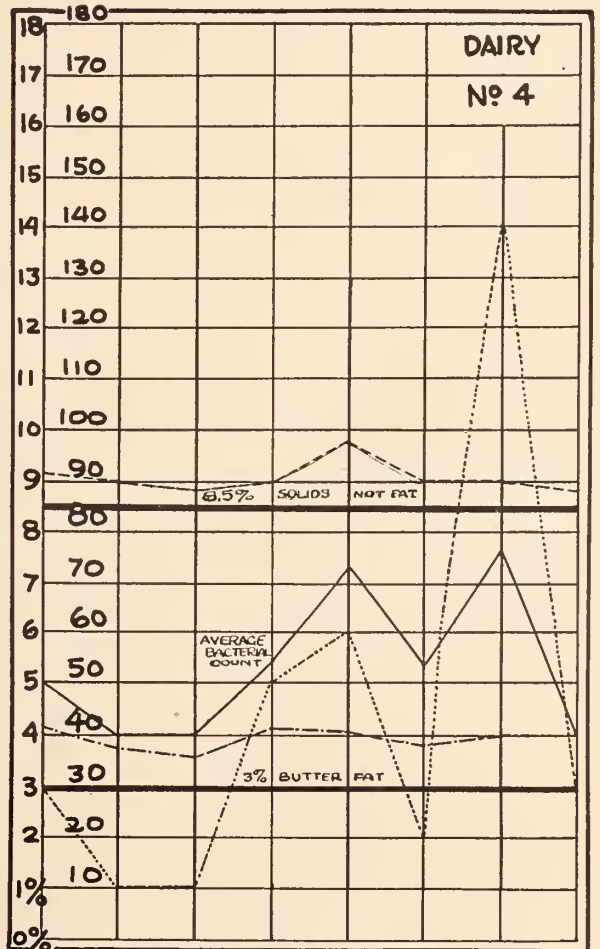
Milk produced by private herd under conditions approaching those for certified milk—Utensils and final package—washed, rinsed and sterilized—Cows tuberculin tested—Milk not Pasteurized.

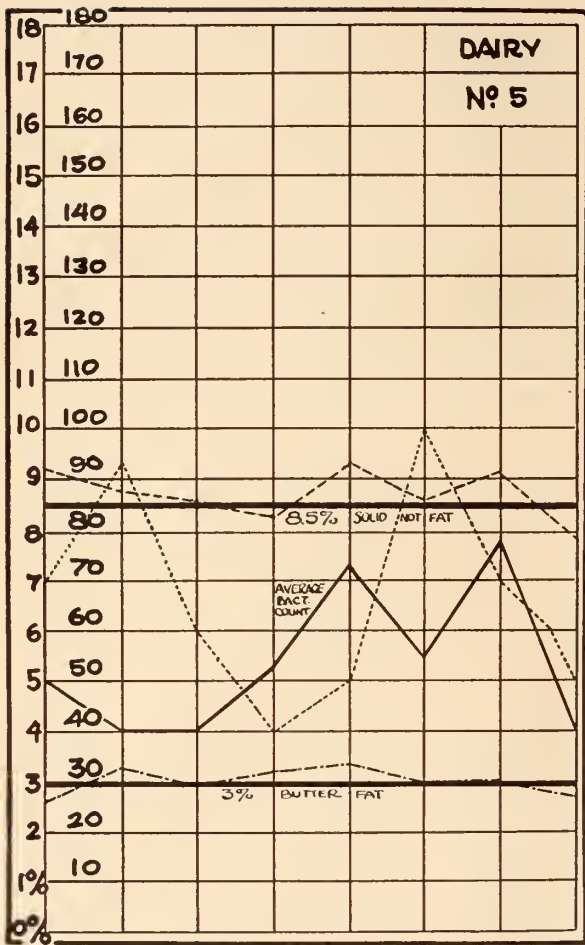
Total Solids: Low 8.52%—High 9.71%—Average 9.06%.

Milk Fat: Low 3.6%—High 4.2%—Average 3.97%.

Bacterial count: Low 10,000—High 140,000—Average 44,000.

Sediment: Excellent 4—Good 4.





DAIRY NO. 5.

Produced by farmers—Clarified—Straining—Pasteurized—Holding process—Utensils and final package—washed, rinsed in vat.

Total Solids: Low, 7.37% ; High 9.28% ; Average 8.46%.

Milk Fat: Low 2.8% High 3.6% ; Average 3.1%.

Bacterial Count: Low 30,000; High 100,000; Average 66,000.

Sediment: Excellent 1; Good 7; Fair 0.

DAIRY NO. 6.

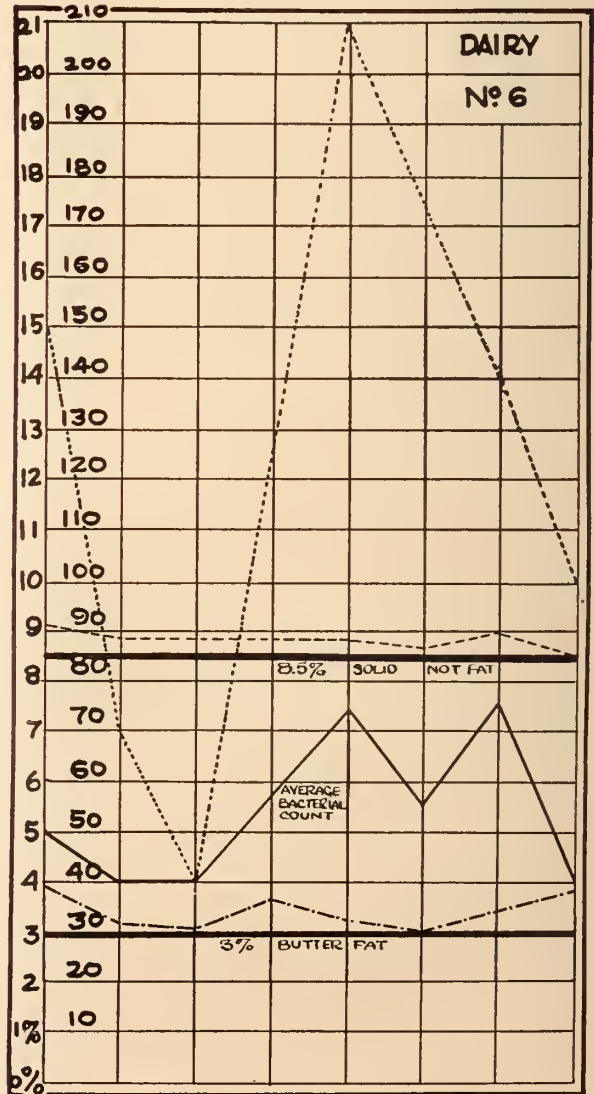
Milk produced by farmers—Not clarified—Pasteurized Holding process—Utensils and final package—scrubbed and steamed.

Total Solids: Low 8.61% ; High 9.02% ; Average 8.71%.

Milk Fat: Low 3.0% ; High 3.8% ; Average 3.37%.

Bacterial count: Low 40,000; High 210,000; Average 127,500.

Sediment: Excellent 0; Good 1; Fair 7.



In order that I might get some idea of the condition of the ordinary raw milk as it is delivered to the dairies by the farmers, I obtained a sample and made a count which showed: bacteria 1,500,000 and a poor sediment test. This same milk when put out by the dairy showed a bacterial count of about 50,000.

The city of Chicago has a good milk ordinance which I have liberally quoted from to illustrate the safeguards which a city can throw around its milk supply. This ordinance contains:

1. A clause requiring the pasteurization of all milk sold in the city.

2. A definite temperature set above which milk cannot be delivered; 55° F. was this temperature.

3. A provision for the inspection of all dairies or concerns which received, bottled, or handled milk in bulk. An application for inspection must first be made to the Commissioner of Health; after his inspection a permit is issued which expires each year. The Commissioner of Health has the right to revoke this permit if conditions are not met with.

4. Inspected milk, cream, skim milk or buttermilk is produced and handled in accordance with the following regulations:

a. Each dairy is marked by means of a score card. (Samples of such a card may be obtained from the Chicago Board of Health or the Wisconsin State Board of Health.)

b. Milk is obtained from tuberculin tested cows—which test occurs every six months—and must be made by an authorized veterinarian.

c. Cows must be kept clean; long hair clipped from flanks, udder and tail.

d. Cows must not be fed on any refuse or decaying matter.

e. Milking must be done by milkers clean as to clothing and person, or by mechanical device.

f. All utensils must be cleaned and sterilized before using and should be of such construction that all parts are absolutely free from places where milk can accumulate.

g. All persons living on farms where milk is produced shall be free from contagious or infectious diseases. Any case of sickness on such farm shall be reported to the health officer at once.

h. Milk should immediately be removed from stable after it has been drawn and strained and cooled to 60° F. or below.

i. Milk for sale must be kept in tightly stoppered bottles.

j. "Inspected milk" should be printed on the caps, which should have tags. The date of the day the milk was bottled is also on the cap.

k. Inspected milk must not contain more than a perceptible amount of sediment and not more than 100,000 bacteria per c.c. from October 1st to May 1st, inclusive, and not more than 150,000 bacteria per c.c. from May 2d to September 30th, inclusive. Cream must not have more than 150,000 for the first period and 300,000 for the second period. The agar plate method is used.

5. Pasteurized milk, skim milk, cream or buttermilk are held to the same regulations.

The bacteria rate is higher for pasteurization. Before pasteurization milk must not contain more than 750,000 bacteria per c.c. from October 1st to May 1st, inclusive, and not more than 1,500,000 bacteria per c.c. from May 2d to September 30th. Such cream shall not contain more than 800,000 bacteria per c.c. from October 1st to May 1st, inclusive, and not more than 1,500,000 bacteria per c.c. from May 2d to September 30th, inclusive.

An application for permit must also be made by the farmer pasteurizing the milk.

Re-inspection of a plant or machinery may be enacted upon request of any person or firm to the Commissioner of Health.

In all continuous pasteurization milk and cream must be heated to a temperature determined by the Commissioner of Health and fixed for each machine to kill 99% of the bacteria and all pathogenic bacteria and shall show no colon bacilli in culture.

A recording apparatus is installed upon all pasteurizers to record during operation the temperature of the pasteurized product as it flows from the heater.

The following condition as to degrees of heat and time of exposure shall be complied with.

A uniform heating of 140° F. for 20 minutes, or 150° F. for 15 minutes, or 155° for 5 minutes, or 160° F. for 1½ minutes, or 165° F. for 1 minute. The time is calculated from the time the entire quantity of milk reaches the required temperature.

All such milk, cream and buttermilk must be labeled "Pasteurized."

PENALTY.

Every person, firm or corporation violating any of the provisions of the foregoing action shall be fined no less than \$5 nor more than \$200 for each and every offense, providing the Commissioner of

Health has notified the firm in writing within three days after discovery of offense.

CONCLUSIONS.

What conclusions can we draw from these findings and review of the literature?

1. Our examinations show that in most instances a good grade of market milk is delivered by the dairies under investigation.

2. Ordinary raw milk should not be allowed to be sold without pasteurization, and every city should have a city ordinance to that effect.

3. That pasteurization properly carried out does not alter the physical properties or antiscorbutic properties to any marked degree, and that pasteurization properly carried out will make ordinary milk safe for human consumption.

4. That bovine tuberculosis is pathogenic for man and that the danger of its transmission by milk is a real one.

5. That although milk and butter have been used for 3,000 years, we have not yet reached adequate standards for its production and distribution.

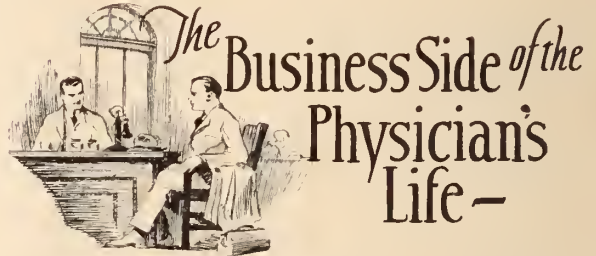
6. That the milk dealers of Green Bay should be congratulated in their efforts to supply to the public a safe raw milk and safe pasteurized milk, and further, that they have a right to expect and should be protected from unfair competition by City ordinance when such unfair competition means the distribution of unsafe milk to the public.

7. That we must agree with Dr. Charles Christadore in an article on "Certified and Pasteurized Milk" when he says that we have gone through the age of neglect, the water age, the skim milk stage, the preservative age and the tubercular stage, and are now in the pasteurization stage when all unsafe milk can be made safe by proper pasteurization, and that a golden age will be "when all milk shall be certified in the full and sanitary sense and meaning of the term as to environments and methods, machine clarification immediately after milking before germ multiplication has commenced, then cooling and bottling at the farm, pasteurization after bottling to make assurance doubly sure."

REFERENCES.

1. Heineman—Text Book "Milk" p. 342.
2. Heineman—"Milk", p. 342.
3. Kelly—J. A. M. A., 1916, Vol. 67, p. 1667.
4. Heineman—"Milk", p. 435.
5. Heineman—"Milk", p. 443.

6. Holt—"Pediatrics", p. 146.
7. Holt—"Pediatrics", p. 1070.
8. Ramsey—"Care & Feeding of Infants and Children", p. 269.
9. Pottenger—Southern Med. Journal, 1915, VII, p. 935.
10. Johnson & Hooper—Public Health Reports, April 28, 1922. "The Comparative Study of the Antiscorbutic Value of Milk."



Well, I see that some statistical shark down in the offices of the American Medical Association has been collecting data on the sporting proclivities of the genus medico.

His figures aren't complete, of course. Not a word is said about the proportion that are willing to burn a little midnight gas trying to draw to a bob-tailed flush. Yet I know that is a very respectable percentage—respectable in a quantitative sense, let me add, lest THE WISCONSIN MEDICAL JOURNAL be taken to task for seeming to couple bob-tailed flushes and respectability in the same brackets.

Then he fails to enumerate the number who will take a sporting chance on the quality of those pint flasks that our druggist friends tell us so confidently are not a day less than eight years old. For real sporting chances, there's the king of indoor sports.

But he has found that 28% of physicians are addicted to golf in a more or less advanced stage of the disease.

"Tut, tut," what would the old-time physician say to that, that earnest old worker who felt that his duty to his community wasn't discharged in full unless he spent his mornings, afternoons, evenings and half the nights dashing madly around the country, curing the community ills and forgetting to collect his bills, world without end until he blew up with a grand flourish for lack of a change of pace and was buried at the ripe old age of 47.

No, that old-time physician wouldn't have understood the modern physician who can and will close up shop once in a while and go out for a

round of golf or fishing. But even the doctors—some of them—are beginning to get, as well as prescribe, a bit of sense.

One of the disciples of our related profession, dentistry, has had his name in the papers a good deal of late because of his participation in the British amateur golf championships in May. Due to Dr. Willing of Portland, Oregon., more than to any other man, the Walker cup stayed in the possession of America. Because, in the pinch, with the cup depending on him, he played steady winning golf.

The story was told that the gallery following his play became restless at times because of the deliberation Dr. Willing showed in making his shots. Every play was studied, many of them measured, and when he played, he knew just what he was after. What the gallery thought about it, didn't concern him at all. Winning that game was his business, not the gallery's.

I'll bet a Russian ruble or two that the same quality of steadiness and persistency that Dr. Willing showed in golf carries through into his professional work and his business experiences. For there are qualities in good golf playing that crop out unmistakably in our work-a-day life.

It isn't the flashy, spectacular player who usually turns in the best score in golf, and it isn't the hip, hip, hurrah business man who makes the big success. True, he makes a lot of noise for a while, and creates an appearance of prosperity that is oftentimes confusing. But usually it doesn't last.

Good golf is like good business judgment. We all of us know, if we stop really to think, that mighty few men can play the long shot and expect to come out winners. Yet the man who wouldn't think of trying to guess under what pod the little pea is resting or playing a forty-to-one shot at the races, will go head first into a speculation with a sublime faith that it's going to put him way up at number 900 Easy Street.

Then there's the chap, and his case perhaps is saddest, who plugs along with a steady plan of saving, gradually building up a modest but sure income fund over the course of the years, and gets to the point where he is beginning to see financial independence just a little way ahead. Along comes someone with a proposition that promises fabulous returns for his money, and in he sticks his pile—all the accumulations of the years—with ninety-five chances out of a hundred that he'll see it all swept away.

He's like the fellow that tosses his game away on the greens. Off with a wonderful drive, with pretty consistent iron and mashie plays on the fairway, with a neat stroke to the green—only to toss it away with a series of wild putts. The golf links are full of that type of player.

And business life is full of that type of business man.

Most professional men, and certainly most physicians, earn during their best productive years, enough surplus over and above the cost of maintaining their families to provide them with a sure and ample income to retire on. They won't get it by trying to put Wall Street out of business or flirting with long-shot speculations.

But they can get it by playing good golf. The steady, persistent, consistent game. The sort that Dr. Willing played. Investment in sound, well-balanced securities, bought with the advice and counsel of an established security house, is the game that brings most of us onto and through the eighteenth hole with a par score.

DAMAGES FOR CONSCIOUS PAIN DEADENED BY OPIATES.

(*Wasieck v. M. Carpenter Baking Company (Wis.)*, 191 N. W. R. 503).

The Supreme Court of Wisconsin says that this action was brought by the plaintiff as administratrix to recover damages for the death of her husband, a city fireman, who was killed through a collision of the defendant company's automobile with a fire truck on which he was riding. A judgment for damages was entered which allowed \$10,000 for compensation of the widow; for the estate, exclusive of pain and suffering, \$600, and for pain and suffering, \$2,625. The supreme court approves the first two items, and reduces the third one to \$500. There is no yardstick, the court explains, by which either the jury or the court can accurately measure the damages in a case of this kind. The amount awarded for pain and suffering was much more difficult of approximation than that allowed for compensation of the widow. It must be manifest that \$2,625 for three hours of conscious pain and suffering, deadened by opiates, could not stand, for, if so, there would be cases in which such damages would mount into hundreds of thousands of dollars, maybe millions. There is no accurate scale by which either court or jury can determine damages for pain and suffering. They must, however, exercise their judgment and discretion. But this court, having before it many cases in which juries have passed on damages for pain and suffering, is able, by considering these and the circumstances of each, to get a fairly balanced average, and concludes that \$500 is the utmost that can be allowed in this case for pain and suffering. The verdict of the jury was not perverse. The jury simply had no tangible evidence on which to base it.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1923

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A. J. WEISENDER, Berlin, 1st Vice President
J. L. YATES, Milwaukee, 2nd Vice President

E. E. TUPPER, Eau Claire
3rd Vice President

S. S. HALL, Ripon, Treasurer
Mr. J. G. CROWNHART, Executive Secretary
558 Jefferson St Milwaukee

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Table with columns for Term Expires (1923, 1924, 1925, 1926, 1927, 1928) and Councilor names with their respective districts.

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H. M. BROWN, Milwaukee
ROCK SLEYSER, Wauwatosa
JOSEPH F. SMITH, Wausau

Alternates

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F. G. CONNELL, Oshkosh
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Committee on Health and Public Instruction

W. D. STOVALL, Madison
W. H. WASHBURN, Milwaukee
I. F. THOMPSON, Madison

SECTION ON PUBLIC HEALTH AND PREVENTIVE MEDICINE

Table with columns for Medical Section and Surgical Section, listing names and roles like Chairman, Secretary, and Chairmen.

Advertising Representative: Cooperative Medical Advertising Bureau, 535 North Dearborn St., Chicago, Ill.

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Large table listing County, President, and Secretary for various Wisconsin counties.

SOCIETY PROCEEDINGS

BARRON-P-W-S-B COUNTY

A meeting of the Barron-P-W-S-B County Medical Society was held at the Lakeside Hospital at Rice Lake on May 22nd. Dr. Dawson conducted a clinic after which papers were read by Dr. Galloway of Clayton; a paper on Insulin by Dr. Harold Marsh of Madison; and one on Infant Feeding by Dr. T. L. Birnberg of St. Paul.

BROWN-KEWAUNEE COUNTY

Members of the Brown-Kewaunee County Medical Society were guests at the Hickory Grove Sanatorium May 14th. After a chicken dinner a short business session was held. The closing of offices on Saturday afternoons during the summer was discussed.

FOX RIVER VALLEY SOCIETY

Dr. C. J. Combs, Oshkosh, was chosen president of the Fox River Valley Medical Society at its meeting at Green Bay June 1st. Other officers elected were Dr. H. F. Schroeder, Marinette, first vice-president; Dr. W. M. Wochos, Kewaunee, second vice-president; Dr. R. L. Cowles, Green Bay, re-elected secretary-treasurer; and Dr. M. J. Sanborn of Appleton, censor.

In an address by Dr. R. A. Walker, retiring president now of Lansing, Mich., necessity for closer public relationship was stressed. Dr. Walker suggested dignified advertising and dropping of that part of the code that was not in keeping with progress, as a means to this end.

The following papers were presented during the sessions of the society: "Childlessness and Sex Vigor" by Dr. Victor Lespinasse of Chicago; "Obstetrical Anesthesia," by Dr. Carl S. Harper, Madison; "Radium Therapy," by Dr. A. O. Olmstead, Green Bay; and "A Plea for Rhinology," by Dr. W. C. Comee of Green Bay.

KENOSHA COUNTY

The Kenosha County Medical and Dental Societies were hosts to members of the Racine County Dental Society at a two day meeting held at Kenosha during the last week in May. Clinics were held at St. Catherine's hospital and the sessions were closed with a banquet held at the Kenosha Elks' Club.

LA CROSSE COUNTY

The regular meeting of the LaCrosse County Medical Society was held at Oak Forest Sanitarium Thursday evening, May 17, 1923.

The program was arranged by Dr. George W. Lueck, Medical Superintendent of Oak Forest Sanitarium. Following a dinner at 6:30, Dr. T. L. Harrington of Milwaukee delivered an interesting and instructive talk on "The Opportunity and Obligation of the Family Physician in Lowering the Death Rate from Tuberculosis."

This was the annual spring meeting held at the Sanitarium each spring due to the kindness of Dr. Lueck, an admirable host.

MILWAUKEE ACADEMY OF MEDICINE

Dr. J. L. Yates, Milwaukee, presented a paper on "Cancer, Its Treatment based on Biological Aspects" at the meeting of the Academy held on May 22nd. The last meeting until the fall months was held on Tuesday evening, June 12th.

MILWAUKEE COUNTY

Discussion of the "Cult of Abrams" brought a near record attendance to the last spring meeting of the Milwaukee County Medical Society held at Hotel Pfister on May tenth. Dr. Arthur Cramp, director of the Propaganda Department of the A. M. A., presented this subject, aided by lantern slides, tracing the history of the cult.

Following the program, upon motion of Dr. G. E. Seaman, the society adopted the following resolution:

"Be it resolved, That the entire Abrams' method is such a palpable fraud that this Society considers it beneath its dignity to appoint a committee to investigate it, and that the pursuit of the Abrams' method on the part of any member of this Society shall be considered inconsistent with membership in the Society."

NINTH DISTRICT SOCIETY

Upwards of 60 members of the Ninth Councilor District Society met in Stevens Point in May. Dr. C. C. Walsh, Merrill, was elected president for the coming year and Dr. Joseph F. Smith was re-elected secretary-treasurer. Following an all day clinic several papers were read and discussed at the evening meeting.

Dr. Carl Beck, Chicago, spoke on "Immunity as Related to Surgery;" Dr. D. Walters, Wisconsin Rapids, "Appendicitis;" Dr. V. E. Eastman, Wausau, "Insulin;" and Dr. F. A. Southwick on "Treatment of Goiter." Dr. F. J. Gaenslen, Milwaukee, conducted a clinic for crippled children during the day. The next meeting will be held at Wisconsin Rapids.

ROCK COUNTY

A joint meeting of the Rock County Medical and Dental societies was held in Janesville on May 7th. Dr. Boyd Gardner, head of the dental department of the Mayo Clinic, Rochester, delivered a paper on "The Relationship between Focal Infection and Systemic Diseases."

SANATORIUM CONFERENCE

The need for increased sanatorium facilities for tuberculous children and a program for their education while in the institutions; the necessity for a hardening process or post-graduate course for the sanatorium graduate before he returns to his regular work; the importance of advertising Wisconsin sanatoria to the

people of Wisconsin; and the desirability of special training for tuberculosis nurses were among the outstanding points brought out at the State Mid-Year Sanatorium Conference, held at Hickory Grove Sanatorium, De Pere. Nearly 100 sanatorium physicians, superintendents, trustees, nurses, County Board members and others attended the conference conducted by the Wisconsin Anti-Tuberculosis Association.

The urgent need of immediately increasing the facilities of Tomahawk Lake Camp, where tuberculosis convalescents are given a hardening process through graded labor after discharge from the sanatoria, was emphasized by several speakers. That the Camp in its present capacity serves approximately but twelve per cent of the state convalescents was stated by Frank Reich, superintendent of the camp. An appropriation made two years ago, which would make possible the enlargement of the institution to a capacity of 60 patients, has not as yet been released by the governor.

One of the most inspiring talks of the meeting was given by Miss Mary Hughes, superintendent of Mount View Sanatorium, Wausau, who spoke on "The Duties of a Sanatorium Superintendent."

"It is deeply essential that a superintendent should ever bear in mind that the most important person in the institution is the patient, for whom the sanatorium exists; that when a new patient enters its doors to spend many weeks or months, it is the entire man or woman, who enters—body, mind and soul, and that any system which ignores one or the other of these factors, will be to the disadvantage of the patient," said Miss Hughes.

The problem of employment for the sanatorium graduate was the subject of a talk by Attorney F. E. Bachner of Wausau, who spent three years as a patient in Wisconsin Sanatoria.

"The sanatorium graduate leaves your hands, big, hearty, well-looking and seemingly ready to do a man's work in the world," he said. "Your good wishes follow him as he goes. His family and friends outside welcome his return to them. It is his happy day. His former employer adds his congratulations to the many, and tells him that his job is still open for him. 'But,' says the graduate, 'the superintendent of the sanatorium says that I must take it easy.' 'That's alright,' says the employer, 'We'll start you easy.' The easy start continues about ten days. The man looks fine, why should he be pampered? Then follows a story that is not at all uncommon. The graduate is doing a full day's work. He feels that he shouldn't be doing this, but he urgently needs the job and the earnings, so he continues. He refuses to consider a few returning symptoms. A month or six weeks and he is again knocking at your door, with his chances of regaining health immeasurably dimmed. Nothing is more discouraging, not only to the one relapsing, but to the staff, and worst of all, to every patient in the sanatorium!"

"This is why I call the problem a serious one. Of what good, I ask you, are all your rest and air and food

—your careful supervision—your discipline—your solicitous watchfulness—when they must end at the sanatorium door? The tuberculous patient can obtain rest and air and food at home, but you know that is not sufficient. There must be in addition, that one thing that I rank higher than any of the others, and probably the equal of all three of them. *And that is discipline!* I am unalterably convinced that to be a good disciplinarian is the first and most important attribute of a sanatorium superintendent. Those sanatoria that most severely restrict the activities of the patient are ever the most successful. It is better to be cursed by your patients and bring them health, than to be beloved by them and have them die. This discipline, as I call it, must not stop at the sanatorium door."

That new legislation makes it possible for patients to enter sanatorium for observation when tuberculosis is suspected without waiting for a positive diagnosis, and that the term "Indigent" in regard to county charges entering sanatoria has been changed to "those unable to pay" was briefly explained by Miss Nellie Van Kooy of the staff of the Wisconsin Anti-Tuberculosis Association.

Dr. J. V. Conroy, Pureair Sanatorium, urged the building of separate pavilions for tuberculous children and Dr. J. W. Coon of Stevens Point spoke of the need for more open air schools in Wisconsin cities as a preventive measure. A. L. Simon, superintendent of the East De Pere schools, who has conducted classes for the patients at Hickory Grove sanatorium, during the past winter, urged a state wide system of education for the children in the sanatoria. Major B. E. Hedding, head of the new federal hospital for tubercular ex-service men at Milwaukee, told of the program of the institution which aims to prepare the men to resume their places in the working world. More extensive publicity and a regular advertising campaign for Wisconsin sanatoria was urged by Dr. Hoyt E. Dearholt, executive secretary of the Wisconsin Anti-Tuberculosis Association. Other speakers were: H. W. Williams, statistician of the State Board of Control; Miss Adda Eldridge, secretary of the Bureau of Nursing Education, and Dr. Frank Bauman of the State Board of Health.

VERNON COUNTY

Members of the Vernon County Medical Society and their wives were the guests of Dr. and Mrs. C. E. Lauder of Viroqua on May 19th. Following a dinner Dr. Harold Marsh of Madison spoke on "The Treatment of Diabetes." A short business session closed the meeting.

WISCONSIN SURGICAL ASSOCIATION

Members of the Wisconsin Surgical Association held their annual meeting in LaCrosse on May 9th and 10th. Dr. Edward Evans, La Crosse, was elected president of the association for the coming year succeeding Dr. F. J. Gaenslen of Milwaukee.

Clinics were held during the mornings while the

afternoons were devoted to discussions. The presidential address by Dr. Gaenslen was on "The Care of the Crippled."

The following papers were read during the course of the meeting: "Biological Causes of Incompetency," Dr. H. M. Brown, Milwaukee; "Non-Union of Tissue," Dean D. Lewis, of Chicago; "A Method of Removing Metallic Material from the Lungs," Dr. J. R. Minahan of Green Bay; "Diseases of the Rectum and Anus," by Dr. R. J. Pennington, Chicago; "The Therapeutic Significance of a Biological Conception of Cancer," Dr. J. L. Yates, Milwaukee; "X-ray Manifestations of Gastric Syphilis," by Dr. Percy Brown, Madison; "Recto-peritoneal Tumors," by Dr. F. A. Stratton, Milwaukee; "Management of Toxic Goiter," by Dr. F. J. Plonke, St. Paul; "Value of Transfusions of Blood in Anemias," by Dr. H. T. Kristjansono, Milwaukee; and "The Surgery of Abdominal Tuberculosis," by Drs. F. J. Pember and T. W. Nuzum of Janesville.

CORRESPONDENCE

June 1, 1923.

Dr. Rock Sleyster, Editor,
Wisconsin Medical Journal,
Wauwatosa, Wisconsin.

My dear Dr. Sleyster:

We very much regret the publication in the May issue of the Journal of the program of the Dane County Annual Clinic Day inasmuch as what was set forth therein merely covered that part of the program given by the Jackson Clinic staff. As a matter of fact complete programs were given at all of the other hospitals in addition. Unfortunately none of these programs, apparently, were available to you, as we know that they would also have been published in that event.

We are calling this to your attention first, because we want you to know of the unintentional omission and second, because we should regret it if any of the local fraternity or hospitals should in any way feel slighted.

With best personal regards from us all, I am,

Sincerely yours,

J. W. JACKSON.

Editor's Note: Many of the notes under "Society Proceedings," in absence of official reports, must be made up from material at hand. In this particular instance the fact that but a partial program had been published was not discovered until the May issue was in press. The fault, if any, was the Managing Editor's rather than of the Jackson Clinic.

CORRECTION.

In the May issue, page 582, The Journal quoted Dr. Samuel S. Higgins in his letter as saying "The attending physician was and is now a member of the State Medical Society."

The letter should have read "The attending physician was and is not a member of the State Medical Society."

The typographical error just reversed the meaning of this key sentence.

NEWS ITEMS AND PERSONALS

Concrete and steel framework for the new seven story Wisconsin State General Hospital at Madison is now complete. Construction work was carried on during the winter so that the institution may be opened at the earliest possible date.

Dr. W. E. Ground, Superior, sailed for London on June 16th for rest and research work on the prevention and cure of cancer.

Dr. W. W. Johnston, city health officer of Racine, has tendered his resignation effective upon appointment of a successor. The resignation followed refusal of the Mayor to sign the payroll claiming right of appointment of members of the health board.

Wisconsin has now accepted the provisions of the Sheppard-Towner federal maternity act. An appropriation of \$23,000 annually has been made to include the work under the provisions of this act.

Dr. G. V. Mears, Fond du Lac, has disposed of his home and will leave next fall for Jacksonville, Fla. Dr. Mears retired from active practice in 1920.

Dr. Vernon A. Chapman, Milwaukee, is now located in the Colby-Abbott building at 445 Milwaukee Street. Dr. R. O. Brunkhorst, Milwaukee, has moved to 416 East North Avenue.

To Dr. C. J. Combs, Oshkosh, has fallen the honor of being elected president of the Oshkosh Rotary Club. Dr. Combs was installed on May 8th.

Dedication of a new wing to St. Elizabeth Hospital, Appleton, has been set for July third. It is expected that the wing will be ready for use at that time.

Caught in a train wreck at Salt Lake City, May third, Dr. M. M. Young, Ashland, was one of three physicians to give first aid. Six were killed and thirty injured in the wreck. Dr. Young and his companions had attended all but a few of the injured before the relief train reached the scene of the disaster.

Dr. Nels Werner of Barron has moved to Eau Claire where he is now associated with Dr. H. C. U. Midelfart and staff.

A Milwaukee alumni chapter of Alpha Kappa Kappa will be formed in the near future. A group of Milwaukee members held a preliminary meeting to discuss plans in May.

Struck by a passenger train near Kaukauna, Dr. C. C. Del Marcelle, Neenah city health officer, sustained three

fractured ribs and minor injuries. Dr. Del Marcelle was thrown from his automobile which was carried up the track by the fast moving train.

Dr. W. A. Engsberg, Lake Mills, has disposed of his active practice to Dr. T. J. Buckley. Dr. Engsberg was recently elected cashier of the Bank of Lake Mills.

Registered nurses of the state are making vigorous protest against a bill recently introduced in the legislature permitting physicians to use other than registered nurses in hospitals.

"The passage of bill 439 S would abolish all registration and would injure the standing of Wisconsin nurses in other states," declares Miss Agnes W. Reid, president of the state nurses' association.

Struck by an automobile when crossing a street during a storm, Dr. Lorenzo A. Winn, Poynette, sustained injuries that have confined him to his home. Dr. Winn is the oldest practicing physician in that city.

The commissioner of pensions at Washington has announced the appointment of Dr. A. A. Beek at Wautoma as pension surgeon.

Dr. Willard Chipman, son of Dr. and Mrs. H. A. Chipman of Stoughton has written an intensely interesting article in the June American magazine on his experiences as an Ambulance Surgeon. Dr. Willard Chipman is on the staff of Bellevue hospital, New York City.

For the second time in two years, Dr. M. F. Campbell, formerly of Madison, has won the annual science prize of the Bellevue Alumni Association. Dr. Campbell is a graduate of the University of Wisconsin.

Dr. Leander J. Foley has been elected president of the staff of the Milwaukee Maternity hospital.

Dr. and Mrs. T. W. Ashley, Kenosha, left on June 16th for Vienna. They will spend the summer in Vienna where Dr. Ashley will do special study.

The state board of control has accepted the resignation of Dr. Harry Sauthoff of the Mendota state hospital for the insane. Dr. Sauthoff will become associated with Dr. Frank S. Meade, Madison, in private practice.

The Waldheim Park Sanatorium, Oconomowoc, has been sold to the Toren Restoration Hospital, Inc., Chicago. The recorded sale price was \$85,000.

Mrs. V. S. Falk, wife of Dr. Victor Falk, Stoughton, died on June 3rd, after a long illness.

Governor Blaine has signed the Webber bill making it possible for Milwaukee county to erect a hospital to which citizens of the county may be admitted even though they are admittedly not actually destitute.

Struck by a street car while in a Chicago taxi, Dr. A. W. and Margaret Trevitt, Wausau, had a narrow escape from serious injury. The driver was seriously injured while Dr. Trevitt was thrown through the glass partition.

Dr. C. B. Devine, Marshall, has left for Prescott, Arizona, where he will enter the service of the U. S. Veterans' Bureau.

DEATHS

Dr. E. Wells Kellogg, Milwaukee, died at his home on May 19th, at the age of 63. Dr. Kellogg had a wide circle of friends and at one time occupied the chair of therapeutics in the old Wisconsin College of Physicians and Surgeons, Milwaukee's first medical institution.

Born in Roscoe, Ill., Oct. 9, 1859, Dr. Kellogg graduated from Carleton College and from Rush. He came to Milwaukee in 1889, establishing his practice which he continued up to the time of his death.

Dr. Kellogg was a member of the American Medical Association, State Medical Society, and the Milwaukee County Medical Society. He was also a thirty-second degree Mason and a member of the state board of directors for the Y. M. C. A.

Dr. John A. Gault, Lancaster, died in Milwaukee on May 15th. Born in Rosendale, Wisconsin, Oct. 21, 1862, Dr. Gault graduated from Rush in 1898 and six months later located in Lancaster where he had since maintained his practice.

He was a member of the American Medical Association, State Medical Society, and the Grant County Medical Society. Dr. Gault stood high in Masonic, K. P., and M. W. A. orders.

Dr. W. S. Blunt, Waupun, died at St. Mary's Hospital, Fond du Lac, May 26th following an operation for appendicitis and gall stones.

Dr. John T. Sullivan, Milwaukee, died at his home on May 26th. He graduated from Marquette Medical School in 1911, establishing his practice in 1914. He was well known as a former Marquette cheer leader and as a ball player. He was a member of the Cincinnati Reds in 1910 and of the Louisville Colonels in 1911.

LEGAL NOTES

Governor Blaine announced this month his veto of a bill that would extend the scope of physicians' testimony. This bill, introduced at the request of the circuit judges of the state, in its original form took away from the doctor the right to testify in his own behalf when such testimony might tend to injure the reputation of his patient. After protest by the representative of the state society, the bill was amended to accomplish "what we had in mind."

Whether the amended bill should become a law then became a matter of public policy. Governor Blaine declared that the policy of the state to treat

the relations between the physician and patient as confidential shall not be disturbed. The veto follows:

"TO THE HONORABLE, THE SENATE:

"I return herewith, without my approval, Bill No. 167, S.

"It has been alleged that the purpose of this bill is to meet the criticism made by Justice Owen in the case of *Maine v. Maryland Company*, 172 Wis. 350, in his dissenting opinion.

"Chapter 122 of the Laws of 1921 was enacted for the purpose of meeting the question raised by Justice Owen, and, in my opinion, the amendment then adopted effectively meets the question raised in said opinion.

"This bill is evidently intended to secure evidence in personal injury actions, as it provides for testimony of physicians as to the physical condition of such patient, although there may be other occasions where it will be used.

"It has been the policy of the state heretofore to treat the relation of lawyer and client, priest and confessor, physician and patient, as privileged. This bill will to a large extent change that public policy. On the face of it, it seems to be quite an innocent provision, but in practice, as conditions actually exist, it is not so innocent as it looks.

"For instance, we know that large employers, like railroad companies, et cetera, employ physicians who treat their employes. The physician becomes possessed of information which no one else has, which may be used against the patient. In such cases I think workmen may feel with much justice that the physician will be a prejudiced witness against him.

"The innocent looking part of this bill is that in any civil action a physician employed directly by a patient may testify as to the physical condition of such patient. That is not the objectionable feature, and if that were what the bill accomplished I would hesitate in withholding my approval.

"The dangerous part of the bill is that which provides that in any civil action any physician who is employed by anyone in behalf of the injured person may testify. The words 'or by anyone in his behalf' open the door for the so-called 'company physician' to testify as to the physical condition of the patient. As I have said, it is well understood that large employers have what is known as a 'company physician.' He treats the employes without pay. Often the arrangement is made expressly, and if not expressly, impliedly,

that such treatment by the company physician is a part of the contract of employment, and thereby the employer, as a legal conclusion, employs such company physician on behalf of the employe who may be the injured patient. In other cases such company physician becomes a physician employed on behalf of the employe through the acquiescence of the employe.

"The net legal effect of this bill is to permit the company physician to testify in civil actions, involving a cause for personal injury, as to the physical condition of the injured person. This, of course, destroys the confidential relationship between patient and physician. It does more than that, and it does the objectionable thing, and that is, to permit the paid physician of the employer to become a witness in behalf of the employer in a personal injury action against the injured employe who has been the patient of such physician.

"There is another valid objection to the bill. It destroys the effect of the amendment two years ago which was adopted to meet the very question raised by Judge Owen, to which I first called attention. Under this bill, in actions involving an accident insurance policy, or under a life insurance policy providing for additional benefits in case of death arising through certain accidents, on the death of the insured the physician selected by the personal representatives of the deceased would be excluded from giving testimony as to the cause of such accidental death that the physician might derive from a physical examination, for certainly after the death of a person no physician can be authorized on behalf of such deceased. Death closes any power to give authorization by the deceased or by anyone else in his behalf.

"The first assigned reason seems sufficient to justify disapproval, and the disapproval might well rest upon the first statement. However, I thought attention ought to be called to the fact that this bill destroys the very purpose of the amendment of two years ago, adopted to meet the very valuable suggestion of Judge Owen in the case cited.

"Respectfully submitted,

"JOHN J. BLAINE,
"Governor."

COURT SUSTAINS HOSPITAL

The Supreme Court of Wisconsin on June 5th handed down the following decision which establishes the right of hospitals to regulate, beyond

question, those who may be permitted to practice within the hospitals. The decision is of great interest to the members of the medical profession.

"This is a mandamus action brought by plaintiffs, who are co-partners engaged in the practice of medicine and surgery at La Crosse, to compel their reinstatement as members of the medical staff of the defendant hospital association.

"The petition states that the defendant was incorporated in October, 1899, under the provisions of Ch. 86 of the revised statutes, without capital stock, to conduct, promote, pursue and maintain the establishment and maintenance of a hospital situated in the city of La Crosse for the benefit of the sick, infirm and aged; that its hospital was built and equipped, in part, by voluntary subscriptions, and has been maintained ever since, in part, by voluntary subscriptions; that during all the time the petitioners practiced their profession each has enjoyed the privileges of said hospital and complied with all the rules and regulations prescribed by said corporation; that on or about the 1st day of September, 1919, the said hospital association, in conformity with the movement initiated by the American College of Surgeons to standardize hospital service and secure medical and surgical standards, and by virtue of the authority in them vested by the articles of incorporation of said La Crosse Lutheran Hospital Association, formed and created an organization known as the attending staff of the La Crosse Lutheran Hospital Association, and thereupon duly and regularly adopted a constitution and by-laws for the government of said attending staff. The constitution and by-laws declared that the La Crosse Lutheran Hospital has formed, through its board of directors, an organization known as the attending staff of the La Crosse Lutheran Hospital, consisting of eight members, including petitioners; that the purpose of the organization shall be to secure and maintain high medical and surgical standards; to encourage the spirit of cooperation among the members of the attending staff and the hospital, thus securing the maximum welfare of the patients, aiding the scientific advancement of its members as well as the interns and nurses coming under its influence. It was provided that vacancies shall be filled and additional appointments shall be made by the board of directors on recommendation by the attending staff; that the attending staff shall hold monthly

meetings at the hospital for the scientific discussion of records and cases under treatment, and such other matters as may properly come before this body in the interest of the hospital. All members of the attending staff were required to subscribe to the following declarations: "I hereby promise, upon my honor as a gentleman, that I shall not, as long as I am permitted to practice in the La Crosse Lutheran Hospital, practice division of fees in any form; neither collecting fees for others, referring patients to me, nor permitting them to collect fees for me; nor will I make joint fees with physicians and surgeons referring patients to me for operation or consultation; nor will I directly or indirectly compensate any one referring patients to me; nor will I knowingly permit any agent or associate to do so." Comprehensive rules were prescribed for the government of the attending staff, among which were the following:

"4. Unprofessional and unethical conduct and violation of the rules of this staff shall constitute a cause for expulsion. Any member against whom charges have been preferred shall be notified of such charges, and shall have the opportunity of appearing before the attending staff and the board of directors in joint meetings in his own defense before final action shall be taken.

"5. Three-fourths vote of the staff shall be necessary to recommend expulsion of a member."

"It was also provided that the constitution and by-laws may be adopted, amended or repealed by three-fourths vote at the annual meeting or at any other meeting upon notice of the proposed change to all members or without notice by unanimous vote of all members present.

"Petitioners then alleged strict compliance with the constitution and by-laws established for the government of the attending staff; that no charge of unprofessional conduct was ever preferred against them, and that they were never expelled as members of said general staff, and that they continued to practice medicine and surgery in said general hospital until the 19th day of October, 1921; that on said date they made application to said hospital for the admission of a patient whom they were called upon and employed to treat, and that the said hospital association denied the patient admittance to said hospital, the superintendent of said hospital stating that the governing board thereof had decided that the peti-

tioners were not to be permitted to longer practice in said hospital, and that any patients they presented for treatment would be denied the privileges of said hospital unless said patients would be sent to be treated by Dr. Adolph Gunderson and the members of his firm, and that at all times thereafter petitioners have been denied the privilege of practicing their profession therein, and that no reason has been given by said hospital association for such denial. Petitioners pray that a writ of mandamus issue commanding said La Crosse Lutheran Hospital Association, its officers, directors and governing board forthwith to require the directors and trustees of said La Crosse Lutheran Hospital Association to permit your petitioners as physicians and surgeons, to enjoy the privileges of said hospital, to permit them to take their patients to said hospital, to visit and treat professionally their patients therein, and generally to practice their profession as physicians and surgeons in said hospital. An alternative writ issued, which upon motion of the defendants was quashed. This appeal is from the order quashing the writ.

Justice Owen's Opinion

"OWEN, J. The allegations of the petition fail to reveal any right on the part of the petitioners which may be enforced by mandamus. The defendant is a private corporation. According to the allegations of the petition, its articles of incorporation provide that the board of directors or trustees thereof have the control and management of its affairs and have power to adopt and enforce reasonable rules, regulations and by-laws to that end. Presumably no one has any voice in the control of the affairs of the corporation except the members thereof. The petitioners are seeking to enforce no right which accrues to them as officers or members of the corporation. Their right to practice their profession therein is subject to the license or consent of the board of directors. If they have the right to continue that practice indefinitely, it must be due to some contractual relations established between them and the hospital association. It is well settled that duties imposed upon corporations not by virtue of express law or by the terms of their charter but arising out of contract relations will not be enforced by mandamus. *State ex rel. Berg v. Milwaukee Medical College*, 128 Wis. 7, and cases there cited.

"Petitioners seem to place considerable reliance

upon the constitution and by-laws established for the government of the attending staff, and especially the provision requiring that 'Unprofessional and unethical conduct and violation of the rules of this staff shall constitute a cause for expulsion.

Any member against whom charges have been preferred shall be notified of such charges, and shall have the opportunity of appearing before the attending staff and the board of directors in joint meetings in his own defense before final action shall be taken. Three-fourths vote of the staff shall be necessary to recommend expulsion of a member.' These by-laws do not in any manner operate to deprive the board of directors of their power to exclude physicians from practicing in the hospital. They merely operate to give to the members of the attending staff a voice in the matter and to clothe them with advisory powers only.

The provision is that 'three-fourths vote of the staff shall be necessary to recommend expulsion of a member.' The staff may not expel, they may recommend. If they do recommend, the directors may still do as they please about expelling the member, and the board of directors may expel a member without any recommendation from the staff. This is a power lodged in them by the articles of incorporation, and probably one which they could not delegate if they would. The result of petitioners' contentions would be to place it within the power of those originally constituting the attending staff to determine who should not practice in the hospital, a rather important part of the management of the hospital association. We cannot ascribe to the constitution and by-laws established for the government of the attending staff any such effect. The power to manage the affairs of the corporation includes the power to exclude physicians from the privilege of practicing therein. If the exercise of this power constitutes a breach of contractual relations, the rights of the other party must be enforced in a proceeding to recover damages or to enforce specific performance. Mandamus will not lie. In *Comb.* p. 41 a mandamus to restore a surgeon to a hospital was denied by the court of King's Bench "because it is not in the power of the court nor is it a public office." The writ was denied for a like purpose in *Replogle v. Burnham Hospital*, 71 Ill. App. 246.

"By the Court.—Order affirmed."

PROGRESS OF STATE LEGISLATION.

(AS OF JUNE 11.)

(For a fuller outline of these measures the reader is referred to the April and May issues.)

During the past month the Senate has passed the Benfey bill 130 S providing that before one may practice medicine he shall present proof of adequate preparation in the subject of diagnosis to enable him to use ordinary skill and care in diagnosing. This bill is based entirely upon the Supreme Court decision of April 3rd last (See April issue).

The upper house also adopted the Benfey substitute 1 S to Bill 363 A. In its original form this bill provided for a separate board of chiropractic examiners; permitted chiropractors to attend contagious cases; sign all health reports including death certificates; licensed those who passed the examinations; and by using the term "doctor of chiropractic" in the measure this bill would have given the chiropractors the right to go by that title.

The Benfey substitute recognizes chiropractors under the terms of the April decision of the Court. This decision said that "the practice of chiropractic is the practice of medicine." The substitute gives chiropractors a representative on the State board of medical examiners and registers chiropractors after examination. Examination in purely chiropractic subjects would be by a committee of three chiropractors. Examination in diagnosis would be had by the entire board.

The questions on the test roll calls which follow are then plain. It will be noticed that some senators voted against both measures.

ROLL CALLS.

1. Shall Bill 130 S as amended be ordered engrossed and read a third time?

Ayes—Barber, Benfey, Bilgrien, Burke, Clark, Lange, Morris, Ridgway, Roethe, Severson, Staudenmayer, Teasdale, Werden and White—14.

Noes—Casperson, Czerwinski, Garey, Gettelman, Heck, Huber, Johnson, Kemp, Moran, Polakowski, Schumann, Smith and Titus—13.

Absent—Hirsch and Quick. Paired—Senator Mahon for the bill, Skogmo against; Senator Kuckuk for the bill, Cashman against.

2. Shall Substitute amendment 1 S to Bill 363 A be adopted (the Benfey amendment)?

Ayes—Barber, Benfey, Bilgrien, Burke, Clark, Czerwinski, Kuckuk, Lange, Morris, Ridgway, Roethe, Werden, and White—13.

Noes—Casperson, Garey, Gettelman, Heck, Huber, Johnson, Kemp, Polakowski, Schumann, Severson, Skogmo, and Smith—12.

Absent—Hirsch, Quick, Staudenmayer, and Titus. Paired—Senator Teasdale for the amendment, Cashman against; Senator Mahon for the amendment, Moran against.

3. Shall Bill 130 S be indefinitely postponed (killed)?

Ayes—Cashman, Casperson, Garey, Gettelman, Hirsch, Huber, Johnson, Kemp, Polakowski, Quick, Schumann, Teasdale and Titus—13.

Noes—Barber, Benfey, Bilgrien, Burke, Clark, Czerwinski, Kuckuk, Lange, Ridgway, Roethe, Severson, Smith, Staudenmeyer, Werden and White—15.

Absent—Moran. Paired—Senator Mahon for the bill, Skogmo against; Senator Morris for the bill, Heck against.

These are the test roll calls in the upper house. By the time this is published the Senate will have taken final action on bill 363 A and the assembly will have voted on bill 130 S. The final summarized vote in both houses will be published in the July issue.

No. 373-A, by Assemblyman Spoor, repealing the ante-nuptial physical examination law.

Passed Senate as amended, May 15. Senate amendment (requiring female applicants for marriage licenses to file affidavit of freedom from venereal disease, the male to submit to the present requirement), adopted, and bill as amended passed by Senate. Senate amendment non-concurred in by Assembly, May 19. Conference committee to reconcile differences.

No. 93-A, by Assemblyman Lindahl, county nurses to be paid out of the appropriation of the state board of health.

Killed, June 2.

No. 424-A, requiring venereal disease examinations of vagrants and treatment of cases found positive.

Killed, May 21.

No. 139-S, by Senator Morris, the "state narcotic law," governing sale and administration of narcotic drugs.

Vote by which passed reconsidered, June 8. Amendment No. 3-S, by Senator Morris, offered and adopted. Bill passed as amended, and sent to Assembly.

No. 260-S, creating position of state toxicologist at the university.

Amendment offered, providing that the appropriation of \$4,500 annually shall cover salary and expenses, adopted, and bill as amended ordered engrossed by Senate.

No. 109-S, by Senator Schumann, requiring tuberculin test of all cattle and appropriating one million dollars annually for eradication work.

Passed unanimously by Senate, June 7.

No. 167-S, by Senator Severson, permitting physicians to testify concerning patient's physical conditions in civil cases and as a witness in his own behalf when accused of malpractice.

Vetoed by governor. Veto sustained by Senate.

No. 308-S, removing the requirement that physicians may not disclose information regarding presence of venereal disease when called upon to testify in court actions.

Passed by both houses.

No. 461-A, by Assemblyman Nein, requiring hospitals to permit any regularly licensed physician or surgeon to treat his patients in such hospitals, under penalty for violation.

Killed in Assembly.

No. 237-A, by Assemblyman Price, the county "home rule" bill, under which any county may employ, remove, or create the office of any employee except constitutional officers. (This would affect county nurses, agricultural agents, etc.)

Passed by both houses and approved by governor.

No. 171-S, permitting town boards upon petition of property-owners to establish sanitary districts within unincorporated areas for the purpose of installing water supply and sewerage systems.

Vetoed by governor, June 1. Veto sustained by Senate.

No. 705-A, to abolish the position of deputy state health officer.

Killed, May 17.

No. 9-S, the Revisor's bill, codifying the laws of the state board of health.

Amendments passed upon by Committee on Judiciary which approved some and rejected others, and bill recommended for passage, June 7.

No. 679-A, by Assemblyman Holly, requiring schools to instruct in symptoms of disease and proper care of the body.

Passed by Assembly; ordered to third reading in Senate, June 8.

No. 439-S, by Committee on Judiciary (by request), permitting the employment of unregistered nurses in hospitals.

Killed by Senate, May 22.

THE COMMON SOURCES OF ERROR IN LUNG EXAMINATIONS.

E. A. Duncan, El Paso, Texas (*Journal, A. M. A.*, April 28, 1923), asserts that the considerable number of erroneous diagnoses of pulmonary tuberculosis are almost always based on or supported by descriptions of non-existent or misinterpreted physical signs. Any single sign of increased pulmonary density, especially at the apex, unaccompanied by other evidence, must be regarded as insufficient and conclusions therefrom withheld. This applies equally to alterations in fremitus, percussion changes and abnormal breath sounds. The misleading differences in the physical signs of the two sides must be kept in mind. Vigilance on the part of the examiner to recognize fictitious accentuations of breath sounds, extrapulmonary noises of cartilaginous origin and marginal sounds is essential to correct diagnosis. The elicitation of provoked râles requires a considerable reduction of pulmonary volume by expiration followed by cough. Basal bronchitis without upper lobe involvement must be proved tuberculous by the laboratory before such diagnosis can be made.

INCREASING VIRULENCE OF SMALLPOX.

During 1922, the case-fatality rate of smallpox, or the number of deaths per 100 cases, was *five* times the figure for 1921! Among 9,936 cases reported in 276 cities in the United States and Canada, 495 deaths occurred, or five per cent of the total cases. In 1921, only one per cent of the 31,489 cases died. The decline in the number of cases may be only a casual circumstance; the lesson to be drawn from the records of the year is that smallpox in a virulent death-dealing form has entrenched itself in recent years among the American and Canadian populations. No one can now tell when, where, or to what extent this killing form of the disease will next make its appearance. The wide acceptance of the false teachings of the anti-vaccinationists and the indifference of the American population to the continued and vehement warnings of its public health officials have prepared tinder for what may well become a catastrophe of the first order. At last, we can see fairly clearly where the two national sins of tolerance of scientific error and of drift are leading us.

—Statistical Bulletin, Metropolitan Ins. Co.

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

- The Interpretation of Dreams.** By Prof. Sigmund Freud, LL.D. The Macmillan Co., New York. 1923.
- The Vaso-Motor System.** By Sir W. M. Bayliss. Illustrated. Longmans, Green & Co., New York. 1923. \$2.50.
- Diseases of the Skin.** By Robert W. MacKenna, M. D. Illustrated. William Wood & Co., New York. 1923.
- The New Physiology in Surgical and General Practice.** By A. Rendle Short, M. D. Fifth Edition. William Wood & Co., New York. 1923.
- Suggestion and Common Sense.** By R. Allan Bennett, M. D. William Wood & Co., New York. 1923.
- Health Building and Life Extension.** By Eugene Lyman Fisk, M. D. The Macmillan Co., New York. 1923. \$3.50.
- Nursing and Nursing Education in the United States.** By The Committee for the Study of Nursing Education. The Macmillan Co., New York. 1923. 585 pages. \$2.00.
- Tobacco and Mental Efficiency.** By M. V. O'Shea. The Macmillan Co., New York. 1923. \$2.50.
- A Manual of Corrective Gymnastics.** By Louisa C. Lippitt. The Macmillan Co., New York. 1923.
- The Patient's Viewpoint.** By Palnel J. Flagg, M. D. The Bruce Publishing Co., Milwaukee. 1923. \$1.30.
- Legal Medicine and Toxicology.** By many specialists. Edited by Frederick Peterson, M. D., Manager Craig Colony for Epileptics; Prof. Walter S. Haines, Rush Medical College; and Ralph W. Webster, M. D., Asst. Prof. Rush Medical College. Second edition. Two Octavo volumes, 2,268 pages, 334 illustrations, including 10 insets in colors. W. B. Saunders & Company, Philadelphia and London. 1923. Cloth, \$20.00 net.
- Inflammation in Bones and Joints.** By Leonard W. Ely, M. D. Illustrated. J. B. Lippincott Co., Philadelphia. 1923.
- Social Work in the Light of History.** By Stuart Alfred Queen, Ph.D. J. B. Lippincott, Philadelphia. 1923.
- Applied Pharmacology.** By A. J. Clark, M. C. Illustrated. P. Blakistons Son & Co., Philadelphia. 1923.
- Pathological Physiology of Surgical Disease.** By Prof. Dr. Franz Rost. P. Blakistons Son & Co., Philadelphia. 1923.
- The Form and Functions of the Central Nervous System.** By Frederick Tilney, M. D., and Henry A. Riley, M. D. Illustrated. Second Edition. Paul B. Hoeber, New York. 1923. \$12.00.
- The Surgical Clinics of North America.** The New York Number, April, 1923. W. B. Saunders Co., Philadelphia. London. Per Clinic Year, paper, \$12.00; cloth, \$16.00.
- The Heart in Modern Practice.** By Wm. D. Reid, M. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co.
- Nutrition of Mother and Child.** By C. W. Moore, M. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- Labyrinth & Equilibrium.** By Samuel S. Maxwell, M. S., Ph. D. 1923. J. B. Lippincott Co., Philadelphia. \$2.50.
- Essentials of Surgery.** By Archibald L. McDonald, M. D. Illustrated. 1923. J. B. Lippincott Co., Philadelphia \$2.50.
- Physics and Chemistry for Nurses.** By A. R. Bliss, M. D., and A. H. Olive, A. M. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- How We Resist Disease.** By Jean Broadhurst, Ph. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- Nursery Guide.** By Louis W. Sauer. Illustrated. 1923. St. Louis. C. V. Mosby Co. \$1.75.
- How to Eat in Health and Disease.** By Benjamin Harron, Ph. D. Illustrated. 1923. New York. E. P. Dutton & Co.
- The Omnipotent Self.** By Paul Bousfield, M. R. C. S. 1923. New York. E. P. Dutton & Co.
- Textbook of Pediatrics.** Edited by Prof. E. Feer. Translated and edited by Jullus Parker Sedgwick, B. S., M. D., and Carl Ahrendt Scherer, M. C., F. A. O. P. J. P. Lippincott & Co., Philadelphia.
- Feeding Diet and the General Care of Children.** By Albert J. Bell, A. B., M. D. F. A. Davis Co., Philadelphia.
- The Indiscretions of Lady Susan.** By Lady Susan Townley. D. Appleton & Co., New York. 1922. Price \$5.00.
- The Life and Letters of Walter H. Page.** By Burton J. Hendrick. In 2 volumes. Doubleday, Page & Co., New York. 1922. Per set, \$10.00.
- In the Wake of the Buccaneers.** By A. Hyatt Verrill. The Century Co., New York. 1923. Price \$4.00.

BOOK REVIEWS

The Interpretation of Dreams. By Prof. Sigmund Freud, LL.D. New York, 1923. The Macmillan Co.

This is the authorized translation of the third edition of Prof Freud's monumental work with an introduction by A. A. Brill of Columbia University. The fact that a period of nine years elapsed between the first and second editions, whereas it is but a year since the second was issued, attests the awakening interest in the subject. During these years the study of dream interpretation and their aid in solving the various neuroses has progressed and shown many new developments and changes in interpretation. The "Sexual Theories" were not in existence when the work first appeared in 1899. Freud, Steckel and others working in this field have since learned to attach a greater value to the significance of symbolism in dreams and even during the last year much has accumulated which requires consideration in the new edition. This new material is shown in numerous insertions in the text and by the addition of footnotes.



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Much has been written in the past few years and by many who have been enthusiastic but poorly prepared. No one can, however, be really qualified to use or judge Freud's psychoanalytic method who has not mastered his theory of the neuroses and such a mastery can only be gained by a careful study of the master. The interpretation of Dreams is his greatest and most important work.

The Vaso-Motor System. By Sir W. M. Bayliss. 1923. New York. Illustrated. Longmans Green & Co. \$2.50.

This monograph discusses the various factors which produce changes in the diameter of the blood vessels and chemical agents as well as the action of the nerves is included. It is one of a series of monographs on physiology edited by Ernest H. Starling, M. D., F. R. C. P., and is truly a most valuable and important contribution to the literature on the subject.

Diseases of the Skin. By Robert W. McKenna, M. D. Illustrated. William Wood & Co., New York, 1923.

This new work comes to us from the pen of one of England's best known dermatologists. The author has been most successful in preparing a practical text which admirably meets the needs of the student and general practitioner. It furnishes a concise yet adequate description of the various skin diseases and omits no essentials. The chapters on treatment meet the practitioner's demands. It is richly illustrated with 166 original illustrations and will be found a very helpful and practical book.

The New Physiology in Surgical & General Practice. By A. Rendle Short, M. D. Fifth Edition. New York. William Wood & Co. 1923.

The rapid exhaustion of four editions of this little work attests its popularity and shows a growing interest on the part of the surgeon and general practitioner in the scientific aspect of his professional work. We are realizing more and more the important bearing of physiology on medical and surgical problems and no reader of the Journal will go wrong in ordering this most valuable work. New chapters have been added dealing with the physiology of muscular exercise, the functions of the kidney and the dietetic factor in the causation of appendicitis. The chapter on the heart written by C. E. H. Heropath, M. D., of the Bristol Royal Infirmary is alone worth the investment.

Suggestion and Common Sense. By R. Allan Bennett, M. D. New York. William Wood & Co. 1923.

This little work is well named and is interesting reading. It deals by chapter with "Psychology and Organic Life," "Psychology and Disease," "Suggestion," "General Methods and Dangers," and "Examples and Results."

Health Building and Life Extension. By Eugene Lyman Fisk, M. D. New York. The Macmillan Co. 1923. \$3.50.

This book is the outcome of a survey of health conditions in industry undertaken by the Life Extension In-

stitute for the Committee on the Elimination of Waste in Industry of the Federated American Engineering Societies. The general investigation into the various sources of waste in industry was undertaken by the Federated American Engineering Societies at the instance of Mr. Herbert Hoover.

It is a discussion of the means by which the health span, the work span, and the life span of man can be extended. It is divided into three sections: Physical State of Civilized Man; The Problem of Industrial Health and Working Capacity and Preventive, Remedial and Constructive Measures.

Nursing and Nursing Education in the United States. By The Committee for the Study of Nursing Education. New York. The Macmillan Co. 1923. 585 pages. \$2.00.

In December, 1918, at the invitation of the Rockefeller Foundation, a conference of persons interested in the development of public health nursing was called in New York. A committee of seven was elected and was financed by the foundation, their work resulting in the splendid report just published. The work covers a careful survey and study of public health nursing, private duty nursing and institutional work. Part "B" of the report covers the hospital school of nursing, training of the subsidiary nursing group, university schools, post-graduate courses, public health nursing courses, courses for teachers and administrators, the teaching staff and teachers college. It is a most timely and valuable study of a tremendously important problem and should be read by all interested in the care of the sick.

Tobacco and Mental Efficiency. By M. V. O'Shea. New York. The Macmillan Co. 1923. \$2.50.

This is the report of an exhaustive study of research of the tobacco problem by Prof. M. V. O'Shea of our own University of Wisconsin. It answers such questions as relate to the use of tobacco by the most eminent men of the past, the effect on mental efficiency as observed by the leaders of thought of today and the effect on college and high school students. The study is without bias for or against tobacco. The author gives the replies of well known men in ten different lines of work. In a final chapter he sets forth the conclusions he has reached and includes a valuable bibliography.

A Manual of Corrective Gymnastics. By Louisa C. Lippitt. New York. The Macmillan Co. 1923.

This valuable little manual is by Louisa C. Lippitt, Assistant Professor of Physical Education and Director of Corrective Gymnastics for Women at the University of Wisconsin. It gives such exercises as are needed for the many types that are treated in the corrective gymnasium. These are plainly described and beautifully illustrated. This is a subject deserving of more attention by the medical man and any could well profit by this work.

The Patient's View Point. By Palnel J. Flag, M. D. Milwaukee, The Bruce Publishing Co. 1923. \$1.30.

The author describes in a most interesting manner the growth and progress of the medical man from his be-

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ginning as a medical student, to his more mature acknowledgement of the fundamental truths of life. The progress is most interestingly sketched and the fundamental principles finally stated in a most forceful acknowledgement and tribute to the Creator. We cannot agree with the author always but there is food for sound thought in his work.

Legal Medicine and Toxicology. By many specialists. Edited by Frederick Peterson, M. D., Manager Craig Colony for Epileptics; Walter S. Haines, M. D., late Professor of Chemistry, *Materia Medica* and Toxicology, Rush Medical College; and Ralph W. Webster, M. D., Assistant Professor of Medical Jurisprudence, Rush Medical College. Second Edition. Two Octavo volumes, totalling 2268 pages, with 334 illustrations, including 10 insets in colors. Philadelphia and London: W. B. Saunders Company. 1923. Cloth, \$20.00 net.

This is the standard and most important work on the subject in the English language and is almost too well known to need discussion in the review column of a medical journal. The object as stated in the first edition is "to give to the medical and legal profession a comprehensive survey of forensic medicine and toxicology in moderate compass." It succeeds in covering a broad ground between the manuals of limited size and the systems of legal medicine of almost encyclopedic dimensions.

The second edition follows closely the outlines of the first both in arrangement of subject matter and in selection of topics treated. The articles are arranged into two sections, the latter being devoted to Toxicology and all other portions of legal medicine in which laboratory investigation is generally an essential feature. The entire work has been thoroughly revised or entirely rewritten and brought up to present day knowledge of the subject treated. Some new sections have been added such as "Common Law and Statutory Obligations of Pharmacists," "Identification of the Living," "Poisonous Mushrooms," "Forensic Questions Relating to Poisoning," "Industrial Poisoning," "Legal Rights and Obligations of Physicians," "Protein Poisoning," etc. Dr. Ralph W. Webster becomes a co-editor of the present edition. The authors, the editors and the publishers are to be congratulated on "Legal Medicine and Toxicology"—it is a credit to them and will win the approval and confidence of both the legal and medical professions as did the first edition.

Inflammation in Bones and Joints. By Leonard W. Ely, M. D. Illustrated. Philadelphia. J. B. Lippincott Co. 1923.

The scope of this excellent work is indicated by an enumeration of its several sections: General considerations; acute osteomyelitis and arthritis; chronic osteomyelitis; chronic arthritis; tuberculosis of special joints; other forms of arthritis of the first great type or group; the second great type of chronic arthritis; and arthritis caused by developmental abnormalities. Dr. Ely, who is of Stanford University, has furnished us with an excellent text on the subject. There are 144 halftone and colored illustrations.

Social Work in the Light of History. By Stuart Alfred Queen, Ph. D. Philadelphia. J. B. Lippincott Co. 1923.

This is one of "Lippincott's Sociological Series" by the Professor of Sociology, University of Kansas. It covers present tendencies in social work, nineteenth century humanitarianism, the English poor law, the medieval church and philanthropy, and mutual aid in medieval communities. It is the first work brought to our attention which adequately presents the subject in the light of history. It is interestingly and well written and is well worth while.

Applied Pharmacology. By A. J. Clark, M. D. Illustrated. Philadelphia. P. Blakiston's Son & Co. 1923.

This is an English work but will be of interest to the American reader for it splendidly sets forth the direct scientific evidence for the therapeutic action of the most important drugs and demonstrates the importance of this knowledge in the clinical application of drugs. An unusual feature is a short abstract by the author of the physiological and pathological problems concerned. The man who has been out of school a few years would do well to review the subject and this work will serve admirably for the purpose.

Pathological Physiology of Surgical Disease. By Prof. Dr. Franz Rost. Philadelphia. P. Blakiston's Son & Co. 1923.

This interesting and original work written as a basis for diagnosis and treatment of surgical affections is from the pen of Prof. Dr. Franz Rost of the University of Heidelberg, translated by Stanley P. Reimann of the University of Pennsylvania and with a foreword by John B. Dearber. It discusses questions of the greatest importance — questions which confront the surgeon in his hospital work almost daily. It will be found helpful in explaining phenomena met with in the wards on almost any round. It represents seven years work by its gifted author and will find a popular reception by his American colleagues. There is an extended bibliography with which we have not been as familiar as with the writings in our own language. The surgeon and intern will do well to acquire this book.

The Form and Functions of the Central Nervous System. By Frederick Tilney, M. D., and Henry A. Riley, M. D. Illustrated. Second Edition. New York. Paul B. Hoeber. 1923. \$12.00.

A review of this splendid work might be summed up by saying there is nothing finer—nothing more complete. The distinguished authors are considered final authority in America and have contributed much to the lasting literature on the subject. They have for years taught neuro-anatomy at Columbia University and to medical colleagues during the war at the New York Neuro-Surgical School under direction of the Surgeon General. The present work keeps in mind at all times the pertinence and value of knowledge concerning the structure of the nervous system in its actual application to clinical medicine and it stands out as unique in this

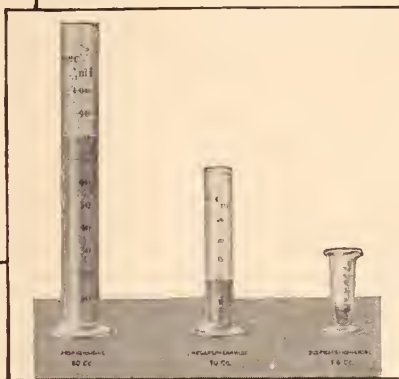
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respect. Anatomical and physiological facts are illustrated by clinical examples and cases are cited as caused by certain organic disturbances to show the significance of the several divisions of the brain and cord. It is a most comprehensive volume of a thousand large pages and contains 763 illustrations, 56 of which are colored. No radical changes in text or illustrations have been made since the first edition was published, though it has been carefully gone over and improved.

The Surgical Clinics of North America. The New York Number, April, 1923. W. B. Saunders Co., Philadelphia, London.

The Surgical Clinics of North America (Issued serially, one number every other month). Volume III, Number 2, (New York Number, April, 1923). 286 pages with 159 illustrations. Per Clinic year (February, 1923, to December, 1923). Paper \$12.00 net; Cloth \$16.00 net.

THE STATE UNIVERSITY HOSPITAL.

Members of the medical profession in this state will be interested in reading the paper presented by Dr. Howard at the last meeting of the Council on Medical Education and Hospitals in Chicago and published in full in the Journal of the American Medical Association for May 12. Michigan and Iowa have been the leaders in the development of state general hospitals designed for direct public service and for the promotion of medical education. Iowa has been particularly fortunate in its conduct of the university hospital along these lines. The buildings at present occupied have become outgrown and the need has appeared for moving the medical school and associated hospital to a more commodious location than that now occupied in the center of Iowa City. For this purpose the General Education Board and the Rockefeller Foundation offered the state \$2,500,000 on condition that the state would appropriate an equal sum. This the Iowa state legislature has just done at the rate of \$500,000 per year for five years. The general popularity of the state hospital and the medical school was shown in the practically unanimous support given this project by the newspapers of the state and state organizations of various kinds. Their popularity with the medical profession was shown by the endorsement of the project by the state society and by every county society.

Dean Bardeen of the medical school of our university in discussing Dr. Howard's paper spoke as follows as reported in the Journal of the American Medical Association, p. 1078, 1923:

"Dr. Howard has given a clear account of the splendid service rendered by the University Hospitals of Iowa. He has been able to base this account on long personal experience. Wisconsin is now erecting at the University a State General Hospital. I am naturally interested in seeing it develop along lines of greatest usefulness to the public and the profession, but such remarks as I

may make are necessarily based rather on theoretical deductions than on actual experience.

"Michigan and Iowa took the lead in developing state general hospitals on a broad scale. At both institutions the primary incentive in establishing these hospitals was doubtless the need of providing clinical material for medical students. It was soon discovered, however, that these hospitals met a public need quite apart from their value in medical education. They have come to be regarded as among the most beneficent institutions in the state, and have a popularity much wider than would be possible were their main function the somewhat abstract one of providing medical education.

"In Wisconsin, the public interest and support of the hospital now being erected are in the main due to a recognition of the value of a stitch in time. The new hospital will contain a psychopathic department in which earlier treatment can be given than is now the case in the hospitals for the insane. It will contain an orthopedic department in which early treatment can be given in case of inherited or acquired physical defects. It will contain a pediatric department in which infants thrown on the public charge may receive proper medical attention. It will provide facilities for doing what is possible medically to aid the deaf and the blind who now receive merely custodial care. It will provide facilities for the care of patients suffering from various other medical and surgical conditions who are now without resources to obtain the proper care. The law covering these cases is similar to the corresponding laws of Michigan and Iowa, but is even broader.

"The hospital would not, however, give all the service that it should were it merely a centralized station for giving medical care to those now deprived of such care. It was placed under the control of the Board of Regents of the State University because it was recognized that the best care was likely to be given the patients if the hospital were established in connection with the medical school. The law recognizes the important functions of the hospital as a center of teaching and research. As such it becomes a factor in the organization of medical service in the state. The first recognized function of the state is maintenance of order. The government not only provides police forces of various types including regulatory commissions, but also provides court houses in which the legal profession has opportunity to see that social rules are observed. I believe that in a similar manner in the newer functions of maintenance of health the government should provide not only officers of public health to see that health rules are observed, but also hospitals in which the medical profession can apply medical service to best advantage. As in case of the courts so here we would have local, district and state hospitals supplementing one another. In such an organization, the state hospital becomes a diagnostic center and a center for treatment of cases of a kind for which the local and district hospitals cannot be expected to provide adequate facilities. To make an effective organization of this kind the active cooperation of the medical profession is essential."

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ORIGINAL ARTICLES

THE RELATIONSHIP OF WOMEN'S DISEASES TO THE CHRONIC PATIENT.*

BY CAREY CULBERTSON, M. D.,

CHICAGO, ILLINOIS.

It is assumed that the subject assigned to me for this conference on the challenge of the chronic patient implies two questions:

1. What has the gynecologist up to this time accomplished for his patient with respect to those ailments peculiar to her sex?

2. What does the gynecologist look forward to with respect to these ailments? Has he attained the utmost that can be realized for their relief: if not, what advances does he anticipate for the future?

Owing to the broad scope of the subject, impossible to consider in detail in a short paper, we may make a hasty survey of the field under a classification of five or six chapters, in all of which the case of the chronic patient predominates.

1. *The physiological disturbances.* I refer here to the ductless gland disorders based upon aberrant physiology rather than pathology, the menstrual disturbances of puberty and adolescence, menorrhagia, amenorrhoea, and dysmenorrhoea; the varied manifestations, protean in their nature, of the climacteric; dystrophia adiposogenitalis; a few of the psycho-neuroses and allied disorders. Here we have conditions as old as civilization, no doubt, yet presenting a new field to the gynecologist because of their modern interpretation. We are indebted to the physiologist for this advance, for it does mean a step forward, notwithstanding the fact that, having suggested to us the theory of hormone production and its practical application, he now tells us that we are working in the dark and, oftener than not, without knowing what we are doing.

Nevertheless, in ductless gland therapy we have means of controlling with some satisfaction certain types of dysmenorrhoea, of menorrhagia, of

amenorrhoea, of early pregnancy nausea, and of climacteric disturbances. In this field, new, as I have said, only in its interpretation, we find some of our most interesting problems and most pleasing successes. They have required of the gynecologist that he lay aside for the time his surgery and again take up internal medicine; he has been given another point of contact with the neurologist; all this to his advantage.

2. *Ectopic pregnancy.* In our field of work this morbid condition has to stand by itself, though it is closely allied with the inflammations in its etiology and treatment. Though some extra-uterine gestations are due to congenital anomaly of the tube and some occur without doubt in the normal tubes, the majority depend upon pre-existing salpingitis for their occurrence. Hence the prophylaxis in most cases is the same as that of pelvic infection. We understand today the pathology of tubal pregnancy and its diagnosis has been stressed in the literature, yet it must be acknowledged that, throughout the rank and file of the profession, it does not meet with ready recognition. Too often the physician waits for the classical symptoms of rupture, with internal haemorrhage and the collapse of his patient, before he thinks of tubal pregnancy, whereas its diagnosis before rupture is not so difficult. Pelvic haematocele, which may fairly be regarded as a chronic form of ectopic gestation, is many times more frequent than rupture with shock and collapse and yet this is oftener than not mistaken for some vague inflammatory process.

The treatment of extra-uterine pregnancy remains surgical, though it is beginning to be clear that certain small haematoceles will disappear if we leave them alone and that, in rare instances, the tube remains unaltered and need not be extirpated.

3. *New growths.* Here we approach one of the larger divisions of the gynecological field. The cause of new growths has not been revealed to us; hence we have no prophylactic measures to offer and our treatment remains surgical. As yet we have no reason to anticipate ferment or antitoxin or vaccine, the employment of which will prevent neoplasms from developing or cause them to disap-

*Read before the State Medical Society of Wisconsin, Green Lake, Sept. 6-8, 1922.

pear. When such a means is placed at our command we hope that it will be for use against malignancy.

And yet we believe that some considerable advance in treatment has been made against malignancy. Surgery has had the aid of X-ray and radium therapy both as a preliminary treatment and as a prophylaxis against reappearance. There is a constant, though not strong enough, anti-cancer propaganda being spread among the laity. Yet the physician remains at fault, in a measure, in failing to recognize the importance of precancerous conditions and to diagnose the growth in its early form. Whether there has been a decrease in operative mortality is not yet clear from a study of statistics, but the literature certainly gives one the impression that there is a gradually increasing number of patients alive five years after operation. Whether this increase is actual or relative only it is difficult to say.

In this connection, because of its relation to new growths in symptomatology and differential diagnosis, the non-neoplastic bleeding uterus may be mentioned. Formerly so-called myopathic haemorrhage which did not react favorably to drugs was beyond control. Later it yielded only to hysterectomy. Today it has become innocuous under the influence of radium or the X-ray.

Benign tumors, uterine fibromyomata chiefly, have for years been subject to extirpation surgically and that too with a constantly decreasing operative mortality. Here again radium has come to be applied effectively. The use of radium is best indicated in the treatment of interstitial growths moderate in size where the patients are no longer young, and in those cases where, for various reasons, surgery is contraindicated. It must be remembered, however, that radium cures only by destroying and that it exercises no selective property. Hence, it remains today a valuable adjunct to surgery indeed, but has not taken surgery's place. True ovarian neoplasms are subject only to ablation, but cystic degeneration of the ovary is not an indication for oöphorectomy. This latter condition is not inflammatory and it is never neoplastic.

4. *Mechanical defects.* If gynecology owes its place in medicine to any one surgical triumph it is that which solved the problem of genital fistula. This once common and miserable condition, the result of bad obstetrics, is today seldom seen. No

sooner had Sims and Emmet perfected operative procedures for the closure of fistulae than a great advance in the management of labor brought about their disappearance. At the present time genital fistulae are uncommon and over 50 per cent of those we do see are postoperative. Uterine prolapsus remains with us, though that also is less common than formerly. But it is in these and allied conditions of vaginal herniation that plastic surgery finds its greatest justification. Fundamental factors and underlying situations are better understood and operative procedures are more intelligently applied. There is still too great a tendency toward standardization in technique, the average surgeon regarding his operative subjects as exactly the same in type of structure. This idea obtains even on the part of those who would prevent these postpartum defects by delivering all women artificially, irrespective of their constitutional differences. It is not recognized that in some women the pelvic floor will not sag in spite of repeated labors, whereas in others prolapsus in some degree will take place on the slightest provocation, and in a few it is congenital. In other words, the tissues of the pelvic floor vary considerably in different women and operative procedure must be varied accordingly. The day is past, and should never have come, when hysterectomy alone comprises the treatment for the prolapsed uterus or an operation on the vaginal wall should be thought sufficient for cystocele. It is in this proper understanding of underlying principles, as well as in exact application of technique, that plastic surgery becomes superior to ablative surgery and rises to the excellence of an art. Standardization of principle with flexibility of technique should be regarded as the desideratum. It is descensus of the pelvic floor rather than displacement of the uterus that is the important thing. We should apply at least four rather different operations to the various types of procidentia and have at our command as many methods of ligamentopexy instead of one procedure only for all cases.

5. *Pelvic inflammation.* In this field the gynecologist finds the bulk of his work. If puerperal and venereal infections could be eliminated pelvic surgery would be decreased more than 50 per cent alone. The mortality and morbidity consequent to child-bearing is still far too high and that, too, despite the fact that we possess absolute

knowledge as to prophylaxis. The same thing is true, in a measure, of Neisserian infection. In this field we are confronted with illness in its acute and chronic expression. Acute pelvic peritonitis does not properly come within the scope of this symposium but I take advantage of this opportunity to stress the importance of conservative treatment. There is still too much surgery in the acute stage, still too great a tendency on the part of the surgeon to rush into the abdomen, attacking the tube as he would the appendix. It is ten years now since the American Gynecological Society put its approval upon the non-surgical treatment of the acute pus tube.

In its chronic form, pelvic inflammation represents our great defeat. We are able to relieve our patient of her suffering but the cost is mutilation and loss of function. Our ideal in the cure of disease is to restore the parts affected to their normal condition and working capacity, but thus far our cure lies in ablation. It is chiefly in cervicitis and tube-ovarian suppuration that we find the pelvis becoming a source of focal infection.

The prevention of venereal infection has been carried out in our army organization, as you are all aware, and the application of such prophylaxis to the citizen in private life may be said to be on the way, if not already here. State medicine is stepping in where the physician stands back. We are all aware of what has been done in the prevention of ophthalmia neonatorum. We have seen state legislatures prescribe health regulations for those contemplating the marriage state. At the present time the Commissioner of Health in Chicago is nailing placards on brothels whose inmates are suffering from gonorrhoea or syphilis. Has the time come for the physician to bring venereal prophylactic measures into the home?

6. In sterility we find an increasing menace. It has been estimated by some writers that childlessness among women of American birth has risen from a former percentage of 10 to a present one of 25. Possibly the generally accepted idea is that this increase is due to the voluntary refusal of motherhood. I believe that this is far from the whole truth but it is certain that more women than formerly come to us complaining of sterility. This presents a problem at times easy of solution but very often it is a difficult one. Here again, displacements of the pelvic organs, tumors and inflammations are frequent causes, inflammation be-

ing by far the commonest factor. Even light grade infections, capable of sealing shut the tubal fimbriae without making the patient appreciably sick, are sufficient. One of the more recent advances in diagnosis is the test for tubal patency by the injection of gas or air through the uterus. This method has been shown to be efficient and practicable, a very definite improvement over direct inspection by exploratory vaginal or abdominal section.

In a small group of cases sterility has been successfully overcome by endocrine therapy. The patients suitable for such treatment are, generally speaking, those having developed obesity with a gradually decreasing menstruation, assumed evidence of ovarian deficiency secondary to thyroid and hypophyseal dysfunction. The male factor in sterility is of great importance. In the absence of very definite lesions on the part of the wife, no extensive treatment, much less operation, is to be undertaken until the virility of the husband has been established.

Factors which make for chronicity and which are extra-pelvic in origin are constantly confronting the gynecologist. Backache is probably the most frequent complaint we have to deal with and yet its cause is found more often elsewhere than in the pelvic organs. The distress due to general abdominal ptosis is extremely common and this fact should be learned early in his experience by every physician. Colitis is a more frequent cause of left-sided pain than is the left ovary and the same holds true for the appendix in relation to the right ovary. I am thoroughly convinced that the various expressions of illness which we call "neurosis" find basis for their origin less in the uterus and ovaries than in the upper abdomen or in general systematic fault.

I feel that the challenge of the chronic patient to the gynecologist is being met more courageously and more intelligently today than ever before, with advance both in the interpretation of her ailments and in their treatment. Some of these advances I have attempted to outline very broadly. In general, it may be said that there exists in our work, and this is evident in our literature, a strong tendency towards conservatism, towards the preservation of organic structures as well as of function. Something is gained for our youthful patient if menstruation can be maintained, even in the absence of reproductive possibility. Myomectomy

where possible, instead of hysterectomy, is the preferred treatment of uterine myomata in younger women. The conservation of ovarian tissue is recognized as the patient's right—her right to every function which attends her in her normal position in life.

BENIGN HYPERTROPHY OF THE PROSTATE GLAND, WITH ESPECIAL REFERENCE TO PREOPERATIVE CARE.

BY IRA R. SISK, M. D.,
SECTION ON UROLOGY, JACKSON CLINIC,
MADISON.

Hypertrophy of the prostate gland occurs in a very large percentage of men more than fifty years of age. Hypertrophy of sufficient size to cause the patient to seek medical aid does not usually occur in men younger than fifty. In Wilson's series of 387 cases, the patients were all more than fifty years of age, and 83 per cent were over sixty. In practically all men over fifty years of age some enlargement of the prostate is found on rectal examination. In a review of the cases of one hundred men over fifty years of age who complained of symptoms other than those attributable to genitourinary conditions, Judd found that the prostate gland was enlarged in all cases on rectal examination. In 85 per cent enlargement was slight and in 15 per cent it was marked; 50 per cent had symptoms of partial urinary obstruction. Other investigators have estimated that approximately 60 per cent of all men over fifty years of age have prostatic hypertrophy, and that 35 per cent of these require treatment.

Little is known with regard to the etiology of prostatic hypertrophy, and as yet no hypothesis has been advanced which adequately harmonizes with the facts. Some of the theories put forward are that hypertrophy of the prostate is: (1) a phenomenon of senility; (2) a condition analogous to the formation of fibroid tumors of the uterus; (3) due to errors of over-eating, alimentation, constipation, sexual excesses, and so forth; (4) a result of acute and chronic prostatitis, gonorrhoea, vesical calculi, and so forth; (5) due to arteriosclerosis; (6) a compensatory process in order to effect hypertrophy of the muscles of the bladder; (7) a neoplastic growth; (8) caused by urethral stricture.

Symptoms. In the early stages the symptoms

are those of beginning urinary obstruction; namely, frequency and difficulty of urination. Usually slight frequency of urination is the first symptom complained of, and both frequency and difficulty may be of only a slight degree for a long period of time. The course of prostatic hypertrophy, however, is usually progressive, and attacks of marked increase in frequency and difficulty, and sometimes acute retention, occur as the result of sudden changes in temperature, exposure, and so forth. Infection, which frequently occurs, may produce more annoying symptoms and may also cause dysuria. In the later stages there may be incontinence, which is not a true incontinence but the overflow from an overdistended bladder. Patients with large quantities of residual urine may present symptoms of chronic uremia; namely, general debility, loss of strength and weight, failing appetite, and, finally, nausea and vomiting. Hematuria occurs in a small percentage of cases and may be of a slight or marked degree.

Diagnosis. The diagnosis in many cases of benign hypertrophy of the prostate can be made from the history and findings on rectal examination. Cystoscopic examination as a routine procedure is unnecessary. It should be made in all patients with a great deal of infection, a history of hematuria, or with more pronounced symptoms than would be expected in the presence of the degree of enlargement noted on rectal examination. Preoperative roentgenographic examination should be carried out on the kidneys, ureters and bladder, and a cystogram made routinely in all cases.

Preoperative Preparation. The advance which has been made in the successful management of patients with benign hypertrophy of the prostate is due largely to improvement in preoperative treatment. Although surgical technic has been perfected and postoperative care improved, these advances have been overshadowed by progress which is the result of a better understanding of the care of patients before operation. A few years ago the average mortality in prostatectomies was 25 per cent; at present it is not more than 5 per cent in patients properly prepared for operation. Several large series of cases have been reported in which the mortality was less than 2 per cent. Urologists hold diverse opinions regarding the proper procedures in the preparation of patients for operation. The methods in most common use are:

1. Preliminary suprapubic drainage.
2. Gradual decompression.
3. Partial emptying of the bladder.
4. Permanent urethral catheterization.
5. Intermittent catheterization.

I believe that if one method is to be employed in all cases, preliminary suprapubic drainage undoubtedly offers the best results, except in certain selected cases in which gradual decompression should be carried out before suprapubic drainage. The chief disadvantage in this method as a routine procedure is that the scar in the abdominal and bladder walls and the shrinkage in the prostate, resulting from preliminary cystostomy, render the technic of prostatectomy much more difficult; for this reason many surgeons prefer to prepare the majority of patients by some other method. When I compare the smooth convalescence of a large series of patients prepared by preliminary suprapubic drainage with the more stormy convalescence of those prepared by other methods, I am convinced that the sooner the percentage of patients prepared by the former method is increased, the sooner the mortality rate following prostatectomies will be decreased.

I think it wise to perform a gradual decompression after the method of Van Zwalenburg in the type of case in which there is a large distended bladder with little or no infection and in which catheterization has not been previously resorted to. Such patients progress more favorably when gradual decompression is instituted for a few days before the cystostomy. Although this line of treatment is unquestionably the most nearly fool-proof of any we have, I do not believe it is necessary to perform a two-stage operation in all cases; a large percentage of cases can be handled successfully by other methods. Approximately 25 per cent of patients who apply for medical aid will be found to be in condition for prostatectomy when first examined; another 25 per cent can be prepared by the use of a catheter intermittently; and the remaining 50 per cent must be prepared by other methods.

Patients with benign hypertrophy of the prostate may be classified in four groups with regard to the preoperative treatment suitable for their particular cases.

Group 1. This group consists of patients on whom prostatectomy may be performed without preparatory treatment and comprises about 25 per cent of all cases. These patients have sufficient

enlargement of the prostate to cause annoying symptoms and yet there is little or no residual urine, little or no infection, and a normal or practically normal renal function, as shown by the usual tests. The following history illustrates this type of case.

Case 32769. Mr. W. B., aged sixty-two, came to the Clinic October 12, 1922, complaining of slight frequency and difficulty of urination, especially troublesome in the fall of the year for the past three years. At the time of examination it was necessary for the patient to void twice at night and four to six times during the day. Difficulty had been quite pronounced at times, the patient having to stand for several minutes before he was able to start a stream.

On rectal examination, the prostate was found to be enlarged, 2 (on a scale of 1, 2, 3, 4) and of the benign adenomatous type. Examination of the urine revealed: specific gravity 1.020, reaction acid, no albumin, sugar, pus, or blood. There was one ounce of residual urine. Intramuscular injection of phenolsulphonephthalein yielded a return of 55 per cent in two hours and fifteen minutes. Blood urea was 37 mg. in 100 c.c. of blood. Cystoscopic examination showed a marked enlargement of the lateral and median lobes of the prostate, but no other pathologic condition was found in the bladder. Prostatectomy was performed without preoperative preparation. Convalescence was uneventful.

Group 2. The patients in this group are those whose conditions are a little more advanced than in Group 1, and preparation by intermittent catheterization is employed. In these patients there may be from one to five or six ounces of residual urine, considerable infection in the bladder, and slight impairment of renal function. Such patients are catheterized once or twice a day, the bladder thoroughly lavaged, and antiseptics introduced. This treatment is continued until the improvement of the patient is such as to warrant operation. The following report illustrates this type of case.

Case 29551, Mr. J. G., aged sixty-three, came to the Clinic in October, 1921, because of frequency of urination which began eighteen months before. Previous to two weeks before he had voided once at night, but for the last two weeks he voided every two hours, day and night. In June, 1920, he had had complete retention of urine for three days.

He has had only slight difficulty, and no hematuria.

Physical examination showed a blood pressure of 160 systolic and 80 diastolic. On rectal examination the prostate was found to be moderately enlarged and benign. Urinalysis showed a specific gravity of 1.016, acid reaction, some albumin, and no sugar. Microscopic examination revealed the presence of a great deal of pus. The return of phenolsulphonephthalein injected intramuscularly was 25 per cent in two hours and fifteen minutes. Blood urea was 40 mg. in 100 c.c. of blood. Radiograms of the kidneys, ureters and bladder were negative.

On cystoscopic examination the lateral and median lobes of the prostate were found to be markedly enlarged; the bladder was small and trabeculated, and showed marked chronic cystitis. A cystogram revealed multiple cellules and dilatation of both ureters. There was no residual urine. The patient was placed on daily bladder lavage with antiseptics following the lavage. In a few weeks' time the infection had practically disappeared; the combined functional test showed 45 per cent return in two hours and fifteen minutes, and the blood urea was 33 mg. in 100 c.c. of blood. The patient felt well and had a good appetite.

Suprapubic prostatectomy was performed, and convalescence was uneventful. After operation the infection cleared up completely and has remained so to the present time.

Group 3. This group is small and consists of patients on whom it is best to perform the gradual decompression of Van Zwalenberg before instituting drainage by means of a suprapubic cystostomy. The indication for this line of treatment is a chronic distension of the bladder in patients who have not been subjected to catheterization or instrumentation. Accompanying chronic distension of the bladder there may be great impairment of the renal function, possibly with some infection in the bladder, and usually those symptoms which result from chronic uremia. The residual urine should be relieved by gradual decompression and permanent drainage should then be instituted by means of a suprapubic cystostomy. The following report is presented as illustrative of this type of case.

Case 29584, Mr. M. P., aged sixty-three, came to the Clinic in September, 1921, complaining of

nausea and vomiting which had occurred every day since March, 1921, and usually many times a day. The patient remarked that he had been perfectly well previous to this time. Vomiting came on before and after meals, during meals, and between meals. The patient had retained very little food for six months, had lost thirty-five pounds in weight and a great deal of strength. On close questioning he remembered that he had had frequency of urination for thirteen years; that he had had a great deal of difficulty; that five years previously he had had complete retention of urine and had had to be catheterized more or less for a year; and that for the last few months he had been unable to control his urine at night. Recently he had voided every hour day and night.

On physical examination the bladder was found to be distended to within 2.5 cm. of the umbilicus. Rectal examination revealed the prostate to be very large and of the benign adenomatous type. Blood pressure was 194 systolic and 106 diastolic. The blood urea was 78 mg. in 100 c.c. of blood; a combined functional test (made after decompression) gave no return of dye in two hours and fifteen minutes.

The residual urine was reduced by gradual decompression, and three days later a suprapubic cystostomy was performed under local anesthesia. Vomiting ceased immediately and the patient gained rapidly in weight and strength. He was sent home in about three weeks and returned from time to time for examination.

Six months after operation a combined functional test gave a return of 25 per cent in two hours and fifteen minutes. The patient had gained thirty-eight pounds in weight, was doing considerable work, and felt very well. He was advised, however, to wait for further return of renal function before submitting to operation. He has not been examined since January, 1922, due to intercurrent illness in himself and in other members of the family.

Group 4. This group includes patients who are poor surgical risks and require a great deal of care and skill. The method of preparation is suprapubic cystostomy and drainage. These patients have a large amount of residual urine, a great deal of infection in the bladder and possibly in the kidneys, and marked impairment of renal function. In this group are included patients who would

ordinarily fall into Group 3 but have had recent catheterization or instrumentation; also all patients in Group 3 after gradual decompression has been performed, and those in Group 2 who do not show satisfactory improvement under intermittent catheterization. The following history illustrates this type of case.

Case 31620, Mr. J. N., aged sixty-three, came to the Clinic in July, 1922, complaining of frequency and difficulty of urination of ten years' duration. Five years before he had had acute retention of urine for which he had been catheterized for a few days. Recently his condition had been growing worse.

Urinalysis showed specific gravity 1.020; neutral reaction; a little albumin, and a great deal of pus. Blood pressure was 140 systolic and 90 diastolic. On rectal examination the prostate was found to be very large and benign. There were twelve ounces of residual urine. Combined functional test gave a return of 28 per cent in two hours and fifteen minutes; blood urea was 58 mg. in 100 c.c. of blood. A cystostomy was performed for drainage and in three weeks the combined functional test yielded a return of 60 per cent in two hours and fifteen minutes; the urine showed only a small amount of pus. Prostatectomy was performed and the patient recovered without complications.

DISCUSSION.

In determining the operability of patients the general appearance of the patient, as well as the function of the kidneys as shown by the phenolsulphonephthalein test and the estimation of the blood urea, is taken into consideration. The maximum point of improvement should be waited for. It is desirable to have the renal function approach normal. Frequently, however, operation can safely be performed in the face of impaired renal function when the preparatory treatment has been continued until the maximum improvement has been reached, and the general condition of the patient appears to be good.

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TREATMENT AND RESULTS IN FRACTURES.*

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The value of any surgical procedure is to be determined by the degree of success attained in the relief of the condition for which it is undertaken.

The procedure to be adopted by the surgeon is left to his judgment, and the selection of the method through this judgment is to be arrived at by his own experience and a rational use of the experience of others, available through clinics and published reports.

So much is being written these days about fractures that one hesitates to propose it in a medical program without an apology, but until the profession arrives at a method of treatment giving uniformly good results in all cases, the treatment of fractures will be an open question. I therefore venture to bring this subject again to your attention, knowing that those whom I address are practitioners like myself, searching for the truth in the fracture question, and having tried many methods of treatment, are not satisfied with their results in many cases.

It is not my purpose to bring out any new method nor any arbitrary changes in the methods now in use, but possibly to present some thoughts which will be helpful in making the form of treatment we now use more satisfactory.

There is uppermost in the mind of every one who attempts to treat a fracture, and it has probably come to all of us many times when we have attempted to treat fractures by the closed method, this question—

"Have I secured an approximation of the fragments so that I can expect union within a reasonable healing period with a good functional result, and what shall I say to this patient when he is shown an X-ray picture of his broken bone with its fragments out of place."

We all know how disappointing the X-ray plate is when it pictures the broken bone in a part which bears every resemblance to normal in length, alignment, and outward appearance, and that the reward for using our best efforts is to see every fracture, which has been displaced, more or less out of

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place in spite of any amount of external manipulation we may have made.

It is seldom, if ever, that a displaced fracture is completely reduced unless we cut down upon it and remove the interposed tissues and clot.

Fortunately experience has taught us that it is not necessary to have correct replacement of fragments, and that good anatomical and functional results will follow the closed, moderately displaced, fracture as quickly as the one that is opened, accurately replaced, and fastened in place with some foreign body, and that nature in time smooths over the points and angles about such fractures. If alignment be good there will eventually be little signs of the fracture left.

We see in the skiagraph many cases of old fractures functioning normally though there is considerable deformity of the bone not evident from without. We also see many old fractures where callus, angles, points, and deformities can be seen and felt without the aid of the X-ray and yet function is proceeding normally.

We have, too, seen many of our fractures we have accurately replaced by the open method remain ununited for a period much longer than it takes the simple fracture to unite if left closed though not quite in place.

Skiagraphs of our operated fractures showing the open space between the fragments, persisting long after they should have ossified, annoy us often.

It is reassuring to know that, in some of these, there is a callus splint that does not show in the picture, which enables the part to function until after varying periods the ossification is complete.

We are told that too many fractures are operated upon, but no one has yet told us what is the maximum amount of displacement we may have without resorting to the open method, and until this question can be answered quite positively, we must expect to be criticised by those who, whether or not competent to judge, will, nevertheless, pass adverse judgment on our work.

It is much more comforting to know a fracture is completely reduced even if we have to open up to make the reduction, and now that facilities for operating fractures are so good, and the dangers at a minimum, there is a strong temptation to operate on them all.

For myself, should I sustain a fracture, and hav-

ing available the services of a good surgeon in a modern hospital, I should choose the open method rather than have the fragments very much out of place. I should want the readjustment to be three-fourths perfect as a minimum.

This conclusion is arrived at after an experience of a third of a century in the treatment of fractures in a section of the country where fractures have been common, and where most all the methods of treatment have been tried out.

I am aware that a great majority of those speaking or writing on the treatment of fractures advise against operative treatment, and especially against the use of plates and other non-absorbable material, but I maintain that there are many cases which require the Lane plate, or the Parham and Martin band or some other strong support should be applied to the fragments.

I am willing to admit that the indiscriminate use of these various aids to reduction and maintenance of position should not be made except where the most rigid asepsis is obtainable and by surgeons of experience in the mechanics of fracture surgery.

Attempts to popularize any new procedure always calls forth enthusiastic and often misdirected effort to make use of it, with failure to obtain the results of its originator, and disappointment is followed by discredit for the procedure.

Few men can follow successfully the leadership of others.

Few Surgeons are equally successful with its originator, in the use of any new method.

Many promising surgical procedures, successful in the hands of their inventors, fail when tried out by strange hands.

No two men will get exactly similar results with the same method, whether they be physicians or surgeons, just as one who had made success in practice in one community will not be equally successful in a new location until he adapts himself, for communities differ as well as men.

This human element must be taken into account when passing judgment on the value of any form of treatment.

While we aim at anatomic perfection in the treatment of fractures, abundant evidence is before us, that good functional results may be expected even if there be considerable separation of the fragments. Those of us who may have been com-

pelled to complete the dressing of a fracture which did not look first rate in the skiagraph, may take encouragement from the many cases which come before our observation where the results are entirely satisfactory, if we can only have the cooperation of the patient, which is not always easy and is often the greatest difficulty in restoring the function of a part.

We know that comminuted fractures make the poorest showing under the X-ray and that correct replacement of these fragments is well nigh impossible due to several factors, the principal one being the attachment of muscles pulling in many directions so that if the fragments are brought into position, they cannot be held there without some artificial means directly applied.

Callus and bone formation seem especially active in these cases, and if not operated they do surprisingly well if held with the ordinary external splints.

We find an increasing readiness on the part of surgeons to display their comminuted fractures with fragments badly out of position, and call a reduction satisfactory, which, to a layman, would seem a very poor job. Results previously obtained in such cases give assurance to the surgeon which he did not possess in the early days of the X-ray.

The beautiful exhibits of X-ray pictures of fractures, plated or treated by other means which we formerly saw on the screen, did not tell all the story. The poor jobs were not shown. We show them all now with out hesitation for we have learned that those cases that look bad are not really so, and that nature, if properly guided and assisted, will do wonders in restoring a broken bone, which, under the X-ray, looks almost hopeless.

Of the cases which will be presently shown on the screen, I desire to call especial attention to two, illustrating a method of bridging a gap where there has been loss of bone,—one case in which the entire elbow joint had been carried away by a charge from a shot gun. A long Lane plate, bent to an angle and fastened to the humerus and ulna, was a most satisfactory means of holding the arm until healing had taken place, making it possible to handle and dress the arm, which could not have been done in any other way. Ligamentous union followed, giving a joint that is almost as useful as a normal joint.

The other case is a little boy who had a charge

of small shot pass through his upper arm at short range, carrying away about two inches of the humerus, but leaving some fragments of the bone in the wound still attached to the periostenum. A Lane plate bridges this gap, enabling the arm to be handled with ease and comfort to the patient while the fragments form nuclei for the rebuilding of the bone. This is a recent case and now under treatment, and I expect a regeneration of bone that will give a useful arm, and if necessary, a bone inlay can be inserted at the proper time if it seems necessary.

This, to my mind, is the most successful use to which we have put the Lane plate, indispensable as it seems to be at times in holding broken bones in position.

The other fractures shown are chiefly of the long bones, representing the different types of simple, compound, and comminuted fractures in varying degrees of reduction with the means of retention from the external splint to the bone inlay, including the Lane plate and the Parham and Martin steel band. Experience proves that all these methods have their place and serve a purpose of distinct value.

The results in many of these cases prove what has been said in the foregoing paper, for they are old enough to enable one to judge of the value of the treatment. In all these cases good functional result has followed though the period of disability have been unusually long in some of them, due to delayed union, caused by a mild infection in the open fractures and other causes.

It will be observed in some fractures of the thigh that the plate has held the fragments apart after the preliminary softening process has taken place, so that when even slight weight has been put on the leg the plate has either bent, broken, or the screws pulled out. For this reason, the plate in a thigh bone should be removed in about four weeks. The fractured ends will be drawn together by the muscles, and being held in alignment by a splint union is much better favored.

In one case a plated fracture of the humerus shows the plate in situ four years after being put on. It is buried in callus.

In another the plate is still on a femur after eight years. It is the second plate on this fracture. The first one was bent and torn loose as before mentioned. It has not made any trouble, and at

the patient's request, has been permitted to remain.

The bone band shown on several of the fractures, especially oblique and spiral fractures, are always removed in about four weeks. Otherwise by their annular pressure they are apt to interfere with the nutrition of the bone and set up a mild periostitis.

End results prove to us that the fragments of a comminuted fracture, though badly placed and impossible to replace without opening the fracture, had better be left alone after we have made as good a reduction as possible.

THE ROLE OF UNSUSPECTED-SYPHILIS IN OTO-LARYNGOLOGY.*

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The importance of obtaining routine Wassermann examinations in the practice of Oto-Laryngology cannot be over estimated. This will be shown by the following statistics and case reports. While the observations noted in this article date back over a period of more than two years, the majority of cases herein reported have been seen at the clinic of Dr. Joseph C. Beck of Chicago (1919-1920) and at the Milwaukee County Dispensary (1920-1921.)

It is not within the province of this paper to elaborate on the pathology involved nor to give the details of the anti-luetic treatment used. Specific lesions of the ear, nose and throat are not uncommon in individuals who are not aware of the fact that they have syphilis. In the event of a negative Wassermann in obscure cases with persistent symptoms we have given anti-luetic treatment disregarding the Wassermann findings, and in a number of cases have had very gratifying results. G. Bilancioni reports similar results in the *Military Journal of Rome*, March 1921.

Our observations have led us to the definite conclusion that every chronic suppurative sinusitis should be regarded as having a possible luetic basis. The incidence moreover of a positive Wassermann in a considerable number of cases of polypoid degeneration of the ethmoids, seen at our clinic,

(Milwaukee County) may or may not be significant but at least it is suggestive.

Chronic Suppurative Otitis Media is more frequently of a luetic nature than is generally suspected. In the study of a considerable number of these cases which were under treatment for a long period of time the routine Wassermann revealed an active syphilis. The fact of the great vulnerability of the Eighth Nerve and the Labyrinth to the syphilo-toxin is so generally understood as to need no further discussion here.

Pharyngitis of the sub-acute and chronic type which has been under treatment for a long time, the possibility of syphilis not having been recognized, has yielded to anti-luetic treatment. The routine Wassermann in Laryngeal Diagnosis is so universal as to need no comment.

Whereas lesions of the Larynx and lesions of the Eighth Nerve immediately excite the suspicion of a luetic basis, for some unknown reason lesions involving the mucosa of the nose, paranasal sinuses, the pharynx, the Eustachian Tube and middle ear, and the bony tissues underneath, are looked upon as being of a simple pyogenic origin; that this attitude is unwarranted is borne out by the following selected cases which we present.

Of 370 unselected cases seen at the Milwaukee County Dispensary in which a routine Wassermann examination was made we found:

46 Positive 4 plus	} 65
19 Positive 3 plus	
5 Positive 2 plus	
21 Positive 1 plus	

CASE REPORTS.

(Negative general findings have been omitted.)

CASE No. 1. H. K. Male, age 29.

May 1—1919—Complained of continuous pain over frontal region and back of neck for past ten days. No relief from Salicylates nor Pyramidon.

Past History—Negative except for G. C. infection 9 years ago.

Examination—nose—septum—marked deviation to left, ridge on right. Mucous membrane congested. Mouth—teeth negative. Tongue negative—Tonsils large, infected.

Ear—Rt. drum membrane dull, shows recent trauma, healed out perforation. Left drum membrane dull, retracted.

Advised complete Blood and Spinal fluid examination, X-ray sinuses; later tonsillectomy.

*Read before Milwaukee Oto-Ophthalmic Society, March 21, 1922; also Milwaukee County Medical Society May, 1922.

May 2, 1919.—X-Ray shows right antrum cloudy. Puncture—thick, yellow malodorous discharge (Lab. exam. showed Staph. Aureus and streptococci. Antrum irrigated.

May 3, 1919—Wassermann examination—Blood 4 plus, Spinal Fluid 2 plus. All symptoms disappeared after anti-luetic treatment.

May 8, 1921—Blood—Wassermann Negative, Spinal Fluid Negative. Patient feels fine.

CASE No. 2—M. G. Female, age 35, married.

June 14, 1919—Complained of repeated attacks of severe pain in frontal sinus region, over antra and through eyes, also marked purulent discharge from right side of nose.

Past History—Has had several intra-nasal operations. Right antrum opened, all with temporary relief.

Examination—Nose—Septum deflected to the left. Large crust upper straits, right. Left, turbinates turgescient.

Mouth—Teeth pyorrhea—several crowns.

Tonsils submerged apparently not infected. Pharynx, red.

Ears—Right—Drum dull, no light reflex—Left—Retracted.

X-ray—Shows Right Pan Sinuitis. Teeth—five apical infections.

Wassermann examinations (2) 4 plus.

CASE No. 3—T. S. Female, age 47—Married.

Nov. 4, 1919—Complained of severe pain, burning sensation and swelling of right side of face and nose for past eight days. Mouth is quite sore. Patient shows all symptoms of an acute inflammation of above mentioned areas. Temp. 100, pulse 120. Considerable bleeding from right side of nose.

Past History—Patient has had four operations on right antrum and ethmoids in the past two years with temporary relief following each operation. Cultures from nose show staphylococci and an occasional streptococcus. X-ray frontal—entire right side is blocked: no right frontal sinus.

Nov. 11, 1919—Under local anaesthesia right antrum was opened, following which the swelling gradually disappeared.

Nov. 19, 1919—Examination showed no pus from the upper straits of nose. There is a necrosis of the septum with granulation. Some necrotic material removed from floor of the nose (right side). No tenderness in hard palate. Blood for Wassermann taken.

Nov. 25, 1919—In upper central alveolar border a small fistula was opened—in squeezing nose thick pus was expressed. Probe in sinus showed loose necrotic bone to floor of the nose.

Diagnosis—Syphilis. Smears: staphylococci and streptococci.

Wassermann positive. Patient did well under anti-luetic treatment.

CASE No. 4—A. K. Male, age 45—Laborer.

May 22, 1920—Complained of difficult breathing through nose. Pain in both legs, past six years also has pleurisy.

Examination of chest—B. S. Prolonged and roughened over entire chest—Heart hypertrophied.

Nose—Large boggy inferior turbinates—both sides of nose full of polypi.

Mouth—Teeth pyorrhea, Tonsils small inoffensive.

Ears—Negative.

Wassermann 4 plus.

CASE No. 5.—M. M. Female, age 37.

June 24th, 1920—Complained of purulent discharge from left nostril falling back of pus into throat from the nose, severe headaches, supra orbital, bilateral. Morning cough with expectoration. Feeling of tightness in chest, condition has existed for past five years. No loss of weight.

Physical examination—Robust woman 209 lbs. Chest shows generalized bronchitis of slight severity.

Sputum—Negative.

Nose—Septum deviated to the right, definite ethmoid sinus disease—Left—polypoid degeneration—Pus in middle meatus left.

Mouth—teeth several crowns, pyorrhea.

Tonsils—small ragged—Pharynx anemic, dry.

Ears—right drum membrane retracted. Left old central perforation healed out.

Wassermann 4 plus.

CASE No. 6—S. A. Male, age 41, Laborer.

Nov. 22nd, 1921—Complained of pain in head—cannot hear well also some pain and buzzing noises in right ear.

Examination—Nose—Septum deviated to right—Right side of nose full of polypi—Large boggy inferior turbinate left.

Mouth—Teeth pyorrhea, very bad shape.

Tonsils negative, pillars injected.

Ears—Both drum membranes retracted.

Wassermann 4 plus.

CASE No. 7—R. B. Schoolboy, age 7 years.

Nov. 17th, 1920—Complaint—frequent sore throat, mouth breather; discharge from nose.

Past History—Scarlet fever, measles, Influenza.

Nose—Vestibulitis bilateral; membranes reddened, serous discharge.

Mouth—Teeth carious. Tonsils infected; adenoids.

Ears—Negative.

Advised removal tonsils and adenoids—Local treatment to nose.

March 8th, 1921—Returns, (Tonsils and adenoids removed Nov. 1920) Nose seems some better: discharge less.

Blood examination.

Wassermann 3 plus.

CASE No. 8.—B. K. Schoolgirl age 7 years.

Nov. 20th, 1920—Complaint—discharge from nose—is very nervous. Cannot see for distance.

Examination Nose—Vestibulitis bilateral, mucous membranes congested.

Mouth—Teeth good, Tonsils moderately large—apparently inoffensive.

Ears—Negative.

Wassermann—4 plus.

CASE No. 9—School girl, Age 14. A. M.

Dec. 4th, 1918—Complains of difficulty in hearing for past three to four weeks.

Examination:

Nose—Septum deviated to left.

Mouth—Large infected tonsils.

Ears—Drums negative.

Dec. 13—Tonsils and adenoids removed.

Dec. 23—Ears inflated.

Jan. 2—1919—Patient states deafness worse, also has pain in right mandibular region during articulation for past four days.

Ears—Both hammer handles injected.

Diagnosis—Oto-Sclerosis.

Patient to return twice a week for treatment.

May 17th, 1919. Patient complains of pain in left eye past three days.

Examination shows marked Ciliary and conjunctival injection, Central opacity of the cornea, several small ulcers. Iris and media hazy.

Diagnosis—Interstitial Keratitis.

Wassermann 4 plus.

CASE No. 10—F. F. Male, age 31, Laborer.

July 22nd, 1920—Complaint, left ear discharging for past four years following a cold in head,

has constant headache over frontal, vault and occiput, also pain in back and right hip. Patient was advised operation for brain abscess.

Family History—Father died Cancer age 53—Mother has rheumatism. Wife, four children, living and well.

Past History—Scarlet fever, diphtheria in childhood, Lumbago four years ago—Denies venereal infection.

Examination—Nose—septum deviated to right, ridge low down, somewhat atrophic condition with crust formation on left.

Mouth—Teeth carious, pyorrhea. Tonsils submerged—apparently inoffensive. Pharynx anemic.

Ears—Right—drum retracted—dull. Left—purulent malodorous discharge; canal red—drum, large perforation, anterior inferior quadrant. Hearing—right ear 20/20 whispered and conversational voice. Left ear—Conversational voice 8/20. Whispered voice 20 inches.

July 28th, 1920—Wassermann 4 plus.

Aug. 12th, 1920—After three injections of Arsph enamine; no discharge, ear practically dry—headaches much less in severity.

Nov. 16th, 1920—Ear is dry—conversational voice 20/20, whispered voice 20/20—no headaches. Patient feels fine is back to work.

June 3rd, 1921—Perforation of drum practically healed out. Hearing 20/20, conversational and whispered voice.

CASE No. 11—Z. F. Male, age 28 Laborer.

Sept. 7th, 1920—Complains discharging Rt. ear since childhood. Feels weak—appetite poor.

P. H. Negative except G. C. 1910.

Examination—Nose, septum deviated to right high up—large ridge low down on right. Inferior and middle turbinates large and boggy.

Mouth—Teeth carious, four crowns. Tonsils, large, cryptic, infected.

Ears—right muco purulent malodorous discharge. Left—membrane dull, retracted.

Wassermann 4 plus.

CASE No. 12—J. M. age 8, Schoolboy.

Jan. 27th, 1921—Complains of discharging ear for past year following cold.

Examination—Nose, acute rhinitis—turbinates boggy.

Mouth—Teeth carious, tongue coated. Tonsils quite large, not infected.

Ears—Right canal impacted cerumen. Drum—

negative. Left—auricle—dermatitis; canal, mucopurulent discharge. Drum central perforation hearing 10/20—conversational and whispered voice—Wassermann 4 plus referred for anti luetic treatment.

March 10th, 1922—Left ear dry—healed out perforation. Hearing conversational and whispered voice 20/20—Wassermann negative.

CASE No. 13—O. S. Schoolgirl age 11.

March 30, 1921—Complaint—Cannot hear well for several years gradually getting worse—backward at school.

Examination—Enlarged thyroid, slight tremor. Nose—Atrophic condition bilateral.

Mouth—Tonsils hypertrophied, not infected.

Ears—Drum membranes retracted. Hearing—Right—Whispered voice 5 feet. Left—Whispered voice 2 feet. Forks very indefinite.

Wassermann 4 plus.

Since treatment patient has picked up considerably well at school. Hearing improving. (Visiting Nurse's report.)

CASE No. 14—H. T. Male, age 32.

June 23rd, 1921—Complaint—Impaired hearing right ear for past six years, becoming progressively worse, ringing noises for past year. Has had two intranasal operations and great deal of treatment with no results.

Examination—Nose, septum deviated to right high up, ridge low down on left, spur posteriorly. Partial inferior and middle turbinectomy right. Some crowding of the upper straits on the right.

Mouth—Teeth, good condition. Tonsils have been removed.

Ears—Both drum membranes retracted, otherwise negative.

Wassermann 4 plus.

CASE No. 15—G. H. Female, age 30, married 3 children L. & W.

Feb. 14th, 1922—Complaint—patient suddenly became deaf 3 years ago when last child was born, at same time became blind. The hearing gradually became worse—at this time cannot hear at all. Had some treatment for eyes and condition cleared up. Wassermann at Children's Hospital one plus.

General Examination—Aortic Stenosis.

Nose—Septum deviated to left anteriorly ridge low down—posterior and high up septum deviated to right.

Mouth—Teeth all lower molars left removed—upper right molars removed. Tonsils—Hypertrophied, cryptic.

Ears—Drums retracted. No evidences of any pathology. Hearing—Right—Whisper and conversational voice 0. Left 0 Galton whistle—hears only two tones in high pitch, left. X-ray shows mastoid completely blocked out.

Wassermann 4 plus.

Eyes—Discs, blurred, hazy.

CASE No. 16—M. S. Female, age 25.

July 20th, 1920—Complains of hoarseness and weakness of voice on arising, after a few minutes voice is better. At times burning sensation posterior part of nose, also pain in ears, particularly the right. Tonsils removed 3 years ago to relieve condition which has been present for several years. No improvement.

Examination—Nose—Nothing pathological in relation to symptoms.

Mouth—Teeth in repair—tongue coated.

Throat—Good tonsillectomy.

Pharynx—Negative.

Larynx—Negative.

Right ear, cerumen—drum negative.

Left ear—cerumen, Drum negative except slight retraction.

Complete blood examination—Wassermann 4 plus.

Anti-luetic treatment—Result good.

CASE No. 17—E. G. Female—Age 25.

July 13—Complained of sore throat for past three months. Enlarged submaxillary glands—one was opened three weeks ago. For the last two weeks has severe headaches over temporal regions following a fall.

Examination—Nose—septum deflected to the right—large boggy inferior turbinates. Teeth negative. Tonsils—mucous patches. Ears negative. Wassermann 4 plus.

CASE No. 18—I. M. School girl age 11.

March 31st, 1920—Complained of chronic sore throat.

Examination—Nose—septum deviated to right. Large cryptic tonsils. Teeth negative. Pharynx—negative—Ears—negative.

Wassermann 3 plus.

CASE No. 19—B. L. Schoolboy, age 7.

May 23rd, 1921—Complained of frequent sore throat—defective vision.

Examination—Septum deviated to right—membranes congested. Teeth carious. Tonsils large, cryptic, plugs in crypts. Pharynx—negative.

Ears—drums retracted.

Wassermann 3 plus.

CASE No. 20—M. A. Male age 32.

Nov. 9th, 1919—Complained sore throat for the past six weeks. Pain on swallowing. Was to have tonsils removed when his Doctor noticed redness and oedema of throat and gave patient Rx for gargle preparatory to operation—no improvement.

Examination—Teeth negative, tonsils infected with white spots firmly adherent. There is a large white sharply defined ulceration on the posterior wall of the pharynx behind and above the uvula.

Wassermann 4 plus.

CASE No. 21—R. M.—Female—married.

Feb. 11th, 1922—Complains of severe headaches over frontal region for past two weeks.

Past History—Negative except for G. C. infection for which she is being treated at this time.

Examination—Nose—Septum deviated to the left—muco-pus in middle meatus. Hard grey mass on floor of nose, left. Malodorous, piece removed, necrotic bone. The mass can be moved slightly backward and forward seems to be attached to hard palate. Tonsils large cryptic—Teeth carious. Ears, negative. Patient has had three Wassermann tests all of which were negative. Referred for anti-luetic treatment.

March 10th, 1922—Headaches have disappeared—patient feels fine. Necrotic mass still present in floor of nose.

X-ray—Left antrum blocked out.

In conclusion:

We find mucous patches in the mouth and throat, therefore, it is probable that we have cases in which there are mucous patches in the mucosa lining the nose, the paranasal sinuses, the eustachian tube and middle ear with a low grade pyogenic infection superimposed and the resulting conclusions misleading. The history of chronicity and progressive aggravation of symptoms after prolonged treatment in these patients prompted this investigation. Wassermann tests made on other members of the family in a great number of the foregoing cases have been strongly positive. All of these cases have done well under anti luetic treatment.

FUNDAMENTALS IN CARDIAC DIAGNOSIS.*

BY EDWARD F. MIELKE, M. D.,
APPLETON, WISCONSIN.

The diagnosis of heart disease is fraught with many pitfalls. I am sure it has been the experience of us all that after having made a refined diagnosis during life, we have found at autopsy almost unbelievable discrepancies. The prognosis is also hard to judge in any case, and early in my hospital experience I learned a little about it by finding a patient dead in the bath room whom I thought I had improved to a remarkable extent. Especially is this true in the aortic cases. Our errors, however, should not discourage us but make us strive harder to understand this most complex organ.

When a patient presents himself for diagnosis as to a cardiac condition, every possible factor should be considered in the final diagnosis just as one would do in a case of tuberculosis. Each symptom and sign should be given its proper weight. The establishment of a definite routine of examination is helpful in order not to miss some seemingly unimportant point which later might prove to be of immense value.

The past history of the patient should be gone into most carefully, especially the streptococcal class of diseases. Recently while examining some 50 girls at Appleton High School, I asked each one whether or not she had had rheumatism or chorea. Of the entire group two answered yes—one had had chorea and the other rheumatism. Their hearts were all apparently normal except the one with chorea in her history who had a mitral stenosis. Eyster reports that following polyarthritides definite permanent injury resulted in 50% in the primary attack, 65% showed such changes in the second, and 75% in the third attack.

The subjective symptoms should be carefully analyzed, for, as Mackenzie states, the symptoms of heart failure are not to be found by examination of the heart. Experience teaches that when a robust patient comes complaining of cardiac trouble, one will usually be unable to find any, and hence the statement that a cardiopath tends to become a neuropath. On the other hand, medical examin-

*A paper presented before the Outagamie County Medical Society, Feb. 27, 1923.

ers of athletes frequently discover gross valvular lesions in their men with seemingly no limitation of cardiac response and no subjective symptoms.

The common early symptoms are breathlessness, exhaustion, oppression and distress in the chest, suffocation, and tightness in the chest, fatigue, dizziness, giddiness, lassitude, fainting, tachycardia, headaches, coldness, sweating, cyanosis, irritability, excitability, tremulousness, insomnia, visual disturbances, sensory disturbances, and lack of coordination of muscles. Any of these symptoms may be present in the functional cases. They have to be analyzed carefully, especially in their relation to effort, for it is here that the heart first shows its limitation of reserve power. Breathlessness is the most common symptom but may be absent even with a badly damaged heart. Palpitation is common especially in mitral stenosis. Pain is a most common symptom and as shown recently at the Mayo Clinic may have a most unusual distribution even in the real anginal cases. Arcas of hyperalgesia are common about the precordium in both the functional and organic cases and in those where there is a temporary exhaustion of a healthy heart from various causes.

A few facts about true angina pectoris might here be stated. The pain is usually brought on by some exertion. The condition is most common in the sturdy, muscular type; rarely in the weak. The rate is usually regular, and the condition is uncommon in auricular fibrillation. There is seldom edema and usually no heart findings except slight enlargement. The average systolic blood pressure in a large series of cases was 160. Extreme pain with signs of collapse should make one think of a possible coronary infraction. It is interesting to note that angina occurs most commonly in males, the ratio being about 2 to 1 and that the reverse ratio is true of hypertension cases.

Physical examination in all heart cases should be complete. As Billings has often said, many of our mistakes are not due to lack of knowledge but to lack of thorough examination of our patients. One should note especially the jugulars for a positive venous pulse, precordial pulsation, clubbing of the fingers, cyanosis, so common in mitral stenosis, and retraction of the interspaces. Collections of fluid may occur in the chest especially the right, in the abdomen or about the buttocks without a general anasarca. It should, however, be remem-

bered that dropsy and hepatic enlargement are shown only in a limited percentage of heart failures. Increased pulse rate while at rest and persistent crepitation at the bases of the lungs are early signs of exhaustion of the heart.

One is handicapped in the diagnosis if he does not locate the apex beat accurately, and this is often done just the same as one fails to listen for the all important expiratory sound in auscultation of the chest. (Watch yourself the next time you listen to a chest.) The location of the apex tells much as to the size and position of the heart. When the finger is exactly over the apex, the heart will not force the finger to the right or the left but directly outward. In mitral stenosis the impulse is lifting, heaving, and shocking and is usually in its normal position. In aortic insufficiency it is big, heaving, slow, forceful, dome-like and usually displaced downward and to the left. Where dilatation and muscular weakness are present, one would expect an indefinite, wavy, and diffuse beat. Note should be made of fixation of the apex. Normally it moves some 3 C. M. in changing from the right lateral to the left lateral position. Fixation with retraction of interspaces makes us suspect adherent pericardium, or if far advanced, Pick's disease. Palpate for thrills remembering that they are common in the rapid neurotic heart.

The borders should next be percussed, and I believe the immediate method most satisfactory. Percuss in the interspaces with the ball of the terminal phalynx of the middle finger. Pull away the tissues over the interspace to be percussed with the left hand so that the skin is tense. Percuss to distinct dullness and then holding the finger away from the chest at this point, allow the skin to resume its natural position and mark the spot. This method of percussion seems especially valuable for the right side and the meadistinal dullness. It is well to record the measurements in centimeters for future reference.

Hypertrophy and dilatation of the heart cannot be made out with certainty by physical examination until fairly well marked, largely because so many other factors may alter the position of the left border. Right ventricular dilatation and hypertrophy of moderate degree usually produce no demonstrable enlargement to the right of the sternum but manifest themselves in displacement of the apex outward and to the left. A hyper-

trophied and dilated heart is usually not considered so good as a normal heart yet it should be remembered that in the cardio-renal cases it is a valiant and efficient organ, working for years against heavy mechanical odds. Fibrosis is often present but this should not in every case, be considered as a degenerative process but a change endowing the heart with an added element of resistance to strain.

When such a heart gives rise to symptoms of exhaustion, we are apt to make a diagnosis of fibrous myocarditis. We will be right in only 22% of cases as shown from the autopsy records of the Mass. General Hospital. Fibrous myocarditis is a hazardous diagnosis, as we still have no adequate method of recognizing gross changes in the myocardium by physical examination. Arterio-sclerosis and hypertensive renal disease will be found by far the most common cause of hypertrophy and dilatation, and in 79% of hearts showing hypertrophy and dilatation no valvular lesion will be found at autopsy.

Auscultation is our next step, and it is here that one most often gets into trouble. This statement reminds me of what Charles Mayo once said: namely, that he would rather have his internes go about his surgical wards with a stomach tube around their necks than with a stethoscope. We lay too much stress on murmurs and not enough on the myocardium and its response to effort. We try too hard to make the murmur a basis for a pathological condition. Mackenzie's book on the heart emphasizes this point in that only 20 of the 500 pages are devoted to murmurs.

The bell type of stethoscope seems to work the best for heart work because it can be dug into the interspaces thereby avoiding many extraneous sounds. It seems we hear too much on auscultation, and this would be made still worse by the use of the phonendoscope type of instrument.

Diastolic murmurs are practically always pathological; rarely are they functional. They are usually aortic in origin, but may appear at the apex in late mitral stenosis. A clear cut diastolic murmur is enough to make a diagnosis alone. At times the diastolic murmur can be heard best with the patient either lying down or bending far forward. Sometimes it is best heard during deep expiration. At other times one can hear it best with the ear to the chest wall. Pure aortic involvement

is common following polyarthritis; yet it surely has a predilection for the mitral valve. Often one sees a case of aortic insufficiency in the young adult with a negative history, and we are forced to ascribe the cause to tonsillitis, growing pains or some other slight infection. Recently I have seen three such cases. It seems established that strain can injure the valve cusps; yet on the other hand it has recently been denied by Lewis that there is such a condition as an athletic heart. The arch of the aorta is primarily attacked by syphilis, and the process then extends down to the valves. The lesion is usually a pure one, no other valve being involved. Stenosis of the aorta due to syphilis practically never occurs because syphilis always has a dilating effect. Cases conforming to the textbook description of aortic insufficiency with all the classical signs are usually syphilitic.

The presystolic murmur of mitral stenosis is very characteristic. It is most common in women and is fleeting in its early formation, often taking years for its full development. During the attack of polyarthritis the mitral valve may be involved within 24 hours even before the myocardium, which is injured to some extent in practically all cases. Systolic murmurs are common during the attack and may leave as soon as the tonicity of the myocardium is reestablished, but years later the true damage is often found in a mitral stenosis. The lesion is a progressive one and decompensation often occurs between the 34th and 37th year. Acute exacerbations are common in this lesion and should always be looked for in anemia, wasting, debility, gastric and pulmonary complaints, hemoptysis, hemiplegia, tobacco heart, and nervous arrhythmia. Much proof has been presented of late that the tonsil is the incubator for these streptococcal infections, that one attack of polyarthritis predisposes another, and that breaks in compensation are due to infectious and toxæmic insults and not to mechanical causes. These points would argue for the wholesale removal of the tonsil as a prophylactic measure in many types of heart disease.

The thrill and murmur of mitral stenosis are best made out with the patient lying on the extreme left side—one sort of gets the heart in a corner and very near the chest wall. The heart with a mitral stenosis is usually slow, though the murmur can be brought out more plainly by speed-

ing up the heart by exercise or by inhaling a few whiffs of amyl nitrite. The murmur, as you know, is typically located at the apex, often not covering an area greater than a half dollar. It is rough, purring, rumbling, rolling, and crescendo in character. It runs up to the first tone of the heart which is sharp, snapping, shocking, and forceful. This character of the first tone may be our first clue as to the existence of a stenosis even without the presystolic murmur, especially if there be a systolic murmur and a history of polyarthritis. The presystolic murmur must not be confused with either the Austin flint murmur which is associated with aortic regurgitation or with a gallop rhythm. As the lesion advances, the murmur often changes and fills all or a part of diastole. When decompensation sets in in this lesion and in others, the murmur may again change. They may increase in intensity, change in any character, or disappear entirely and make the diagnosis almost impossible. Reduplication of the second sound at the apex is common in mitral stenosis; and there may be a greater intensity of the second sound at the pulmonary area than we have a right to expect at the age of the individual in question, though I place little significance on this in any mitral lesion.

The most difficult part of cardiac diagnosis comes in the interpretation of systolic murmurs which may be functional or organic. If organic, the question to be decided is whether they are due to an endocarditis or some other pathological condition. It is interesting to note that in a routine examination of a large number of apparently normal men at Harvard, Parmenter was able to demonstrate murmurs of some kind in 67%.

Functional murmurs may be of almost any type. They include anemic, cardio-respiratory, cardio-muscular, accidental, and physiological. They are most common in the pulmonary area in the second left interspace, rightly called the area of romance. They are also common at the apex but may be found over any area of the precordium. They may be soft or harsh, loud or weak, though they are usually not loud and are poorly conducted; yet some of the loudest and most widely conducted murmurs are functional. They often vary with the position of the patient and the phase of respiration. In some cases they are present in the upright position and disappear when the patient lies down and vice versa. Exertion often brings

them out. They are fleeting, often being present on one examination and absent on another. Cardio-respiratory murmurs are often loudest at the apex, but may be heard as high as the second rib in front, in the axilla, and below the angle of the scapula; but as a rule the area over which they are heard is limited. They are usually louder at the end of deep expiration. In still other cases they are persistent under all circumstances.

The typical organic mitral systolic murmur is loud, long, rough, and constant. It replaces the first tone of the heart to a large extent. It is well transmitted, especially directly to the back (not around the chest.) In the latter situation it is usually louder than in the mid-axilla, and occasionally it is heard as loudly in the back as any where. Its association with the signs of stenosis make the diagnosis almost certain. The four big points then in the diagnosis of mitral endocarditis are: the history of a streptococcal infection, enlargement of the heart, presence of signs of stenosis, and lastly a typical murmur.

Systolic murmurs over the aortic area are common and are rarely due to aortic stenosis because we believe that stenosis of the aorta without regurgitation is probably a myth. These murmurs are usually associated with roughening, stiffness, fenestration or slight congenital malformations of the aortic valves. They are also due to aortitis, roughening, or diffuse dilatation of the arch of the aorta, aneurism of the aorta or innominate artery, pulmonary stenosis, and congenital heart disease.

Autopsy findings reveal mistakes most often where the diagnosis has been made during an attack of an acute infectious disease. Any general infection including the streptococcal may affect merely the tonicities of the heart muscle producing a big heart with a murmur, all of which subside when the cause is removed. It is even doubtful whether diseases like pneumonia or typhoid ever produce a true primary endocarditis. Autopsy findings also show that the diagnosis is only speculative in the greatly enlarged and dilated heart as well as in the decompensated heart except in most cases of aortic insufficiency. It is often well to resort to the theory of probabilities in making a diagnosis remembering that a death from pure mitral regurgitation is almost unknown, and if a patient has a serious chronic valvular disease of the rheumatic type involving either the mitral or aor-

tic valve or both, stenosis and insufficiency will both be usually present to some extent regardless of the physical findings. If the diagnosis of a valvular lesion has been made and later it is found to have disappeared, there is always the possibility that the lesion has healed, for many noted authorities report cases of complete recovery even where a diastolic aortic murmur had been found.

The common types of arrhythmia may be misleading. The youthful type of respiratory arrhythmia waxes and wanes with respiration or may be associated with some other cause of vagal stimulation. The diastolic period is especially prolonged during expiration. It means nothing, and its presence would rather indicate a sound heart even though it followed an acute polyarthritis.

Extra-systoles are usually ventricular in origin and are considered premature beats. They are weak and often not felt at the wrist. They may not open the semilunar valves, and hence the second sound may be absent. They are followed by a long compensatory pause and the following beat is usually strong. In most cases they disappear when the rate of the heart is increased by exercise.

Auricular fibrillation and flutter are common and from a clinical standpoint may be considered as one. They are the cause in 60-70% of cases of the arrhythmias occurring in decompensated hearts. Cases of auricular fibrillation coming to autopsy will show mitral stenosis in 40% and pure myocardial degeneration in 25%. The pulse in this condition is absolutely irregular, made more irregular by exercise, and the rate is usually over 100. There is a pulsus deficit and no definite systolic pressure; yet hypertension is usually absent. Jugular pulsation becomes abnormal when this rhythm is present, and the presystolic murmur often changes in character filling all or part of diastole.

Gallop rhythm should be sought for at the apex by auscultation. Practically it is a double first sound with the accent on the second half. It often means serious myocardial exhaustion. In rare cases, even when present, one can make out the pulsus alternans by palpation of the radial. The rhythm here is usually regular, but a strong beat alternates with a weak one. It is also in many cases a sign of grave heart disease. It must not be confused with the bigeminal pulse where every other beat is due to an extra systole.

We all realize the value of laboratory and graphic studies in heart cases, but they are far outweighed by the clinical findings in the vast majority of cases. Wassermann test should be made on all obscure cases, especially the aortic type. Basal metabolism studies will help to differentiate the thyroid cases. The Goetsch test does not seem to help differentiate the organic from the functional. Gastro-intestinal studies will often reveal pathology in the functional cases. Exercise tests of various kinds to estimate the myocardial reserve have all been found wanting, but are of some value. Blood pressure studies are extremely important. Recently while taking a blood pressure, I found a marked difference between the systolic and diastolic pressure; and on going over the heart, found my diastolic murmur to account for it. The diastolic pressure in aortic insufficiency is always lower than normal except when associated with reno-vascular disease. High blood pressure is not common in mitral endocarditis. While a heart is failing in either the hypertension cases or the endocarditis group, the blood pressure often remains what it was previous to failure until just before death.

Warfield lays much stress upon diastolic pressure. It measures peripheral resistance, and the driving force of the heart. It is more stable than the systolic and should never be more than 100. He places his hypertension cases in three groups:

1. Chronic nephritic with all pressures raised and constant abnormal urinary findings.
2. Hereditary group with all pressures raised but no abnormal urinary findings.
3. Arterio-sclerotic group with large systolic and pulse pressure but normal or nearly normal diastolic pressure and no constant urinary findings. These groups overlap. Syphilis is not considered in them.

The final step in the diagnosis of a heart case is not complete until one has attempted to place the patient in a definite class, if possible, in order that the proper therapy be instituted. First try to decide if it is a functional or an organic case. If it is organic, the patient will probably fall into one of the following classes:

1. Streptococic which includes those giving a history of polyarthritis, chorea, tonsillitis, growing pains etc.
2. Syphilitic which will be the most common in the middle aged male.

3. Arterio-sclerotic with an average age of 55 with extreme changes in the arteries.

4. Nephritic with an average age of 36 with usually no valvular lesion, no arterio-sclerosis and negative Wassermann.

5. Post infectious class resulting from diseases like pneumonia and typhoid.

6. Congenital heart.

7. Goitre heart.

8. Obesity heart.

The functional cases might be put into one of the following four classes:

1. Physical and mental strain group comprising those who have lived far beyond these powers. This group would include the cases recently described by Oehsner under the title of "Chronic Fatigue Intoxication."

2. Constitutional inferior type comprising those who have led the lives of physical invalids, never having entered into any athletic activities, are mentally inferior, and give a neurotic history, such as fear of high places, fear in the dark, enuresis, etc.

3. Emotionally sensitive group where some hidden fear, some disaster, some home worry, or death has been the start of the trouble.

4. Hysterie type showing some definite somatic manifestation such as paralysis, aphonia, blindness, anaesthesia, or contracture.

In conclusion I wish to state the views of Henry Christian on the use of digitalis; namely, that the danger or toxic effects of digitalis are more serious as met with in medical books than in medical practice. Some one of these toxic effects or so called digitalis dangers really should be looked for rather than avoided in digitalis therapy. The real dangers in digitalis therapy are three: 1. Using a poor digitalis preparation. 2. Consciously or unconsciously prescribing too little of a potent digitalis preparation. 3. Not knowing when digitalis should be started and stopped. Digitalis is given usually in insufficient dosage. Christian says he has yet to see the patient in whom too much digitalis had been given prior to his seeing the patient. The large majority of patients seen by him have had too little digitalis; a small percentage have had enough; none have had too much; some have had too little from the point of view of dosage when actually they should have had none, and finally digitalis poisoning, of course is possible, but it is one of the rarities of medicine.

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BARBER FAVORS EUGENICS LAW.

In a separate report filed with Gov. Blaine, Senator J. L. Barber, M. D., Marathon, declares that the investigations of the legislative visiting committee point clearly to the need for a stringent eugenics law. Senator Barber was chairman of the visiting committee and his report in part follows:

"There are 42 deaf and dumb children at the state school for the deaf at Delavan, all of whom were born to parents who are deaf and dumb," Senator Barber's report reads. "This shows that if persons who are deaf and dumb are married their children probably will be deaf and dumb.

WOMAN HAS TEN CHILDREN.

"In the state school at Sparta there is one woman who is feeble minded and she has five children, all confined to that institution and costing the state \$5,000. In the home for the feeble minded at Chippewa Falls there is a woman who had lived for some years with a man without being married. Being a woman of very low morals and feeble minded, she gave birth to 10 children, all of whom are feeble minded. They are costing the state \$10,000.

"Is this not sufficient evidence that it is dangerous and very expensive to permit this class of people to become married? We should have a law on our statute books prohibiting marriages of this character unless they who seek marriage be sterilized, and in the event such people go out of the state to get married their marriage should be considered null and void. Such a law, however, should give the people the right of appeal to the board of control in the event they feel that the physician examining them did not do them justice."

EXTRACTS FROM LETTERS OF DR. JAMES EVANS, PARIS.

Paris, March 24, 1923.

Funny, when you get a few anchors cast in a community, how busy you can get! I have not had time to write for a long time. Last Sunday we went to Fontainebleau. We took a ride through the forest—spring was just waking up and it was wonderful. In the afternoon we took the Bateau Monche out to St. Cloud; got a car and took a ride all around the park and the town. It was beautiful; a wonderful spring day with balmy air and the bluest of French skies.

Yesterday was the wedding of one of our Field Service men, in the little Episcopal chapel in a pretty little garden run for American students. After the wedding, a very nice reception. Friday afternoon a conference at the American Hospital with Dr. Gros and Dr. Fuller and a Mr. Robert Gamble of Wall Street, one of the trustees of the Field Service Fellowships. The idea was to discuss the raising of a scholarship to send a graduate student in medicine once a year to France, to be raised among the medical profession in America and to be administered by the American Field Service as another of their scholarships.

The next three weeks I am divided between Vidal's anaphylactic clinic and Dr. Griffon's laboratory of coprology where I hope to get some very valuable work in coprologic syndromes—which puts the treatment of hitherto obscure and empirically treated intestinal disorders of all kinds on a scientific basis. He has been doing work I never heard of being done in America. That work will bring me out to a new hospital and another gastro-enterologic clinic.

I think I am now assured of an assistantship at Peter Bent Brigham under Dr. Christian for the coming year.

I would like to bring home some instruments, but I hardly know what to do about it. I do not feel like loading up with very much and it will be easier to send for special instruments when we find the need of them after returning home. I am getting a special contrivance for gastro and intestinal resection and suturing. I have also been able to get slides of Gilbert's prints of Notre Dame which I had previously mentioned to you. I shall have at least 25 or 30 of them made and they should make a marvelously interesting illustrated lecture.

I am trying to lay plans for writing a paper for publication in France and America on Diffuse Limitis.

Friday night we had another meeting of our medical society. The program was by two members of the Rockefeller Commission for the prevention of tuberculosis in France, and was very interesting. France is way behind us in the work, but making valiant strides. Those meetings are the most interesting little informal discussions you ever heard.

We never had a bit of snow all winter, and now spring is in full bloom. This afternoon between the time it took to go up and down the Seine at St. Cloud, the leaves all pushed out.

It is mighty hard to stick in Paris over Easter, with everyone leaving for the South and the Riviera, Spain, Rome or what not.

Paris, April 2, 1923.

We just got back from Chantilly where we went for the Easter Monday holiday. We got out there about ten, and took a stroll through the forest. After lunch we went through the beautiful Chateau of the Grande Conde, and then through the wonderful stables along the race track. After that we had tea on the terrace of the Manor House where I convalesced after being wounded at Verdun. The Manor House is now a hotel. It was formerly Mr. Shepard's villa. It is still the same house, though changed into a hotel, and it seemed funny surely, to sit on the same terrace again where we used to have those wonderful chicken dinners, and to see the little garden where the Shepards entertained so wonderfully.

Nice, May 14th.

We left Paris Friday, having given up our apartment the day before. We spent the evening in Paris at Montmartre dining with some friends at a queer little place called the Bon Bock. After dinner we went to the Lapin Agile, a little Montmartre artists' resort that is still *real*. There the poet recites his own unpublished verses, and they are often good. The artists leave casts of the sculptors on the wall or copies of their own paintings. The "Lapin" himself, the proprietor, is an old white-bearded patriarch, who counts the cherries in your drinks as the waiter brings them past him. We got back to our room after midnight on the last subway and took the train at 6:00 for Nice.

If you want to see the people and learn what they are like, and get into the heart of the coun-

try, as it were, travel third class. We got our whole round trip ticket unbelievably cheap, \$30.50 apiece—Paris, Avignon, Nice, Genoa, Rome, Florence, Venice, Come, Lake Como, Lugano, Maggiore, Simplon Tunnel, Interlachen, Lausanne and Paris. Without going to Interlachen it would have been only \$24.00, but we wanted to take in Lake Thun and the Jungfrau climb, like Art and I did with you.

On our way down to Nice the train was crowded with young conscripts for the French army and they crowded the corridors and sat all over us in the compartment. They insulted all the "chefs de gare" as they passed through, flirted with all the girls, and had a hilarious time all around. At one station a load of conscripts got on. We had been alone in a compartment until then. A father of a family climbed in through our window and the old grandfather began handing in baggage after him, but before the mother and the little boy could come through the regular way the French Army had invaded our compartment and installed themselves, four of them. Well, there were four in the family and we two and the four soldiers, which meant two more than there was room for. Maybe there wasn't much ado, in true French "midi" style. The argument was terrible, and the funny thing was, you didn't think those boys ever had the slightest intention of leaving, but after a while, one by one, they would get up to go out and smoke, and never come back. They could not yield, of course, but left in their own good time, just the same. How they will argue, and it never means a thing!

Our first night was at Avignon, where we went through the old Palace of the Popes. That town was fascinating, and the Rhone Valley is beautiful. We left the same noon and passed through Arles, Tarascon and Marseilles. The view of the bay at Marseilles is magnificent.

Then we turned east and came along the shores of the Mediterranean about direct to Nice arriving at 8:20. We only intended to stay here a day but we are going to stay three days and two nights. The season is over, but it is lovely here. The flowers drug the senses, the view of sea and sky is something we never saw before. Then there is swimming, street car trips into the mountains, and down to Mentone and Monte Carlo along the famous Grande Corniche road, and dining and the Casino, and all that.

This hotel is a kind of pension, funny old place, I guess you know the kind, with a wonderful table, and only three francs, board and room. It is right on the sea, along the Promenade des Anglais, which is so called because the English had it built to give work to many unemployed several years ago. I am writing this in a pretty garden of olive and palm trees, with wonderful beds of daisies, phloxes, poppies, snapdragons and peonies.

Yesterday we took a motor trip back into the Maritime Alps, up the Gorge de Loup, to a little twelfth century village perched on top of a cliff 750 feet above the sea. When you see the place from the valley you can not imagine how you can ever get up there short of an aeroplane but the road coils and winds up and up, so that a car a mile ahead is only about a hundred feet above you. The town has only forty inhabitants but lost seven men in the war, and there is a plaque on the wall of the twelfth century church in commemoration.

From the brow of the cliff you can see miles away, Nice and the Mediterranean, and the air is so clear and the sky and the distant sea so blue you could sit down and write poetry in a foreign language.

We went in swimming yesterday, and I am certainly ashamed of my physical condition after being shut up in an apartment all winter. Parisians say you can not live in Paris without leaving it for at least one month each year. I believe them. The dampness and soot are terrible, and then the apartment life everywhere. They say Parisian families die out in three generations.

You notice the difference in the natives of this part of France and the Parisians—certainly a sturdier, healthier looking lot you could never see—the stuff by which the French won the war. Rome, May 19, 1923.

Just back from a marvelous dinner on the terrace of a beautiful restaurant in the Borghese Gardens on the Pincian Hill overlooking Rome in the moonlight,—a soft Italian night, music, you are young, love in young, the cigar is good, the wine excellent, you have just received a cable filling your pocketbook again,—what could be more perfect?

We left Nice after a motor bus drive high up along the edge of the Maritime Alps overlooking the Mediterranean with Monaco, Monte Carlo, Cap Ferrat and Mentone spread out before you in a setting of hazy purple headlines, blue sea and sky, and crag on crag, all the way along the moun-

tain tops, hundreds of feet above the ocean, and then the red tile roofs far below us and climbing up the mountain sides. At the Italian border we came down to the sea again at Mentone and just at the Customs House a funny Italian beggar came strumming along with a guitar with a cord over his nose and a plug hat on his head, singing for all he was worth, and his tin cup full of pennies.

On the way back we stopped at Monte Carlo long enough to see the Casino and hotels. We did not have time enough to try our luck and besides, the night before I had not been much encouraged at the Casino at Nice where we lost the huge sum of nine fancies on the table and one under the brim of a lady's skirt.

The next day we left for Vintimiglia where one goes through the customs formalities and changes trains. We were still going third class and buying a lunch along the way and laughing at American tourists who did not know French and did not know the ropes. But once on Italian soil we were as lost as the rest, and third class Italian is unbearable,—dirt! the people in the cars,—the sanitary arrangements unspeakable.

On leaving Genoa for Rome we decided to change to second, and found it heaps better. We reached Genoa in the evening after a trip with beautiful scenery along the Italian Riviera, that is to say, beautiful scenery between tunnels, for there must have been at least a hundred and twenty tunnels between Nice and Genoa. We walked out to find a restaurant in Genoa that night and found a little place down a narrow side street, down a hillside, where a huge dinner cost about fifty cents and oh, what spaghetti! We have been eating it every meal but one, since.

After dinner we found a funiculaire and went up a high hill overlooking the town, and it was beautiful in the starlight. The next morning on the way to the train we took in Columbus' reputed birthplace. On the way down to Rome we made the acquaintance of a very old man, the professor of physiology at the University of Turin, who was most kind to us, who explained everything as we went along and took us in his carriage to our hotel. Our conversation was all in French which we find helps so much more than English in Italy. We could see the Leaning Tower of Pisa from the train,—and then Rome.

We have had a strenuous, hectic three days of sightseeing since we arrived. Our host, the hotel proprietor, is fine. He makes out our itinerary

every day with an eye to economy, which makes him wonderful.

I will omit most of our sightseeing, except to say a word about our visit to the Forum. Before visiting the Forum we went into an old archeologist's shop to see a reconstruction of the Forum as it existed in the fourth century. That helped to get our bearings. We did not take a guide, as we rather thought and were amply justified in thinking, that to dope it out ourselves from Baedeker would impress it much more on our minds. Then, too, all that boyhood block building of mine helped mightily. So the whole afternoon we roamed over the Forum, the Capitoline Hill and the Coliseum, until I am afraid my temper was sadly worn with the difficulty of dopping out directions in Baedeker.

Venice, May 26th.

On our way from Rome we stopped at Florence and spent two busy days sightseeing and shopping. Florence is certainly charming. The shops are lovely, and prices cheap. Half a day was devoted to Fiesole and dodging its beggars and guides. We left Florence weary of tramping art galleries. The thing that impressed me most in Florence was Savonarola's old monastery and his cell, especially after reading George Elliot's "Savonarola" which I can remember impressed me much as a boy.

On our way from Florence here we met a very interesting Italian banker, and according to him, America was not only discovered by an Italian, but built by them, and the Ku Klux Klan and prohibition laws are going to wreck the United States. He was also very pro-German, and said that Italy and Germany together are going to run the world in the next generation. One sees lots of Germans around Venice and hears German spoken on all sides. They travel on their Italian investments, out of money they ought to be paying France.

Venice shall always be our goal after this, should we start for China. It is glorious here. Our first evening we took a gondola up the Grand Canal and after dinner walked out to St. Mark's, passing under the arch of the Piazza into a fairyland of fantastic marble columns row on row, with glittering St. Mark's dome glowing orange, over the Doge's Palace, and to the end of the Square. Filling the place is a moving crowd of bright colors. In the center is a raised platform with a large band playing wonderful music. It was a stunning effect indeed.

Yesterday morning we saw the Doge's Palace, Bridge of Sighs, Dungeon, and St. Mark's. Having read Francis Marion Crawford's "History of Venice" makes this certainly twice as interesting. In the afternoon we went over to the Ledo and went in swimming. The beach there is a peach. Last night we took a gondola and went out opposite Santa Maria della Saluta,—lay alongside a barge filled with singers and an orchestra and listened to Italian and Venetian songs for about an hour, then returned down the Grand Canal in the moonlight for about an hour before retiring. Paris, June 4th.

It seems a long time since I wrote last, so much has happened since, and we have been traveling so far and so fast,—though I believe it is really less than a week. We are busy packing and getting ready for England.

The trip has made me fully qualified for a Cook's guide. It has been great fun, a great experience, and one learns how to travel.

From Venice we went to Milan, stayed there only long enough to see the Cathedral, which is gorgeous. We then went on to Como. At Como I changed some dollars for Swiss francs and the clerk gave me 55 francs exchange or the equivalent of \$11.00, and I could not tell him otherwise. I wanted to change every cent I had in the world at the same rate, but couldn't take such advantage of the poor dub. I only changed twenty dollars and made fifty per cent profit. Then it started to rain and we had a lot of rain all through Italian lakes. Stayed all night at Lugano, and it certainly is beautiful there. We took the boat across the lake, then train, then railway to Ponte Presa to go to Luino and then boat again on Lake Maggiore to Stresa, and on Lake Maggiore it just poured. At Stresa we stayed at the Hotel Milan, where they had a very funny sleight of hand and mind reading entertainment in French that evening.

Next morning we went to Interlachen, and went to the Kursaal that night. I drank German beer, and we listened to the concert. Next morning we went up the Jungfrau, which took a day, and we both got mountain sick. It was blowing a gale, and the glare of the sun was so intense on the newly fallen snow that one could not see very much. The snow was being driven by the wind. It was a wierd world up there, not nearly so beautiful as when I visited it with you and Art. The next day we took a drive up the beautiful Lauter-

brunnen to Trümmelbach Falls. That was a drive and a sight worth seeing. The road goes through flowery mountain pastures, through villages of quaint chalets, and along a running brook through the pines, and the Falls have gouged out a queer vertical tunnel hundreds of feet high out of the slate rock, and you visit it by an electric lift. In one place it is illuminated artificially by red lights.

Our next jump was to Montreux, partly by an out-of-the-way narrow gauge electric railway that wound in and out of the valley, over mountains and through tunnels in a way most fascinating, and just at sunset we came out of a long tunnel to the top of a mountain to emerge onto a long winding descent overlooking Lake Geneva. It was gorgeous, and the hillsides were covered with narcissus. At Montreux they were celebrating the Fete of the Narcissus, and we had luck to get a room.

The next morning we paid a hurried visit to the Castle of Chillon, celebrated in Lord Byron's poem describing Bonivard's imprisonment there. We saw where he was chained to a pillar set in a rock in the basement of the castle, with a little window looking out onto Lake Geneva and the mountains in the distance. Any one could write a poem there. Then we got the boat nearby, which passes Montreux on the way to Lausanne.

We left Lausanne the same day at 3:00 P. M. and got to Paris that night at 11:30, and the sensation was funny, into Paris again! It was certainly strange. I think Paris will always seem like home to me now.

Tomorrow it is on board the airplane for London. That ought to be fun. Jove, but we are having a year of it!

VITAL STATISTICS FEES READY.

Fees for physicians and midwives for the certification of births, and for physicians, osteopaths and coroners for certifying deaths during the year ending June 1, were tabulated during June by the State Bureau of Vital Statistics for submission to county treasurers for payment. Any physician entitled to such fees during this period who fails to receive the county treasurer's draft promptly should apply to that official. It is believed such payments should be completed by the counties by July 1.

TRI-STATE MEETS IN OCTOBER.

The annual assembly of the Tri-State District Medical Association of Iowa, Illinois, Wisconsin, Minnesota and districts from surrounding states will be held at Des Moines, Iowa, this fall. The dates of the meeting are October 29th, 30th, 31st, and November 1st.

THE WISCONSIN MEDICAL JOURNAL

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EDITORIALS

TRUTH IN ADVERTISING.

PRACTICE limited to the successful treatment and removal of chronic diseases."

This was the catch-line of an advertisement that recently appeared in a prominent Milwaukee newspaper. Such a statement may be within the law but it is certainly misleading. How the readers would laugh if an attorney were to advertise that his practice was limited to success in courts. Yes, they would not only laugh at the attorney but also at the paper who sold its space for such an absurd statement.

Yet we are faced with the peculiar anomaly of newspaper advertising managers meeting in convention declaring themselves for "Truth in Advertising" and, the convention over, many accepting so-called medical copy that is misleading, generally exaggerated, and usually untrue. Not only do they accept the copy but also a bonus in the way of unusually high rates for printing it.

A Justice of the Wisconsin Supreme Court has graphically pictured one reader of just such advertisements. He said "the sinking man, grasping at straws —"

The skillfully worded and phrased sentences dangle before the sick what appears to be a life-preserver. Quick restoration and a happy future appears certain after a "free consultation". The sick reading such an advertisement are often misled, mulcted of their small savings, and become ultimate charity cases. And far worse, often the

precious time is past when curative treatment might have restored.

We wonder whether this all too common result of so-called medical advertisements has ever occurred to the newspaper management? Is it asking too much to suggest that a responsible person read all this type of copy; that the extravagant be blue penciled; that the misleading and untrue be refused?

Admitting a financial loss we refuse to believe that the newspaper exists that would knowingly jeopardize the very life of a reader or readers for additional profit. We hesitate to believe that such a paper does exist in Wisconsin so we appeal to the press to apply the rule of "Truth in Advertising" to medical copy.

Honest and reputable practitioners are doing what is possible to protect the public from fraud and ever maintain the integrity of an honored profession. For the sake of public good they ask cooperation to the extent that no obviously misleading advertising be placed before the readers of the daily and weekly papers.

A straw is not a life-preserver.

RULES ARE CHANGED.

IN the May issue of this Journal we commented editorially upon a ruling of the Civil Service Commission restricting the selection of physicians for state institutional service to residents of Wisconsin. We asked the question if the standard of "The best shall serve the state" should be so restricted in the field of medicine.

On June 12th the Dane County Medical Society

discussed this question with special emphasis upon conditions at the Mendota institution. On June 13th the editorial was reprinted by a Madison paper. On June 18th the Commission announced that this ruling had been changed, and while of two physicians of equal standing the resident of Wisconsin will be given the preference, the state service will choose the best within the salary limitations, regardless of the state boundry.

In justice to the Commission, we have since been informed that at the time of our editorial the Commission had under consideration the change suggested. Through the active advocacy of the Dane County Society in appointing a committee to urge this change, however, physicians of Wisconsin may once more point to a concrete example of unselfish service for the public good.

The announcement of the new ruling follows:

June 26, 1923.

State Board of Control
Capitol

Dear Madam and Gentlemen:

Owing to the inability of the Civil Service Commission to secure a sufficient number of qualified candidates, who are residents of Wisconsin, for the position of physician for institutional service, the requirements have, therefore, been changed to meet the existing emergency, so that hereafter candidates who are legal residents of the United States will be admitted to the examination. It is anticipated that this modification of the residence requirements will permit the preparation of a suitable eligible list of persons for physician so that certifications can be made at an early date.

Very truly yours,

ROBERT G. SHARP,

RGS-MEF *Secretary and Chief Examiner.*

BEGINNING with this issue the Journal will print each month a list of articles accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies. The work this Council is doing to bring before the medical profession the truth concerning the new proprietary medicinal preparations deserves the most extended publication.

In practically every mail physicians of this state are solicited for some new pharmaceutical product. The Journal demands that such products shall receive the approval of the Council before they may be advertised in its columns. It is because of this restriction that many articles not

approved, and some not even submitted for approval, are offered to the members of the profession in a direct manner.

Physicians should obtain a satisfactory answer to the question, "Has this the approval of the Council on Pharmacy and Chemistry?" before they purchase. If the article is advertised in this Journal it has such approval. If it is offered by mail take the time to look it up as a matter of self-protection.

IT is with deep regret that we announce the death of Dr. Henry C. Sibree, Sturgeon Bay, president of the Door County Medical Society.

We know of no more fitting tribute to this pioneer physician than the simple paragraph from the Sturgeon Bay news item on the day following his death.

"The first to establish a hospital here, the first in the county to perform an operation for appendicitis, and the first to bring a trained nurse to the people of the peninsula, Dr. Sibree will live long in the memory of Door County's inhabitants."

AS OTHERS SEE US

SAFEGUARD HEALTH FROM IGNORANCE.

Physicians and laymen alike can hardly fail to take a personal interest in legislation for regulation of the treatment of the sick which is now under consideration in Springfield. At present there are some 12,000 persons in Illinois engaged in such practice. The only regulation governing them is that provided by a law now twenty-five years old. A modern bill, generally indorsed by reputable physicians, and passed five or six years ago, was declared unconstitutional because of some minor details.

The effect of this situation is a menace to the health of thousands of persons in the state who might put themselves in the care of inefficient practitioners. The purpose of law on the subject is to make careful and extensive scientific education a requisite to any treatment of the sick. That certainly is wise, and equally fair to those who wish to treat the sick and to those who seek treatment.

The Tribune does not presume to judge the merits of the bill introduced by Senator Mason,

but we assume that he has had sound scientific advice in its preparation. There can be no doubt that some such legislation is needed. Human health is too precious to allow it to be imperiled by practitioners who acquire their "profession" with less study, less brains, and less effort than is required for the making of a good plumber.

Most potential patients have little or no knowledge of their own anatomy or what may ail it. Many have even less knowledge of the qualifications of those to whom they go for treatment; they must, of necessity, surrender themselves almost blindly into the hands of the physician. It is right that they should be protected in so far as possible from fakes, fads, and ignorance. A law which will do this, and raise and maintain the highest possible standards of the art or science of healing, certainly is needed. If Senator Mason's proposals will do this they should be supported, regardless of how much they may interfere with the activities of persons who look upon healing as a trade such as might be learned in night school.

—*Chicago Tribune.*

EUGENICS IN WISCONSIN.

Wisconsin has had a eugenic marriage law since 1913. It has not, in general, had the support to which it is entitled from the medical profession. Nor has it had the support of some self-styled social workers. There have been plenty of cases, in its application, that gave opportunity to those who were seeking a chance to laugh. So the anti-eugenists misread public opinion and decided that at this session of the legislature the law was due for repeal. All they needed do was glibly to charge, without backing their word by statistics, that it "has been 100 per cent a farce."

No sooner was the repeal bill in than they got a surprise. They found that people have begun to think in terms of eugenics. The statute has kept this subject before them. And the state health office has been able to show that the law has done much good.

Why repeal this law? has been the question persistently put to the group working to get it off the books. They have not been able to frame a convincing answer. Nor have they showed that the law is out of harmony with the big principle of race improvement. They have been able to offer nothing as a substitute except the old plan that gives absolutely no protection against social disease.

The eugenics law, imperfect as it is, stands, broadly, for the improvement of our people in physique, ability and character—the three desirable eugenic qualities. If it has prevented marital disaster in a single life, it has been worth while. And if it has made our new home builders more familiar with the responsibilities that come with marriage, it has been an agency of great good.—*Milwaukee Journal.*

The Extension Division of the University of Wisconsin announces a revision in lectures offered by Dr. J. P. McMahon, Milwaukee. The lectures now offered are:

1. An Outline of the Cancer Problem and a Discussion of the Diagnosis and Treatment of Cancer of the Female Generative Organs and Breasts.

2. An Outline of the Principles and Practice of Radiumtherapy with especial reference to its employment in diseases of the Female Generative Organs and Breasts.

Holding that deaths from diphtheria now are unnecessary in view of the effectiveness of diphtheria antitoxin, the state board of health at its recent meeting at Milwaukee took further action to bring about better local control of this disease. The state health officer reported that numerous deaths from diphtheria have been due to failure to use diphtheria antitoxin, or because it was administered too late to be effective, or because of failure to make a prompt diagnosis.

The board expressed its opinion that "there can at this time be no justification for any physician holding an adverse opinion as to the specific value of diphtheria antitoxin as a therapeutic agent in the treatment of diphtheria."

The state health officer was directed to bring these facts to the special attention of the physicians of the state and to request all local health officers immediately upon a report of a case of diphtheria to ascertain whether the state board's regulations are being complied with, whether antitoxin has been administered, and whether proper prophylactic measures were given adequate consideration concerning other members of the patient's family.

In 1922 the state reported 3,593 cases of diphtheria and 238 deaths.

**We accept only honest ads.
Favor those who favor us.**

**Say you saw the ad. in
OUR JOURNAL
Let's Pull Together**

THE JOURNAL CLINIC

Edited and Published by

THE BUREAU OF POST GRADUATE MEDICAL
INSTRUCTION

UNIVERSITY EXTENSION DIVISION

The University of Wisconsin.

A CASE OF VENTRAL HERNIA OF LARGE SIZE WITH OPERATIVE CURE.

BY H. E. BURGER, M. D.,

BELOIT, WISCONSIN.

Mrs. S.—Age 58, Widow; occupation, Laundress.

Family History—Negative.

Personal History—Has never borne children. Twenty-two years ago she underwent abdominal hysterectomy for fibroid uterus. History otherwise negative.

Present Illness—About ten years ago she noticed a tumor the size of a small orange in the midline between the umbilicus and the pubis. This tumor has increased until it has reached its present size.

Physical examination—Patient is a fleshy woman in good condition. There is a large pendulous hernia which is irreducible. With the patient lying on her back and reduction made as far as possible there remains a tumor (hernia) with a fairly marked ring, this tumor measuring 28 (twenty-eight) inches in circumference, 16 (sixteen) inches from upper to lower pole and 15¼ (fifteen and one-fourth) inches laterally. When the patient is in the erect position the tumor falls half way



to the knees. The lower surface is covered with roughened, thickened skin and patient states that it has been chafed and raw during the hot summer months. In the wall of the tumor are three tumors the size of an orange, evidently hernias of the hernia. The scar of the old operation shows at the right of the mass. (See photograph).

The patient desires operation in spite of the danger, stating that she would rather be dead than

to continue in her present condition. So far as I can ascertain, no physician has previously seen this hernia. The fact that this hernia is irreducible makes operation the only means of relief.

Operation was performed Dec. 18, 1922, the Mayo technique being followed with the addition



of tension sutures of braided silk tied over gauze to care for the great strain. The only additional point of interest was that the cœcum and appendix were in the leble marked X in the photograph.

After a couple of days of difficult respiration due to the increase of intra-abdominal pressure, the patient made an uneventful recovery and was discharged with instructions to wear her abdominal supporter whenever she was on her feet.

AN UNUSUAL SOLITARY SUBJECTIVE MANIFESTATION OF THYRO- TOXICOSIS.*

BY H. M. COON, M. D.,

MADISON, WIS.

A single subjective symptom, "weakness of both legs," which when more closely analyzed was found to be confined to one muscle group, the quadriceps femoris, is at least noteworthy. As an expression of marked thyroid derangement, accompanied by an unusually high metabolic rate, this circumstance warrants more than passing notice.

*From the Bradley Memorial Hospital, University of Wisconsin, Madison.

This case, referred to the medical service of the Bradley Memorial Hospital for a neurological study, is that of a man fifty-one years of age, with the following history:

Three months previous to admission, without warning of any sort, the patient had his first attack of weakness, while attending a theatre. Upon arising from his seat he noticed a perversion of sensation, described as numbness, in both of his lower extremities and in order to arise from his chair he had to help himself with his arms. Upon starting to walk he fell to the floor, with the feeling that his knees went out from under him. Consciousness was not lost. After a few moments he was able to rise, with only slight assistance, and to walk from the theatre. Two weeks later, with no disturbance in the meantime and under similar circumstances, this difficulty in arising from his seat and walking was repeated. Two days later, after returning from his work, upon attempting to walk after having rested in a chair for a short time, the patient lost all control of his legs. He fell four times in attempting to walk a short distance. A physician was called and prescribed stimulation by contrast baths and for three weeks there was no return of the weakness. At this time patient had his teeth examined. Two were found diseased and extracted. To the difficulty in eating following this procedure the patient ascribes a considerable loss of weight. Ten days before admittance there was a recurrence of the weakness, which has persisted.

The weakness is described as occurring with no other changes, no pain accompanied it, nor with the exception of the first occasion, numbness. It is merely a loss of ability to control his limbs after they are flexed at the knees. He is able to walk with the leg extended but as soon as the knee is flexed he can no longer control his limbs. This weakness is noticed especially in the evening, after the day's work is over. While it may be necessary for him to have assistance in getting to bed, upon walking in the morning he is able to walk normally.

There is some cardiac palpitation accompanying these attacks, but there is no history of any other cardiac symptoms occurring previous to the onset of the attacks. There are no pulmonary complaints.

Appetite and digestion are good. Neither constipation nor diarrhoea complained of.

Nocturia for the past two months, not associated, however, with any other renal symptoms.

Patient sleeps well; is not worried nor irritable. Has, however, noticed a tremor of all extremities which has not been present before the onset of his weakness.

Best weight within the past six months was 190 pounds; at present weight is 173 pounds.

Past Medical History:

Scarlet fever and occasional sore throats only diseases of childhood. Acute rheumatic fever 13 years ago, with no marked cardiac disturbance. Broncho-pneu-

monia eight years ago, not a severe attack. Influenza in 1918. No operations.

Social History:

German by birth. Animal keeper by occupation. Married twice, four children by first wife, none by second. Habits as to living are good.

Family Medical History:

Negative.

Physical Examination:

Patient is a well nourished male, not acutely ill. Gait is abnormal, in that he walks with the legs held rigid. In sitting down or arising from a chair, he uses his arms a great deal. If arms are not used, drops into the chair heavily as soon as legs are flexed at knees. Skin is moist and clammy.

Eyes—Some widening of the palpebral fissure, especially marked in downward movement of the lids. Pupils react to light promptly. Convergence is absent. No nystagmus.

Nose and ears—Negative.

Mouth—Tongue protrudes in midline, with a fine tremor. Teeth only fair. Pharynx congested. Tonsils are negative.

Neck—There is an enlargement of both thyroid lobes and the isthmus. Enlargement is soft and homogenous. Systolic murmur heard over the right lobe.

Chest is emphysematous in type. Slight increase in area of substernal dullness. No abnormality of fremitus. Percussion note is slightly hyperresonant throughout. Breath sounds are normal. No râles.

Heart—Apex beat in 4th interspace. Left and right borders within normal limits. Soft systolic murmur heard best at apex, also heard in axilla. Pulmonic and aortic second sounds are equal.

Abdomen—Liver palpable, spleen not. Otherwise negative.

Extremities—Blood pressure—Systolic 158, diastolic 92. Palmar surface of hands moist. Marked tremor of fingers. Radial pulses equal, with suggestion of water-hammer character. Rate 118. Knee jerks are sluggish. No Babinski. Marked weakness of quadriceps groups of both extremities, no other muscle weakness.

Impression:

The history of marked weakness of the legs, coming on at the end of a day, loss of weight and tremors of all extremities, together with the physical findings—ocular signs, thyroid enlargement, tremor of tongue and fingers, and the quadriceps weakness, give the picture of thyroid intoxication, and a provisional diagnosis of toxic adenoma of the thyroid is made.

Clinical Findings:

Blood—Hb 100%. R. B. C. 4,970,000. W. B. C. 6,200.

Urine—Negative.

X-Ray of substernal region shows presence of substernal thyroid.

Basal metabolism shows a variation from the predicted of +79.0% and +80.7% with the Du Bois tables and +91.43% and +93.24% with the Benedict tables.

DISCUSSION.

Plummer has for many years emphasized the importance of quadriceps weakness as a suggestive sign of hyperthyroidism, but it is usually brought out by means of a thorough and complete examination, and is not ordinarily more than a collateral finding. In this case it was the one outstanding complaint and any other substantiating evidence in the history notably the loss of weight and tremor, was merely brought out as part of the routine history taking, and had made no impression on the patient.

The basal metabolic increase is noteworthy as an indication of the degree of toxicity, which led to the opinion that immediate surgical treatment was imperative.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical
Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

HEALTH EDUCATION.

DIRECTOR, STATE LABORATORY OF HYGIENE,

BY W. D. STOVALL, M. D.,

MADISON, WIS.

Have we not reached the place in our effort to save human life when we should ask ourselves these questions: Are our methods effective and if not, why?

During the latter part of the nineteenth century and the early part of the twentieth, science has become a subject of importance to the professions and the trades, to individuals, and groups of individuals. Scientific studies of many kinds have revealed facts which have accentuated the urgency of collective action for community benefits and individual protection. Not the least of importance among the contributions of workers in the field of science are those contributions which have advanced knowledge of life itself. The study of biology has brought forth information concerning living things which has profoundly influenced human life, economic and social. Medicine has been revolutionized, and from it has developed our modern public health movement.

As a result of discoveries in the science of biology and allied sciences, routine procedures have been worked out which bring to the mass of the people comfort and protection. One of the great fields for service to mankind is in the field of applied science. Great departments have sprung up in our federal, state and municipal governments to apply the science which affords protection to individuals and communities from disease. These government departments are called Public Health departments, and in them various bureaus have been organized, the functions of which are to apply various sciences to disease prevention problems. Biology is the science which underlies them all. It is the science which is most important in public health work. The bureau of communicable diseases is a most important division of every board of health. The work of this bureau is based entirely upon knowledge concerning that world of small life, bacteria, revealed to us through the microscope. Out of this study has been developed routine procedures governing those who are sick with bacterial diseases. The procedures are adopted to prevent the spread of these diseases from the sick to the well. Quarantine, medical inspection of school children, specific, passive and active immunization against many diseases, and sanitary control of all food supply are a few of the results. So-called educational work has become a very prominent part of health department activities.

It is easy to prove then that great machines have been organized to protect the public from the disease spreading bodies which lurk in the unseen places; and routine methods of procedure have been adopted as if by administrative control to prevent disease. In fact much prevention has been accomplished by these means and is today preventing much disease. Statistics from New York City show that the use of diphtheria antitoxin has reduced the mortality from diphtheria from 150 per 100,000 in the decade before 1895 to but 22 per 100,000 at the present time.

In spite, however, of our well organized departments for the administration of health laws, we are forced to recognize that something is wrong. A previous article in the Journal pointed out the failure on the part of health departments to reduce the hazard from diseases for which they have set up definite methods of control. This failure has caused considerable doubt as to the

value of the methods or the way in which they are being applied. Recently in an article in this Journal W. C. Sieker has reminded us that respiratory diseases in general are everywhere on the increase both in numbers afflicted and in fatalities; that diphtheria and scarlet fever, measles, whooping cough, and other common communicable diseases of childhood show no signs of abatement.

A bulletin issued last year by one State Board of Health called attention to the highest scarlet fever morbidity for the preceding year of any for ten years previous. Two years ago diphtheria was unusually prevalent in Wisconsin and all over the United States.

In the early part of 1921 a statistical bulletin from the Metropolitan Life Insurance Company, basing its conclusions upon records of its more than 10,000,000 policy holders, commenting on the higher mortality in 1920 over 1919 due to diphtheria, measles, scarlet fever, and whooping cough, declared that the downward tendency has been so trifling as to raise the question whether the present line of attack on these diseases is producing results commensurate with the cost.

Dr. Rosenau said in referring to medical inspection of school children: "It at once must be admitted it has been a failure, for it has had but very slight influence upon the prevalence of measles, scarlet fever, diphtheria, whooping cough, mumps, and so forth."

And so illustrations are not wanting which indicate that even with our present good organizations for disease prevention we are making little if any progress. No one is more conscious of this than those who are in the work themselves. To meet this obvious failure on the part of health organizations to effectively stem the tide, particularly of the communicable diseases, the obvious thing has happened. Health departments have organized in addition to their scientific sections a bureau for public health education. This new bureau is the direct result of the failure of health organizations to bring to the public in an effective way the things which can be accomplished by the application of scientific practice to disease prevention. In a word the claim is that the methods used for this disease prevention have failed not because the methods are not good but because the people do not cooperate for carrying them out.

This in my opinion is the situation. School medical inspection has not failed. There is no adequate school medical inspection. In a few localities more or less effective organizations for inspection of school children have been built up but these are few. However, the whole success of the prevention of the common communicable diseases of childhood does not rest entirely upon adequate medical inspection. There must be co-operation between the health officers, and the public in general. Health officers have not received this co-operation, and so health departments, federal, state and municipal, have undertaken to bring it about by carrying on campaigns of so-called health education.

Health education has undoubtedly accomplished some favorable results in bringing about a better understanding between health departments and the public generally. It has, however, accomplished little that is of a permanent constructive nature. Health education so far has amounted to little more than health propaganda, which may be within itself not an undesirable thing, although it has little or no real educative value. Health education consists largely of the distribution of pamphlets which are really extracts from the scientific literature of the time. These pamphlets are read by but few people and many of those who read them are unable to interpret and put them into daily practice.

The present system of health education is failing because of two reasons: First, because the people, even so called educated people, are ignorant of living nature, of the science of biology; second, because it enumerates in many pamphlets what scientific public health practice can accomplish in any community, but provides no leadership to put into effect that practice. The result is that disease continues to spread unabated.

It is well to ask them what constitutes good health education, and how may the people be reached with all the effectiveness of modern science for the prevention of disease?

The answer to the first question is: The re-organization of our school system and incorporate in the curriculum instruction is Biology. This does not mean, to quote from a recent article in Pearson's magazine by Ellen Torelle, that travesty on good sense often called "nature study": "Biology is a science and must be presented as

such. It must be experienced, it can not be learned." There is much talk of instituting courses on hygiene and public health in high schools and normal schools. Courses of specialized study in hygiene are meaningless without first a ground work in botany, zoology, histology and embryology. Hygiene and public health are not sciences within themselves but are constituted of many sciences, biology, physics, chemistry, sociology and many related subjects. To inaugurate courses in our schools to teach the routine principles by which health officials and health organizations set about administering public health laws is not teaching hygiene, and it does not produce an intelligent individual. Good health education consists of courses of instruction in the science upon which good health is more dependent than any other, the science which deals with life, its fundamental facts, and the laws which govern it, the science of biology.

Before health departments can expect co-operation there must be intelligence on the problem in which cooperation is asked. A large per cent of so-called educated men and women know nothing of the phenomena of life. It is still a mysterious thing. The value and possibilities of human life are not recognized. From such individuals, and they constitute a large per cent of university and college graduates, no intelligent co-operation can be expected. They may or may not follow rules which they are taught and are requested to follow. If they do, it is from a willingness to be in line and to follow blindly than any knowledge as to why they are asked to meet certain requirements. A reorganization of our schools and the establishment of proper courses of instruction in biology constitutes a logical, necessary foundation for subsequent study of physiology hygiene, and other sciences. People so educated can solve many of their own health problems.

The sanitation of school grounds would not be a matter of concern for health departments among people who have had proper schooling in the fundamental sciences. Quarantine would not be the bothersome problem which it now is. Communities of people recognizing the possibilities of human life and knowing that the foundation of a worthy future civilization rests upon the recognition of the possibilities of human life would bend their efforts to its perfection. Health de-

partments under such circumstances would be asked to co-operate with small communities by supplying experts to do what is recognized by all must be done.

If there are those we feel that we are not working our health education backward, to use a homely expression, that we have not the cart before the horse, let him look seriously into what others think of our educational system.

President Harding is quoted as saying that the education of the American child has fallen below the standard necessary for the protection of the future.

The Secretary of State, Mr. Hughes, said: "It is time for reconstruction, and the establishment of definite requirements by which there will be secured better mental discipline, more accurate information and appropriate attention to things of the deepest value, which make for the enrichment of the whole life of the student."

These sentiments express a fault in the general educational scheme and after all what effects general education of the student effects his attitude toward life. We do not expect leaders or even intelligent co-operation from those whose education on the fundamental facts of life and laws which govern it have been so neglected as to suggest that this information is forbid to the mass of students to be revealed only to the few, those who call themselves science students.

We appear to believe that we are accomplishing permanent construction when we distribute among the people short papers on disease and how it is spread. Let us observe the kind of ground upon which we are casting our seed.

Reports from the United States Department of Education show that one-half of the children of the country are without schooling. The enrollment of the first grade is twice that of the second. In other words, half of the children who enter our schools in the first grade never get any further. The eighth grade enrolls only half as many as the second, and the high schools enroll only half as many as the eighth grade. The high school enrollment steadily decreases each year until only one-third of those who enter as freshmen complete the senior year.

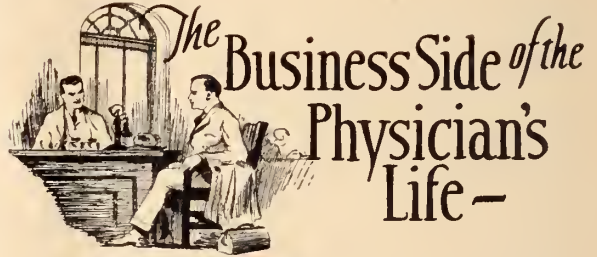
One may well ask then if the present method of public health education can possibly succeed with lack of schooling so common.

And what of those who do finish the high school courses and even the college and university courses? I have already quoted from two American statesmen who believe the American school is not meeting the requirement of the times. That the curriculum in our schools is not giving instruction in those subjects which will help the student to see and interpret life is obvious. The committee appointed by the State Medical Society two years ago to co-operate with a committee from the State Teachers' Association for promoting school hygiene took for its first job an inquiry into the instruction given in the public and normal schools in the State in hygiene and allied subjects. In the majority of instances nothing worthy of the name of any branch of the science of biology is taught, and in a few instances very inadequate courses in physiology are offered.

Public health workers everywhere might as well realize now as later that until the school curriculum is reorganized and a new one built up around courses in biology, botany, zoology, histology, embryology, our educational work is going to be largely wasted in desert air. Without such training even so-called educated men and women have no understanding of our appeal. We are very much in the position of the wireless operator who sends a message when no one is "standing by". The enforcement of our rules meet with resistance because people have not been given the means of interpreting their value. It is not sufficient to say that a method of procedure should be carried out because it is good for the individual or community. It is not sufficient to say that disease is spread thus and so, and co-operation for the establishment of this or that condition is necessary for the protection of human life. This sort of education is superficial and without schooling in biology it can be nothing more than a substitute and can never accomplish anything more than the mildest sort of passive co-operation for the enforcement of public health laws.

Our present methods for the control of the common communicable diseases of childhood, diphtheria, measles, scarlet fever, whooping cough, etc., have not failed and medical inspection of schools has not failed. What has failed is our educational system. The school curriculum has not advanced with science, and civilization. We can not expect our methods for disease prevention to work without an intelligent public. The

public can not be intelligent on our problems until they have been taught the facts revealed by a study of biology. The greatest problem in public health today is the fight to introduce the study of biology in our common schools, the study of biology as a science not as a course in nature study.



Those of you who have been following this series of articles with bated breath or breaths have perhaps wondered why so much time has been spent on the subject of investments and collections.

The answer to that, of course, is that these are the principal subjects on which a business man, talking to a physician, can expect to talk with any assurance. In this the physician differs from the business man, for in talking over a business man's affairs, one might and would expect to discuss the methods he uses in earning his money.

Not so with the physician. No layman can be qualified to discuss with a physician his methods of earning his money, for that concerns itself with the professional side of the physician's life, a curtain behind whose sacred draperies no mere layman can expect to venture.

So we start, like the famous recipe for rabbit pie, with "First catch your rabbit." After you have "caught" your money, then it is time enough to step in and attempt to discuss with you the subject of its disbursement. As catching the honestly earned dollar seems to be a mountainous undertaking for many physicians, we have devoted a good deal of space in past issues to talking about methods of collecting. And as holding onto the money seems to be an equally difficult proposition for many others, that has occupied the balance of our space.

Not many men—and this includes your so-called business man as well as the professional man—have any real conception of the meaning and power of capital. Almost every town, large or small, has its proportion of men who we refer to as "capitalists." We know these men have a lot

of money, or at any rate we think they have. We also know that they appear to do little if anything, but go down to their offices about three hours later in the morning than we do, and leave their offices about three hours earlier. If our town sports a club, we see them sunning themselves in the windows pretty frequently, with heads nodding, and hands folded comfortably over rotund vest fronts.

These benevolent gentlemen wear about them a serene expression closely resembling that gracing the contented cat who has just finished off the family canary. It looks pretty soft to us, and we wonder how they do it.

These men are our nearest approach to a leisure class. They are men who live not out of their own efforts so much as the efforts of their money. This isn't strictly true, of course, for most of our monied men are putting brains as well as money into their enterprises.

Because we are a younger nation and are younger as investors than our English cousins, our leisure class, if we can call it such, differs materially from the leisure class of England.

Our capitalist group employ its money to a very large extent in promotional enterprises, and let me say right here that despite the popular pastime of cussing the capitalist, this nation wouldn't be the gold mine of opportunity and all around comfortable place to live in that it is, had it not been for the far sighted promotional work requiring gigantic risks that our monied men have taken—and still are taking.

Your Englishmen, however, haven't the same incentive for promotion, because British enterprises are largely in a completed state. Hence, he puts his money away into securities that are already soundly developed, and then lives off the income. The only part of him that works is his money and his appetite.

We are all of us potential capitalists. Perhaps small scale ones, but money is capital whether it happens to be in dimes or ten thousand dollar bills. And to the extent that we learn to invest our surplus income wisely, and *keep it working*, will our scope as capitalists broaden, and our benefits accrue therefrom.

An English business man, in this country recently, made the interesting statement that England had nothing like the number of "fake stock" promoters, and similar gentry feeding on the gullibility of the public. He accounted for this from

the fact that the English people have become accustomed through generations of training, to invest their savings in sound securities. This applies just as much to the poorer classes, who put their savings into Bank of England certificates, and similar gilt-edged reservoirs for earnings.

If you must take chances, play your own game, and let someone else get burned in the oil market. You have plenty of opportunities in your own profession to take a chance—get an X-ray outfit, start a new hospital, put your money into radium, do something where the odds will be in your favor because you know your business. If you gamble outside your own profession you are playing the other fellow's game with all the odds against you, and are ruining your own efficiency because of outside worries. He who plays the other fellow's game should kiss his coin "Goodbye!"

Six per cent may sound like a piker sum—trivial, uninteresting, not to be compared to the earnings that the oil men tell about, or that King Henry of Detroit has made from his humble road affliction. But six per cent put away and allowed to grow—don't miss that "allowed to grow" part of it—will double itself in about twelve years. Twelve years from now 999 of every thousand oil gambles or any other kind of gambles will be sleeping 'neath the daisies.

As a plain matter of simple arithmetic and fact, six per cent is a young giant, if properly used. The man who invests in securities and then spends the income from them as fast as he gets it, isn't getting the good out of his investment that he should. Compound interest is the greatest friend in the world to the man who knows how to use it. When you make an investment, make a good job of it. Plow back the earnings. Then watch your principal grow.

If we invested our money with better judgment and discretion—what a lot of happiness we would be building for our future and the futures of those we hold dearer than life itself. And there's a lot of consolation in knowing that there *are* many physicians who have learned to recognize the simple truths about investment, and are building their income foundation securely.

But twenty years from now, there are going to be a lot of fellows that you and I know and like who are going to be singing that old thread-bare refrain, "If I only had known better!"

Singing is about all the consolation that will be left them—then.

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Waukesha	Wm. E. Nicely, Waukesha	S. B. Ackley, Oconomowoc.
Waupaca	E. H. Jones, Weyauwega	A. M. Christofferson, Waupaca.
Winnebago	Ronald Rogers, Neenah	S. D. Greenwood, Neenah.
Wood	J. B. Vedder, Marshfield	W. G. Sexton, Marshfield

SOCIETY PROCEEDINGS

ACADEMY OF MEDICINE

Dr. Victor C. Vaughan, editor of *Hygeia*, addressed the last spring meeting of the Milwaukee Academy of Medicine on June 13th. The next meeting of this society will be held on October 9th.

COLUMBIA COUNTY

A meeting of the Columbia County Medical Society was held at Portage on June 13th. At a business meeting the society voted to maintain its present organization for at least the rest of this year.

Papers were read by Dr. Ira Sisk, Madison, and Dr. W. J. Thompson, Portage. J. G. Crownhart, Secretary of the State Society, spoke on the program of the state society and the legislative work.

DANE COUNTY

A committee to investigate medical conditions at the Mendota state hospital was appointed at the June 12th meeting of the Dane County Medical Society. This committee met with the state board of control and the civil service commission urging the repeal of the ruling that restricted the choice of physicians for institutional service to Wisconsin.

After a business meeting a ball game clinically demonstrated the dire results of obesity, the Leans winning 12 to 3.

OUTAGAMIE COUNTY

Twenty-five members of the Outagamie County Medical Society were entertained at a dinner meeting held June 7th at the Riverview Sanitarium as the guests of Dr. C. D. Boyd, Kaukauna. Drs. C. D. Boyd and A. A. Pleyte discussed "The Diagnosis of Tuberculosis."

ROCK COUNTY

The Rock County Medical Society held its monthly meeting in Beloit on June 28th. Dr. Carl Harper, Madison, addressed the Society on "Obstetrical Anesthesia." Three physicians of neighboring counties were made associate members increasing that membership to five.

SHEBOYGAN COUNTY

Thirty members of the Sheboygan County Medical Society held a dinner meeting at the Association of Commerce, Sheboygan, on June 28th. Dr. R. C. Brown, Chicago, gave a paper on "The Pathogenesis and Treatment of Peptic Uleer." The lecture was illustrated by slides.

At a meeting on June 16th the Society adopted a resolution favoring the location of the proposed sanitarium on the grounds of the county farm.

ST. CROIX COUNTY

A meeting of the St. Croix County Medical Society was held at Baldwin on June 20th. Dr. B. G. Stockman, Woodville, was elected Secretary at the business meeting.

Papers were read by Drs. W. D. Stovall, Madison; H. B. Sears, Beaver Dam; and V. A. Gudex, Eau Claire.

CORRESPONDENCE

Hospitals, sanitariums, and similar establishments will not be affected by the new maximum hours of work law, Bill 306-A, recently passed by the Legislature. Because a fifty-four hour law would work an irreparable injury if applied to the employees of hospitals, sanitariums, and the nursing profession, the Secretary asked the Industrial Commission for a ruling on the new law. The following is the reply:

"This is in reply to your letter respecting the effect of Bill 306-A on the employment of nurses and domestic help in hospitals and sanitariums.

"The term 'place of employment' is defined to mean and include 'any manufactory, mechanical or merchantile establishment, laundry, restaurant, confectionary store, or telegraph or telephone office or exchange, or any express or transportation establishment'. To this definition the recent Hotel Bill added hotels by a separate section. It is the Commission's belief that this definition does not include hospitals and sanitariums and that, therefore, the hours of labor law does not apply to them."

Yours very truly,

F. M. WILCOX,
Chairman, Industrial Commission.

June 12, 1923.

Mr. J. G. Crownhart, Exec. Secy.,
Wisconsin State Medical Society,
Jefferson Street, Milwaukee, Wis.

Dear Mr. Crownhart:

Please be informed that the annual assembly of the Tri-State District Medical Association, of Iowa, Illinois, Wisconsin and Minnesota and districts of surrounding States, will be held at Des Moines, Iowa, on October 29th, 30th, 31st and November 1st, 1923.

I would appreciate it if you would make a note of this meeting in the column of your State Medical Journal.

We are looking forward to a very splendid meeting, and as usual a very excellent program has been arranged.

Yours very truly,

EDWIN HENES, Jr., M. D.,
Secretary.

EH/sz

NEWS ITEMS AND PERSONALS

Dr. H. L. Prince, superintendent of the home for dependent children at Sparta, has not been reappointed to that position by the state board of control. Dr. Prince was formerly medical supervisor of the Madison public schools and physician of the state prison at Waupun. He has also served as superintendent of the school for the blind at Janesville.

He took over the administration of the Sparta home in 1918. His term expired on June 30th.

Dr. and Mrs. Arthur J. Patek, accompanied by their daughter, Elizabeth, and son, Arthur, left July tenth to spend several months in Europe.

Dr. Charles A. Harper, Madison, was reappointed state health officer by Gov. Blaine on June 29th. His new term expires on February first, 1930. On the same day Gov. Blaine announced the appointment of Robert G. Sharp, Oconto, to be a member of the state board of control to succeed Henry Town, resigned. Mr. Sharp was formerly secretary of the civil service commission.

Applications for renewal of permits to prescribe liquor during 1924 must be filed with the federal authorities during July and August. This announcement has been made by Director Clark M. Perry, Milwaukee.

Revocation of the license to practice medicine and a fine of \$500 was imposed on Dr. A. R. Law, Madison, when found guilty of performing an illegal operation.

Dr. William Teich has opened an office in the Widule Building, Milwaukee.

The Madison Neurological Clinic, of which Dr. W. F. Lorenz is director, has moved to the First Central Bank Building, Madison. Dr. R. L. McIntosh, Edgerton, has become an associate member of the clinic.

Dr. Max Landauer has been re-elected president of the Mt. Sinai Hospital Association, Milwaukee, for his twenty-first consecutive term.

Graduates of Rush will be interested in the announcement that the new home of that college and hospital are shortly to be added to the University of Chicago group on the Midway.

Dr. A. J. Schloemer, Jackson, has returned from Vienna where he spent three months in post graduate work. He will take over the practice of Dr. H. A. Pfeiffer, with whom he has been associated. Dr. Pfeiffer will leave shortly for Vienna and upon his return will open an office in Milwaukee.

Another prescription book theft was announced by Dr. Clarence Baumgart, Milwaukee. The book number was B-18438. A small quantity of cocaine was also obtained by the thieves.

After an extended trip through the East, Dr. C. M. Gleason, Manitowoc, has returned from his vacation.

After a year spent in Europe Dr. and Mrs. Karl W. Doege have returned to their home in Marshfield.

Dr. E. S. Knox, Green Bay, has been appointed lieutenant, senior grade, U. S. N., and will act as medical officer for the Green Bay unit of the Naval Reserve force. Dr. Knox was a captain in the World War.

Appointment as head of the Cook County Tubercular sanitarium at Oak Forest, Ill., has been received by Dr. Royal Dunham, staff physician at Soldiers' Home since May 1st. He has assumed his new duties.

Membership in the American Urological Association has been conferred upon Dr. W. G. Sexton, Marshfield. His election was announced at the recent meeting in Rochester.

Dr. G. L. Bellis, Manton, Mich., has been appointed to succeed Dr. Charles E. Ide, resigned, as head of the Muirdale sanitarium. Dr. Bellis is a former superintendent of Muirdale.

Dr. James A. Bach, Milwaukee, recently attended the graduation exercises at the University of Pennsylvania. His sons Mark and Edward both graduated this year.

Plans will soon be made to erect a new isolation hospital at Madison. A sixty bed capacity is planned.

The regular June meetings of the state board of health and the state board of medical examiners were held in Milwaukee on June 29th.

Dr. R. C. Smith, Superior, has left for Europe. He will spend several months abroad studying at Vienna and other centers.

Dr. Homer M. Carter, Madison, is now in new offices on the sixth floor of the First Central Bank building.

Dr. H. E. Purcell, Madison, was elected president of the St. Mary's Hospital staff at a recent meeting. Dr. J. P. Donovan was elected vice-president and Dr. R. C. Aylward, secretary-treasurer. A training school for nurses will be opened at this hospital in the fall.

After twenty-three years of continuous operation, Dr. M. Ravn, Merrill, has closed his hospital. Dr. Ravn and son will continue their offices in the building.

Doctor and Mrs. G. I. Hogue of Milwaukee, who have been abroad the past three months, write of their return July 15th. Doctor Hogue has been at Vienna and reports eighty-three Americans registered at the Krankenhaus.

MARRIAGES.

Miss Mary Powell Hall, daughter of Dr. and Mrs. S. S. Hall, Ripon, to Mr. James A. Older, Portage, on July first.

Dr. Gunnar Gundersen, LaCrosse, to Miss Mary C. Baldwin, LaCrosse, on June 23rd. They sailed July 6th for Europe to return in the fall.

Dr. William C. Hanson, Racine, to Mrs. Rose Behnken-Houg, Racine, on June 25th.

Dr. P. R. Minahan, Green Bay, to Miss Gladys M. Stowe, Oakfield, on June 21st. They will be at home at Green Bay after August first.

Dr. Benjamin J. Birk, Milwaukee, to Miss Ruth Markwell, Milwaukee, on July 7th. They will be at home after November first.

Dr. Arthur C. Brown, Madison, to Mrs. Maude C. Edwards, Richmond, Va., on June 30th.

Dr. Victor W. Purdy, Milwaukee, to Miss Rhina A. Steins, Milwaukee, on July 18th.

DEATHS.

Dr. Henry C. Sibree, Sturgeon Bay, died at Kalamazoo, Mich., June 13 as direct result of a paralytic stroke. Dr. Sibree was a pioneer physician of the Door County region and at the time of his death was President of the Door County Medical Society.

Dr. Sibree was born in New York City July 28, 1852, and received his education in Manitowoc County where his family moved in 1858. He completed his medical education at Northwestern University and graduating in 1878 was married to Miss Cora A. French, Dover, Ohio. He first practiced at Pestigo where he also served as county superintendent of schools for three years. After later practice at Green Bay he made his home at Sturgeon Bay where he was a resident since 1883.

A member of his county medical society, the State Medical Society and the American Medical Association, Dr. Sibree established the first hospital in Sturgeon Bay in 1901. He is survived by his wife and three married daughters. He was a member of the Masonic order.

Dr. Arthur D. H. Thrane, Eau Claire, died at the Sacred Heart Hospital on June 15th at the age of 79 after an illness of two months. Born in Norway, January 26, 1844, Dr. Thrane came to America in 1865. After a year in New York he took up his studies at Rush graduating in 1866. After practicing for a short time in Chicago he moved to Eau Claire where he has been in continuous practice since 1875.

Dr. Thrane was a volunteer in the German-Danish war and was a pioneer physician in northern Wisconsin. He was a member of the Eau Claire County Medical Society, the State Medical Society and the American Medical Association.

Dr. Herbert R. Bird, Madison, died at Waukesha on June 25th at the age of 74. He had a wide acquaintance throughout the state as medical director of the State Department of the G. A. R. and as commander of the Madison post of the Civil War Veterans.

Dr. Bird was born in Waukesha, March 24, 1849. At the age of 13 he enlisted at Madison as the drummer boy of Co. D, 23rd Wisconsin. He served with his company until taken prisoner at Vicksburg in 1863. Later he was exchanged and was mustered out at Mobile.

After the war Dr. Bird became a supervisor at the Mendota hospital later completing his studies at Rush. For many years he practiced medicine in Arena, Dane County, moving to Madison in 1899.

LEGAL NOTES

The Supreme Court recently sent back for new trial a case that is of unusual interest to members of the profession.

It arose in St. Croix county when one Dr. R. C. Seaman of Cherokee, Iowa, filed a claim against the estate of Thomas B. Lee, Deer Park, Wis., for a note of \$1,750. On July 5, 1920, Lee was advised by the Mayo Clinic at Rochester that he had no hope for recovery from a cancerous growth in submaxilla gland and lower lip.

As result of advertisements Lee entered into a contract with one Dr. R. C. Seaman of Cherokee, Iowa, whereby for the sum of \$2,000, of which \$250 was paid in cash, Seaman agreed to cure him of the cancer. The treatment contract was signed; \$250 was paid and a note was given for \$1750. Lee died on September 2nd from the cancer. Seaman filed the claim for \$1750 resting on the note. The circuit court dismissed the case. The Supreme Court by majority decision granted a new trial of "probable miscarriage of justice."

From this opinion Justices Crownhart and Jones dissented and we quote from the dissenting opinion of the former.

"This court now holds that the decision of the lower court was correct and without error, on the case as made before it," says Justice Crownhart, "but reverses the case and sends it back for a new trial pursuant to section 2405m, Stats., which provides that this court may, when 'it is probable that justice has for any reason miscarried,' or if it 'shall be deemed necessary to accomplish the ends of justice,' grant a new trial in its discretion, even though there are no errors in the record, and the judgment should be otherwise affirmed. The statute lays down a rule of equity to soften the rigors of the law.

"Now we come to the question whether or not from a fair consideration of the facts in the case 'it is probable that justice has for any reason miscarried' or a new trial should be 'deemed necessary to accomplish the end of justice.' I cannot bring myself to believe that this is a case where the conscience of this court should be moved to favor the plaintiff by granting a new trial. I can see no inadvertence of the plaintiff in the trial, but, on the contrary, it is perfectly plain to me that the plaintiff deliberately choose his

ground for his contest in the court below. He sought to prove his case by the introduction of the note alone, and to rest upon the presumption of consideration. He stood upon his bond. He was a 'stony adversary.' He craved the law. He pleaded not for equity or justice. He endeavored to disregard the treatment contract as immaterial, and it would seem with good reason. The treatment contract on its face shows that it is unconscionable and extortionate. It is such a contract as no reputable physician would be likely to make under the circumstances. It is set forth in full in the opinion of the court.

"Here is a man sick unto death, who applies to a doctor for treatment, probably as a result of the work of D. A. Seaman in 'getting out literature for Dr. Seaman.' On the fact of the contract it appears that the sick man had a cancerous growth of the lower lip reaching into the sub-maxilla gland, and the plaintiff was to do 'his very best to effect a permanent cure of same by this first treatment.' Here is a fairly implied representation that the plaintiff would probably cure the deceased man by a single treatment. However, it is represented to him that, if he needs retreatment, he may have it as many times as necessary for the one price (\$2,000), providing the party will return to the sanitarium and comply with all the rules, including paying the going price per week, weekly in advance, for board and room, which price is not given in the contract, and that the patient shall pay '\$5.00 for every four bottles of blood purifier used by him after leaving the sanitarium.' In the absence of any testimony of the doctor showing what treatment he gave this man, the doctor being present at the trial, it may fairly be presumed from the contract that he treated him with his 'blood purifier.' The note which he took from his patient bears interest at 8 per cent, and provides that, in case of proceedings for collection, attorneys' fees shall be allowed.

GRASPING AT STRAWS.

"A hard contract, indeed! What happened? The sinking man, grasping at straws, signed the note and contract, stayed on at the sanitarium less than two months, and died. It seems to me too plain to admit of controversy that the plaintiff took advantage of his patient's unfortunate condition to make an unconscionable and overreaching contract. A doctor stands in a fiduciary or confidential relation to his patient, and this court need exercise no undue sympathy with one who dishonors a noble profession by oppression and extortion. It seems to me to be a perversion of the statute to grant a new trial in this case on the ground stated in the statute that 'it is probable that justice has for any reason miscarried,' or 'to accomplish the ends of justice.' It gives the plaintiff who comes into the court with unclean hands another chance to mulct the estate of his victim. The statute was not intended for any

such purpose. It was intended to reach those cases which appeal to the conscience of this court as being cases where justice has not been done, and hence requires a new trial in equity and good conscience. It must be noted that one party to this contract is dead. His mouth is closed. He may not disclose on the trial what happened at the making of this extraordinary contract. Only the two Seaman are witnesses to testify. Further, I think it sufficiently appears that the deceased had a manifestly incurable disease at the time he came to Dr. Seaman. I think the contract carries with it a clear implication that the deceased, for a consideration of \$2,000, would be cured. Such a contract is against the public policy of our laws, and should not be enforced in our courts.

"For the above reasons, I respectfully dissent from the decision of the court."

BOARD CANNOT REFUND.

The Board of Medical Examiners is not authorized to grant a license to practice for less than a year, according to Attorney General H. L. Ekern in an opinion to the Secretary of the Board.

"You state in your recent letter," says the opinion, "that you have a request from an itinerant practitioner who has paid his fee for a license to practice as an itinerant for the year 1923, who asks for a return of three-fourths of the amount, which was \$250, because he says he does not intend to practice as an itinerant doctor after March 15. You inquire whether the board has a right to return any portion of this fee.

"I find no provision in the law which authorizes the board to return any part of the fee after the same has been paid and a license secured for a definite time. The board is not authorized to grant a license for a fraction of a year and charge therefore the proportionate share of the license fee."

THE RECORD OF THE LEGISLATURE.

Medical and Health Enactments of the 1923

Session Reviewed.

BY L. W. BRIDGMAN,

STATE BOARD OF HEALTH.

The 1923 session of the Wisconsin Legislature may now be appraised for its record in dealing with legislation affecting health administration and medical practice. Several worthy measures whose enactment stood to promote the public welfare failed of passage. Other commendable proposals were, on the other hand, added to the statutes, and will tend to facilitate the means be-

ing utilized by state and local authorities in protecting the general public from the encroachments of disease and other conditions that militate against the highest success and happiness of the individual.

The session was featured by a number of bills of rather freakish character, such as the proposal to wipe out the laws for the vaccination of pupils and teachers as a condition to school attendance in times of epidemics—a suggestion that assumes the uselessness of this protective procedure in the face of its worldwide application and effectiveness in inhibiting the spread of smallpox. This fight was waged with an intensity shown in no previous session of the Legislature, and there have been many such fights before, for the attempt to repeal the vaccination laws is a perennial one. The existing law was defended by medical men, health officers, and welfare workers, including representatives of the women voters' and clubwomen's organizations. These deserve to the last one the thanks of every right-thinking Wisconsin citizen for their support of this important health preservation procedure.

The author of this repeal measure was none other than the legislator who sought unsuccessfully to require that physicians' prescriptions be written in the English language.

The Legislature rejected appeals for opening hospitals to all comers in the medical fraternity, regardless of qualifications or character. This action is in consonance with the Supreme Court's decision one month later when, in a case against the La Crosse Lutheran hospital, the Court ruled that the maintenance of the highest medical standards depends upon the right of the hospital director to enforce any rules laid down for the guidance of practitioners.

The biennial attempt by the apostles of Palmer to gain greater recognition for their unscientific cult again failed. Not through any lack of fervor in the cause of spinal adjustments, however. No one can accuse the chiropractors of any laxity in "seeing the members." At no time were they off the job. They found many willing friends in the lower house, who seemed at every vote to give them what they wanted in the matter of professional recognition. The Senate was adamant, however, against any lowering of medical standards by such means, and so the Minier bill failed. The Supreme Court has held that chiropractors hold themselves out to diagnose disease. The

Court held that, this being so, chiropractors are amenable to the penalties that lie against those who fail properly to diagnose disease after assuming to possess such qualifications.

The movement symbolized by the Benfey bill, No. 130-S, which would have required all who practice the healing art (except by spiritual or mental means), to have a knowledge of the basic science of diagnosis, was an honest attempt to protect the health and lives of Wisconsin people when they are threatened by the unscientific practices of those who work at the chiropractic calling. The bill failed, but it should be mentioned that it is no deader today than the Minier bill which would have raised chiropractors before the law to the professional station of the medical practitioner. The fact of the matter is that the medical practice act was not weakened in any particular by this Legislature, while the movement to raise chiropractic to equal standards has made no progress.

An attempt was made, and came near succeeding, to discard the physician's long held right of withholding professional information in civil actions. The bill to accomplish this would have permitted the disclosure of such facts with the consent of the patient. It met with a good deal of opposition and was amended materially through several substitute bills in order to attract more favor among the lawmakers. It was finally passed in amended form, but met with a veto from Governor Blaine in a message strongly asserting the necessity for holding the rule of secrecy inviolable as between physician and patient.

The Legislature finally passed an appropriation bill for further eradication of bovine tuberculosis, but cut the amount asked for a million dollars to \$550,000 annually. Federal aid also is available, however and the state commissioner of agriculture is authority for the statement that the state will have some \$1,516,000 available for two years for this work. The state appropriation will not be raised by a surtax, which the Senate disapproved, but will come from the general fund, and this measure received the governor's approval.

The following summarizes the principal enactments bearing on the conduct of medical and health administration:

NEW MEASURES ON STATUTES.

Establishment of County Hospitals. Chapter 228 of the Laws of 1923 permits counties to establish county hospitals for the treatment of indigent

persons, those afflicted with any disease, deformity or ailment that can probably be remedied or advantageously treated in such institutions, and other patients who may be treated at rates that may be determined.

On Admittance to Sanatoria. Chapter 113 permits the admission to state and county sanatoria of any person with symptoms of tuberculosis calling for careful observation in order to make a diagnosis, the need for such admission to be determined by the superintendent and the visiting physician. The same amendment restores the financial features of the admission law to the status it formerly had by changing the phrase "indigent" to "unable to pay." Because of the interpretation placed on the word "indigent," it has been difficult in some of the counties to secure the admission of patients as county charges, forcing the patient in many cases to wait until all his resources were exhausted before he could be admitted to the sanatorium. This tended to prolong the disease without treatment and to increase the expense to the county.

Teaching Health in Schools. Chapter 298 makes provision in all public schools for the teaching of the symptoms of disease, including the taking of temperature and pulse, and the proper care of the body. No pupil shall be required to take such instruction if the parent or guardian files written objection.

Medical Licensing by Waiver. Chapter 93 provides: "Any person holding a certificate of registration in accordance with the provisions of Chapter 97 of the Laws of 1899, who shall have been engaged in the practice of medicine, surgery or osteopathy since July 1, 1899, shall be granted a license without examination upon presenting such certificate to the board with the application for such license and a fee of five dollars and surrender said certificate on the issuance of said license."

New Statute on V. D. Control. Chapter 250 adds the following provision: "When a physician has reported a case of venereal disease to the state board of health in compliance with subsection 4 of this section (1417m), all questions regarding the presence of the disease and the date from which the treatment was neglected shall not be regarded as privileged information when the patient or physician is called upon to testify to the facts before any court of record."

Add to State Board's Powers. Chapter 109 permits, besides the state health officer and deputy

state health officers, "other qualified officer of the state board of health" to file complaint against persons with venereal disease to compel their commitment to a state or county institution for treatment.

Safeguarding Food from Disease. Chapter 112 prohibits the employment in hotels, restaurants, or other eating places or in bakeries, dairies, meat markets, etc., of any person having a communicable disease or any venereal disease in a communicable form.

State Narcotic Law. Chapter 392 makes stringent additional regulations to govern the sale and administration of narcotic drugs, providing penalties, etc. It is applicable to physicians, pharmacists, manufacturers and jobbers, veterinarians, dentists, hospitals, nurses, embalmers, etc. Violations are to be classed as felonies. These amendments in general make the state narcotic laws conform with the federal statute.

State Fee on Alcohol Remitted. Chapter 383 adds to the State Prohibition Enforcement law the following: "Nor shall any fee be required of a physician or dentist to enable him to secure alcohol for the purpose of sterilizing his instruments." This takes effect on January 1, 1924.

Change in Medical Board Rule. Chapter 40 removes the requirement that members of the State Board of Medical Examiners shall be appointed from the ranks of the various schools of medicine.

State Toxicologist Provided. Chapter 385 creates the position of state toxicologist at the university at a salary of \$4,500 annually. This official shall make without charge toxicological analyses of human and animal material submitted by any district attorney.

Sheppard-Towner Law Accepted. The Legislature, by Chapters 97 and 145, accepted the provisions of the Sheppard-Towner Act for their application to maternal and infant welfare work in Wisconsin, and provided for matching the federal appropriation. An amendment was added to prevent any official from entering any home or of taking charge of any child over objections by the parents.

State Health Laws Codified. The Revisor's Bill, No. 9-S, codifying the laws of the State Board of Health, was enacted into law.

Home Rule for Counties. Chapter 190 grants home rule to counties. This measure permits counties to abolish, create or re-establish any office

or position (other than judicial or other constitutional office). Exercise of such option enables a county board to refuse to employ a county nurse.

State Health Appropriations. Chapter 160 makes biennial appropriations to the State Board of Health and Bureau of Vital Statistics.

ABOLITION OF COCAINE.

The following communication appeared in The London Times on March 24. The authors, Sir W. M. Bayliss and Dr. C. W. Saleeby, are among the best known medical authorities in Great Britain. This letter is of interest in this country as showing the attitude of physicians in England towards the narcotic situation there and particularly to cocaine. It is also of interest to note that credit is given to American research for the discovery of a safe substitute for cocaine.

TO THE EDITOR OF THE TIMES.

"We submit that the abolition of the use of cocaine by international action is the only effective means of ending the evils to which this drug gives rise, and this is now feasible without detriment to any department of surgical practice.

"The failure, everywhere, of all past or present methods of control is acknowledged. One of us has recently observed, in Montreal, the futility of the combined efforts of the police, the health authorities and the Customs officers, and he has returned to Europe to find similar failure alike in this country and in France. Montreal, it may be noted, is the headquarters for the illicit distribution of the drug in North America. It is evident, and for evident reasons, that so long as the drug is manufactured it will be misused. In the light of the experience of other countries, we are entirely skeptical of the success of the new legislation proposed by the Home Office.

"The Committee on the Use of Cocaine in Dentistry reported in 1917 (Cd. 8489), suggesting further restrictive legislation. One of the present writers, serving on that Committee, did not sign the report, but appended a memorandum in which the view was expressed that, according to the evidence of leading dental surgeons, cocaine was no longer needed in dentistry, completely effective substitutes, such as procaine, being available.

"A new synthetic substitute, known for short as "butyn" has now been prepared in Chicago, and tested widely with very good results. Like procaine, it has no action on the central nervous system. A highly favorable report on its use in ophthalmic practice appeared in the British Medical Journal for January 13 last. Its introduction completes the argument advanced in 1917.

"International action should, therefore, be taken to end the present manufacture of cocaine in Germany and Switzerland or elsewhere, and the cultivation of the coca plant in Peru, Java, Bolivia and other countries. The best instrument for such action, given an instructed and active public opinion in the various countries concerned, is the Opium Committee of the League of Nations. Though neither the United States nor Germany is as yet a member of the League, both of these coun-

tries are represented on the Opium Committee. We urge that our Government should give full and cogent instructions in this sense to Sir Malcolm Delevigne, the British representative on that Committee, prior to its next meeting in May. This, we are convinced, is the only way with cocaine.

We are, Sir, yours,

W. M. BAYLISS,
C. W. SALEEBY."

LEPROSY AMENABLE TO TREATMENT.

Leprosy is in a measure amenable to treatment, says the U. S. Public Health Service. During the last ten years (1912-21) a considerable percentage of the lepers segregated at the Kalihi Hospital near Honolulu and on Molokai Island have been paroled; that is, they have been released as being "not a menace to the public health," but have been required to report for examination at certain intervals which vary with the individual case. Of those paroled about 13 per cent have relapsed and have returned to segregation; but about one-fourth of these were later paroled for the second time. In all, 242 lepers were paroled; 31 relapsed and seven of these were later paroled. Ten were completely released from parole.

The chance of arresting the disease decreased with the length of time that it had been allowed to go without treatment unless this period was seven years or more. Apparently patients who survive without treatment for seven years possess powers of resistance that slightly increase their chances for marked improvement under treatment.

Those who desire it are treated with chaulmoogra oil and its derivatives.

The parole system was begun in 1912 and has worked admirably. Those paroled appear to have told their friends that the conditions existing at the hospital were good; and the mere fact that they had been released has shown that segregation might lead to cure and not to lifelong confinement, as it almost invariably did previous to 1912. As a consequence many lepers, instead of concealing the disease up to the last possible moment (and thereby spreading it through the community) are now surrendering of their own accord and taking treatment. This earlier surrender and earlier treatment hasten the degree of improvement that will secure parole and will later, perhaps, complete release. About 70 per cent of those who have been paroled were in segregation for less than two years.* * *

Ohio is not the only State that has put a crimp in the chiropractic program, for Wisconsin's supreme court has decided that the practice of chiropractic is the practice of medicine and that any person practicing any form or system of treating the afflicted without having a license or certificate of registration authorizing him so to do, shall not be exempted from but shall be liable to all the penalties and liabilities for malpractice. Perhaps a few malpractice suits in any of the States where the chiropractors are attempting to treat the sick and afflicted would have a healthy effect in suppressing these pretenders.—*Indiana Medical Journal*.

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

- The Handbook of Tuberculosis.** By John Ritter, M. D. J. B. Lippincott Co., Philadelphia. 1923. \$2.50.
- Applied Psychology for Nurses.** By Prof. D. A. Laird. J. B. Lippincott Co., Philadelphia. 1923. \$2.50.
- Senile Cataract.** By W. A. Fisher, M. D., and collaborators. Chicago Eye, Ear, Nose and Throat College. Illustrated. 1923. \$2.50.
- The Life of Pasteur.** By Rene Vallery-Radot. Doubleday, Page & Co., New York. 1923. \$3.00.
- Intelligence Measurement.** By S. C. Kohs, Ph. D. The Macmillan Co., New York. 1923. \$3.00.
- Diseases of the Rectum, Anus and Colon.** By Samuel G. Gant, M. D., LL. D. W. B. Saunders Co., Philadelphia. Three octavo volumes, 1616 pages, 1128 illustrations, and 10 color insets, 1923. Cloth, \$25.00 net.
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- Men Like Gods.** By H. G. Wells. The Macmillan Co., New York. 1923. \$2.00.
- The Wisconsin Blue Book.** By Fred L. Holmes and collaborators.
- The Interpretation of Dreams.** By Prof. Sigmund Freud, LL.D. The Macmillan Co., New York. 1923.
- The Vaso-Motor System.** By Sir W. M. Bayliss. Illustrated. Longmans, Green & Co., New York. 1923. \$2.50.
- Diseases of the Skin.** By Robert W. MacKenna, M. D. Illustrated. William Wood & Co., New York. 1923.
- The New Physiology in Surgical and General Practice.** By A. Rendle Short, M. D. Fifth Edition. William Wood & Co., New York. 1923.
- Suggestion and Common Sense.** By R. Allan Bennett, M. D. William Wood & Co., New York. 1923.
- Health Building and Life Extension.** By Eugene Lyman Fisk, M. D. The Macmillan Co., New York. 1923. \$3.50.
- Nursing and Nursing Education in the United States.** By The Committee for the Study of Nursing Education. The Macmillan Co., New York. 1923. 585 pages. \$2.00.
- Tobacco and Mental Efficiency.** By M. V. O'Shea. The Macmillan Co., New York. 1923. \$2.50.
- A Manual of Corrective Gymnastics.** By Louisa C. Lippitt. The Macmillan Co., New York. 1923.
- The Patient's Viewpoint.** By Pamel J. Flagg, M. D. The Bruce Publishing Co., Milwaukee. 1923. \$1.30.
- Legal Medicine and Toxicology.** By many specialists. Edited by Frederick Peterson, M. D., Manager Craig Colony for Epileptics; Prof. Walter S. Haines, Rush Medical College; and Ralph W. Webster, M. D., Asst. Prof. Rush Medical College. Second edition. Two Octavo volumes, 2,268 pages, 334 illustrations, including 10 insets in colors. W. B. Saunders & Company, Philadelphia and London. 1923. Cloth, \$20.00 net.
- Inflammation in Bones and Joints.** By Leonard W. Ely, M. D. Illustrated. J. B. Lippincott Co., Philadelphia. 1923.
- Social Work in the Light of History.** By Stuart Alfred Queen, Ph.D. J. B. Lippincott, Philadelphia. 1923.
- Applied Pharmacology.** By A. J. Clark, M. C. Illustrated. P. Blakistons Son & Co., Philadelphia. 1923.
- Pathological Physiology of Surgical Disease.** By Prof. Dr. Franz Rost. P. Blakistons Son & Co., Philadelphia. 1923.
- The Form and Functions of the Central Nervous System.** By Frederick Tilney, M. D., and Henry A. Riley, M. D. Illustrated. Second Edition. Paul B. Hoeber, New York. 1923. \$12.00.
- The Surgical Clinics of North America.** The New York Number, April, 1923. W. B. Saunders Co., Philadelphia. London. Per Clinic Year, paper, \$12.00; cloth, \$16.00.
- The Heart in Modern Practice.** By Wm. D. Reid, M. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co.
- Nutrition of Mother and Child.** By C. W. Moore, M. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- Labyrinth & Equilibrium.** By Samuel S. Maxwell, M. S., Ph. D. 1923. J. B. Lippincott Co., Philadelphia. \$2.50.
- Essentials of Surgery.** By Archibald L. McDonald, M. D. Illustrated. 1923. J. B. Lippincott Co., Philadelphia \$2.50.
- Physics and Chemistry for Nurses.** By A. R. Bliss, M. D., and A. H. Olive, A. M. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- How We Resist Disease.** By Jean Broadhurst, Ph. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- Nursery Guide.** By Louis W. Sauer. Illustrated. 1923. St. Louis. C. V. Mosby Co. \$1.75.
- How to Eat in Health and Disease.** By Benjamin Harron, Ph. D. Illustrated. 1923. New York. E. P. Dutton & Co.
- The Omnipotent Self.** By Paul Bousfield, M. R. C. S. 1923 New York. E. P. Dutton & Co.
- Textbook of Pediatrics.** Edited by Prof. E. Feer. Translated and edited by Julius Parker Sedgwick, B. S., M. D., and Carl Ahrendt Scherer, M. C., F. A. O. P. J. P. Lippincott & Co., Philadelphia.
- Feeding Diet and the General Care of Children.** By Albert J. Bell, A. B., M. D. F. A. Davis Co., Philadelphia.

BOOK REVIEWS

The Handbook of Tuberculosis. Dr. John Ritter.
In the first chapters the author gives a brief history of tuberculosis beginning with remote time and leading up to the present. The chapter on contagion and infection with definition of terms contains this paragraph:

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"Tuberculosis as we observe it clinically is a communicable disease; it is spread from man to man or more correctly, from a tuberculously diseased adult to infants and small children with whom the so diseased individual may come in contact."

Prevention is well outlined by the chapter on Pregnancy and Tuberculosis. To combat the danger of infection the first two years of life when infection means disease and death, the public must be educated to grave dangers that occur from the marriage of the woman with an active tuberculous lesion.

To prepare the reader for the proper appreciation of the resistance of childhood with its lowest death rate from tuberculosis, a careful outline is given of the anatomy of the lungs by Miller (Wisconsin) and of the lymphatics of the lung with special reference to the Tracheo Bronchial Lymph Nodes by Ghön.

From the third to fourteenth year infection by the tubercle bacilli usually means a lymphatic reaction. *Enlarged tracheo bronchial glands with clinical history of toxic reaction and with history of no other recent contagious disease, point in the majority of cases to a reaction that is tuberculous.*

Careful explanation of physical examination of the chest both of the child and adult are given in detail. If we believe that there yet remains to be demonstrated a single method of conferring passive immunity, although every possible method has been tried, then serious study of pulmonary lymphatic reaction of the child will give best results.

In certain infectious diseases one attack is generally regarded as conferring a permanent active immunity. This is not so in tuberculosis and the author calls attention to the most effective weapon which is:

"Conservation of this inherent tendency first to resist and secondly to recover while the disease is confined to a lymphatic fight.

"Tuberculosis is primarily a child disease, is preventable in childhood, is and can be cured in childhood."

Adult tuberculosis is taken up in the succeeding chapters with careful descriptions of symptoms, treatment and complications. Our attention is called to the importance of careful examination of chest before surgical operations and the routine practice of taking blood pressure, also to the dangers of tonsillectomy in the tuberculous individual. X-ray treatment of tonsils in selected cases has proven a satisfactory method of reducing the lymphoid tissue.

The author has handled his subject in a manner that holds the attention of the reader and it is a privilege to recommend Dr. Ritter's handbook to the medical profession.
Charles E. Ide, Milwaukee.

Applied Psychology for Nurses. Prof. Donald A. Laird. Lippincott Company, Philadelphia. 1923. \$2.50. This volume is a valuable addition to the Lippincott series of Nursing Manuals. It is an attempt to select from the vast literature of psychology those facts which will be of most immediate aid to nurses in understanding the patient, themselves, and their fellowmen, as organisms that act, think and feel. The facts are pre-

sented from the biological point of view and all controversial matter is avoided.

Senile Cataract. W. A. Fisher, M. D. Chicago Eye, Ear, Nose and Throat College. 1923. 160 illustrations, 112 in color. \$2.50.

This book as a compilation of descriptive material on senile cataract operations includes contributions of noted ophthalmic surgeons. The intracapsular as well as the capsulotomy operation is fully described. Among those collaborating with the author are Prof I. Barraquer, Barcelona; Prof E. Fuchs, Vienna; Lt. Col. Henry Smith, London; H. T. Holland, M. D., India; and John W. Wright, M. D., Columbus, Ohio. The technic of the operations is fully illustrated.

Manual of Materia Medica. Merck and Co. 1923. Linen Cloth 50 cents. Artificial Leather \$1.00.

The text of this manual has been revised with important additions. Part I embraces drugs, chemicals, and preparations. Part II is based on therapeutic indications and summarizes principal means of treatment. Part III classifies the various medicaments according to physiological action and Part IV deals with poisoning and its treatment. The manual is of pocket size, 581 pages.

The Life of Pasteur. By René Vallery-Radot, New York. Doubleday Page & Co. 1923. Price \$3.00. Sir William Asler who has written the preface to this work says "Whether to admire the man or his method, I leave for the readers of this well told story to decide. I am of the opinion expressed by the beautiful tribute in the Spectator that he was the most perfect man who ever entered the Kingdom of Science." It is fitting indeed that at his centennial so excellent a story of his life be published. It is a fascinating story of the struggles of this greatest of scientists—a biography which will appeal to and stimulate every medical man.

Intelligence Measurement. By S. C. Kohs, Ph. D. New York, The Macmillan Co. 1923. Price \$3.00. Dr. Kohs gives a brief discussion of the psychology of analysis and synthesis, and then takes up the block-design test which he has devised—a "performance test" of intelligence, which he sets over against the language tests of the other current scales of measurement. The advantage of such a test is that it can be given to all children, whatever their mentality and their language may be. He describes the test, gives the results of its application to some three hundred children, and suggests rules for standardization and for evaluating results. It is his hope that there may be evolved a whole scale of such performance tests, if not to replace the language scales, at least to parallel them. The book is illustrated with many tables and graphic figures.

Diseases of the Rectum, Anus and Colon. By Samuel Goodwin Gant, M. D., LL. D., Professor and Chief of the Department for Diseases of the Colon, Rectum and Anus at the Broad Street Hospital, Graduate School of Medicine, New York City. Three octavo volumes, totalling 1616 pages with 1128 illustrations on 1085

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A. I. ROSENBERGER, M. D., Res. Physician

figures and 10 insets in colors. Philadelphia and London: W. B. Saunders Co., 1923. Cloth, \$25.00 net.

Possibly once or twice a year some new work is published which seems to us a milestone in medical literature—so new and so complete as to provide for itself an enduring place—as having attained an excellence which cannot be surpassed. Gant's new work so impresses us. It will be many years before its equal is written if ever and it stands out as alone in the field it covers. The medical profession owes its distinguished author and its publishers a debt of gratitude—for it is a truly monumental work which should be in the library of every surgeon, intern and general practitioner. As giving the scope and ideals of the author we can do no better than quote from the preface:

"The dominant idea of the author in the preparation of these volumes is to present to specialists, practitioners, and students a complete yet practical treatise covering the history, etiology, pathology, symptoms, diagnosis, treatment, and postoperative treatment of diseases involving the ileocolic angle, appendix, colon, sigmoid flexure, rectum, anus, and perianal region.

These volumes are not in any respect a revision of previous works by the author, the text being newly written from cover to cover, hundreds of new and original diagrams, photographs, micro-photographs, radiographs, half-tones, color plates, and drawings having been incorporated.

Diseases of the ileocolic angle, appendix, colon, sigmoid flexure, rectum, anus, buttocks, and sacrocoecygeal region have been rearranged, reclassified, and newly discussed to meet present-day conceptions of these affections. Many chapters have been included relating to diseases directly and indirectly involving the bowel not hitherto discussed in works of this character.

To eliminate useless material and make the books convenient in size and easily comprehensible discussion of subject matter has been as brief as clarity would permit.

Repetition of overlapping subjects has been avoided by cross references, and worthless new methods have not been discussed for the sake of novelty."

IN LIGHTER VEIN.

The Riddle of the Rhine. By Vietor Lefebure. New York: E. P. Dutton Co. This is an account of chemical strategy in peace and war sent by the Chemical Foundation, Inc., 81 Fulton Street, New York. It tells of the critical struggle for power and for the decisive war initiative—a matter of pre-eminent public interest concerning the sincerity of disarmament, the future of warfare and the stability of peace. This work is of vital importance and interest to peace loving citizens.

The Rose in America. By J. Horace McFarland. New York: The Macmillan Co. 1923. \$3.00. The plain intent of this book is to make it easy for the amateur to grow good roses anywhere in America by telling in untechnical language how to do it. The author writes from a new standpoint, without regard

to foreign tradition. He has had unique contact with thousands of amateur rose-lovers through his work for eight years as Editor of the "American Rose Annual."

The ROSE ABOUT THE HOME is the basis of the treatment, which tells of Soils, Planting, Pruning, and Protecting, and discusses the best varieties for every part of America with entire frankness.

As I Was Saying. By Burges Johnson. New York: The Macmillan Co., 1923. \$2.50. A series of humorous essays by the associate professor of English at Vassar College. Many of these have appeared in the Century Magazine, Harpers, Atlantic Monthly, etc. He treats of such subjects as "Small Town Stuff," "A Dog in the House," "Elephantosy," "Is After Dinner Speaking a Disease?" This is a little work which will help you relax on a rainy evening. You'll like it!

Men Like Gods. By H. G. Wells. New York: The Macmillan Co., 1923. \$2.00. The foremost English author in his latest novel transports us into the world of two thousand years hence. Two motor parties find themselves in Utopia and are as much a curiosity to the inhabitants as are the Utopians to them. From this standpoint Mr. Wells unrolls a panorama of the future in government, society, science, letters and morals that is nothing if not provocative and stimulating. It is well worth while.

The Wisconsin Blue Book. Fred L. Holmes, Editor.

In no other volume can the reader obtain such a compendium of information concerning the Badger State. Wisconsin history, statistics, system of government, departmental work and election statistics are some of the more general headings. Every departmental head has contributed to make this volume excel all others of the past.

"The health advantages of Wisconsin are second to no other state in the union," declares Dr. C. A. Harper, state health officer, in his comprehensive survey of the health activities of the state.

Under the heading of Hospital Service, Dr. C. R. Bardeen of the University of Wisconsin tells of the history of the state's hospitalization work. Major W. F. Lorenz has given a valuable sketch of the history of the Soldiers' Hospital.

Each member of the Legislature is furnished with a limited number of copies for distribution in the district or copies may be obtained from the Superintendent of Public Property, Madison, at \$1. We cannot recommend it too highly to the physicians of Wisconsin as a book of ready reference for the activities and history of their state.

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The Wisconsin Medical Journal

Volume XXII

MILWAUKEE, AUGUST, 1923

Number 3

ORIGINAL ARTICLES

THE MAJOR INFECTIONS.*

BY WILLIAM J. MAYO, M. D.,

ROCHESTER, MINN.

The four major infections, syphilis, tuberculosis, cancer, and sepsis, have many points in common. They are all introduced into the body through its surface, and, with the exception of carcinoma, their causative agents are identifiable. That carcinoma is caused by a specific organism, there is much reason to doubt, but that it arises on the surface of the body and penetrates through the protective coverings to attack the nonepithelial constituent as well as the epithelial is assured. Bacteria, which Vaughan believes to be neither animal nor vegetable, but organisms lying between, and which are responsible for tuberculosis and sepsis, are more resistant than the body tissues of the host to poisonous agents, which would cause their destruction. One of the main reasons for believing that the spirochete may belong to the protozoal group rather than to the bacterial lies in the fact that it is like all the protozoa, for example the plasmodium of malaria, responsive to specific medication without injury to its host.

These four infections have another and very important feature in common. They not only work directly on the tissues, but they infect the lymphatics. As Cohnheim pointed out more than forty years ago, if the sentinel gland, that is, the one first involved, can be located, the origin of the disease in the external defensive mechanism can be ascertained. When the causative noxious agents enter the blood-stream they may be carried to situations where the defensive powers of the animal organism may completely overcome them. While this is equally true of the lymphatics, the defensive process is much slower and the lymphatic glands themselves often become involved and act as secondary sources of infection. Whether the infection is picked up by the blood-stream or by the lymphatics is largely determined by physical

factors. The blood capillaries pick up watery molecular solutions to which their walls are permeable, but the colloid molecules are too large to pass through the walls of the capillaries, and are carried into the lymphatics through the agency of the endothelial cells, which become phagocytes.

The lymphatics undertake the removal and the destruction of particles too large to penetrate the walls of the capillaries. For instance, on the under surface of the diaphragm particles of carmine, microscopically visible, have been seen to enter the lymphatics and pass to the thoracic glands. The resistance developed by the lymphatics varies in different persons and with different forms of infection. The process is accompanied by increased vascularization, phagocytosis, and the development of connective tissue which contracts until it cuts off the nutrition of the contained organisms. The latent phase of these contained organisms, especially spirochetes, the bacilli of tuberculosis, and the cancer cell, may be prolonged, resulting in renewed activity after many years, due to a breaking down of the lymphatic barriers from injury or intercurrent disease.

The reactions of the four infections, one or another, when in combination, which occurs not infrequently, are disastrous. The syphilitic patient may die from terminal tuberculosis. The leukoplakia buccalis of syphilitic origin leads to chronic septic irritation in which may develop carcinoma. Sepsis is a common and unfortunate secondary infection in syphilis, tuberculosis, and cancer, causing great distress to the patient and shortening of life. Sepsis is also a factor in the visibility of the manifestations of tuberculosis, cancer, and especially syphilis. Persons of cleanly habits may have little or none of the hardness in the base of the chancre which is due to sepsis, and the secondary manifestations of syphilis in the clean may be extremely mild. The unclean are more likely to have prominent display of primary and secondary syphilitic lesions, with consequent early diagnosis, and the advantage of early treatment lies with them. Patients with tuberculosis seldom die from the disease itself, except in the presence of meningitis when the inflammatory products of the specific infection are under pressure. The large majority of tuberculous patients die from

*Read before the Tri-State District Medical Association, Oct. 30, 1922.

the associated sepsis. In carcinoma of the internal organs the course of the disease may run with little or no pain because of the absence of sepsis, in marked contrast with the open septic conditions of external cancers, which explains the common conception of the laity that death from cancer means being eaten alive.

The question of immunity to the four plagues is an interesting speculation, of which we have no proof. In the sense of the actual causative agents of these plagues passing from mother to child, the spirochete only can pass through the placenta, but it would appear that certain persons have inherited or acquired more than average resistance to the causes of tuberculosis, carcinoma, or sepsis, or in some way present unfavorable conditions to the harboring or growth of the various infections.

SYPHILIS.

"Unto the second and third generations"; how true is this old prophecy. Because of syphilis the innocent are born into a harassed life of inferiority. Hale White, in his statistical table of the death rate in syphilitic subjects who had had two years of treatment, showed it to be nearly twice the normal in various periods after the first five years. The usual estimate of the incidence of syphilis in European cities is from 12 to 14 per cent of the adult population. These, however, are pre-Wassermann statistics. The sensitive modern tests record incidence in European cities as high as 20 per cent. In the cities of the United States Stokes estimates the general incidence as about 10 per cent.

The effect of sepsis on syphilis is most disastrous. Stokes confirms the observation of Duke as to the extraordinary improvement in cases of stubborn visceral and neurosyphilis, which may sometimes be secured by removal of all sources of focal infection. Stokes emphasizes the fact that the combined effect of inflammatory and degenerative changes may cause the diagnostician to overestimate the permanent damage, which can be seen only after the inflammatory complication subsides.

Recent knowledge of syphilis has unsettled, more or less, the opinions of the past generations which were based chiefly on clinical observation. It is probable that the present-day note of uncertainty is due in a great degree to the results of experimental research, largely on rabbits, and the occasional failure to arrest advanced syphilis,

especially of the nervous system. Arrest of the disease in the nervous system may be hoped for, but the expectation of restoration of lost nerve tissue, merely because the defects are invisible, is no more reasonable than when there is visible loss of the integrity of external parts of the body. It is fairly certain that syphilis of the nervous system in a recognizable form is a late manifestation of an early nerve infection. Those patients who early show external manifestations of syphilis in the shape of well marked secondaries in the skin, mucous membrane, bones, and soft parts present a more curable form, or at least are less liable to syphilitic attack on the nervous system, even as a late manifestation; perhaps the disease in the visible parts of the body leads to earlier diagnosis and treatment. It is possible, or even probable, that there is a certain specificity in strains of spirochetes which causes attack in one case on the nervous system, and in another, results in effect on the external portions of the body. The work of Rosenow on specificity of bacteria leads us to believe that this is true. On the other hand, in the location and progress of syphilis the individual soil may be different and the spirochetes, the same. Negroes seldom develop syphilis of the nervous system, but suffer to a far greater extent from its vascular manifestations, such as in the heart, aortic aneurism, and so forth, than the white race. In the Negro, when the nervous system is involved, the condition is usually due to the paralytic effects of cerebral thromboses, rupture of miliary aneurisms, and secondary embolisms, rather than to primary neurosyphilis.

Our sheet anchor of diagnosis has been the more or less fallible blood Wassermann reaction. The blood Wassermann reaction in the secondary stage of syphilis is manifest in nearly 100 per cent of cases; in late syphilis of the viscera, bones, skin, and so forth, it is more than 80 per cent, and in syphilis of the nervous system it is about 50 per cent. Spinal puncture gives a higher average of successes than the blood Wassermann test. The nervous system has no lymphatics and the nerve cells are insulated by the neuroglia, so that the spirochete may remain latent here indefinitely, defying diagnosis, and protected against remedies.

It is probable that there are in the body certain other tissues in which the spirochetes may remain latent indefinitely without manifestations, such as the heart in congenital syphilis, and the testes, spleen, and lymph-nodes in acquired

syphilis. The enlarged lymph-nodes may restrain the advance of the spirochetes and so encapsulate them as to prevent evidence of their presence indefinitely. Incidentally, the lymph-nodes may protect the spirochetes against medication, permitting reinfection of the patient from time to time, as would any other form of focal infection, quite parallel to the glandular manifestations of tuberculosis and cancer. In certain cases of intractable syphilis with splenomegalia in which anemia is a prominent symptom, prolonged treatment sometimes fails to arrest the disease. Its progress is quickly arrested and the anemia promptly overcome by removal of the greatly enlarged spleen in which spirochetes will be found.

It may be possible that a similar condition exists in the deeper layers of the skin, where general medication for syphilis occasionally fails to arrest the disease. In such cases disappearance of the visible manifestations sometimes follows the inunction of mercury which possibly acts more directly on the disease than other forms of treatment.

The arsenic compounds are of great value, not only as curative agents, but also as public health agents, within six hours rendering carriers of the disease in a contagious form, such as chancres and mucous patches, incapable of infecting others. Occasionally, however, a serious reaction on the liver, with jaundice, results from the use of arsphenamin. Perhaps arsenic treatment is being overdone, especially in elderly patients who are less resistant to chemical poisons than younger patients. Admitting that the arsenic used in the chemical sense has been changed in arsphenamin, arsenic in various forms has been up and down in the treatment of syphilis a number of times in the history of the disease, but mercury has steadily maintained its place.

Stokes says, "Early syphilis can be arrested in a high percentage of cases, and the majority of patients if well treated can be said to be cured. Late syphilis, outside the nervous system, can be arrested in the great majority of cases. Neurosyphilis can be arrested perhaps in from 50 to 60 per cent of cases, and the condition of the patient greatly improved in from 80 to 85 per cent." While the percentage of syphilis is high, the number of patients who sustain irremediable damage is relatively small, which indicates either a high grade of natural resistance and hereditary or acquired immunity, or that treatment is more

effective than is often believed. As I recall patients with undoubted syphilis whom I saw in my earlier practice and whom I have had opportunity to observe during life, it seems to me that there is a fair percentage of them alive and apparently well, and with healthy children. Mothers who are possibly less seriously affected with the disease may give birth to a syphilitic child; a mother may have stillbirths, abortions, and so forth, and yet develop an immunity and have healthy children who remain well, and she may also regain her health.

One rather discouraging feature of the present unsettled state of knowledge of the diagnosis of syphilis is the frequency with which cancer is still more or less justifiably subjected to diagnostic delay because of the failure rapidly to eliminate the question of syphilis, and it is certainly true that the bugbear of syphilis is responsible for the hopeless state in which some of these patients come to the surgeon. In urgent surgical conditions such as cancer, and in acute abdominal conditions, a necessary operation should not be delayed for preliminary treatment of chronic syphilis unless its manifestations are such that it does not require a specialist to discover them. The syphilographer is sometimes too suspicious, and the practitioner generally too innocent. The surgeon can aid the syphilographer in the treatment of the disease by the removal of foci of latent spirochetal infection as it exists in the spleen, glands, and other tissues, and in the removal of septic foci which break down the general resistance of the patient.

TUBERCULOSIS.

The septic factor is the most important in tuberculosis. Tuberculosis itself seldom kills unless the products of the tuberculous infection are confined in a bony box and produce injurious pressure, as in the brain. Other parts of the body, the thorax, peritoneal cavity, and the soft parts generally, yield to pressure, which gives time for the development of local resistance and generalized immunity. The greater number of patients with tuberculosis die from intercurrent disease in which sepsis plays the chief role. The Ancients recognized that opening a so-called "cold abscess" would be followed by hectic, picket-fence temperature, prolonged discharge, and eventually by the death of the patient. They recognized nature's ability to open such an abscess without the development of these symptoms, although they

failed, as we fail now, to imitate the same safe drainage mechanism. Too often, physicians introduce probes into spontaneous sinuses following cold abscess and cause deep infection and everlasting damage. So important is the septic factor in tuberculosis that the main consideration in any operation for the disease is to avoid mixed infection. In certain situations surgical tuberculosis may be a mixed infection from the start, as occurs in the intestine. The most common type is that due to swallowed sputum which causes multiple ulcerous lesions which, in time, often result in intercommunicating fistulas involving the small and large intestines, and run on to a fatal issue, but occasionally the ulcerous tuberculous process may be limited to a small intestinal area, and partial healing with obstruction takes place. Such patients are cured of the local lesion by resection, and the improvement in their general condition is very great. The septic factor in these cases is the deciding one in the eventual result.

In contradistinction to the ulcerating type of intestinal tuberculosis is the so-called hyperplastic tuberculosis, usually the result of bovine tuberculosis bacilli, which usually involves the ileocecal coil, especially the cecum and ascending colon, although it is seen occasionally in other parts of the large intestine and even the small bowel. In this localized and most curable form, a tumor develops which so closely resembles malignant disease that the surgeon on resecting it cannot always rule out carcinoma until microscopic examination has been made. The severe anemia in these cases, as in malignant disease of the head of the colon, is out of proportion to the extent of disease and may lead the inexperienced to look on the case as incurable. Tuberculosis of the peritoneum is an interesting surgical condition.

The ascitic forms are most common in women and in them usually originate in tuberculosis of the mucous membrane of the Fallopian tubes which are lined with ciliated epithelium, having on cross section much the appearance of bronchi of the same size. The tuberculous peritonitis is the result of the escape of tuberculous material through the open fimbriated extremity of the tube into the peritoneal cavity, and the peritonitis is a conservative process of nature in an attempt to destroy the infecting material. The Fallopian tube in tuberculosis is usually open, in contrast with the closed tube in gonorrhoea. The reasons for failure to cure tuberculosis of the peritoneum

in the majority of cases by merely emptying out the fluid can readily be seen. If the abdomen is opened the results are better, although still unsatisfactory, because the fluid is removed more thoroughly, not because sunlight and air are admitted into the peritoneal cavity. Complete removal of the fluid in many cases permits the fimbriated end of the Fallopian tube to become adherent to the sigmoid or neighboring peritoneum so that the products are retained within the tube. The ascites disappears as the necessity for a peritoneal defense passes away, but the products accumulate in the tube and become manifest on pelvic examination. Removal of these tubes can be effected readily by enucleation, often without a ligature, with cure of the disease in a high percentage of cases. It is not necessary to remove the ovaries as they have only a surface infection similar to that of the intestine. The cause of tuberculous infection of the peritoneum, especially in children, is sometimes to be found in infected lymph-nodes. The so-called adhesive type of peritonitis, more common in the male, is a very favorable form. The abdomen becomes hard, fibrous exudate forms, and spontaneous recovery usually takes place. Operation should not be performed, since it merely opens up adherent spaces in the peritoneal cavity and sometimes leads to intestinal injury and fecal fistula. This type argues for a mixed infection from a septic source of origin, usually the intestine, and sepsis causes the plastic peritonitis. Because the complicating septic bacteria which produce the plastic exudate are short lived, the exudate will be found sterile. I have had a few cases in which early operation for the evacuation of localized pockets of septic material revealed short-lived types of pus-forming organisms which later would have disappeared through natural defense.

It is very important not to institute wound drainage following the removal of a tuberculous kidney. Unless there is distention of the ureter from stricture near the bladder, which would necessitate its removal with the kidney, the ureter should be handled very gently, catching it with a clamp at a point about 5 cm. below the kidney with its sheath, surrounding fat, and adherent tissues, cutting with the cautery, and dropping it back into position without tying. A ligature placed in so vulnerable a situation is likely to be followed by a sinus which will be slow to heal. The tuberculous ureter should be removed com-

pletely or its upper stump left sufficiently long so that if infection follows, drainage will be direct. Tuberculosis of the glands, joints, bones, and intestines, is much less common than formerly. The majority of such cases are bovine in origin and the incidence has been greatly reduced through the pasteurization of milk and the better care of dairy herds.

CANCER.

Glandular involvement in cancer tells the story. While operative skill and technic are important, generally speaking our results show that without regard to the type of operation, five-year cures occur in 71 per cent of cases in which operation has been performed for carcinoma when the glands are not involved, and in only 19 per cent when they are involved. Local operations cure local disease; massive operations fail when the local stage has passed. Operative mortality in cancer is not as important as extension of operability which gives a larger number of patients a chance for cure. For cancer of the gastro-intestinal tract, which means, practically, the stomach, large intestine, and rectum, a 10 per cent mortality following operation is a fair risk and justifies the procedure. When I find my personal results as to mortality better than 10 per cent, I extend the operability, taking more advanced cases. Enlarged glands may be due to associated sepsis and not to cancer, and incorrect diagnosis may lead to failure to remove a curable growth. Methods of handling these cases, such as the two-stage operation of Mikulicz for carcinoma of the sigmoid, and preliminary colostomies, for cancer of the rectum, lessen the septic factor and are of the greatest value in extending operability and reducing mortality.

The associated sepsis in cancer is the cause of much of the distress and hurries the patient to a fatal end. In the Middlesex Cancer Hospital, by establishing strict asepsis and antisepsis, cachexia, which is a combination of anemia and sepsis, has been greatly lessened. The patients are made more comfortable and their lives prolonged. We all recognize the dangers of operating on the infected so-called inflammatory carcinomas such as are seen around the mouth, the cervix, and so forth. The use of the knife in these cases is often followed by quick recurrence and metastasis from infected venous thrombi. Caustic excision in these cases, followed later by plastic repair, is a step in the right direction. The cancer cell is

five times as vulnerable as the normal cell and is especially susceptible to heat. The caustic procedure should not be abandoned, particularly in infected cancerous processes around the mouth and jaws. In many cases of infected cancer radium and the roentgen ray are now used and they have a similar effect without the risks of the tissue destruction and sloughing which accompanied the use of the caustic, to say nothing of the pain. Experience with irradiation has demonstrated a number of points. First, that if there is actual tissue loss by the involvement in carcinoma, while the disease may be eradicated by irradiation, the tissues are not restored. Radium is destructive and may be more so than operation. In the alimentary tract, huge fibrous strictures follow the use of radium, and secondary operation for the relief of these strictures is seldom as successful as if the patient had been operated on primarily. It should be remembered, too, that the handling of radium, especially in malignant disease, requires an expert. There are many men who, with a small amount of radium, do little good and an enormous amount of harm. With good faith, but poor judgment they apply radium in cases in which operation should have been performed early, causing delay and perhaps failure in a subsequent operation which, primarily, would have been successful. Patients who come to surgical operation, subsequent to the use of radium have a greatly increased operative mortality and greatly reduced prospects of permanent cure. Generally speaking, the use of radium means the parting of the ways. If radium is elected one can seldom turn back and take the operative route with a good prospect of success. In certain situations of the body where the tissues can be easily removed this does not hold true, and in special cases the preliminary use of radium to be followed by operation, as quickly as the inflammatory condition from the radium subsides, may be advisable. However, the physician with little experience who, without surgical consultation, uses radium on the operable patient, is not giving the patient a fair chance. The use of radium or the roentgen ray following operation has much to commend it in certain types of cases. The more cellular the growth, the less the prospect from surgical operation, and the greater the prospect of benefit from radium and roentgen ray. In the hands of the wise expert these agents have an enormous field of usefulness. In cases of inoperable cancer of

the cervix uteri in which the vaginal wall is involved and the uterus fixed, radium often causes the disease to disappear painlessly; some of our patients have remained well for a term of years. Radium not only destroys the cancer cell and sterilizes nuclei at a greater distance, but it also reduces the sepsis. Because the ill-advised use of radium has done harm, let us not deny its extraordinary power for good when properly employed. Desjardins has demonstrated that irradiation by modern roentgen-ray methods, in the hands of the expert, is proving of great value and promises much in the immediate future.

SEPSIS.

With the discovery of the causative bacterial agents in sepsis, there was an abandonment of all the knowledge which had come through clinical experience. I well remember as a student how the then new antiseptic school of surgery laughed at the "laudable pus" of the Ancients, and yet we now recognize that there is such a thing as laudable pus, and that the Ancients were right. We have failed utterly to destroy pathologic bacteria by agents which are not harmful to the human economy. We know that what happens in the favorable case of sepsis is the development of an immunity through natural processes, an increase of the bodily defenses and an attenuation of the bacteria until the resulting exudate may have the physical features of pus, but is no longer infective to the organism. This process was spoken of by the Ancients as the abscess getting "ripe", that is, ready for opening. Much harm has been done by knifing an abscess, prematurely breaking down nature's carefully built defense, delaying the process of healing, and by the introduction of new and more virulent bacteria from the outside, reinforcing those that are undergoing deterioration from natural processes on the inside. The Ancients understood that the time to open an abscess was when it was "ripe and pointing", or when it was coming to the surface by way of a protected passage and development of a soft spot. Today it is often good practice in treating abscesses which are not under pressure to wait for them to become ripe and point. Many times it is wiser to let the abscess open spontaneously, certainly not to squeeze or force the pus out, thus breaking down the protection wall and opening up new avenues of infection. One can illustrate this best by our changing views of the handling of acute

perforating appendicitis with spreading peritonitis.

Sistrunk has developed the fact that in the cases of acute appendicitis for which operations have been performed in the Clinic, there have been no deaths, other than accidental, if the appendix has been removed in the first twelve hours. In the second twelve hours the death rate from peritonitis following the rupture of an acutely infected appendix has been 3 per cent; in the third twelve hours 6 per cent, and between the end of the thirty-six hours and the sixth day, 16 per cent. In the ordinary types of acute and subacute appendicitis in which there is no escape of septic contents through a perforation into the peritoneal cavity, the appendix can be removed safely at any time. During the first few hours after such septic material escapes it remains in the vicinity of the appendix. After the first shock of the insult to the peritoneum the patient may be relieved of pain and appear much better, the period of the "fatal improvement" of Morison, since in spite of the fact that muscular rigidity continues, the unwary practitioner may thereby be led to postpone operation.

Removal of the perforated appendix after the process of spreading septic peritonitis has been established more often does harm than good. It does not cure the peritonitis and it may break down nature's resistance in such a way that a patient dies who might otherwise have reached a stage of operative safety. It will be said that immediate appendectomy at any stage, regardless of peritonitis, would save many of these patients who, without operation, would die. Perhaps in the exceptional case this may be true, but every cemetery has its gravestones which emphasize the rule. The surgeon of good judgment will recognize the exceptions to the rule of caution in the dangerous intermediary stage between the safe early and the safe late operation.

I have spoken of perforative appendicitis in terms of hours and days. It is a poor method of evaluating all the conditions which surround the perforated appendix, but perhaps it is as good as another, although the question really is one of the state of the septic process rather than of time. When this method of computing the pathologic condition is used, it is based definitely on the time that the perforation occurs and not on when the patient is first seen by the surgeon.

Intestinal peristalsis is the agent which spreads the infection from the region of the appendix throughout the peritoneal cavity. Alonzo Clark improved results in his time by giving opium, which quieted peristalsis. Ochsner showed a better way to check peristalsis by stopping food. Since it is known that the fluids of the body and the necessary nutrition may be readily maintained by subcutaneous administration of 3 per cent glucose in sodium chlorid solution, in a serious case of progressive peritonitis it is best not to use even proctoclysis, because occasionally the solution will pass through a patent ileocecal orifice and start peristalsis in the small intestine.

Mann, in his classic experiments, removed the liver of a dog and found that in about eleven hours the animal passed suddenly into collapse and died within a few minutes. He discovered that if he injected glucose solution into the veins when this terminal stage had been reached the dog would jump up, wag his tail, and appear quite happy, and could be carried on in this way for a considerable period. This brings up the point that after all surgical operations which involve the integrity of the gastro-intestinal tract, or in which there is danger of distributing sepsis by peristalsis, the early giving of fluids and especially food in the stomach is to be deprecated. The administration of normal salt solution or specially sterilized glucose in sodium chlorid solution subcutaneously affords a substitute which in the sensitive patient, by following Bartlett's method of adding a small amount of novocain, can be used painlessly. Hot fomentations applied to the entire abdomen and sufficient opium to relieve pain are of some value while the peritonitis is active.

After the peritonitis has subsided and the process has become localized, usually about the sixth or ninth day, the abscess may be opened, and if it is ripe, that is, if the infection has led to the development of general and localized immunity, the appendix can be removed with safety. If the patient is still very ill and the products more or less imperfectly encapsulated, under local anesthesia a small opening is made down into the accumulation through which a little piece of rubber tissue is introduced to evacuate slowly the septic products and relieve the tension.

Eight or ten days after the inception of an acute appendicitis, operations, other than the evacuation

of an abscess, for the removal of a well encapsulated septic appendix which is progressing toward recovery, must be performed with caution. The plastic adhesions which develop as a result of the pathologic process have become vascularized and have developed lymphatics. Appendectomy at this time sometimes results in intestinal fistula or generalized sepsis.

Finally, I would call attention to the rectal opening of the pelvic appendiceal abscess. A patient is sometimes seen who is very ill with an indefinite tumefaction in the lower abdomen covered by intestines. Rectal examination shows a mass in the pelvis impinging on the rectal wall. If the abdominal tumefaction is watched it is seen to disappear, gradually sinking into the pelvis. The patient shows evidences of a localizing infection with a tumor pressing on the anterior rectal wall, which gradually increases in size, and rectal tenesmus becomes prominent. At the end of about two weeks the anus will be found dilated with considerable escape of clear odorless mucus, the tumefaction nearly filling the rectal space, pressing down against the peritoneum. On about the eighteenth day, the mass presenting in the rectum feels much like the stage of labor in which the child's head and the membranes are pressed against the cervix, represented by the anal muscles. The patient develops a peculiar nervous condition, shortly after which there is a sudden escape of an enormous amount of pus of foul character, with almost immediate relief to the patient.

I have watched many such cases, and in the earlier days I opened some of these abscesses through the anterior rectal wall. Most of the patients did well, but in some cases I failed to drain the abscess at the proper point. The drainage tube would become displaced, or fail to drain, requiring painful dressings. Sometimes I was able to delay the recovery of the patient for several weeks until the abscess finally opened itself at a place of its own choosing. I have seen cases of this kind in which the abscess was opened through the rectum, altogether too early, before the intestinal roof was firm, and evacuation of contents was followed by displacement of a loop of small intestine into the cavity from which the pus had been evacuated, resulting in death. I have never had a patient die if I allowed the abscess to go on to spontaneous opening.

CHRONIC INDIGESTION IN CHILDHOOD.*

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In the first place, I want to thank you for the honor which you have conferred upon me in asking me to address you. I am especially grateful, because I am now a professor emeritus and because I was recently told by one of my confrères in Boston, fortunately older, not younger than I, that I belonged to a past generation in medicine. This may be true, but, if by the past generation is meant the generation which learned to use its ears and eyes and hands and, above all, its brains in diagnosis and treatment, and not to depend entirely or almost entirely on laboratory findings, I am glad that I belong to that past generation. I believe, however, that, even if I do belong to that generation, I am able to appreciate the value of laboratory methods and their findings, to make use of them and to evaluate them properly in connection with the clinical findings. It has seemed to me, at times, as if some, at least, of the younger generation were not able so to do.

CAUSES OF INDIGESTION.

Normally, the digestive powers are equal to the work demanded of them, that is, the digestion of the food. The equilibrium of the digestion may be disturbed by a decrease in the powers of digestion or by an increase in the work to be done in digestion. The decrease in the powers of digestion may be due to overfatigue, either physical or mental, to diseases outside of the digestive tract, and to disease of the digestive tract. The increase in the work to be done in digestion may be due to improper methods of eating, to too much food otherwise proper, or to improper food.

Decrease in the Powers of Digestion. This element in the etiology should always be the one first investigated. A careful, detailed study of the child's whole life should be made, no matter how much time it takes, to determine whether the child is overfatigued, physically or mentally, and what the causes of this overfatigue are. In many instances it will be found that the child does not get sufficient rest and sleep, that it is playing too hard or too long, that it is studying too hard, that it has too many social engagements or too much excitement, that there is friction in the home or

in the school. If overfatigue is found and the causes are removed, many cases of indigestion will promptly recover. In such cases regulation of the diet and the administration of drugs will do no good whatever, unless the causes of the overfatigue are removed.

Diseases outside of the digestive tract may sometimes be discovered in taking a careful history. Every child with indigestion should be stripped and examined carefully from head to foot. This examination should include the nasopharynx and the urine. The diseases, outside of those of the digestive tract, which most often cause indigestion in children, are those of the nasopharynx and pyelitis. Until these diseases or abnormal conditions have been remedied, the indigestion will persist. No regulation of the diet and no drugs will relieve it, if there is continued absorption from diseased tonsils or abscessed teeth. It is most surprising how many cases of indigestion in children will be cured, if the life is properly regulated and other diseases and foci of infection cured.

Primary disease of the digestive tract is very uncommon in childhood. In indigestion, of course, there are no real pathological changes, but merely a disturbance of the functions of digestion. If there is disease, or rather a disturbance of the functions of the digestive tract, it is almost invariably secondary to a disturbance originating in the contents of the tract as the result of the ingestion of improper food or of bacterial fermentation in the food. If there is bacterial fermentation in the food, it is, as will be shown later, almost invariably primarily due to improper food and not to the implantation of abnormal bacteria. If there is disease of the digestive tract, it is evident, therefore, that the first thing to be done is to remove the cause, that is, the improper food. If only proper food is given at the proper times, in many instances, probably in the majority of the milder cases of indigestion in children, cure will result. It is most surprising how large a proportion of the cases of indigestion in childhood will yield to simple regulation of the life, the removal of foci of infection and reasonable regulation of the diet.

Increase in the Work in Digestion. One of the common causes of increase in the work in digestion is an improper method of eating. Many children eat hurriedly; they rush in from their

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play, hot and tired, gobble their food and rush out again to play more. In other instances they come home from school tired and nervous and eat a hearty meal. In other instances they swallow their food without proper mastication or wash their food down with liquids. Children that eat hurriedly are, moreover, very likely to eat more than they would if they ate properly. The treatment is, of course, obvious. Children must be made to rest for a time before eating. They must be made to eat slowly and to chew their food properly. They must not be allowed to wash their food down before it is properly masticated.

Too much proper food is a possible, but not a common, cause of an increase in the work in digestion. This brings up the question as to what is proper food for children, that is, what is a reasonable diet. In general, it is safe to say that the modern child is given too large a variety of food for its age and altogether too large an amount of sweets. This tendency to give a great variety of food is perhaps merely another manifestation of the general tendency to make children grow old too quickly. No one seems willing now to let a baby be a baby or a small child a small child. They want the baby to be a child, the child a youth and the youth an adult, much to the detriment of them all.

Improper food is unquestionably the chief cause of disturbance of the equilibrium of the digestion by increasing the work in digestion. In many of the milder cases no especial type of indigestion has been established by the improper food. The functions of digestion are simply disturbed and no intolerance for any of the food elements has been established. In such cases the elimination of the improper articles of food is all that is necessary to bring about a rapid cure.

In most of the more severe cases, however, the conditions are more complicated and an intolerance, more or less marked, for one or perhaps two of the individual food elements has been established. This intolerance is usually the result of overfeeding with this element, but a secondary intolerance sometimes develops for another food element, which has not been taken in excess. This intolerance for one or more of the food elements may or may not be associated with fermentation in the intestinal contents as the result of abnormal bacterial activity. Fermentation may take place in any of the food elements. It may occur

in both the carbohydrates and the fat at the same time, but never can occur in protein at the same time that it is going on in the carbohydrates or fat.

CLASSIFICATION OF SEVERE INDIGESTION.

On the basis of an intolerance for one or more of the individual elements, indigestion in childhood may be divided into:

- (a) Indigestion with intolerance for fat;
- (b) Indigestion with intolerance for sugar;
- (c) Indigestion with intolerance for starch;
- (d) Indigestion with intolerance for protein;
- (e) Indigestion with fermentation.

The line between indigestion with and without fermentation is necessarily very indefinite and indistinct, because there is always fermentation going on normally in the intestinal contents. The line between normal fermentation, fermentation as a part of simple indigestion and indigestion with excessive fermentation must evidently be very indefinite. Fortunately it is not very important to draw this line, because the treatment is essentially the same whether there is or is not fermentation.

The present tendency seems to be to lump all the severe forms of these definite types of chronic indigestion together under the term of "coeliac disease", and to treat them all as if they all had the same etiology and were of the same nature. It seems to me that this tendency is altogether wrong, that it prevents clear thinking and interferes with the careful study and reasonable treatment of these cases. They do not all have the same etiology, are not all of the same nature and therefore cannot all be properly treated in the same way. In my experience the most severe cases are those of fat indigestion or of primary starch indigestion with excessive fermentation and a secondary intolerance for fat.

SYMPTOMATOLOGY AND DIFFERENTIAL DIAGNOSIS.

All the types of chronic indigestion in childhood have many general symptoms in common, such as loss of weight and other manifestations of disturbed nutrition. Among these may be mentioned dryness of the skin and hair, cold extremities, pallor, irritability, peevishness and disturbed sleep. Other symptoms, which vary according to the type of indigestion, are diarrhea, constipation, and the alternation of diarrhea and constipation. The abdomen may be distended, normal in size or sunken. There may or may not be vomiting.

Fever of varying degrees may, or may not be present. None of these symptoms are, however, definite enough of themselves to justify a positive diagnosis as to the type of indigestion.

Something may be learned as to the type of indigestion from the condition of the bowels, the odor of the breath, the appearance of the tongue, and the presence, absence or amount of gas, nausea and vomiting. Much more, however, can be learned from a careful analysis of the history, especially in relation to the diet. The diagnosis of the type of indigestion must, however, be made chiefly on the results of the examination of the stools, because the different types of indigestion have characteristic stools. The macroscopic examination of the stools is usually sufficient to justify a positive diagnosis as to the type of indigestion present. It should never be depended on alone, however, but should be verified by a microscopic examination, because the microscopic examination sometimes gives additional information and sometimes shows that the conclusions drawn from the macroscopic examination were not entirely justified. The microscopic examination of the stools is not a difficult matter and requires but a few minutes.

Examination of the Stools. A small portion of the stool is spread on a slide and stained with either Lugol's or Gram's solution. Starch granules stain blue or violet. Another portion is spread on a slide and stained with a saturated alcohol solution of Sudan III. The neutral fat drops and fatty acid crystals stain red. Soap crystals do not stain with Sudan III. A drop of glacial acetic acid is then allowed to run under the cover-glass. The specimen is then heated until it simmers. This changes the soap to fatty acids, which then stain. If it is desired to determine whether the fat is in the form of neutral fat or fatty acids, another specimen is stained with carbol-fuchsin. This does not stain neutral fat, but stains fatty acids a brilliant red and soaps a dull red.

I am aware that the chemical examination of the stools has seemed to show that the results obtained by this method of determining the amount of fat in the stools are unreliable. Nevertheless, I have found this method most helpful in clinical work and still use it. Common sense must be used in the interpretation of the findings of the microscopic examination of the stools. Unless the character of the food which the child is taking and the relation of the different food ele-

ments in the food to each other are borne in mind, erroneous conclusions may easily be drawn and, unfortunately, often are.

The bacteriologic examination of the stools is, in general, not of much clinical importance in the diagnosis between the different types of indigestion. Little additional information is, as a rule, obtained from it. The presence of many iodophilic bacteria, when the stools are stained with Lugol's or Gram's solution, indicates, however, an impairment of the powers of digestion of starch, even if no undigested starch is seen. The intestinal flora must be, of course, either fermentative or putrefactive, that is, one which forms acids from the carbohydrates or fats or alkalis from the proteins in the intestinal contents. The type of flora can, therefore, always be quickly and easily determined from the reaction of the stools. The reaction can be determined by placing a piece of wet litmus paper on the stool. It is important that the stool is not contaminated with urine. It is better to break up the stool so that the reaction is determined from the inside rather than from the outside. The reaction of the stool is most important. If only one test is possible, the reaction gives the most valuable information.

In the acid stool of carbohydrate indigestion the presence or absence of organisms of the gas bacillus group is of considerable importance in indicating the treatment. The determination of the presence or absence of the gas bacillus by the fermentation test is not difficult and can be carried out by any one in his office without special training. A fermentation tube, test tube and glass spatula are cleaned thoroughly with concentrated nitric acid and washed with water until the reaction is neutral. 1 cc. of Dextri-maltose and 1 cc. of the stool are then placed with the glass spatula in a test tube 1/3 full of water. This is boiled vigorously for one-half minute and poured into a fermentation tube, the tube being tilted back and forth to eliminate bubbles. The tube is stoppered with flamed cotton and placed in the incubator at 37° centigrade for twenty-four hours. A warm room will do almost as well. The tube is then inspected for gas and the amount noted. If no gas is formed or the bubble is no larger than a pin head, then the result is negative. If there is less than one-half inch of gas, the result is questionable. If there is one-half inch or more of gas, the result is positive. It

must be remembered, however, in interpreting the results of this test, that the presence of a few gas bacilli does not necessarily prove that they are the cause of the disease.

There is an excess of putrefactive organisms in protein indigestion. Porter and his co-workers have recently developed a method for the recognition of this type. It can be carried out, however, only in a well-equipped laboratory. Others have, however, claimed that his conclusions are faulty. It is possible that organisms of the butyric acid group or the bacillus acidophilus may be of importance. There are, however, no easy methods for recognizing these organisms, and there is no specific treatment, if they are found.

THE STOOLS IN INDIGESTION.

Fat Indigestion. The stools are usually large, semisolid, gray and acid in reaction. They are sometimes loose and frothy and extremely acid, and sometimes dry, hard and crumbly. They are almost always gray, the white color due to soap being seldom seen in the stools of children. They often contain considerable mucus, especially if they are very acid. The odor is acid, often that of butyric acid. The oily stools and the small soft curds so often seen in the stools of fat indigestion in infancy are almost never seen in childhood. Microscopically the fat is almost never in the form of neutral fat, but usually in the form of fatty acids, although sometimes of soap.

Sugar Indigestion. The stools are loose, yellow or green, frothy and acid in reaction. The odor is that of acetic or lactic acid. The stools often contain mucus and are very irritating to the skin. Microscopically, little abnormal is to be seen, except undigested food particles which have been hurried through the intestines.

Starch Indigestion. In the milder cases the stools are loose, yellowish-brown or green, acid in reaction and have the odor of acetic or lactic acid. In the severer cases the stools are large, brown, mushy, acid in reaction and odor, and contain considerable mucus. When there is, in addition, a secondary disturbance in the digestion of fat, the stools are often gray in color and even more acid in reaction. The odor is very peculiar, being a combination of a foul odor with that of butyric acid. Microscopically the stools show undigested starch and iodophilic bacteria, and in the severe

cases with secondary fat intolerance large amounts of fat.

Protein Indigestion. The stools are loose, brownish, and alkaline in reaction. The odor is foul or musty. They usually do not contain much, if any, mucus.

Indigestion with Fermentation. The characteristics of the stools are the same as in the other types of indigestion with the manifestations of fermentation superadded. The stools are likely to be frothy and to contain considerable mucus. The acidity or alkalinity of the reaction is increased, according to the type of fermentation present, and the odor is more acid or more putrefactive.

TREATMENT.

There is no place for the so-called digestants in the treatment of chronic indigestion in childhood. It is safe to say that there is never an insufficiency of either pepsin or hydrochloric acid in these cases. Pancreatin is destroyed in the stomach and can, therefore, be of no use. There is nothing to suggest that there is an insufficiency of the bile salts. There is likewise no place for drugs in the treatment of this condition, except for the temporary relief of symptoms. Tonics, appetizers and antifermentatives are alike powerless to remove the cause of or to cure the disease.

Regulation of the life of the child to avoid overfatigue, either physical or nervous, care of the general hygiene and the enforcement of proper methods of eating are of great importance and will relieve many of the mild cases. Further treatment consists primarily in the regulation of the diet to fit the digestive capacity of the individual child. The element or elements which it cannot take care of must be cut down to the point where it can take care of them. This point can only be determined by the examination of the stools. As a general rule, it is advisable to rapidly reduce the amount of the food element at fault to a point below the tolerance, and then to increase it to the point of tolerance, rather than to find this point by gradually diminishing it. The deficiency of calories which necessarily results from the reduction of the amount of the offending food element must be made up by increasing the amounts of the other food elements in the food. The amount of the element at fault should be gradually increased as the tolerance for it increases. In general, it is not necessary to consider

the vitamins in prescribing the diet in these cases of chronic indigestion in children, because it will be found that even on very unusual and restricted diets there are almost invariably enough vitamins present. They should be thought of, however, in order to avoid possible trouble from an insufficiency of one or more of them.

It is evident that, when indigestion is treated in this way by regulation of the diet, the physician must know exactly the composition and caloric value of all the foods which he orders. He must not only understand the matter himself, but he must be able to explain it to those who have charge of the child. It is not sufficient to give general directions as to cutting down one or more of the food elements. He must give explicit directions as to just how much of each food element is to be given, or at least the maximum amount of the offending food element and the minimum amount of the other food elements. It is necessary to have tables showing the caloric value of various foods and the content in grams of fat, carbohydrates and protein of each food, to give these to the parents and to show them how to use them. This is not as difficult as it seems, because all educated people now, as the result of reading the lay journals, know something about the different food elements and the caloric value of foods. In fact, many of the laity know more about these matters than the average physician. It is very easy, as a rule, to get the coöperation of the parents. It is also easy to get the coöperation of the children. In fact, children will follow a diet far more closely, and are much less likely to overstep its bounds, than adults.

In mild cases of fat indigestion it is usually sufficient to cut out butter, cream and bacon and to limit the number of eggs. In more severe cases the milk should be skimmed and eggs cut out entirely. In the severest cases it is necessary to have the fat entirely removed from the milk by centrifugalization and every source of fat in the food removed. I have seen children so sensitive that the fat contained in one or two ordinary crackers would show in the stools. I have even seen a child set back for several months by giving a piece of butter the size of a pea.

Sugar indigestion usually ceases promptly when all sugar, candy and sweets, such as ice cream, cake and cookies, are removed from the diet. Sometimes it is advisable, as in indigestion in in-

fancy, to change the form of the sugar rather than to cut it out entirely. This, however, is usually not necessary.

Mild cases of starch indigestion are due more often to potato starch than to any other. They are promptly relieved when potatoes are removed from the diet. In general, it is advisable not to have healthy children eat potatoes daily and to limit the amount of potatoes which they eat. Certain children have an intolerance for certain types of starch, while others are intolerant of other types. It is often possible, therefore, in the milder cases of starch indigestion to continue to give starch, provided the kind of starch is changed. In general, the starch of rice and wheat is more easily digested than the other starches. In the most severe cases of starch indigestion it is necessary to cut starch entirely out of the diet. Even a little will do harm and prevent improvement. In these cases of severe starch indigestion there is almost invariably a secondary intolerance of fat. The diet, consequently, must be made up almost entirely of proteins. It is not as difficult as it at first appears to plan a diet composed almost entirely of proteins, which will contain a sufficient number of calories. Fat free milk must form the basis of the diet. It may be given plain, in the form of junket, or in the form of blanc-mange prepared with gelatin. Meat, especially the white meat of chicken, which contains less fat than other meats, is usually well borne. Protein may also be given in the form of white of egg. Another useful way of giving protein is in the form of cottage cheese. Casein may also be given in the form of casein flour made into biscuits or bread. In the severest cases fat should not be used in the preparation of these biscuits or bread, because of the intolerance of fat. I have usually used the diaprotein flour. Eight ounces of fat free milk contains 80 calories. A level tablespoonful of chopped chicken about 17 calories, and a rounded tablespoonful 25 calories. The cottage cheese made from one pint of skimmed milk contains 72 calories. The six or eight muffins made with a measure of diaprotein flour contain 184 calories. It is usually advisable, however, not to give a strictly protein diet continuously, because of the danger of acid intoxication. This can be avoided and the caloric value of the food increased by the addition of sugar to the food. As a rule, children with starch indigestion can bear a small amount

of sugar, if the diet is otherwise made up entirely of proteins. It is advisable to give this sugar in a form which is absorbable high up, and which leaves little residue in the intestines. Corn syrup meets these indications better than any other form of sugar. This is composed of maltose, twenty per cent; dextrose, fifteen per cent; dextrin, thirty-two per cent; cane-sugar, three per cent. One ounce, by volume, contains 136 calories. It is usually impossible to give children more than three ounces of corn syrup daily without causing disturbance, although some will take as much as five or six ounces daily. When these patients begin to improve, a little starch can be added to the diet and also a little fat. In some cases the results are better, if fat is first added; in others, if starch is first added.

In protein indigestion the amount of protein in the diet must be cut down to the minimum protein need and the caloric requirements made up by an increase in the amount of carbohydrates, the increase being greater in the starches than in the sugars. In general, it is wise to keep the fat low in these cases. Protein indigestion is relatively uncommon and usually yields promptly to treatment.

In those cases in which there are marked clinical evidences of fermentation, bacteria undoubtedly play an important part in the production of the symptoms. They presumably also play a part in those cases in which the evidences of fermentation are less marked. What proportion of the symptoms in a given case is due to bacterial fermentation, and what proportion to disturbance of the chemical processes of digestion is, however, almost impossible to determine. It is likewise impossible to know whether the trouble was originally due to bacteria, or whether the bacterial fermentation is secondary. In general, however, it is probable that the difficulty was not originally due to bacteria, because it is impossible to permanently implant any organisms in the intestines by giving them in the food. Fortunately, it is unimportant to know which is primary, because, whether primary or not, abnormal bacterial activity must be stopped. It is impossible to permanently change the intestinal bacterial flora by giving bacteria by the mouth, although the flora may be somewhat modified temporarily, if the bacteria are given continuously. The character of the flora can only be changed by

changing the composition of the food, that is, by changing the medium on which the bacteria grow. If it is suitable, they thrive; if it is unsuitable, they do not. Cutting down the proportion of carbohydrates and increasing that of the proteins in the food, therefore, changes the flora from the fermentative to the putrefactive, while cutting down the proportion of the proteins and raising that of the carbohydrates changes it from putrefactive to fermentative. This can be proved by bacteriologic examination of the stools, but is shown equally well by the change in the reaction of the stools, the stools being acid when the bacterial flora is mainly fermentative and alkaline when it is mainly putrefactive. Organisms growing on fat have relatively little to do with fermentation in the intestinal tract, but the products of their activity increase the acidity of the stools. The treatment by regulation of the diet which is indicated by the examination of the stools thus not only aids the weakened digestive powers but also diminishes fermentation by changing the bacterial flora.

When the organisms of the gas bacillus group are the cause of the fermentation in the intestinal contents something may also be done to limit their activity by the administration of organisms which produce lactic acid. The best type for this purpose is perhaps the *Bacillus bulgaricus*. It is more effective when given in the form of buttermilk than in tablets or cultures, because of the far greater number of organisms which it contains. Furthermore, the buttermilk contains considerable amounts of lactic acid which is itself inimical to the growth of the gas bacillus. The lactic acid forming organisms are also of some benefit in the treatment of protein fermentation, because they are also inimical to the growth of putrefactive organisms. In such cases the milk may be modified to contain a low protein and high carbohydrate element and the organisms grown in it. It must be remembered, however, that the lactic acid organisms cannot change the bacterial flora permanently. This can only be done by so changing the diet as to change the character of the culture medium in the intestines.

PROGNOSIS.

The prognosis depends on the severity of the individual case, the thoroughness of the treatment, and whether or not the parents coöperate in the treatment. Recovery is usually prompt in the

mild cases due to fatigue, parenteric infections, improper habits of eating and an excess of proper food, if the cause of trouble is removed. It is fairly rapid in the cases which are due to improper food, if an intolerance for one of the food elements has not been established. In the severe cases in which an intolerance for one or more of the food elements has been established, recovery is a matter of months and often of years. It is almost invariably interrupted by relapses. The most stubborn cases are, in my experience, those of severe starch intolerance; next, those of severe fat intolerance. In time, however, if, in spite of apparent lack of progress and frequent setbacks, treatment is kept up along the proper lines, recovery almost always eventually takes place.

Footnote. Certain parts of this paper have been copied, with the permission of the Journal of the American Medical Association, almost verbatim from a paper by the author on the same subject in the number of that Journal, published July 10, 1920.

EXPERIMENTAL HERPES ZOSTER

The experiments reported by Oscar Teague and Ernest W. Goodpasture, Pittsburgh (*Journal A. M. A.*, Aug. 4, 1923), were carried out with the virus from a herpes lesion of the lip of a pneumonia patient. The virus was inoculated on the scarified cornea of a rabbit, and transferred at two or three day intervals to the cornea of a normal rabbit. The first rabbit inoculated Feb. 7, 1923, died of a herpetic encephalitis, and the virus has continued since that time to cause a 100 per cent mortality among adult rabbits inoculated on the cornea. In these experiments, it appears that the herpes virus first multiplies at the site of inoculation in the skin and passes up the corresponding spinal nerve to its spinal ganglion; the virus then seems to pass centrifugally along the nerve and its branches to the skin, where, owing to the increased susceptibility produced by the application of tar, it multiplies rapidly and gives rise to characteristic herpetic vesicles. Another possibility is that the virus may travel from the site of inoculation to the main nerve trunk and then centrifugally along other branches of the nerve without first reaching and multiplying in the spinal ganglion. The authors feel certain that the secondary vesicles did not arise through accidental contamination of the surface of the skin with the virus, or through transfer of the virus by way of lymphatic vessels of the skin and subcutaneous tissue, or by way of the blood stream. The distribution of the vesicles forces the conclusion that the virus passes along the course of the nerves to the skin, as in herpes zoster in man. It is suggested that the method of applying coal-tar to the skin of experimental animals as a preliminary procedure to the inoculation may render it possible to transfer to the lower animals some of the skin diseases of man of unknown etiology.

PRACTICAL NUTRITION IN CHILDREN.*

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Fifteen years ago Emerson started his first nutrition class at the Boston Dispensary. His class consisted of twelve malnourished children who had been treated long and unsuccessfully at the dispensary for such conditions as "debility." This marks the beginning of nutrition work. For several years the work was done on a very small scale by a few hospitals and medical schools. It is hardly more than five years since nutrition work became popularized. In that time it has spread from coast to coast. Schools, welfare societies and governmental agencies are maintaining nutrition classes and clinics. There is hardly a city or town that does not pay some attention to the undernourished children.

While this rapid spread of the movement is partly due to the war, yet a great deal is due to the enthusiasm of the leaders. These enthusiasts include a large number of nurses, teachers, dietitians, and social service workers, and a small number of physicians, many of whom are not engaged in private practice. The great majority of practising physicians have taken no active interest in the work. Many have failed to appreciate the importance of the work. Others have regarded the movement entirely as a fad, while a few have been critical, suspicious or even antagonistic to it. Lack of support from the physicians, however, has failed to dampen the enthusiasm of the nutrition workers. They have used nurses, dietitians and volunteers to carry on the work. Many a nutrition class has been conducted with a school nurse in charge of the medical part of the work.

While it is true that a great deal of nutrition work has been more enthusiastic than scientific, that is probably always true of a movement in its beginning. It is nevertheless true that a great deal more good than harm has been accomplished. The weighing and measuring of thousands of school children has revealed the startling fact that from 25 per cent to 35 per cent of our children are malnourished. According to the estimate of

*Read before the Dane County Medical Society, April 10, 1923.

Holt there are from eight to ten million malnourished children in the United States. A few years ago the thin undernourished child was regarded as a well child and when not acutely ill was almost entirely ignored. Now we know that he is not well but has a chronic illness that needs treatment.

DEFINITION.

The term malnutrition is loosely used to denote any marked metabolic disturbance preventing the normal gain in weight. Practically we consider a child malnourished whose weight is markedly below the weight of the average normal child of the same height. Emerson of Boston has shown that children over 7 per cent below the average invariably show signs of malnutrition, so that has been adopted as the dividing line in most nutrition classes although some consider 10 per cent as more practical. Proper relation between weight and height is considered of more importance than between weight and age.

ETIOLOGY.

According to Emerson the causes of malnutrition can be placed under five headings which in order of their importance are:

1. Physical handicaps.
2. Lack of home control.
3. Overfatigue.
4. Improper diet and faulty food habits.
5. Faulty health habits or poor hygiene.

In taking up these causes I will lay particular emphasis on those factors which seem to be the least appreciated and those which I have met with the most often and therefore believe are the most important.

1. *Physical Handicaps.*

(a) We may have so-called constitutional weakness, little natural immunity, bad heredity and prematurity. Far too often in the past these have been accepted as the sole cause of malnutrition. The thin child has been dismissed with the words, "Oh, he is naturally that way," or "His mother is thin and he looks like his mother." Practical experience in nutrition classes has shown these factors to be far less important than formerly supposed.

(b) Acute infections. A single acute infection rarely produces malnutrition because convalescence in the normal child is usually very

rapid, but a series of acute infections is a common cause of malnutrition.

(c) Chronic infections, such as those of T. B., syphilis, and rheumatism, chronic respiratory diseases like naso-pharyngitis, bronchitis, and tonsillitis are common causes.

(d) Chronic digestive disturbances.

(e) Chronic metabolic disturbances, rickets, scurvy, diabetes. A very careful examination of malnourished school children has frequently revealed an average of 6 to 8 physical defects per child. As far as possible every physical handicap should be removed so that the child can be free to gain.

2. *Improper Feeding.*

This I believe to be the most important cause of malnutrition because it is the most common and because it is the most amenable to treatment.

(a) Insufficient food. The total caloric value of the food may be too low. The old idea was that poverty, too little food and malnutrition went hand in hand. But after weighing and measuring thousands of school children it was found that there was as much if not more malnutrition among the children of the rich as among those of the poor. Careful calculation of the caloric intake of these children showed that it was insufficient in many cases but that this was due to wrong choice of foods rather than not enough food. Insufficient food is probably not one of the commonest causes of malnutrition. The average child has a big appetite and eats by preference foods of high caloric value like sugar, cream and butter and will usually get enough calories but:

A deficiency of some one essential food element is probably far more common and important. This deficiency is probably most often in the protein, the mineral salt or the vitamine content of the food. It has long been known that certain quantities of protein, fat and carbohydrate were necessary. Recently a great deal of work has been done to show that certain definite quantities of each of the vitamins is absolutely necessary to proper nutrition. We also know that the body requires certain minerals. Some of these like Na.K., Ca., and Mg. are base-formers, i. e., are oxidized to bases in the body, and so tend to keep up the alkali reserve. Others like Cl, S., and P., are acid-formers. A proper relation between them is necessary. Depending upon the mineral content of the foods they are either acid or base-formers.

Vegetables and fruits are the strongest base-formers. Meats, eggs and some cereals are acid formers. It is believed by some that a deficiency of vegetables and fruits in the diet may produce a relative acidosis and that this is a factor in the production of malnutrition.

Experimentation has shown that a certain amount of each of these minerals is necessary to normal growth and nutrition. I cannot discuss each mineral separately in this paper but I wish to quote two short paragraphs from Sherman's "Chemistry of Food and Nutrition." After studying the phosphorus content of twenty American dietaries of groups believed to be fairly representative he concluded: "These results indicate that present food habits are more likely to lead to a deficiency of P. compounds—and it is not improbable that many cases of malnutrition are really due to an inadequate supply of P." In a similar study of iron in these dietaries he says: "Apparently, therefore, the typical American dietary does not contain any such surplus of iron as would justify the usual practice of leaving the supply of this element to chance. Available data rather indicates that food should be selected with some reference to the kinds and amounts of iron compounds which they contain."

(b) Improper food. Here we may mention first, foods which are definitely harmful to the growing child as stimulants, tea, coffee, condiments, and spices; second, foods which are indigestible, like green and overripe fruits, fancy salads and desserts; third, foods which are in themselves useful but which are often eaten to the exclusion of necessary foods, such as sweets, milk and butter.

(c) Improper habits of eating, such as irregular meals, too frequent meals, and too rapid eating, put an unbearable strain on the digestive apparatus. A careful diet history will reveal one or more of the above factors in almost every case of malnutrition.

3. *Overfatigue.*

This is one of the causes of malnutrition most often overlooked. Excessive energy expended by overactive children is of equal importance with insufficient intake of food and more commonly a cause of malnutrition. Very frequently the children in the family get no more rest than the parents and in their play expend far more energy. Emerson has strongly emphasized that we must regulate the activity of such children in order to

get satisfactory results in treating their malnutrition.

4. *Lack of Home Control.*

This overlaps the other causes, as spoiling and humoring the child leads to irregular meals, eating between meals, rapid eating, to the developing of a finicky appetite and an appetite for harmful and indigestible foods. Too often the nervous, indulgent, worrying mother coaxes and tries to force the child to eat. This gives the child the same mental attitude towards food that he has towards medicine. A little withholding of food on the other hand will often result in the child's self-preservation instinct asserting itself and he will often come and beg for food. Dr. Hoffman believes that the poor appetite of the malnourished child is largely a matter of psychology. It surely was true in 80 per cent of the Jewish children in the nutrition classes the author conducted at Rush Medical College from 1920 to 1922 under the direction of Dr. C. G. Grulee.

5. *Poor Hygiene including lack of fresh air and sunshine* is undoubtedly a factor in the production of malnutrition in a considerable number of the children of the lower and upper classes. The children of the poor are deprived of these things through fear, ignorance and poverty of the parents while the only child of the rich is often deprived of fresh air through the fear of the over-fond parents that he may catch a cold.

SYMPTOMS.

These are indefinite and not pathognomonic. Among them are:

1. Nervousness and irritability.
2. Poor and finicky appetite.
3. Constipation.
4. Activity and restlessness, subject to
5. Easily induced fatigue.
6. Mental retardation. These children are inattentive, restless, cannot concentrate and are easily tired of their studies, therefore school work is difficult. Studies on school children have shown a definite relation between malnutrition and slow progress in school.

SIGNS.

1. Underweight and to a less extent under-height.
2. Flabby musculature giving
 - (a) Fatigue posture.

- (b) Curvatures of the spine.
- (c) Prominent abdomen.
- (d) Flat feet.

3. Circulatory disturbances as pallor, cold extremities, anemia, hemic murmur.

DIAGNOSIS.

The diagnosis of the condition is easy, and is based on the above symptoms and signs, and on the use of standard tables of averages. These so-called weight charts are indispensable to any one doing nutrition work. Unfortunately, however, there is a tendency for some nutrition workers to center all their attention on the weight chart. The individual study of each child thus becomes impossible. The diagnosis must also include the recognition of the cause of the condition. This means a careful physical examination to discover any physical handicap. It also means a careful examination into the minutest details of the child's daily life. On this one point I believe more than on anything else depends the success of the nutrition worker. These children are borderline cases. Intake just balances output and they don't gain. Recognition and correction of the smallest error often will start a child gaining.

PROGNOSIS.

Prognosis under treatment is very good. In the properly managed nutrition class the results are often remarkable. The average gain is rarely less than 2 times and often 4 or 5 times the average gain of the normal child. As an illustration: A normal 12 year old child gains nearly one pound a month. A malnourished child of that age in a well managed nutrition class will make a monthly gain of 2 to 5 pounds.

TREATMENT.

1. We must correct physical handicaps such as bad teeth, tonsils, anemia, T. B., and syphilis by appropriate measures.

2. We must regulate the child's activity. The sleep at night should be from ten to twelve hours or about one hour longer than that of the normal child. Short rest periods in the daytime are of great value to the overactive child. If the child will not sleep, simple relaxation is sufficient. A very short rest period before each meal is also of great value as an overactive and overtired child

usually does not eat well. As a last resort we can restrict the play and work of the child. This is not often necessary.

3. We must correct bad hygiene as far as possible. Cleanliness, and abundant fresh air and sunshine should be insisted upon.

4. Correct bad discipline. We must explain to the parents that they are to control the details of the child's life. They must be reassured that the child's poor appetite is not serious but is partly the result of their persistently coaxing him to eat.

5. Regulate feeding. These children are fed very nearly the same as normal children.

Frequency.

Three meals daily are probably the best for the average child as it favors good appetite and digestion. Emerson, however, claims that malnourished children will assimilate more food from five small than from three big meals. Following his example these children in many schools are given light mid-forenoon and mid-afternoon lunches consisting largely of milk. This is all right provided the child's appetite and digestion are not impaired.

Regularity is important as it prevents poor appetite and underfeeding for one meal and ravenous appetite with overfeeding and indigestion at another meal.

Total required calories.

Approximately 45 calories per pound per day is required for the infant. This slowly falls to 35 calories by five years at which it remains nearly constant till after puberty when it rapidly falls to the adult requirement of 25 calories or lower. The child at puberty because of rapid growth and great activity requires from 3000 to 4000 calories or actually more than the adult.

Essentials of the daily diet.

1. Milk. From one pint to one quart. More than one quart is rarely necessary and will frequently lead to insufficient intake of other food. It is a common thing to find the under nourished child from two to four years depending almost entirely on milk and refusing other foods, especially cereals and vegetables.

2. Cereals, cooked, such as oatmeal, rice and farina. If very little sugar is added to the cereal the child can usually eat all he wants for one meal daily. Prepared cereals like cornflakes and puffed rice are too bulky to be given to malnourished chil-

dren. Bread at least two days old and toast are given in liberal amounts.

3. Vegetables. One meal a day should consist largely of vegetables. In order to get an adequate supply of food, vitamins, minerals and residue for keeping the bowels open, it is wise to choose some vegetable from each of the following groups:

1st. Tubers: potatoes, carrots, beets and turnips.

2nd. Green, leafy vegetables: spinach, celery, lettuce, asparagus tips.

4. Fruits should be included in the diet of every child. Ordinarily cooked fruits are safer for smaller children although fruit juices are well borne. One sauce dish full daily of such fruits as apple, prunes, figs and peaches will probably fill the requirements of the average child.

5. Meat, fish and eggs. A small amount of these should be included in the diet as the growing child needs relatively more protein than does the adult. Holt believes that as animal protein contains a greater number of amino acids they should supply most of the protein (which is one argument against a vegetarian diet for children). Deficient protein is far more often a factor in malnutrition than deficient carbohydrate or fat.

Both in the prevention and cure of malnutrition a varied diet is of the greatest importance. The child that "eats everything" as the mother often expresses it is far less likely to develop malnutrition than the child who because of poverty, or because of a finicky appetite or because of the queer ideas of the mother is forced to get along on a limited and unbalanced diet.

COMMENT.

In the past the problem of the malnourished child has been attacked almost entirely by the organizing of nutrition classes in schools and by welfare organizations. The result has been so satisfactory that many nutrition workers have come to believe that this is the final solution of the problem. The welfare organizations have done some very commendable work but charity cannot solve such a large problem permanently. Holt advocates the introduction of a health program into our public schools that shall teach health habits to the children in a practical and attractive way. Physiology now taught is too abstract and imprac-

tical to be very helpful. It may, however, serve as the nucleus around which a better health course can be built. The school physician should not only make routine examination of the children but he should have general supervision of their health training. He should see that the physiology teacher and the physical instructor are capable, that they are neither cranks nor faddists. He should conduct nutrition classes for those children who are markedly underweight.

But all this is largely educational work and does not seriously concern the practising physician. And yet the practising physician is the only one who can successfully solve the problem of the malnourished child. These children are malnourished before they reach school age and largely because the family doctor was too busy with those acutely ill. If he applied the simple facts about nutrition to every child that needs it that child would almost certainly reach school age in a well nourished condition. The school health program then would only be concerned with keeping him so.

THE HEALTH HAZARD FROM AUTOMOBILE EXHAUST GAS IN CITY STREETS, GARAGES AND REPAIR SHOPS.

The air in city streets where there is considerable traffic, according to Yandell Henderson and Howard W. Haggard, New Haven, Conn. (*Journal A. M. A.*, Aug. 4, 1923), is found to be contaminated with automobile exhaust gas to a degree in excess of proper and well established health standards. The amount of visible smoke is not an index of carbon monoxide content. The conditions in garages and repair shops are, as a rule, extremely unhealthful. Many mechanics and drivers suffer almost daily partial asphyxiation with headache and other sequelae. Fatal asphyxiations in private garages are fairly common occurrences in the winter. The conditions in the streets of American cities can be largely ameliorated by the use of the vertical exhaust on omnibuses, trucks, taxicabs and private cars with tops. Cars without tops are now negligible in numbers in cities. The horizontal exhaust now generally used mixes the gas throughout the respiratory zone of street air in a layer only about 10 feet deep. It thus dissipates the heat of the gas and prevents it from rising out of the street. The vertical exhaust, on the contrary, starts the hot gas upward with comparatively little admixture of air, and its heat carries it only out of the street. With the horizontal exhaust the entire air of the garage is rapidly mixed with exhaust gas. Adequate ventilation of garages is at present virtually not feasible. With the vertical exhaust, the heat of the gas holds it against the ceiling with comparatively little admixture of air, and the gas therefore readily finds its way out through any ventilator in the roof.

X-RAY DIAGNOSIS OF BONE LESIONS.*

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The modern surgeon is constantly faced with the question of the diagnosis of obscure bone lesions, and in formulating the diagnosis and treatment of bone lesions he will resort much more often to the X-ray than to direct cutting down. For this reason the X-ray pathology and diagnosis of bone lesions becomes of great practical importance.

Seen from the point of view of the X-ray, bone is a highly specialized structure, possessing a limited reaction to trauma, toxins, and infections. There are certain things that it can do, and certain things that it cannot do; and it will simplify very much the study of X-ray pathology if we define these changes and their relation to clinical phenomena. They may be formulated as follows:

1. *Atrophic changes*, where the bone shadow diminishes, the contrast between the cortex and the medulla becomes extremely sharp, and in the severer cases the medulla casts little more shadow than the soft parts. This accompanies injury, disuse, and is seen in disease—particularly tuberculosis.

2. *Destructive changes*, which are either general or local. The appearances of these are exactly what is indicated by the name—a destruction or disappearance of bone tissue. This may involve a large area, perhaps the end of the bone, or it may appear in small, approximately circular patches, or as notched-out areas. Of the destructive affections, tuberculosis is the most purely destructive, although destruction occurs also in osteomyelitis, and often in syphilis, and at times a wearing away which amounts to destruction in arthritis deformans.

3. *Formative changes*. In this class a new formation of bone occurs, leading to an increase in outline or in density. Arthritis is the most purely formative of common bone affections; syphilis is more formative than destructive; osteomyelitis is both formative and destructive; and new growths are also formative and destructive.

Although with a diseased process there is a tendency toward manifesting one or the other of these

types predominantly, two facts must be remembered: first, that a lesion may possess the characteristics of two groups; and second, that any one of the lesions may show changes of a group which is not characteristic. For example: tuberculosis, although generally purely destructive, may be in rare instances almost purely formative, and formative changes may be excited in practically any of the common lesions; as, formative changes characteristic of osteomyelitis, with increase in density and circumference of the bone, may be caused by syphilis, tuberculosis, or osteomyelitis. Consequently, if we use the term osteomyelitis as characteristic of pyogenic infection we are likely to be led astray, and this is a most important matter in the diagnosis.

In the study of the X-ray appearances of tuberculosis, osteomyelitis, and syphilis, we are likely in the majority of cases to find the character of the lesion apparent from the X-ray; but in a minority of cases the diagnosis cannot be made from the X-ray alone. The latter group of cases consists of two divisions.

1. Cases which are absolutely anomalous in appearance, as in formative tuberculosis; and syphilis when it is mainly destructive and but slightly formative.

2. In certain focal lesions resembling what has been described as Brodie's abscess, where the diagnosis in many cases without a microscopical examination is absolutely impossible. A small focal lesion characterized by a circular loss of tissue, occurring near the epiphysis, may or may not extend through it. It may or may not be surrounded by an area of increased density. It may be perfectly clear as if punched out by a trephine, or its interior may be hazy as if containing some bone elements.

Microscopical examination of a series of these cases, reaching over a period of several years, made by Professor S. B. Wolbach of the Harvard Medical School and by the writer, has shown that these cases may be either osteomyelitis or tuberculosis, and that in a fair proportion of cases clinical diagnosis is impossible or unreliable before operation.

The presence or absence of a Pirquet skin test, the existence or non-existence of leukocytosis, the history and general appearance, all aid in reaching the conclusion. However, as a result of these observations it has been shown very clearly in the series of cases just mentioned that in a certain

*Read before the Annual Assembly of the Tri-State District Medical Association at Peoria, Ill., Oct. 30, 31, Nov. 1 and 2, 1922.

number of them the writer at least was unable to make a diagnosis which stood the test of microscopical examination.

In the same way, the presence or absence of a blood Wassermann reaction has been of great assistance in detecting or excluding syphilis, and the experience of Professor Wolbach and the writer was very definitely to the effect that in bone lesions in children the Wassermann reaction proved a reliable guide in those cases which were checked up by a histological examination.

It seems best, therefore, to recognize that although in general a careful study of the X-ray combined with clinical findings will lead to sound conclusions, there is a very considerable minority of cases where the wise and experienced surgeon will express himself very guardedly as to the nature of the process. In these cases the writer has had recourse to the method of having a microscopical diagnosis made at the time of operation, and being guided in his treatment by the findings of the examination.

Nowhere is a closer correlation between X-ray appearances and microscopical findings more necessary and important than in the study of bone lesions.

SOME TOXIC EFFECTS OF DIGITALIS.

In thirteen cases in which untoward results followed the administration of digitalis, the records were analyzed by William D. Reid, Boston (*Journal A. M. A.*, Aug. 11, 1923), to obtain information regarding the appearance of these toxic effects in relation to the total amount of the drug estimated to be then effective in the patients, and to the amount of digitalis indicated according to the Eggleston method of calculating this. The toxic effects here described are: coupled rhythm, partial heart block with an acceleration of the sinus rate, the onset of auricular fibrillation, and paroxysmal tachycardia originating in the ventricle. Partial heart block with an increase of the sinus rate, and of ventricular ectopic tachycardia, closely simulates the clinical picture of flutter of the auricles. Continuing the administration of digitalis, especially in cases of the latter arrhythmia, is dangerous. The tincture of digitalis administered to the patient described in this report was effective at a total dosage approximating that indicated by calculations based on the Eggleston method. When using a large dosage of digitalis, the physician should know at all times the relation of the amount of the drug already administered to that which would be expected to be the approximate amount for therapeutic effect. If signs or symptoms appear that may be toxic effects of the drug, and if calculation shows that the amount already given is near or above the Eggleston dosage, additional digitalis should be administered cautiously, if at all.

"AND TO TEACH THEM THIS ART."

BY VERNON A. CHAPMAN, M.D., F.A.C.S.,

ASSISTANT PROFESSOR OF OPHTHALMOLOGY, MARQUETTE UNIVERSITY MEDICAL SCHOOL.

MILWAUKEE.

"I swear by Apollo, the physician, and Aesculapius, and Health, and All-Heal, and all the Gods and Goddesses, that, according to my ability and judgment, I will keep this Oath and this stipulation—to reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this Art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine."—
(From The Oath of Hippocrates.)

A few weeks ago I sat in a faculty meeting of a university medical school. At this meeting the matter of medical education was discussed freely; not only with reference to the problems of this particular school, but also the problem of medical education in general. The discussion was broadened to include the problem of supplying the villages and rural districts with physicians in order that the residents of the smaller outlying districts might receive prompt and efficient medical services as they were wont to do in the days gone by.

The matter of the college curriculum was discussed: The laboratory work, the dispensary work, the didactic; how many hours could be allotted to this and to that and to the other, and to each and every item of the crowded college course; and how to get them all sufficiently covered for the students' understanding and to make for their efficiency. Is it necessary to extend the medical college course yet another year? What shall the student's studies and work be limited to in the first year? What in the second? The third? The fourth? And what portion of the whole can be advantageously extended over the full course? What portion of the actual application of medical science and understanding can the student be expected to grasp in the earlier years of his medical college course? Should some of the college work now particularly reserved for the third and fourth

years be spread over the whole college course from beginning to end? Can the student comprehend the meaning of any such work in his earlier college years? What can be done to aid the student to acquire a true conception of the principles and practice of medicine? How can we *early* in his college course surround him with the true medical atmosphere which will insure his conception and reverent appreciation of what the practice of medicine and surgery really should be? How can the young doctor be made to understand that not all of the best that he can get from his medical education consists in establishing himself in a great city as a specialist immediately he receives his unqualified degree in medicine? What of the old-time, earnest, faithful, cheery, sympathetic, resourceful, efficient and altogether truly comforting family Doctor of city and country? Must he indeed be known only through story books and the records of the past?

The medical college of today has set for itself this impossible whole of a task which it could easily accomplish did it but humble itself a trifle and return to the earliest principle of instruction in the art of medicine and surgery. There was a time when the student was content to "sit at the feet" of the master, and the master acquired new enthusiasm and a keen delight in raising this student from a seat at his feet to a seat beside him or to a pinnacle above. I refer to the time when every "medical student" was a student of medicine and "read medicine" under a Preceptor before his medical college course, during his medical college course, and ever after his college course as long as that Preceptor lived. 'Twas with his Preceptor that he acquired the "medical atmosphere" that can be obtained in no other way. 'Twas with his Preceptor that he learned the true sympathetic touch and mental attitude most needful to him and to the patient in the sick room. 'Twas from his Preceptor that he learned the principles and practice of medicine and acquired an understanding which enabled him to grasp immediately the tenets of the medical college course as they were later laid before him.

There was formed between the Preceptor and the student a bond of friendship and understanding that was of inestimable value to both—the student spoke of "my Preceptor" with reverence, and the Preceptor referred to his "Student" with pride.

The student was resolved that he would do

nothing in college or out of it that would bring discredit upon his Preceptor. On the contrary, he would get the very most that he could of his college instruction and carry it home to his Preceptor. The Preceptor was resolved that *his* student should be at the head of his class in college. And thus was formed a mutual school of instruction in medicine *outside* of the college which was the greatest asset of the college in its educational work.

During the college vacations there was established all over the land wherever the student returned to his Preceptor a dual college of instruction—undergraduate and postgraduate—which was of greater value to the world than was ever credited.

It was my privilege to have not only one Preceptor in medicine, but two of them. I wish right now to pay tribute to these men. Never as long as I shall live will I cease to be grateful for the interest and assistance which they granted me freely. Never has there been a time in my twenty-five years of active practice, on sea and on land, in the storm tossed ocean liner, in the snow bound log cabin of the wilderness, in the homes of the mighty in the city, and in the operating room of the city hospital, as a general practitioner and as a specialist, that I have not found the precepts received directly from them of the greatest value.

Under the first, Dr. F. O. Hart, (now years deceased), the writer began the study of medicine before sixteen years of age and was with him nearly two years. The writer was under the tutelage and guidance of the second Preceptor, Dr. W. M. Denman, from the age of seventeen years through his premedical college and medical college days, and for sometime after finishing the medical college course. Even unto this day, twenty-five years after the student's graduation from medical college and with miles, years, between the Preceptor and his student, this early association continues. Only within the year when visiting his Preceptor in Ohio, the writer explained to him the new Barraquer method of cataract extraction. The Preceptor was keenly interested; urged that the writer procure the necessary apparatus and insisted upon being permitted to pay half of the cost. Certainly the first act of the writer, when arriving at his office after the successful use of this apparatus and method at the Milwaukee County Hospital, was to write his Preceptor all about it.

I believe that the present *medical instruction* course should be lengthened. I do not believe that it is possible to crowd into the present *medical college* courses all that a medical education should comprehend when the degree of M. D. is received. I believe that the *medical instruction* course should be lengthened outside of the college, not in it. One of the principal requirements for admission to a medical college course should be that the student be provided with a Preceptor in medicine in addition to the members of the faculty. If he has "read medicine" with this Preceptor for a time before entering college, so much the better. He should be with his Preceptor in his work during the college vacations. The college should expect the Preceptor to accept a certain amount of responsibility concerning his student during the entire course of medical instruction. And when the degree of M. D. is granted to the student, the Preceptor's name should be upon the certificate and should mean more to that student and to the world than the name of the President of the college.

The city will always have its specialists. They are very necessary and are not to be decried. Hippocrates himself acknowledged the specialist; for in the Oath he says: "With Purity and with Holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone, but *will leave this to be done by men who are practitioners of this work.*"

The time is nearly here when the practice of the specialties in medicine will be permitted only to those who have a degree granted to them in that particular specialty. One of the requirements leading to that degree will be that the candidate shall have had at least two or three years of active general practice. This will automatically provide for the medical needs of the outlying communities. The young physician will go from his hospital course into general practice; and the farther he goes from the medical centers to do this general practice the better will it be for him in the development of responsibility, resource and confidence. These first years of general practice will determine his future career. He will either leave general practice well prepared to begin the study of his specialty, (preferably under the direction of a Preceptor in that specialty), or he will continue in general practice developing his resources and ability continuously and fill his honored place as

one of the pillars that firmly support the temple of the Faith of Hippocrates.

PUBLIC HEALTH NEWS.

Mrs. Margaret Walters, formerly county nurse of Taylor County, has been employed as county nurse of Green Lake County, at a compensation of \$135 per month and expenses. This is Green Lake County's first use of the public health nurse system.

* * * * *

The discharge of household waste upon the public highway or on the property of another comes under the general law of nuisances, and may be abated upon the order of the local health officer. Failure to comply is ground for arrest and fine.

* * * * *

Explaining the new law prohibiting the employment of persons having a communicable disease or a venereal disease in a communicable form in places where food is handled or served, the State Board of Health advised that it is not the intention under this law to require employes to furnish a health certificate of freedom from such disease. If the employer suspects that an employee is infected, he should require an examination to determine the facts. A positive finding would be valid ground for prohibiting his further employment in such occupation.

* * * * *

The State Board of Health recently issued a letter to the physicians of the State calling attention to the possibility of typhoid fever being spread by tourists in the State and suggested that liberal use be made of the free distribution of anti-typhoid-paratyphoid vaccine by the State Laboratory of Hygiene.

* * * * *

During the world war when the United States had approximately 4,000,000 men in service, only 213 deaths were attributed to typhoid fever. Had the death rate of the Spanish-American war prevailed, 51,133 deaths would have occurred from typhoid, and had the Civil war rate prevailed, 68,164 lives would have been lost because of this disease.

* * * * *

The preventive inoculation against typhoid was introduced into the American army in 1909 by Major F. F. Russell. The reduction of the death rate in the army during the world war indicates

the effectiveness of the vaccine combined with good sanitation.

* * * * *

Dr. C. W. Muehlberger, a research assistant under Prof. Victor Lenher at the university, has been appointed acting state toxicologist under the new law creating that position. Toxicological analyses are required to be made for any district attorney.

* * * * *

Waukesha county health workers opened a county health center in the city of Waukesha in July, under the auspices of the state board of health. This is the sixteenth county now operating health centers.

* * * * *

Miss Josephine Semsch, R.N., has resigned as state social worker in connection with the La Crosse clinic, as a result of ill health.

* * * * *

There are no institutions where the state can place cancer patients. Advice is given that such patients with no financial means can often be placed in the county home at county or township expense.

* * * * *

All county highway commissioners were requested by the state board of health to file lists of highway construction camps so that the department may take up with them the matter of sanitation, pure water supply, etc. Reports of bad sanitary conditions and at least one outbreak of typhoid fever at road camps warranted a special campaign against conditions that breed disease.

* * * * *

The bureau of social hygiene of the State Board of Health reported that its educational work through addresses, films and exhibits during the first half of 1923 reached nearly 100,000 persons in Wisconsin. The field workers are Miss Martha Riley, Miss Aimee Zillmer, Dr. H. B. Sears, and Frank R. Sherwood.

NOTES ON TECHNIQUE.

Wm. J. McKillip, M. D., Chief of the Venereal Disease Clinic in the Milwaukee Health Department, contributes the following memoranda on clinical technique.

One of these deals with the recovery of spirochetes from chancres. As is well known spirochetes are quickly driven from the surface of chancres to which has been applied calomel or similar dusting powder, so that a scraping of the chancre will not find the organisms. In his technique which was suggested by gland puncture, Dr. McKillip injects two or three drops of

sterile water under the base of the chancre leaving the needle in situ for a brief while, then making slight aspiration. The serum recovered in this way is usually loaded with spirochetes which can then be readily demonstrated either by the Darkfield or by tinctorial methods.

The other point of technique concerns itself with vein puncture. Most operators use the needle so that the lumen of the cutting surface faces up. Dr. McKillip reverses the position of the needle so that the lumen faces downward. In this way perforation of both walls of the vein, with the annoying infiltration of surrounding tissues, is much less likely to happen. This method of using the needle is also, naturally, applicable in making intra-dermal injections as for example in the Schick test.

The above technique has been used in the clinical service of the Milwaukee Health Department for a number of years now with decided success and has also been adopted by a great many practitioners to whom it has been demonstrated.

PROPAGANDA FOR REFORM.

Toxicity of Carbon Tetrachlorid—Experiments on dogs demonstrated that large doses of carbon tetrachlorid produced degenerative changes in the liver and kidney of these animals. In view of these findings and the experience of Lambert, it would appear advisable that the dose of carbon tetrachlorid be reduced in routine treatments. (Jour. A. M. A., July 7, 1923, p. 47.)

The Dreyer Tuberculosis Vaccine—Newspapers have carried extended notices of the Dreyer so-called "defatted" tuberculosis vaccine. The experiments of Professor Dreyer of the Department of Pathology of Oxford University depend on the production of an antigen preparation from tubercle bacilli which are previously deprived of their waxy envelop by treatment with a formaldehyde solution. Animal experiments and some clinical trials have been reported which give ground for the hope that the new antigen may prove of value. Professor Dreyer's work does not offer sufficient evidence to warrant the conclusion as yet that any marked improvement has been made in the treatment of tuberculosis. (Jour. A. M. A., July 14, 1923, p. 138.)

Another Electronic Diagnosis and Treatment—A report on the case of Mr. D., who was treated for carcinoma by C. E. Phelps, M. D., an Abrams disciple of Hartley, Iowa, is of interest because it represents, undoubtedly, what is duplicated in hundreds, if not thousands, of cases, in various parts of the country. The clinical report is by Dr. E. E. Munger of Spencer, Iowa, and the pathological report was made by Dr. E. R. LeCount of Chicago. Briefly, it is the story of a man in his seventies suffering from inoperable carcinoma of the stomach with implanted metastasis on various other abdominal organs. Dr. Munger diagnosed the condition when the patient first came to him. The diagnosis was verified at the Mayo Clinic. Then the man began taking the "Abrams Treatment." He was led to believe that he was being rapidly cured and was finally told that "everything had cleared up except a trace of colitis." A month later he died. (Jour. A. M. A.)

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EDITORIALS

THE ANNUAL MEETING.

THE State Medical Society, its component parts and branches, is active throughout the year. But its period of most intensive activity is during the annual meeting, this year the 77th, at Milwaukee on October 3rd, 4th, and 5th.

At this time dividends are declared and paid, if you attend; benefits to which you are entitled may be derived, if you are in a receptive mood.

The annual meeting is primarily a post graduate course. Justice to your patients and to yourself demands that you avail yourself of this course. If carried out individually at the clinics of the various invited speakers a similar course could only be secured, if at all, at a very considerable expense.

The scientific program is published in this number of the Journal and we would bespeak its earnest attention by every member, which will automatically result in a large attendance and a successful meeting.

A second feature is the get-to-gether element, the sociability, the rubbing of elbows, and interchange of ideas with those in the same line of activity which is, of necessity, beneficial and is an added reason for attendance.

A third activity of the annual meeting, relates to the determining of the policies and the nature of the activities to be pursued, and the selection of the officers to carry them out in the interim between the annual meetings. Attention given to

the choosing, and the enforcing of attendance, of the delegates at the business sessions of the meeting will be very effective in preventing subsequent dissatisfaction with the activities of the Society.

The officers aim to carry out the wishes of the majority, but because of indifference on the part of membership, the proper method of procedure in managing certain matters is often doubtful.

We would ask for support for the State Medical Society at its annual meeting to be held in Milwaukee October 3rd, 4th and 5th, by attendance at the scientific session; by cooperation in the social activities; by interest in, and constructive criticism of, the policies pursued by your society.

F. G. C.

"CHASING THE CURE."

THAT the medical profession and the lay public of Wisconsin are more intelligent than those of neighboring states in the matter of "chasing the cure of tuberculosis in the Southwest" is indicated by a recent study of the migratory consumptive* in San Antonio, Phoenix, Denver, Colorado Springs, etc., published by the United States Public Health Service. Michigan, Illinois and Minnesota are listed among the twelve states which contribute the greatest numbers of "lungers" to these cities "None of which has anything like adequate provision—medical, relief or institutional—for caring for the tuberculous persons, whether resident or nonresident," according to the author.

Wisconsin has—in its chain of state, county, private and philanthropic sanatoria—remarkably good facilities for the humane and efficient medical treatment of its own victims of tuberculosis. These institutions are as successful as any and provide even to the indigent consumptive of Wisconsin opportunities denied many of the wealthy “health seekers” of the southwest.

It is still a matter of regret that even here in Wisconsin there is not a larger proportion of *early cases applying for early treatment*.

While most of the fault of this may lie with the patients themselves and their families, there is no escaping the fact that our greatest physicians are those who dominate their patients instead of being dominated by them. Such physicians secure early treatment and later have credited to their professional record a much higher proportion of tuberculosis cure.

H. E. D.

*“A Report on the Indigent Migratory Consumptive in Certain Cities of the Southwest,” by Jessamine S. Whitney, Statistician, National Tuberculosis Association. Reprint No. 824, from the PUBLIC HEALTH REPORTS, Mar. 23, 1923.

YOUR SOCIETY.

DURING the past three months county medical societies in this state, for some time past quiescent, met to further plans for a progressive future.

We appreciate the difficulties under which the smaller county societies work. Sometimes they cannot afford to bring men to address them that they would like. Membership lists are not large. Some members must often travel ten to twenty miles to attend a meeting. Sometimes the very nature of practice will not permit of a member leaving for a meeting to be gone several hours. This we realize.

But the county medical society remains as the best means by which members of a common fraternity may come to know each other. It is the best means by which all may attain knowledge of that which is new—that which others, often among the membership, have discovered. It is the only means by which physicians may make known the needs for a better public health.

To fulfill its potential promise the county society needs the presence of all of its members at all of its meetings. There is no profession which demands more of its members than that of medi-

cine. Knowledge is the power that enables us to be of a still greater usefulness. The meeting missed does not only mean loss of an opportunity for the individual absent. Extended, it may mean the loss of opportunities for the many as result of a gradual falling off in attendance until the meetings are few and far between.

Your county society has the possibilities. Help develop them by attending the meetings and lending your aid to solve the common problems.

J. G. C.

AS OTHERS SEE US

“Doctors are now treating and curing diseases and disorders of the brain. This is the overshadowing news of the world of medicine. What this means to the ten-billion-a-year crime problem is beyond immediate grasp. Its importance to all mankind is incalculable.

“It is almost childish now to repeat that something is wrong with the mind of every criminal. Men do not break laws made for the protection of men, and in the face of almost certain detection and fearful punishment, unless they are abnormal in some respect. But if abnormalities amounting to some forms of actual insanity can now be definitely cured, and if the next ten years are likely to bring forth advances undreamed of today, it begins to look as if the criminal problem might have to be taken out of the hands of the police and the lawyers and put into the hands of the doctors. And the medical men will do a much better job.”

—Collier's.

AMMUNITION.

Let us remember that every discovery of any importance within the last half or three-quarters of a century—anaesthesia, antiseptics and sepsis, diphtheria anti-toxin, the X-ray, Finsen light, radium, the role of the mosquito in the transmission of malaria and yellow fever (a discovery which alone is worth billions of dollars to the human race), the isolation of the active principles or the hormones from the internal glands, the isolation of the vitamins, the introduction of cystoscopy, the discovery of the tubercle bacillus, the gonococcus, the spirochaeta pallida, the Wassermann reaction, Ehrlich's salvarsan, insulin, in short every discovery of importance, either in sanitation, prophylaxis, medical and surgical treatment or in diagnosis of disease—has come from the hands of the regular medical profession or those directly connected with it.

—Critic and Guide.

PRELIMINARY PROGRAM FOR ANNUAL MEETING ANNOUNCED

Unusual Program Features State Meeting October, Third, Fourth, Fifth.

After weeks of "He had promised to come" and "How will this be?", the combined committee on program and arrangements offers to view what its chairman terms "only a preliminary program."

If you feel that you cannot possibly attend this meeting, this is as far as you should read. If you read the rest you will be there. For—

ON TUESDAY, OCTOBER SECOND

Secretaries of the county societies and officers of the state society are invited to a dinner, at six, Red Room, Hotel Pfister, Headquarters, Wisconsin and Jefferson Streets.

The House of Delegates will meet at Hotel Pfister in the Red Room at eight to open the business sessions.

LET GEORGE DO IT.

The Secretary will make your hotel reservations if you desire. Write him where you prefer to stay, how many, when, and how much. Your reservation will be made at once and you will be promptly notified.

ON WEDNESDAY, OCTOBER THIRD

The House of Delegates will meet in the Auditorium, Cedar and Fifth Streets at eight thirty.

Those who are not delegates will get up just as early, however, to register at the Auditorium before the opening of the scientific program at nine in Juneau Hall.

President F. Gregory Connell, Oshkosh, will open the afternoon session at two with the President's address.

Wednesday evening Dr. W. A. Evans, Chicago, will address a public meeting in Juneau Hall. He has selected for his subject: "Public Health Work Pays." Our Legislative Committee will occupy front row seats to find out how.

ON THURSDAY, OCTOBER FOURTH

The morning session opens at nine and the afternoon session at two. For further details see the next page for we have an important announcement to make in this column.

Thursday evening at six forty-five we eat. To be specific we do not just "eat" but rather "we eat at the Wisconsin Club" where the chef is as famed as the spirit of good fellowship of the club. Unlike all other banquets you may have attended, this banquet is informal and has but one speaker—one of unusual prominence.

Following the banquet the audience will rise while the tables are removed and the Wisconsin Club orchestra takes the stage. There will be dances and dances

and during the intermission, we understand the Rusty Hinge—pardon us, that is a secret. For those who do not care to dance there will be a room devoted to four-somes of cards. For those who neither care to dance nor to play cards there will be a cozy corner, easy chairs and smokes. Presiding officer of this corner will be announced later.

AND ON FRIDAY, OCTOBER FIFTH

The Program Committee has a special feature. Beginning at nine the entire day is to be given over to the introduction of clinical cases with discussions. Speaking in correct terminology there will be "dry clinics" of the type that met with so much favor at the last meeting of the Tri-State. Among those who will take part we mention Dr. George P. Muller, Philadelphia; Dr. Gideon Timberlake, Baltimore, and Dr. Joseph S. Evans, Madison.

The clinics will be continued in the afternoon at two with special emphasis on sectional work. This will include one on tuberculosis and others on eye, ear, nose and throat.

At five-thirty Friday afternoon the convention is officially over. At that time the committeemen, not to be found during the sessions, will reappear to divide the cigars you did not smoke Thursday night.

AND IN BETWEEN TIMES THERE IS—

The Exhibit—the best we have ever had. Kilbourne and Walker Halls, just across from the session hall, will be filled with booths. And every booth will be filled. The exhibitors are bringing many things new for your inspection. And just as a good exhibit is essential to the success of a convention, so does it form just as an essential part of your program. See the exhibits.

SECRETARIES WILL MEET

All secretaries of the county societies are invited to be present at a dinner given by the State Secretary at the Red Room, Hotel Pfister, Tuesday evening, October second, 6 P. M.

For Golfers—no medal flights but just say "fore" at the registration booth and you will be taken to the best courses in Milwaukee County. We can provide necessities and accessories—except for the nineteenth hole.

For the Wives—the stores, the theatres and the banquet (listed in order of importance).

For You—a good time with all precedents broken—not even an address of welcome. It is not needed in Milwaukee.

THE PRELIMINARY PROGRAM WITH WHEN AND WHERE

TUESDAY, OCTOBER SECOND.

6:00 P. M.

Dinner for Secretaries, Red Room, Hotel Pfister, Headquarters.

8:00 P. M.

House of Delegates meets Red Room, Hotel Pfister, Headquarters.

WEDNESDAY, OCTOBER THIRD.

9:00 A. M.

Scientific Program opens at Juneau Hall, the Auditorium.

"The Pathology, Diagnosis, Prognosis and Treatment of Acute Intestinal Obstruction"—D. R. Connell, Beloit.

"The Surgical Treatment of Toxic Goitre"—A. S. Jackson, Madison.

Discussion—Reginald H. Jackson, Madison.

"Chronic Gonorrhoea in Women" — Harold Shutter, Milwaukee.

"Cardio Vascular Symptoms and Signs of Early Hyperthyroidism"—J. A. E. Eyster, Madison.

"Filiform Stricture of Urethra"—James C. Sargent, Milwaukee.

"Hematuria, including causes, diagnostics and therapy"—Gideon Timberlake, Baltimore.

Discussion—Walter K. Gray, Milwaukee.

2:00 P. M.

Afternoon session opens.

President's Address by F. Gregory Connell, Oshkosh.

"Relative Importance of History, Symptoms, Physical Signs, X-ray and Laboratory in diagnosis of Pulmonary Tuberculosis"—(Illustrated)—Charles E. Ide, Milwaukee.

"Anaesthesia and Analgesia in Obstetrics"—William Clark Danforth, Chicago.

"The Purpose and Benefits of Maternal Welfare"—Fred L. Adair, Asso. Prof. of Obstetrics and Gynecology, Univ. of Minn.

Discussion—C. H. Davis, Milwaukee.

"Pathologic Cellular Malfunction"—J. L. Yates, Milwaukee.

8:15 P. M.

Evening meeting open to the public.

"Public Health Work Pays"—W. A. Evans, Chicago.

THURSDAY, OCTOBER FOURTH.

9:00 A. M.

Morning session opens.

"Insulin Treatment of Post-Operative (Non-Diabetic) Acidosis"—William Thalheimer, Milwaukee.

"The Present Status of the Management of Diabetes Mellitus"—William S. Middleton, Madison.

"Surgical Complications of Diabetes"—Russell M. Wilder.

"Some Phases of the Diabetes Problem"—R. T. Woodvat, Chicago.

2:00 P. M.

Afternoon session opens.

"Cancer of the Breast"—George P. Muller, Prof. Clinical Surgery, Univ. of Penn.

"The Cancer Problem from the Standpoint of the Otolaryngologist"—Frank J. Novak, Jr., Chicago.

"Cancer of the Ovary"—Henry Schmitz, Chicago.

"Radium for Uterine Bleeding and Leukorrhoea of Benign Origin"—Thomas J. Watkins, Chicago.

Subject to be announced—James B. Murphy, New York, Rockefeller Foundation.

6:45 P. M.

Banquet at the Wisconsin Club, Grand Ave., and Ninth Street.

One speaker of prominence, a real banquet, dancing and cards. Other features planned. This is open to your wife.

FRIDAY, OCTOBER FIFTH

9:00 A. M.

Morning session opens. Day devoted to dry clinics with presentation of patients. Among those on the program are George P. Muller, Gideon Timberlake, and Joseph S. Evans of Madison—subjects to be announced.

2:00 P. M.

Afternoon session for dry clinics. The special sectional interests will be included at this time. The complete program will be announced next issue.

GENERAL INFORMATION.

All meetings, except where noted, will be held in Juneau Hall, Milwaukee Auditorium. The entrance used will be on Cedar Street between Fifth and Sixth Streets.

Registration booth will be in Kilbourne Hall, Milwaukee Auditorium.

Post Office will also be maintained next to Registration booth. Have all mail or telegrams addressed care State Medical Society Convention, Auditorium Building, Milwaukee.

Municipal parking area is located just across from the Cedar Street entrance to the Auditorium. Watch for the Arterial Highways when motoring in Milwaukee.

MAKE YOUR HOTEL RESERVATIONS EARLY.

Hotel	Single with bath	Single without bath	Double with bath	Double without bath
Pfister (Headquarters)	\$3.50	\$2.50	\$5.00	\$4.00
Plankinton	\$2.50 up	....	\$5.00 up	....
Wisconsin	\$3.50	\$2.00 up	\$6.00	\$4.00
Republican	\$3.50	\$2.00	\$6.00	\$3.50
Maryland	\$2.50 up	\$1.75 up	\$4.00 up	\$3.00 up
Gilpatrick	\$2.50	\$1.50 up	\$4.00	\$3.00
Miller	\$3.50 up	\$3.00 up	\$4.00 up	\$3.50 up
Juneau	\$2.50	\$1.50 up	\$4.00 up	\$3.00 up
Astor	\$3.50	....	\$5.00 up	....

Hotel reservations may be made from list below or through your Secretary, 558 Jefferson Street, Milwaukee.

Exhibits will be housed in Kilbourne Hall, just across the corridor from Juncau Hall, the Auditorium.

THE EXHIBITORS.

At the time this goes to press the following firms have reserved exhibit space. A diagram of the exhibit will be published in the September issue.

Abbott Laboratories, Chicago, Ill.
 A. S. Aloe Company, St. Louis, Mo.
 Frank S. Betz Company, Hammond, Ind.
 Brook Hill Certified Milk, Genesee Depot, Wis.
 Burdick Cabinet Company, Milton, Wis.
 DeVilbiss Manufacturing Company, Toledo, O.
 H. G. Fischer and Company, Chicago, Ill.
 Horlick's Malted Milk Company, Racine, Wis.
 Huston Brothers Company, Chicago, Ill.
 The Kolynos Company, New Haven, Conn.
 Harold McIntosh, Milwaukee, Wis.
 John McIntosh Company, Chicago, Ill.
 Medical Protective Company, Fort Wayne, Ind.
 Mellin's Food Company, Boston, Mass.
 Middlewest Laboratories, Chicago, Ill.
 Oakland Automobile Company, Milwaukee, Wis.
 Pengelly X-Ray Company, Minneapolis, Minn.
 Pitman-Moore Company, Indianapolis, Ind.
 W. B. Saunders, Philadelphia, Pa.
 G. D. Searle and Company, Chicago, Ill.

THE STUDENTS' ANNUAL MEETING OF
 THE UNIVERSITY OF WISCONSIN
 MEDICAL SOCIETY.

Tuesday Evening, May 15, 1923, 8 o'clock.

First Floor Lecture Room, Science Hall.

PROGRAM.

I. *Anatomy*;

A—Study of the Kidney Tubules—Alice I. Out-house.

B—The Anatomy of Peripheral Nerves—Irving Goldberg.

II. *Physiology*;

A—Influence of Drugs on Stomach Movements—Frank Fellows.

III. *Physiological Chemistry*;

A—Studies of Blood and Urine Sugar under the Influence of Iletin—Elizabeth Kirk.

B—Studies in Protein Hydrolysis—Mark H. Wall.

IV. *Pharmacology*;

A—The Relation of Chemical Constitution of Certain Organic Arsenical Compounds to Their Action on the Optic Tract—A. G. Young, V. M. D.

V. *Pathology*;

A—Histological Observations on the Reactions in Guinea Pigs to the Intraperitoneal Injection of Foreign Red Blood Cells—J. Lingenfelter.

This program represented a public presentation of the individual students submitting their respective pieces of work for theses in the University.

THE JOURNAL CLINIC

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The University of Wisconsin.

CASE REPORT: AMYOTROPHIC LATERAL
 SCLEROSIS.*

BY O. V. OVERTON, M. D.,
 MADISON.

That *amyotrophic lateral sclerosis* or *progressive central muscular atrophy* is frequently mistaken for chronic rheumatism or rheumatoid arthritis, is evidenced by the references which are found in textbooks in discussing the former condition. Osler¹ and H. Campbell Thompson² mention this in their discussion of the diseases of the nervous system. The following case report illustrates this point:

THE CASE. Mrs. F. M., aged 37 years, was admitted to the Bradley Memorial hospital on April 9, 1923. Her complaints on admission were pain in the joints and jaundice. Provisional diagnosis of rheumatoid arthritis and obstructive jaundice was made. The history of pain in the joints over a period of eight years was on close questioning found to be incorrect, since a description of stiffness of the joints, rather than of actual pain or tenderness, was given.

The onset, during the first pregnancy, eight years ago, was that of an *afebrile* attack which involved the first phalangeal joint of the right index finger. This persisted until the termination of an otherwise normal pregnancy, five months later. Three months after delivery there was persistent backache in the small of the back.

Patient gives a history, nine months after delivery, of pain, redness, and swelling of the right ankle, and although not forced to bed, had sanitarium treatment, together with removal of tonsils and extraction of several teeth, in an attempt to remove the foci of infection which caused the rheumatism. Three months later, the right knee was involved, as were the small joints of both hands. There was also considerable weakness.

Two subsequent pregnancies, influenza, and a gain of 22 pounds of weight carries the history to two years ago, when there was a loss of 19 pounds, with a gradual return of joint trouble—in the wrists, elbows, and shoulders—but again the patient was not forced to go to bed.

*From the Bradley Memorial Hospital, University of Wisconsin, Madison.

¹Osler: Principles and Practice of Medicine, Eighth Edition.

²H. Campbell Thompson: Diseases of the Nervous System.

In March, 1922, ankles and metatarsals were affected, and there was pain between the shoulders. Last summer, was able to be up and about, but because of the joints was unable to work.

Four months ago, patient noticed numbness of the body with more pain than she had previously had, and during confinement to bed for five weeks, noticed that the right side of the body was worse than the left.

March 20th, 1923, patient developed a nearly complete catarrhal jaundice, which cleared within one month, and which has not returned.

Past medical and family history are negative.

Physical Examination on admission revealed icterus of the skin, the mucous membranes, and the sclerae—with gray stools and dark urine which contained considerable bile pigment. There were tongue tremor and a palpable thyroid. Blood pressure was low—systolic 96, diastolic 64 mm. of mercury. There was an apical systolic murmur, transmitted upward to the third left interspace.

Chest was negative.

Examination of the extremities showed no gross enlargement of the joints, except that the metacarpal-phalangeal joint of the left thumb shows a subluxation toward the palm, and a partial ankylosis in this position. There was considerable contracture of the flexor tendons of the right and left little fingers and of the right ring finger. There was marked wasting of the muscles of both hands—the interossei particularly and the thenar and hypothenar eminences being especially wasted. The distal phalanges of the index and middle fingers were in flexion, not because of contractures, but because of weakness of the extensors, since they permitted of easy passive extension.

Reflexes showed hyperactive knee jerks, with moderate hyperactivity of the arm reflexes, more especially on the right. Sensation was unimpaired throughout. An abortive patellar clonus was present on the left.

Electrical reaction as follows:

Anodal opening contracture—

Right 3 milliamperes.

Left 3 milliamperes.

Cathodal closing contracture—

Right 5 milliamperes.

Left $3\frac{1}{4}$ milliamperes.

Anodal closing contracture—

Right 4 milliamperes.

Left 5 milliamperes.

In both, anodal opening preceded cathodal closing, and on the right, when the difference was more marked, anodal closing contracture also preceded cathodal closing contracture.

The x-ray, as shown by Figure I, fail to reveal joint pathology except for the subluxation of the little finger, as mentioned above. Joints of the lower extremities and of the larger joints of the upper extremities were also negative.

Figure II shows the normal position of the hands.

Figure III, shows the apparatus which has been devised to assist the patient in the use of her hands.

Since flexion was possible, and extension passively possible, a cuff or glove was placed upon the wrist, from which coil springs passed to an attachment in the tip of glove fingers, worn on the hands. A wedge over the first phalangeal joint acts as a fulcrum for these artificial tendons.



Fig. I. X-Ray of hand. Shows no joint pathology except for subluxation of little finger, as mentioned.

Further treatment has been in the nature of general hygiene, and electrical treatments and massage, together with exercises for the use of muscles which remained. By the combination of these the patient is now able to do fine movements, pick up checkers, marbles, and small objects, and to help herself.



Fig. II. Normal position of hands.



Fig. III. Apparatus devised to assist in extension.

The diagnosis is based upon the wasting of the muscles, the reactions of degeneration, the hyperactive reflexes, the negative Wassermann, absence of impaired sensation, the absence of joint changes as revealed by careful X-ray study, and of true arthritic pain.

Syringomyelia is excluded by the absence of sensory disturbances. Loss of pain and temperature sense with retained tactile sense characterize this condition from a diagnostic standpoint because of the natural confusion with rheumatoid arthritis.

SPECIAL STAFF MEETING OF THE JACKSON CLINIC.

BY WILLY MEYER, M. D.,
NEW YORK CITY.

Dr. Willy Meyer, of New York City, addressed the staff of the Jackson Clinic and visitors, June 4, on "Carcinoma, with special reference to carcinoma of the breast." A brief abstract of Dr. Meyer's talk follows:

The first consideration about cancer is that it is still a mysterious disease, especially its etiology. It has been the idea of many surgeons that it must be infectious. Particularly is the surgeon to think so when, for instance, he meets a carcinomatous metastatic peritonitis with effusion, when he had expected to find a tuberculous one; microscopically he can scarcely distinguish between the two. The reason for this is: The one is due to the tuberculosis bacillus, why should the other not also depend on a microbic or parasitic infection? Yet, carcinoma can be produced by irritation, for example, by repeatedly painting the back of an animal with tar. This makes the infectious theory of cancer an academic question.

Some authors hold that carcinoma is a systemic

disease, Dr. Meyer, however, considers this impossible because it can be cured by early operation. Cancer evidently is first a local disease which secondarily involves the lymphatics; later it is carried by the blood to other organs where the same type of tumor is produced, this is the third or metastatic stage.

The American Association for Cancer Control is doing excellent work and is saving many lives all over the country by its propaganda and education of the public. The absence of pain is the most treacherous and misleading peculiarity of carcinoma. The patient may happen to feel a lump in the breast, but because it does not cause pain she concludes that it is harmless and benign. The association for combating cancer teaches people the presence of a painless tumor is an indication to consult a competent physician immediately. He will examine the lump gently and, if he is at all suspicious, he will remove it surgically and radically. All manipulations of the growth before and during the operation should be carried out carefully and gently, because mechanical injury to the cancer nodule may disseminate cancer cells through the lymphatics and blood stream, producing metastasis. This point of care, particularly in examinations, cannot be over-emphasized.

In the first stage of cancer of the breast there is a local swelling; in the second stage involvement of the glands of the axilla; and in the third stage, metastasis. Cancer in the first and second stages is curable by surgery. Radical operation should not be delayed in order to give radium or x-rays a preliminary trial, because time is an important element and the sooner the radical operation is undertaken the better is the chance for cure.

By a peculiar coincidence the two radical operations in use were published simultaneously almost 30 years ago, one from Baltimore, the other New York. The first works from the chest toward the humerus. The other in the opposite direction, from the humerus toward the sternum. In the course of the latter, the breast, the contents of the axillary and infraclavicular regions, with both entire pectoral muscles, are lifted out in one mass. This enables the operator also to remove the fat and connective tissue between the two pectoral muscles, which is sometimes diseased, without ever entering this area. The skin incision is a minor issue; the point is to turn back two big skin flaps

and expose the tendon of the pectoralis major at the humerus and its insertion on clavicle, ribs, and sternum. At the clavicle it is cut off completely, allowing full exposure of the axillary and subclavicular regions. The tendon of the pectoralis minor is cut at the coracoid process. For many years Dr. Meyer carried out the so-called Handley's addition; namely, carrying the lower end of the skin incision midway between the xiphoid process and the umbilicus in the median line and extirpating the fascia covering both recti and the serratus muscle in conjunction with the entire mass. This addition renders the two skin flaps more movable, so that skin-grafting is hardly ever required.

The loss of the pectoralis major has never interfered with the motion of the arm, the deltoid being able to adduct the arm. Dr. Meyer insists on active motions of the arm early during convalescence so that the patient is soon able to perform all her usual motions, including the posture of the Statue of Liberty.

Dr. Meyer then showed slides of the two very first patients whom he had operated on radically for cancer of the breast in 1894 and 1895, in connection with others operated on before 1908. The fact that patients operated on 15 to 29 years ago are still alive and well without recurrence is sufficient proof that carcinoma is a curable disease. Surgeons today are able to cure about 30 to 35 per cent of patients with carcinoma of the breast as they present themselves. This is a high percentage of cures when it is considered that most likely almost 50 per cent of those who come to operation already have metastasis when the surgeon first sees them. As Dr. Meyer emphasized repeatedly, the present solution of the problem of curing malignancy by operation is early diagnosis and early radical surgical interference.

MECKEL'S DIVERTICULUM AND INTESTINAL OBSTRUCTION.

Harold L. Foss, Danville, Pa. (*Journal A. M. A.*, July 14, 1923), records the history of a patient operated on for the relief of acute intestinal obstruction following the strangulation of a loop of ileum by an adherent Meckel's diverticulum. The clinical picture of the condition is not unlike that of intestinal obstruction from volvulus from any cause. The only sign that ever presents itself and which may be considered significant is the appearance of a mass at or near the umbilicus.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

EXPERIMENTAL EFFECT OF B. BOTULINUS TOXIN AND CULTURES ON GUINEA PIGS.

BY F. E. CHURCH,

BACTERIOLOGIST MILWAUKEE HEALTH DEPARTMENT.

The subject of botulism has been of special interest in this country since the outbreak of olive poisoning in California, Ohio, and other sections of the United States. Much notable work has been done by Drs. Geiger, Meyer, Armstrong, Scott, Story, and others in studying and preventing these outbreaks. They have shown that the spores of *B. botulinus* are highly resistant to heat, and that small doses of toxin are fatal to laboratory animals, also that if antitoxin is given in time and in large doses, it will protect the individual from botulinus poisoning.

As a result of these investigations, the commercial canning industry has been put on a safer basis, and the big problem today seems to lie chiefly in the inexperienced home canners who fail to cook their vegetables properly at the time of canning.

The author has conducted his experiments with two objects in view; first, to review some of these findings, and second, to try out several common portals of entry for bacteria, namely, mucus membrane of the mouth, especially the gingival margins, the vagina, cuts, scarified surfaces, and the like.

The culture of *B. botulinus* used in these experiments was obtained from Dr. K. F. Meyer of the Hooper Foundation of Medical Research and was Type "A." The culture was transferred on beef heart medium, and was grown several days anaerobically, until gas was formed and a distinct putrefactive odor developed. The culture was then centrifuged at high speed, and the supernatant fluid (toxin) removed. The sediment containing most of the organisms was washed six to twelve times. This failed to remove toxin which was held by organisms, and proved to be fatal to

guinea pigs. A portion of the toxin or filtrate was heated to 80°C. for one-half hour to destroy toxin.

The antitoxin (Type "A") was obtained through the courtesy of Dr. J. C. Geiger, Epidemiologist, U. S. Public Health Service. One cubic centimeter of antitoxin was equal to four hundred units.

AUTOPSY.

All the pigs showed general congestion of visceral organs. The large and small vessels of the peritoneum and mesentery were distended. Stomach and intestines were distended in most of the cases. Three of the pigs showed a pneumonia. The vessels of the brain were swollen and

PRELIMINARY TEST OF ANTITOXIN.

No. 1.	Guinea Pig	.5 c.c. Toxin	Intraperitoneally	Undiluted .5	c.c. Ant.
No. 2.	Guinea Pig	.5 c.c. Toxin	Intraperitoneally	Undiluted .05	c.c. Ant.
No. 3.	Guinea Pig	.5 c.c. Toxin	Intraperitoneally	Undiluted .005	c.c. Ant.
No. 4.	Guinea Pig	.5 c.c. Toxin	Intraperitoneally	Undiluted followed by no anti	(control)

RESULTS.

Nos. 1 and 2 still alive after ten days.

No. 3 died on tenth day.

No. 4 control died within twelve hours.

The following tables show effect of varying amounts of culture and toxin on the several portals of entry, also the results of guinea pigs protected by antitoxin as controls.

congested. Smears from various organs and blood counts showed an increase in the lymphocytes. No bacteria present.

Autopsy findings and symptoms in general were those of toxemia. There were no microscopic sections made of the tissues for thrombosis.

SUMMARY.

1. Small amounts of toxin will kill guinea pigs

TABLE I.

EFFECT OF TOXIN AND CULTURE ON GUINEA PIGS.

Guinea Pig	Amount of Culture and Toxin	Route	Results	Time
No. I A	1.5 c.c.	Intraperitoneally	Died	12 hours
No. II A	1.5 c.c.	Intraperitoneally	No effect	5 days
	Heated Culture			
No. III A	1.0 c.c.	Intraperitoneally	Died	18 hours
	Washed Sediment			
No. IV A	1.5 c.c. Culture	Fed by mouth	Died	18 hours
No. V A	Rubbed in One Drop	Scarified Area Abdomen	Died	4 days
No. VI A	Rubbed in One Drop	Scarified Area Alveolar Process	Died	5 days
No. VII A	1 c.c.	Incision Abdomen	Died	3 days
No. VIII A	Three Loop fulls rubbed in	Incision Abdomen	Died	2 days
No. IX A	Swabbed	Vagina	Died	2 days
No. X A	Swabbed	Vagina	Died	3 days
No. XI A	Drop	Eye	Died	5 days
No. XII A	Drop	Eye	Died	4 days

TABLE II.

ANTITOXIN AND CONTROLS.

Guinea Pig	Amount Antitoxin	Route	Results	Time Later
I B	0.5 c.c.	Intraperitoneally	Not Ill	10 days
II B	0.5 c.c.	Intraperitoneally	Not Ill	12 days
III B	0.5 c.c.	Intraperitoneally	Not Ill	12 days
IV B	0.5 c.c.	Intraperitoneally	Not Ill	12 days
V B	0.5 c.c.	Intraperitoneally	Not Ill	12 days
VI B	0.5 c.c.	Intraperitoneally	Not Ill	10 days
VII B	0.5 c.c.	Intraperitoneally	Not Ill	10 days
VIII B	0.5 c.c.	Intraperitoneally	Not Ill	10 days
IX B	0.5 c.c.	Intraperitoneally	Not Ill	10 days
X B	0.5 c.c.	Intraperitoneally	Not Ill	5 days
XI B	0.5 c.c.	Intraperitoneally	Not Ill	5 days
XII B	0.5 c.c.	Intraperitoneally	Not Ill	5 days

in from a few hours to ten days.

2. Small amounts of infected material and toxin may infect a person through a breach in the alveolar process when infected food is taken into the mouth. When we consider that the gingival margins have eight times the infecting service as the crypts of the tonsils, it shows a possible portal of entry for the bacillus of botulinus as well as other organisms.

3. Small amounts of toxin of *B. botulinus* may gain entrance into the body through a cut, bruise, mucus membrane, on any part of the body, and set up either mild or severe symptoms.

THE DIPHTHERIA SITUATION IN MILWAUKEE WITH SPECIAL REFERENCE TO ACTIVE IMMUNIZATION.

A PRELIMINARY REPORT BY W. W. BAUER, M. D.,
 EPIDEMIOLOGIST MILWAUKEE HEALTH DEPARTMENT,
 July, 1923.

One of the public health matters which has lately been given great prominence by health workers in Europe and America has been the prevention of diphtheria by active immunization.

The purpose of this preliminary report is to discuss briefly the status of diphtheria in Milwaukee, and the conditions under which the preventive measures were introduced, together with a preliminary report of the results obtained.

A historical survey of diphtheria in Milwaukee shows a condition typical of that in cities of similar type. Prior to the introduction of bacterial diagnosis and serum therapy, there was a constantly increasing rate of deaths per unit of population and per hundred of cases. Then came antitoxin, and the case mortality gradually began to fall until in 1922 it was only 5.7%. There was no decrease, however, in all these years in the number of cases of diphtheria occurring per annum.

The diphtheria prevention service has been offered in sixteen public and parochial schools. These were chosen in consultation with the director of the Division of School Hygiene, and with several objects in view. It was desired to begin this work in that portion of the city where diphtheria had been the most serious problem, and it was likewise desired to have information of schools serving various types of districts. Certain interesting conditions were observed in the various schools.

The response on the part of parents to the offer of immunization was good, considering the fact that most of them were entirely unacquainted with this work, and unprepared to accept it.

TABLE I.

PERCENTAGE OF CONSENT FOR IMMUNIZATION.

School	Type of District	Enroll-ment	Con-sented	Per Cent
A	Poor dwellings, foreign.....	830	119	14.4
B	Poor and mod. good residence..	1,090	316	29.0
C	Slum, foreign	741	368	49.6
D	Good, residence	915	317	34.7
E	Good, residence	911	258	28.3
F	Poor, foreign	1,293	888	68.8
G	Good, residence	504	135	26.8
H	Good, residence	97	64	66.0
J	Good, residence	406	204	51.3
K	Poor and mod. good residence..	872	386	44.3

L	Good, residence	888	204	23.2
M	Poor, foreign	1,080	548	50.8
N	Poor, foreign	1,300	476	36.6
O	Orphanage school	117	117	100.0
P	Good, residence	1,120	330	29.5
Q	Good and poor residence.....	600	95	15.8

Summary.....12,764 4,825 32.8

Susceptibility to diphtheria was found to be variable. The schools serving the poorer districts showed a relatively high percentage of Schick negatives, while those serving the better districts showed a relatively high percentage of Shick positives or susceptibles.

TABLE II

PERCENTAGE OF NATURAL IMMUNITY BY SCHOOLS.

School	Type of District	Schicks			Per cent
		In-spected	Posi-tive	Nega-tive	
A	Poor dwellings, foreign.....	119	32	87	73
B	Poor and mod. good residence	316	195	121	32.3
C	Slum, foreign	357	126	231	64.7
D	Good, residence	308	202	106	34.4
E	Good, residence	248	170	78	31.4
F	Poor, foreign	847	355	492	58.0
G	Good, residence	134	98	36	26.9
H	Good, residence	57	47	10	21.3
J	Good, residence	199	141	58	29.2
K	Poor and mod. good residence	376	242	134	35.6
L	Good, residence	182	137	45	24.7
M	Poor, foreign	509	286	223	44.0
N	Poor, foreign	441	256	185	41.9
O	Orphanage, school	117	65	52	44.5
P	Good, residence	305	210	95	44.2
Q	Good and poor residence.....	89	48	41	41.4

Summary.....4604 2610 1994 42.2

Susceptibility or immunity seems likewise to be a family characteristic. Where three or more children in the same family were tested in a school, it was the usual experience to find all of them, or most of them showing the same reaction to the test. The age grouping of susceptibles showed a greater number of Shick positives in the lower grades.

The administration of toxin-antitoxin was in three doses of one c.c. each, at intervals of one week. This gave rise to very little discomfort, either at the time of injection or subsequently. The occurrence of a combined positive reaction, indicating protein susceptibility, was likely to be coupled with a greater degree of reaction following the injection of toxin-antitoxin. In most cases this amounted only to a local soreness, with occasionally a mild degree of malaise. In only

ten cases was the protein reaction sufficient in intensity to cause the discontinuance of the treatment. In about the same number of cases the reaction was severe enough to cause modification of the treatment which consisted in giving subsequent injections of one-half c.c. at one week intervals, until the total of 3 c.c. had been administered.

TABLE III.

School	TOXIN-ANTITOXIN TO SCHICK POSITIVE.				
	Schick		Toxin-Antitoxin		
	Posi- tive	Refused	One Dose	Two Doses	Three Doses
A	32	10	0	0	22
B	195	3	19	10	163
C	126	13	21	20	72
D	202	17	12	20	153
E	170	10	10	6	144
F	355	0	106	33	216
G	98	13	5	13	67
H	141	3	6	28	104
J	47	1	5	3	38
K	242	10	43	105	84
L	137	9	12	15	101
M	286	49	4	35	198
N	256	20	4	29	203
O	65	0	0	0	65
P	210	6	10	38	156
Q	48	8	2	5	33
Summary	2610	172	259*	360†	1819

The acceptance of the re-Schick was, as might have been expected, considerably less than the acceptance of the original test. The percentage is shown in the following table:

TABLE IV.

School	ACCEPTANCE OF RE-SCHICK AND IMMUNITY PERCENTAGES.			
	Completed T. A.	Re-Schick Accepted	Per cent Acceptance	Per cent Immune from Toxin-Ant. Injections
B	163	89	54.6	77
C	72	50	69.4	80
D	153	113	73.8	97
E	144	103	71.4	92
F	104	62	59.6	95
G	216	127	58.9	96
H	38	21	55.3	100
J	67	41	61.2	97
K	84	57	68.0	96
L	101	74	73.3	94
Summary	1142	737	64.5	92

The first two schools retested showed a very dis-

*† 73% may ordinarily be expected to acquire immunity from one dose only, and 90% from two doses. (Park, Dickson & Thomson).

appointing percentage of immunes among those previously positive who had received the three injections. The toxin-antitoxin used in these schools was a different preparation from that subsequently employed.

Since the beginning of this work, there have been five cases of diphtheria reported in children who have been either certified Schick negative, or who have had the complete course of toxin-antitoxin. Three Schick negative children have been reported as suffering with diphtheria, but in each instance, these diagnoses were questioned in view of the fact that the duration of the illness was only twenty-four hours, was accompanied with high fever, and a prompt and complete recovery without antitoxin. Positive cultures obtained from these cases were shown to be of no significance, because the bacilli proved negative to virulence tests. In the two cases of diphtheria reported following the injection of toxin-antitoxin, considerably less time than the minimum period of twelve weeks had elapsed since the last injection of toxin-antitoxin. Since it has been demonstrated that active immunization requires not less than twelve weeks for its full development, it is obvious that these cases must be regarded as having no bearing upon the efficiency of the immunizing procedure.

CONCLUSIONS.

1. The first campaign for the introduction of diphtheria immunization in Milwaukee resulted in acceptance of the service by approximately 30% of those to whom it is offered.

2. In a fairly representative cross section of the community, approximately 40% of school children were found to be Schick negative or naturally immune against diphtheria.

3. Of the Schick positive or susceptible individuals, the greater number were found in the lower grades, this number progressively diminishing as one ascends the age scale.

4. Large families tend to show a tendency toward the same Schick reaction in all children of school age, except that the younger children may frequently be Schick positive where the older ones are Schick negative.

5. An average of 75% acceptance of toxin-antitoxin by Schick positives was observed. About 20% went through with part of the immunization, and about 6% were lost.

6. The administration of toxin-antitoxin is attended by no untoward results in the younger

children, and by a negligible number of moderate reactions among the older age groups.

7. Depending upon the preparation of toxin-antitoxin used, the efficiency of immunization varies between the averages of 80% and 95%.

8. The cost of active immunization and re-Schicking is considerably less than the cost of caring for the cases of diphtheria which this immunization will prevent, to say nothing of the saving in mortality, morbidity, inconvenience, and expense.

9. The observations and conclusions herewith presented are in accord with those previously published by numerous other workers in the same field.

THE STATE NARCOTIC LAW.

REVIEW OF NEW ENACTMENT AFFECTING WISCONSIN PHYSICIANS.

In line with similar warfare on the illegal use of narcotic drugs in many states, the Wisconsin Legislature contributed its aid in the form of a stringent enactment (Chapter 392, Laws of 1923), known as the "State Narcotic Law." This is the outcome of the Morris bill which, after undergoing many amendments, passed both houses, was signed by the Governor, and became effective with its official publication in July. Recognizing its vital concern to members of the medical profession, the WISCONSIN MEDICAL JOURNAL presents herewith a summary of its provisions section by section.

So far as the use of drugs in the hands of professional persons is concerned, the Act takes away none of their essential rights. It specifies distinctly that in reasonable quantities, prescribed or administered in good faith and for the sole purpose of alleviating pain and suffering, and according to the official regulations governing sales, narcotic drugs may continue to be given. The legislation is directed in its prohibitory aspects against the peddler of dope, the unlawful sale by physicians and others who are authorized to obtain narcotic drugs, and the use of drugs by addicts except for purposes of treatment by a physician. Attention is called to the penalties provided, which are much more severe than any heretofore in effect.

PROVISIONS OF THE LAW.

The first section repeals the penalty provisions in the old law. (Stronger penalties are enacted

in the concluding sections of the new law, cited at the end of this summary.)

Dosage Limitations. Section 2 amends the remaining portions of the old law and enacts what is termed the "state narcotic law." Sales of codeine are limited to one grain, and of heroin to one-eighth grain (codeine being added by this section to the list of drugs whose contents are defined by statute, and heroin being limited to a dosage of one-eighth grain). The narcotic drugs here listed include opium, codeine, morphine, heroin, and alpha or beta eucaine. Prescriptions shall be kept on file for two years.

In English or Latin Only. Section 1420 prescribes that no narcotic prescription shall be written in any but the English or Latin language, nor otherwise than in ink. The forfeiture for violations of this section ranges from \$5 to \$25.

Authority for Enforcement. Section 1421 makes it the duty of police, sheriffs, and members of the State Board of Pharmacy to enforce the foregoing sections (1419 and 1420), and of the district attorneys to prosecute violations.

Regulations for Prescriptions. Section 4 adds eight new subsections, summarized in the following abstracts:

All narcotic drug prescriptions shall be duly labeled by the pharmacist with the date, name of patient, and name of physician, dentist or veterinarian issuing it. No prescription shall be refilled or a copy made except for purposes of record by the druggist. Such record shall always be open to inspection by health departments, boards of medical and pharmacy examiners, and police.

Prescriptions must be issued only in good faith; narcotic drugs shall not be provided for any person except when needed for the treatment and cure of a disease or ailment, nor for any condition arising from the drug habit. Veterinarians are prohibited from prescribing narcotic drugs for human beings.

A physician may personally administer any narcotic drug in the legitimate practice of medicine when believed necessary for the alleviation of pain and suffering or the treatment of disease, and he shall keep a complete record of the case, showing kind and amount of drugs dispensed, the date, and name and address of patient, except such drugs as may be dispensed or distributed by a physician to his patient upon personal attendance,

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SOCIETY PROCEEDINGS

DANE COUNTY

Thirty-five members of the Dane County Medical Society attended the July 11th meeting at Mount Horeb. At this meeting Drs. A. S. Loevenhart and W. F. Lorenz told of their progress in the use of a new drug, triarsenite, for the treatment of locomotor ataxia.

The next meeting of the society will be held in October.

DOUGLAS COUNTY

Dr. M. A. Shillington, St. Paul, addressed the members of the Douglas County Medical Society at a meeting held July 11th on the subject "Diabetes and its treatment with Insulin." The lecture was illustrated.

GRANT COUNTY

Four addresses featured the meeting of the Grant County medical society held at Fennimore July 7th. Those speaking before the society were Dr. C. A. Harper, Madison, "Contagious Diseases"; Dr. W. D. Stovall, Madison, "Serum and Vaccines"; Dr. G. W. Henika, Madison, "Diphtheria Treatment," and Dr. H. E. Marsh, Madison, "Insulin."

LAFAYETTE COUNTY

Morning and afternoon sessions of the LaFayette County medical society were held at Benton on July 10th. Representatives of the state board of health spoke, among others, on late methods of treatment and general health work.

NINTH COUNCILOR DISTRICT

The summer meeting of the Ninth Councilor District Medical Society was held at Wisconsin Rapids Thursday afternoon and evening, August 9th. Clinical cases were taken up in the afternoon followed by a dinner at Hotel Witter.

After the dinner the following program was presented: "Medical Measures before the Last Legislature," Dr. Joseph F. Barber, Marathon; "The Work of the Rehabilitation Division of the State Board of Vocational Education," Mr. W. F. Faulkes, Madison; "Some Impressions of Medical and Other Conditions in Europe," Dr. Karl Doege, Marshfield.

RACINE COUNTY

Members of the Racine County medical society laid aside professional cares for a day holding their annual outing at Brown's Lake, July 26th. Dinner was served at the home of Dr. A. W. Fulton.

ROCK COUNTY

Mercy Hospital, Janesville, was host to the Rock County medical society on July 31st. Dr. T. J. Watkins, Chicago, addressed the society on "Some Important Phases of Infections, with Special Reference to Gynecology." Dr. O. V. Overton, formerly of Madison, was received into membership through transfer.

TREMPEALEAU-JACKSON-BUFFALO

Members of the Trempealeau-Jackson-Buffalo county medical society met at Whitehall on July 13th. After a business session, Dr. Harold Marsh, Madison, read a paper on the use of insulin in the treatment of diabetes.

WALWORTH COUNTY

The Walworth County medical society met at Elkhorn July 13th. All health officers and public health nurses of the county were guests of the society.

Dr. W. D. Stovall, Madison, spoke on "The Modern Use of Serums and Vaccines in the Treatment of Disease," and Dr. C. A. Harper, state health officer, spoke on "Improved Local Health Organization and its relationship with the Public, the Health Officer, and the Physician."

NEWS ITEMS AND PERSONALS

Dr. Maybelle M. Park, director of the Juvenile Department of the State Board of Control, has presented her resignation to become effective August 22nd. Doctor Park accompanied her resignation with a statement of explanation in which she declared that she could not continue efficient work under the present administration.

Several new additional buildings will soon be erected as part of the Wisconsin Memorial Hospital at Farwell Point, near Madison. These buildings will be used to house additional patients suffering from shell shock and other war afflictions.

Dr. Victor H. Bassett, formerly of Milwaukee, has been appointed health commissioner at Savannah, Ga.

Dr. J. Vermulen, Waupun, has been appointed physician at the state prison by the State Board of Control. He succeeds Dr. W. P. Smith.

Pleading guilty to having performed an illegal operation, Dr. A. R. Law, Madison, had his license revoked and was fined \$500 in superior court last month.

Following a change in ownership and policy of the Waldheim Park Sanitorium, Oconomowoc physicians have induced Dr. S. B. Ackley to transform the major part of his institution, Oconomowoc Sanitarium, into a general hospital. Doctor Ackley will become the resident physician and superintendent. The new hospital will fill a much needed want for Oconomowoc.

Doctor E. H. Fillbach, formerly of the Cunningham Hospital of Platteville, has now located at Montfort where he will be associated with Doctor Ketterer.

Dr. Gustavus I. Hogue has returned to his home at Milwaukee from Prof. Barraquer's Clinic at Barcelona, Spain. While abroad Doctor Hogue visited Eye Clinics at Vienna, Berlin, Paris and London. The doctor also witnessed the eruption of Mt. Vesuvius and Mt. Etna.

His automobile struck by a Soo train, Doctor W. E. Ruthven, Barron, was seriously injured by a freak crossing accident. The car continued to run nearly a block and finally collided with a residence following the glancing blow of the train.

The Emergency Hospital, Milwaukee, has accepted the resignation of Miss Minnie Getts, superintendent, effective October 1st.

Milwaukee newspapers during August mentioned the name of Dr. Ralph Elmergreen as a possible candidate for Mayor on the Progressive-Republican ticket.

"It is a little early yet for me definitely to discuss the question of my entering the mayoralty fight," said Doctor Elmergreen in a published interview.

The new Mauston Hospital was opened to the public on Saturday evening, July 14th. The building was erected by the Mauston Hospital Association, largely through the efforts of Dr. J. S. Hess.

C. D. Lehman, for the last three years connected with the University of Wisconsin, has been selected as superintendent of the State Public School for Neglected and Dependent Children at Sparta. Mr. Lehman succeeds Doctor Prince.

Dr. E. L. McKinley, Dodgeville, has accepted a position on the medical faculty of McGill University, Montreal, Canada.

Dr. Clarence Schubert, Madison, has accepted a position with the Methodist Hospital of that city.

Two new wings will be added to the main building of St. Mary's Hospital, Madison, at the cost of \$500,000 within the next year. The wings will include special facilities for the maternity wards, additional operating rooms and a clinical operating room.

Dr. Karl K. Borsack, Fond du Lac, is now associated with the Wiley-Smith Clinic of that city. Doctor Borsack is a graduate of the University of Wisconsin and Rush Medical College.

MARRIAGES

Dr. John E. Connell, Superior, to Miss Durah M. Cameron, Duluth, at Superior, August first. They will make their home at Central Park, Superior.

DEATHS

Dr. H. B. Poppe, Milwaukee, died at his home on Tuesday, July 17th. His health had been poor for several years. Dr. Poppe formerly practiced at Wautoma.

Dr. B. N. Webster, Rice Lake, died at Hahneman Hospital, Chicago, July 20th, following two operations for cancer. Born in 1862, Dr. Webster was a graduate of Rush Medical College. After graduation he first located in Shell Lake, later at Superior, and finally settled at Rice Lake thirty years ago.

Dr. Webster was a member of the B-P-W-S-B county society, the State Medical Society and the American Medical Association.

Dr. Albert Schaller, Angelica, died at Shawano, July 12th at the age of 32. Doctor Schaller was a 1920 graduate of Marquette Medical College, Milwaukee.

THE STATE NARCOTIC LAW.

Continued from Page 139.

and such record shall be kept for a period of two years, subject to inspection.

Uses of Narcotics Defined. This section then continues as follows: "A physician acting in accordance with proper medical practice may prescribe or dispense narcotics for the relief of acute pain, or for any acute condition, such as influenza, renal calculi, broken limbs, and such incurable diseases, such as cancer, advanced tuberculosis and other diseases well recognized as coming within this class, and the physician may prescribe no quantity greater than that ordinarily recognized by members of his profession to be sufficient for the proper treatment of the given case. It shall be a violation of this section for any physician to prescribe narcotic drugs to a patient suffering from narcotic drug addictions except only in cases where the drug addict is being treated by such physician for the cure of narcotic drug addiction."

Fraud is Penalized. Anyone not authorized to issue prescriptions, or who falsely represents his authority to do so, or who knowingly issues or alters a prescription, or assists in evading any provision of this section, is made subject to the penalties provided.

Federal Certificate is Proof. Possession of a United States certificate issued by virtue of the act of Congress, approved December 17, 1914, is declared to be prima facie evidence of intent to dispense a narcotic drug.

Drugs in Transportation. Possession of such drugs while in the course of transportation, on the part of any person other than manufacturer, jobber, druggist, physician, etc., is termed a violation.

Common carriers may have narcotic drugs in possession for purposes of assisting in the prosecution of violations without being subject to penalty.

Rights of Druggists Protected. Druggists are not liable to prosecution if filling prescriptions in good faith, unless they know or have cause to suspect that it is in violation of this section.

Advertisements Prohibited. It is prohibited for any physician, dentist, veterinarian or pharmacist to solicit prescriptions or sales of narcotic drugs by advertisement, or to advertise any treatment the principal element of which consists in the administering of a narcotic drug. Wholesale druggists or manufacturing pharmacists may, however, advertise in publications intended for circulation among the medical profession and drug trade.

Illegal Use of Instruments. It is prohibited to have in possession any hypodermic syringe, hypodermic needle or other instrument adapted for the use of narcotic drugs by subcutaneous injection, except by a physician, dentist, nurse, veterinarian, properly registered under the laws of their state, or by a registered embalmer, manufacturer or dealer in embalming supplies, wholesale druggist, manufacturing pharmacist, registered pharmacist, manufacturer of surgical instruments, government official having charge of such articles, nurse acting under direction of a physician, employee of hospitals under official direction, or a carrier or messenger engaged in transportation of such articles. No such instruments shall be sold or delivered to any person except those named above.

Penalties Apply to Buildings. Buildings used for the illegal keeping of narcotic drugs or resorted to by habitual users are declared nuisances, and owners may be imprisoned for not less than three months.

Self-Ministry Prohibited. Anyone authorized to administer narcotic drugs to others is prohibited from administering them to himself, and it is a violation also to furnish to or prescribe for others any narcotic drugs with the purpose of having them returned to him.

Opium Pipes Condemned. Pipes used for smoking opium and their attachments, or other narcotic preparations of hemp, etc., specifically detailed in this section, may be seized by a peace officer and destroyed.

Druggists' Licenses Revocable. For conviction for a second offense of violating any provisions of this section the law empowers the State Board of Pharmacy to revoke the registration of a pharmacist or assistant pharmacist.

Prima Facie Evidence Defined. Possession of narcotic drugs or of instruments needed in their administration, except by persons not authorized by law to have them, is called prima facie evidence of their unlawful use. The penalty for such un-

lawful use is a fine of not more than \$100, or commitment to an institution for the treatment of drug addicts for a period of not less than six months, or until cured, but not exceeding one year; provided that the superintendent of such institution may release such patient when satisfied of his cure. After a commitment has been served for at least six months, any person so committed, if refused a certificate of a cure and release, may obtain a trial on the question of such cure in the same manner as is provided for the retrial of insane persons.

Board of Control to Provide Institutional Treatment. The State Board of Control is required to provide for the treatment at a state institution of addicts committed from counties, villages, and cities of the second, third and fourth classes. Cities of the first class shall make similar provision in local institutions.

Voluntary Patients Admitted. Upon his agreement to remain at least six months, any citizen addicted to the use of narcotic drugs may, with a certificate signed by at least two physicians, be admitted as a voluntary patient in any institution provided by the state for such treatment, or if a resident of a city of the first class, to such institution provided by such city. If not indigent, such voluntary patient shall pay a sum for maintenance as may be required. Such voluntary admission for treatment shall act as a bar to any prosecution for any violation of the provision which prohibits the possession or use of narcotic drugs.

Penalties Are Severe. The provisions of the law prohibiting the peddling of narcotic drugs carry exceptionally heavy penalties, even more drastic than the federal penalty. Such violation is classed as a felony and the penalty is a fine ranging from \$100 to \$1,000, or a prison term of one to five years.

THE CAUSES AND PREVENTION OF OTOLOGIC CONDITIONS FOLLOWING SWIMMING AND DIVING.

Problems incident to swimming and diving. H. Marshall Taylor, Jacksonville, Fla. (*Journal A. M. A.*, Aug. 4, 1923), states, demand the attention of the otorhinologists and public health officials. There should be a hearty cooperation of one group with the other. Prolonged chilling of the body surfaces causes a reduction of temperature and lowers the general and local resistance. The protective mechanism of the nose and its appurtenances against infection is definitely impaired by the destructive action of water.

TRI-STATE PROGRAM

A preliminary program for the meeting of the Tri-State Medical Society was announced this month. The annual assembly will be held at Des Moines, Iowa, Oct. 29, 30, 31 and Nov. 1st.

MEDICAL RESEARCH AND ADVANCEMENT SYMPOSIA.

Presented by the teaching staffs of the following universities:

University of Iowa.
 University of Wisconsin.
 University of Illinois.
 University of Chicago.
 Northwestern University.
 Western Reserve University (Crile Clinic) Cleveland.
 University of Minnesota Graduate School of Medicine (Mayo Clinic) Rochester.
 University of Indiana.
 University of Michigan.

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NOTE—Requirement for admittance—membership in some State Medical Society.

The headquarters of the assembly will be the Fort Des Moines Hotel and the scientific and clinical sessions will be held in the beautiful new Women's Club building. Hotel reservations should be made early by communicating with the Fort Des Moines Hotel or Dr. Walter L. Bierring, Iowa Member of the program committee, Des Moines.

The following is a partial list of the eminent members of the profession who have accepted places on the program:

Sir Robert A. Falconer, President of the University of Toronto, Toronto, Canada.

Dr. Fred H. Albee, Prof. of Orthopedic Surgery, New York Post-Graduate Medical School, New York, N. Y.

Dr. Edward William Archibald, Associate Prof. of Clinical Surgery, University of McGill, Montreal, Canada.

Dr. William S. Baer, Associate Prof. of Orthopedic Surgery, Johns Hopkins University, Medical School, Baltimore, Md.

Dr. William Bartlett, St. Louis, Missouri.

Dr. Frederic Atwood Besley, Prof. of Surgery, Northwestern University, Medical School, Chicago, Illinois.

Dr. Francis G. Blake, Prof. of Medicine, Yale University, School of Medicine, New Haven, Conn.

Dr. Hugh Cabot, Dean & Prof. of Surgery, University of Michigan, Medical School, Ann Arbor, Michigan.

Dr. Richard Cabot, Prof. of Medicine, Harvard University, School of Medicine, Boston, Mass.

Dr. Frederic J. Cotton, Associate in Surgery, Harvard University, School of Medicine, Boston, Mass.

Dr. George W. Crile, Prof. of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio.

Dr. Byron B. Davis, Prof. of Clinical Surgery, University of Nebraska, School of Medicine, Omaha, Nebr.

Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. Charles P. Emerson, Dean & Prof. of Medicine, Indiana University, School of Medicine, Indianapolis, Ind.

Dr. John F. Erdmann, Prof. of Surgery, New York Post-Graduate School of Medicine, New York, N. Y.

Dr. Robert E. Farr, Minneapolis, Minnesota.

Dr. Charles H. Frazier, Prof. of Neurosurgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. Leonard Freeman, Prof. of Surgery, University of Colorado, School of Medicine, Denver, Colorado.

Dr. Willis D. Gatch, Prof. of Surgery, Indiana University, School of Medicine, Indianapolis, Ind.

Dr. William A. Jenkins, Prof. of Medicine and Clinical Medicine, University of Louisville, School of Medicine, Louisville, Ky.

Dr. Elliott P. Joslin, Prof. of Clinical Medicine, Harvard Medical School, Boston, Mass.

Dr. Frank C. Knowles, Prof. of Dermatology, Jefferson Medical College, Philadelphia, Pa.

Dr. Dean Lewis, Prof. of Surgery, Rush Medical College, Chicago, Ill.

Dr. Charles F. Martin, Prof. of Medicine, McGill University, Faculty of Medicine, Montreal, Canada.

Dr. Charles H. Mayo, Mayo Clinic, Rochester, Minn.

Dr. William J. Mayo, Mayo Clinic, Rochester, Minn.

Dr. Charles N. Meader, Dean and Prof. of Medicine, University of Colorado, School of Medicine, Denver, Colorado.

Dr. Oliver H. Pepper, Assistant Prof. of Medicine, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. Canby G. Robinson, Dean and Prof. of Medicine, Vanderbilt University, School of Medicine, Nashville, Tenn.

Dr. Ernest Sachs, Prof. of Clinical Neurosurgery, Washington University, Medical School, St. Louis, Mo.

Dr. Clarence L. Starr, Prof. of Surgery, University of Toronto, Faculty of Medicine, Toronto, Canada.

Dr. William S. Thayer, Emeritus Prof. of Medicine, Johns Hopkins University, School of Medicine, Baltimore, Md.

Dr. Allen Whipple, Prof. of Surgery, Columbia University, College of Physicians and Surgeons, New York, N. Y.

Dr. Hugh H. Young, Clinical Prof. of Urology, Johns Hopkins University, Baltimore, Maryland.

THE DREYER TUBERCULOSIS VACCINE.

Newspapers have carried extended notices of the Dreyer so-called "defatted" tuberculosis vaccine. Many inquiries have been received, indicating that, with ever-watchful hopefulness, physicians and patients are still alert for news of any promising announcement of a successful specific treatment for tuberculosis. The complete report of the researches conducted by Professor Dreyer, of the department of pathology in Oxford University, appears in the *British Journal of Experimental Pathology* for June, and an extensive abstract is available in the *British Medical Journal* for June 23, 1923, both just received.

It has long been known that the tubercle bacillus has a coating of waxy or fatty material, generally called lipoidal substances. Experiments conducted in this country and elsewhere seem to indicate that the virulence of organisms rests, to some extent, on the concentration of such lipoids in their coats or capsules. As Dreyer says, "there was an *a priori* probability that the failure to produce immunization was due to them." It seems quite possible, as Dreyer reiterates, that these substances protect the specific bacterial proteins and prevent their liberation from the body of the bacterium, thus checking or completely stopping the production of the sole adequate stimulus of the immunity reaction of the infected body. In view of these facts, it was determined to attack the problem by attempting the removal of the lipoidal elements from various bacterial organisms of the acid-fast and gram-negative types. Such organisms are commonly prepared for staining by treatment with formaldehyde and acetone, and the British pathologists were able to devise a method for the preparation of "defatted" antigens, using these two substances. The method is thus described:

Tubercle bacilli are grown on the surface of glycerin broth or other suitable liquid mediums for two or three weeks. The fluid is decanted off and the organisms are ground up in a mortar with a few drops of liquor formaldehyde. More formaldehyde is gradually added with constant grinding until from 150 to 200 c.c. of the liquor formaldehyde have been added to each 5 grams of bacilli weighed wet. This suspension is heated in a flask to 100 C. for four hours, filtered, and the residue washed three or four times with acetone. The suspension is then filtered through, calcium-free paper, and the residue extracted three or four times with acetone and then in a Soxhlet apparatus. The insoluble residue is dried and ground in a sterile mortar. A weighed quan-

tity is ground up with sterile saline solution to a paste, more saline being added during the grinding. It is then centrifuged. The supernatant fluid is pipetted off and, when diluted with saline, containing formaldehyde, constitutes the antigen suspension. There are, of course, many details of standardization and measurement of dosage to be observed, and these are given in full in the complete article.

In brief, such experimental evidence as is available indicates that the injection of this antigen produces antisubstances in the serum which are demonstrable by test tube experiments. Four guinea-pigs subjected to experimental tuberculosis seemed to show signs of immediate healing when treated with the vaccine. Finally, it is the opinion of Drs. Paul Fildes and G. T. Western, after observation of sixty patients treated in the London Hospital with the new antigen, that "improvement has taken place in nearly all cases and is, in our opinion, of the order which exceeds obviously that obtainable by any other form of treatment which is applicable to these conditions." It was also their opinion that the specific vaccines prepared by this method and used in six cases of streptococcal infection, seventeen cases of staphylococcal infection, and five cases of gonorrhoea, produced results which compared favorably with previous experiments with vaccine-treated cases but which were not so interesting as those with the tuberculosis cases.

The waxy capsule of the tubercle bacillus has long excited the interest and curiosity of research workers. In their excellent compilation of the chemistry of tuberculosis, Wells, DeWitt and Long trace these investigations through the literature of many countries. Last year Long and Campbell determined the proportion of total tubercle bacillus lipin present as wax, and immunologic experiments seem to indicate that the virulence of the organism bore some relation to the amounts of wax in the capsule. In fact, experiments have been made with vaccines made from the waxy portion of the organism.

It is unnecessary, of course, to remind our readers that this work is in the experimental stage, at least so far as it concerns the treatment of tuberculosis. The experiments are scientific and have good theoretical basis: future developments will be observed with great interest.—*Jour. A. M. A.*, July 14, 1923.

INSULIN TREATMENT OF POSTOPERATIVE (NON-DIABETIC) ACIDOSIS

William Thalheimer, Milwaukee (*Journal A. M. A.*, Aug. 4, 1923), has treated three cases of postoperative acidosis with insulin, causing almost immediate cessation of vomiting and ketosis. The improvement in two cases was quite as rapid and as dramatic as is caused by insulin in diabetic coma. In the third case, the improvement was not as rapid at first with a small dose of insulin, but the condition rapidly cleared up with larger doses.

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

- The Handbook of Tuberculosis.** By John Ritter, M. D. J. B. Lippincott Co., Philadelphia. 1923. \$2.50.
- Applied Psychology for Nurses.** By Prof. D. A. Laird. J. B. Lippincott Co., Philadelphia. 1923. \$2.50.
- Senile Cataract.** By W. A. Fisher, M. D., and collaborators. Chicago Eye, Ear, Nose and Throat College. Illustrated. 1923. \$2.50.
- The Life of Pasteur.** By Rene Vallery-Radot. Doubleday, Page & Co., New York. 1923. \$3.00.
- Intelligence Measurement.** By S. C. Kohs, Ph. D. The Macmillan Co., New York. 1923. \$3.00.
- Diseases of the Rectum, Anus and Colon.** By Samuel G. Gant, M. D., LL. D. W. B. Saunders Co., Philadelphia. Three octavo volumes, 1616 pages, 1128 illustrations, and 10 color insets. 1923. Cloth, \$25.00 net.
- The Riddle of the Rhine.** By Victor Lefebure. E. P. Dutton Co., New York.
- The Rose in America.** By J. H. McFarland. The Macmillan Co., New York. 1923. \$3.00.
- As I Was Saying.** By Burges Johnson. The Macmillan Co., New York. 1923. \$2.50.
- Men Like Gods.** By H. G. Wells. The Macmillan Co., New York. 1923. \$2.00.
- The Wisconsin Blue Book.** By Fred L. Holmes and collaborators.
- The Interpretation of Dreams.** By Prof. Sigmund Freud, LL.D. The Macmillan Co., New York. 1923.
- The Vaso-Motor System.** By Sir W. M. Bayliss. Illustrated. Longmans, Green & Co., New York. 1923. \$2.50.
- Diseases of the Skin.** By Robert W. MacKenna, M. D. Illustrated. William Wood & Co., New York. 1923.
- The New Physiology in Surgical and General Practice.** By A. Rendle Short, M. D. Fifth Edition. William Wood & Co., New York. 1923.
- Suggestion and Common Sense.** By R. Allan Bennett, M. D. William Wood & Co., New York. 1923.
- Health Building and Life Extension.** By Eugene Lyman Fisk, M. D. The Macmillan Co., New York. 1923. \$3.50.
- Nursing and Nursing Education in the United States.** By The Committee for the Study of Nursing Education. The Macmillan Co., New York. 1923. 585 pages. \$2.00.
- Tobacco and Mental Efficiency.** By M. V. O'Shea. The Macmillan Co., New York. 1923. \$2.50.
- A Manual of Corrective Gymnastics.** By Louisa C. Lippitt. The Macmillan Co., New York. 1923.
- The Patient's Viewpoint.** By Pamel J. Flagg, M. D. The Bruce Publishing Co., Milwaukee. 1923. \$1.30.
- Legal Medicine and Toxicology.** By many specialists. Edited by Frederick Peterson, M. D. Manager Craig Colony for Epileptics; Prof. Walter S. Haines, Rush Medical College; and Ralph W. Webster, M. D., Asst. Prof. Rush Medical College. Second edition. Two Octavo volumes. 2,268 pages, 334 illustrations, including 10 insets in colors. W. B. Saunders & Company, Philadelphia and London. 1923. Cloth, \$20.00 net.
- Inflammation in Bones and Joints.** By Leonard W. Ely, M. D. Illustrated. J. B. Lippincott Co., Philadelphia. 1923.
- Social Work in the Light of History.** By Stuart Alfred Queen, Ph.D. J. B. Lippincott, Philadelphia. 1923.
- Applied Pharmacology.** By A. J. Clark, M. C. Illustrated. P. Blakistons Son & Co., Philadelphia. 1923.
- Pathological Physiology of Surgical Disease.** By Prof. Dr. Franz Rost. P. Blakistons Son & Co., Philadelphia. 1923.
- The Form and Functions of the Central Nervous System.** By Frederick Tilney, M. D., and Henry A. Riley, M. D. Illustrated. Second Edition. Paul B. Hoeber, New York. 1923. \$12.00.
- The Surgical Clinics of North America.** The New York Number, April, 1923. W. B. Saunders Co., Philadelphia. London. Per Clinic Year, paper, \$12.00; cloth, \$16.00.
- The Heart in Modern Practice.** By Wm. D. Reid, M. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co.
- Nutrition of Mother and Child.** By C. W. Moore, M. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- Labyrinth & Equilibrium.** By Samuel S. Maxwell, M. S., Ph. D. 1923. J. B. Lippincott Co., Philadelphia. \$2.50.
- Essentials of Surgery.** By Archibald L. McDonald, M. D. Illustrated. 1923. J. B. Lippincott Co., Philadelphia \$2.50.
- Physics and Chemistry for Nurses.** By A. R. Bliss, M. D., and A. H. Olive, A. M. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- How We Resist Disease.** By Jean Broadhurst, Ph. D. Illustrated. 1923. Philadelphia. J. B. Lippincott Co. \$2.50.
- Nursery Guide.** By Louis W. Sauer. Illustrated. 1923. St. Louis. C. V. Mosby Co. \$1.75.
- How to Eat in Health and Disease.** By Benjamin Harron, Ph. D. Illustrated. 1923. New York. E. P. Dutton & Co.
- The Omnipotent Self.** By Paul Bousfield, M. R. C. S. 1923. New York. E. P. Dutton & Co.
- Textbook of Pediatrics.** Edited by Prof. E. Feer. Translated and edited by Julius Parker Sedgwick, B. S., M. D., and Carl Ahrendt Scherer, M. C., F. A. O. P. J. P. Lippincott & Co., Philadelphia.
- Feeding Diet and the General Care of Children.** By Albert J. Bell, A. R., M. D. F. A. Davis Co., Philadelphia.

BOOK REVIEWS

Text Book of Therapeutics including the Essentials of Pharmacology and Materia Medica. By A. Stevens, M. D., Professor of Applied Therapeutics, University of Pennsylvania, Philadelphia. Sixth edition, entirely reset. Octavo of 793 pages. Philadelphia

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and London: W. B. Saunders Company, 1923. Cloth, \$6.25 net.

Many changes have been made in the new sixth edition of this standard text. Sections have been entirely rewritten and the properties, actions and uses of many new drugs have been considered. The section devoted to applied therapeutics has been brought as nearly as possible up to date. References to many new agents appear for the first time. The work is too well known and too highly regarded to need extensive comment here.

Medical State Board Questions and Answers. By R. Max Goepf, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Professor of Clinical Medicine, Jefferson Medical College. Fifth Edition. Thoroughly Revised. Octavo volume of 731 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$6.00 net.

This is a work with which our readers are more or less familiar. The fifth edition has been thoroughly revised and a number of additions have been made to the text. Essential developments of the last few years and those which may be expected to furnish new questions have been included. It is a thorough but concise work of 731 pages and of unquestioned value to those preparing for a state board examination.

1922 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 1394 pages, 488 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$13.00 net.

The Collected Papers of the Mayo Clinic has become an annual event in medical literature and represents unquestionably the most valuable collection of current medical research published in book form. The Journal has commented each year on the excellence of the publication and has urged its importance on its readers. Nearly one hundred men have contributed to the present volume which is arranged under such general divisions as the alimentary tract, urogenital organs, ductless glands, blood and circulatory organs, skin and syphilis, etc. It is a work of 1400 pages and covers so wide a field that an extensive review in this column would be quite impossible. Any practitioner of medicine will do well to subscribe for this series, placing a standing order for each year.

Excursions into Surgical Subjects. By John B. Deaver, M. D., Emeritus Professor of Surgery, University of Pennsylvania; Surgeon-in-Chief, Lankenau Hospital, Philadelphia; and Stanley P. Rieman, M. D., Assistant Professor of Experimental Pathology, University of Pennsylvania; Chief of the Department of Pathology and Bacteriology, Lankenau Hospital, Philadelphia. Octavo volume of 188 pages and 30 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$4.50 net.

The first five excursions in the present volume represent a series of lectures at Washington University in 1922. Of the other three, one has been published in the Journal A. M. A. and the two are published for the

first time. The subjects covered are peptic ulcer, jaundice, diseases of the bile passages, the intestinal tract, Pasteur, medical education and educators and living pathology. These are an interesting, well written series of essays which the friends and admirers of Doctor Deaver will be glad to have in bound form.

Primitive Mentality. By Lucien Levy-Brubl, translated by Lillian A. Clare. New York: The Macmillan Company, 1923.

This is a sequel to the gifted author's earlier work on the mental functioning of primitive peoples. The author shows the orientation peculiar to the primitive mind, what data it has at command, how it acquires them and what use it makes of them—in short, what the limits and the content of its experiences are. He differentiates and describes certain mental practices characteristic of primitives and shows how and why they differ from our own. The work deals with the primitive indifference to secondary causes; mystic and invisible forces; dreams; omens; the practices of divination; ordeals; the mystic meanings of accidents; misfortunes; the white man's coming, etc. It is a noteworthy work of deep psychological interest but one which will hold and fascinate the medical mind.

What to Eat. By Benjamin Harrow, Ph. D. New York. The E. P. Dutton Company, 1923.

This is a non-technical, yet reliable and scientific guide for those who want to know what to eat and why. It is a resume of our knowledge of foods and feeding with a chapter on anatomy and physiology of the digestive tube. It answers questions put to the doctor every day and is a safe book to put in the hands of the patient.

Transactions of the College of Physicians of Philadelphia. Third series—Volume 44. 1922.

A splendid collection of papers read before the college during the past year and published in book form. Cloth, 600 pages.

Constipation. By William S. Walsh, M. D., New York: E. P. Dutton Company, 1923.

The author states that \$50,000,000 are spent each year in the United States for proprietary remedies for constipation. If this is true, and we do not doubt it, there is plenty of reason for lay books on the subject. Few consult the physician for the trouble but resort to self medication. It is a field for public enlightenment which has been sorely neglected.

Stuttering, Lispering and Correction of the Speech of the Deaf. By E. W. Scripture, M. D. Second edition. New York: The Macmillan Company, 1923.

No groups of unfortunates surely have been more neglected by the medical profession than stutterers, lispers and the deaf and this is not to our credit. The author, formerly of Yale and Columbia, makes plain that stuttering is a disease of the mind and not a disturbance of the nervous mechanism of speech. He con-

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firms his opinions in the first volume ten years ago. A new part of this edition introduces a much needed reform into the instruction of the deaf. It is a splendid and much needed work for the teacher and the physician alike.

A Practical Treatise on the Causes, Symptoms and Treatment of Sexual Impotence. By William J. Robinson, M. D. Eleventh Edition. New York: The Cosmopolitan Press, 1923.

Insanity and the Criminal Law. By William A. White, M. D. New York: The Macmillan Company, 1923.

The well known author and scientist sets forth his opinion that "The time has arrived for the law to take some cognizance of what has been accomplished" through the practical application of modern psychiatry to the problems of human behavior and adjustment. He shows why this is feasible and how it can be done. Here is a work for the doctor to read and hand to the Jurist. It is high time to study abnormal behavior before punishing it. Let's have some diagnosis before treatment is prescribed.

Collected Reprints from the Department of Experimental Surgery. New York University and Bellevue Hospital Medical College. Volume 3—1920-1922.

Optotypes. By John Green, M. D. St. Louis: C. V. Mosby Company, 1923. Paper cover, 24 pages. 35 engraved plates.

Consisting of test letters and pictographs for measuring the acuteness of vision.

Tonsillectomy. By Greenfield Sluder, M. D. St. Louis: C. V. Mosby Company, 1923. Price \$5.00.

The object of Doctor Sluder's work is to present "The method of Tonsillectomy by means of the eminence of the mandible and a guillotine." It has been a difficult subject to present but the author has secured an artist who has succeeded in portraying the successive stages of the operation wonderfully well. This is a work which will stand out for years to come and should be in the hands of all surgeons doing this work. We would, too, compliment the publishers for their share in this successful publication.

The Tonsils. By Harry A. Barnes, M. D. St. Louis: C. V. Mosby Company, 1923. Illustrated. Price \$5.00.

This is a complete work of 200 pages on "The Tonsils—faucial, lingual and pharyngeal, with some account of the posterior and lateral pharyngeal nodules," by Dr. Barnes of Harvard University. It is the second edition of a well known treatise published some nine years ago. It has been entirely rewritten and brought up to date. It is a fit companion to Sluder's work reviewed in this issue and is equally necessary to an up-to-date library on the subject.

CURING PRINCE DON JAIME'S DEAFNESS AGAIN.

Prince Don Jaime, second son of the king of Spain, has been deaf since his birth. More than three years ago the "International Feature Service," which furnishes lurid and sensational "features" for the string of Sunday newspapers that it serves, carried a full page article detailing in typical Sunday newspaper style the alleged cure of the young prince by a London "bone-setter." According to the article, the bone-setter explained that the young prince's affliction was "caused by displacements of the atlas and axis bones of the neck" which, he went on to state, "produced a pressure on the great auditory nerve to the ear and caused deafness." The bone-setter, the story ran, "corrected this displacement" and "the boy immediately began to hear." At the time, *The Journal* investigated the matter and found that the claims were sheer buncombe. Soon after this article appeared, osteopathic colleges and individual osteopaths reproduced it in full and claimed that the wonder-working Londoner was a member of their cult. Chiropractors did the same thing. This was in 1920. Now, in August, 1923, the papers of the country are carrying news items to the effect that one "Dr." Curtis H. Muncie, a Brooklyn osteopath, has just returned from Europe where, according to earlier newspaper reports, he had been called to treat Prince Don Jaime. According to the report in the *New York Times*, Muncie, after a manipulation, cured the prince of his ailment. From the same source we learn that Muncie declared that the lad's deafness was due to "a state of complete deformity" of the eustachian tubes, and Muncie's treatment was simply that of "reconstructing the eustachian tubes"—a mere bagatelle for an osteopath. Presumably, we may look for another advertising campaign on the part of osteopaths and chiropractors detailing the marvelous results that these gentry are able to obtain. Meanwhile Prince Don Jaime is still deaf!—*Jour. A. M. A.*, Aug. 11, 1923.

INSULIN IN TISSUES OTHER THAN THE PANCREAS.

C. H. Best and D. A. Scott, Toronto (*Journal A. M. A.*, Aug. 4, 1923), have been able to prepare active extracts from the submaxillary, thymus and thyroid glands and from liver, spleen and muscle tissue. These extracts have been repeatedly tested on normal rabbits and have consistently produced a marked lowering of the blood sugar of these animals. A large dose produces typical insulin convulsions in the rabbits. The convulsions are alleviated by the administration of dextrose. The number of units obtainable from 1 kg. of thymus or submaxillary gland tissue exceeds that originally obtained from pancreatic tissue. This yield is, however, only a small fraction of that obtained when pancreatic tissue is treated by the present procedure. The authors have secured results which tend to indicate that this substance, which we believe to be insulin, is excreted in somewhat greater amounts by pregnant women than by normal men. Insulin is present in every tissue they have investigated.

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ORIGINAL ARTICLES

THE DIAGNOSIS AND TREATMENT OF BRAIN TUMORS.*

BY WALTER E. DANDY,

FROM THE DEPARTMENT OF SURGERY, THE JOHNS HOPKINS
UNIVERSITY AND HOSPITAL.

All lesions become more frequent as our acquaintance with them grows. If we hark back but a very few years, appendicitis was unknown, then very rare, and finally a very common ailment. The same story is true of any number of lesions. The great educator of true perspective is necropsy and operation. Brain tumors are passing through the rare stage because neither necropsy material nor operative inspections have checked mistaken diagnoses. But in a few clinics intensive studies have shown not only that brain tumors are among the most frequent tumors of the body, but during the first six decades, particularly from the 2nd to 5th decades, tumors are among the most common afflictions of the central nervous system.

The results of the long struggle in the solution of appendicitis should teach us much about the fundamental treatment of brain tumors, and prevent many of the sad chapters in its story when told in later years. Two accomplishments have transformed a prohibitive mortality in the treatment of appendicitis into one which should be practically nil—first and foremost, an early and accurate diagnosis and (2) an early and efficient operative procedure which eradicates the cause.

In the treatment of brain tumors the same two factors are all-important, and in addition there is the third great factor—*localization* of the tumor. Although the diagnosis and localization of appendicitis are nearly synonymous, the same is far from true in brain tumors. In fact, the localization of brain tumors has been the most difficult phase of this complex neurological problem.

It is doubtless known to you all that tumors as large as one's fist are still compatible with life and without giving the slightest evidence of their situation. For many years it has been possible to

know that a patient was afflicted with a tumor, but we have not been able to tell where it was located. With such inadequate information, it is clear that operative results must be very poor. Without accurate information, I should venture the assertion that in the hands of the very best operators, less than one-third of all explorations for brain tumors would actually disclose the tumor at the first operation. In fact, so discouraging have been explorations for tumors of the brain, that except when the location of the tumor seems clear, the palliative decompressive operation has become more or less routine. Obviously, such treatment is most unsatisfactory. There is only one way to cure a patient with a brain tumor, and that is by a complete extirpation of the growth by operation. Decompressions have been justifiable only because the location of the tumor has been unknown. If the location of the tumor is known, any treatment which delays or is palliative, is no more justifiable than delay or palliation in appendicitis.

Although the rate of growth of brain tumors is variable, a fatal outcome is almost inevitable. But we have many warnings of this impending calamity. Tumors cause headache, destroy vision, produce paralyses, convulsions, speech and mental and other disturbances, and most of these changes are progressive. The great hope for patients afflicted with brain tumors lies in the earliest possible diagnosis. To do this, it is incumbent upon us to suspect a tumor when any symptom or sign referable to the central nervous system makes its appearance. Fortunately, it is now possible by the use of cerebral pneumography—i. e., roentgenography of the brain after the injection of air into its ventricles or subarachnoid spaces—to diagnose and also to localize practically all brain tumors which cause pressure, and in the early stages of the tumor's growth. This being possible, the problem of handling brain tumors is greatly simplified.

The treatment of tumors is now reduced to a single simple formula: complete extirpation when the nature and location of the growth make this possible; and when impossible of removal, then and only then to produce the maximum decom-

*Read before the State Medical Society of Wisconsin at Green Lake, Wisconsin, Sept. 6, 1922.

pression for palliation. Unfortunately, some brain tumors, by virtue of their infiltrating character, do not permit extirpation. In other instances, removal is precluded because of the invasion of the brain-stem, speech centers, or other vital parts of the brain. There are, however, many non-encapsulated growths in silent areas of the brain which, if detected early, can be completely removed. The so-called silent areas of the brain were formerly the greatest handicaps to cerebral surgery because they prevented diagnosis or localization of the growths owing to the absence of signs or symptoms. Formerly, it was necessary to perform palliative operations until the tumor grew beyond the confines of the silent brain and produced paralysis or other focal destructions of the contiguous brain with recognizable functions. Now these silent areas are the greatest assets for the success of brain surgery; for, the localization now being possible in another way, extirpation of the growth can be done with contiguous silent areas of the brain, when necessary, and still leave the patient without noticeable defects.

I have said that practically all brain tumors should now be localized and at once. Brain tumors give rise to two types of signs and symptoms: (1) localizing symptoms and (2) general pressure symptoms. If the former are present, the localization is automatically made. Their consideration need not detain us. But the overwhelming proportion of brain tumors give rise to so-called pressure symptoms, and it is to the consideration of this difficult problem of localization that I wish particularly to call your attention. As you know, the craniovertebral chamber is a closed and fixed space and its contents—blood, cerebrospinal fluid, and brain tissue—are almost totally incompressible. For this reason, a new growth is tolerated only by a compromise with these intracranial contents, and this compromise gives the warning signs: headache, nausea and vomiting, choked disc, etc.

Probably all brain tumors which produce intracranial pressure, produce (as an expression of this compromise) changes in the size, shape or position of the ventricles and subarachnoid spaces of the brain. If the fluid from these spaces is removed and air is substituted in its place, these changes in size, shape and position will be accurately registered in roentgenograms of the head. It is, therefore, clear that if these alterations are known.

the location of the cause which produces them (the tumor) can be deduced. I will now show you a series of lantern slides which will explain the localizations of brain tumors from every part of the brain. In many instances the localizations have been so precise as to permit transcortical incisions of great depth to find the tumor at operation, and often to remove successfully tumors which otherwise could never be found except at necropsy.

I should not wish to leave you with the impression that this is a simple and harmless procedure. Unfortunately, it is the reverse. It is both complicated and dangerous. The interpretation of the air shadows is difficult and is all-dependent on the intimate knowledge of intracranial anatomy and physiology. Its danger is shown by the fact that I have had 3 deaths in my first 100 injections. However, in over 400 since then, there has been none. This is owing to the fact that I have learned how to eliminate the dangers. Air is an irritant. When the ventricular channels are blocked, its absorption is prevented; a sero-sanguinous exudate results from its irritation; and this produces a marked accentuation of pressure symptoms. Many patients are so ill that this additional pressure could not be tolerated. To prevent this complication, the air should be removed as soon as possible after the skiagrams are completed. If the quantity of air injected is large (30 cc. or more) either the original ventricular fluid or saline solution may be replaced. In safe hands, the procedure is now without great danger. It seems inadvisable, at least at the present time, that a risk so great as the use of air requires, should be assumed except by a competent neurological surgeon.

Lantern slides were then shown as follows:

1. *Tumors of the Frontal Lobe.* The localizations were made by dislocation of both lateral ventricles and the 3rd ventricle away from the tumor (anteroposterior view). Often the homolateral ventricle, and at times also the 3rd ventricle, were obliterated. The 3rd ventricle, when present, takes an oblique instead of a normally upright position (anteroposterior view); ventricular filling defects on the side of the tumor (lateral views).

2. *Tumors of the Temporal and Parietal Lobes.* Practically the same pictures as frontal lobe tumors, though with more pronounced filling defects. There may be elevation of the descend-

ing horn of the ventricle in temporal lobe tumors. Parietal tumors may dislocate the body of the ventricle downward, broaden its diameter and shorten its height, or narrow its diameter and increase its height, depending on the exact position of the tumor.

3. *Tumors of the Occipital Lobe.* The lateral dislocation of the anterior horns of the ventricle (anteroposterior view, occiput down), is less than in frontal, temporal and parietal tumors, and may even be absent. Filling defects of the ventricles and alterations in size, position and shape of the ventricles.

4. *Ventricular Tumors.* Filling defects in ventricles and evidences of hydrocephalus from closure of the ventricles. A small tumor in the body of the lateral ventricle showed a normal ventricle anterior to the tumor and hydrocephalus of the ventricle posterior to it. The sharp anterior and posterior margins of the tumor were shown by the abrupt lines of termination of the air shadow. A tumor of the 3rd ventricle showed a bilaterally symmetrical hydrocephalus, but with no communication between the two lateral ventricles and with absence of the 3rd ventricle.

5. *Tumors Producing Symmetrical Dilatation of the Lateral Ventricles With Intercommunication.* This line of tumors included (1) suprapituitary tumors growing upward and occluding the aqueduct of Sylvius, (2) pineal tumors, (3) tumors contiguous to the pineal and 3rd ventricle, (4) tumors in various parts of the posterior cranial fossa (cerebellum, cerebellopontine angle, brain-stem and 4th ventricle). All of these tumors block the inter or 4th ventricle. In one instance a shadow of a suprapituitary tumor was seen in the air background of the dilated ventricles; its presence could not be detected except in the presence of air. This has been an important finding in many other tumors situated elsewhere. In another case of suprapituitary tumor, the tumor had grown lateralwards and blocked one lateral ventricle and partially obliterated the 3rd ventricle. A pineal tumor was shown causing dilatation of the ventricles with partial obliteration of the 3rd ventricle, and a large shadow of calcification in the air background.

An endothelioma arising from the leptomeninges near the pineal produced a great hydrocephalus of both lateral ventricles, partial obliteration

of the 3rd ventricle, and a great filling defect of the left lateral ventricle.

Various tumors of the posterior cranial fossa produce dilatation of the 3rd and both lateral ventricles. A case of cicatricial closure of the foramen of Magendie was shown (with dilated lateral and 3rd and 4th ventricles). After a new foramen of Magendie had been constructed, the air could be seen in the cisterna magna and the cerebral sulci (indicating that the new foramen was patent several weeks after the operation). He has since remained well (now 4 years). Another case was shown in which a tremendously dilated cisterna interpeduncularis extended upward and produced a great filling defect in the left lateral ventricle. Both lateral ventricles were of enormous size owing to the obstruction in the cisterna.

CONSTRUCTIVE HEALTH ACTIVITIES IN PUBLIC SCHOOLS.

An efficient school health service, in the opinion of John Sundwall, Ann Arbor, Mich. (*Journal A. M. A.*, Aug. 4, 1923), must include the following interests and activities:

A. Personal phase: 1. Promotion of health (personal hygiene). (a) Physical examinations; (b) bureau of records (follow-up system); (c) provisions for maintaining positive health; (d) prevention and correction of defects—postural defects and those due to disease, defects of special senses, teeth, tonsils, etc.; (e) mental hygiene—prevention and correction of emotional instability, potential neuropaths. 2. Prevention of communicable diseases (community hygiene). (a) Early detection of communicable diseases in the school; (b) isolation and treatment of those affected or exposed. Here cooperation with the city's health department, with the homes, with social agencies, and with visiting nurses, etc., is essential. (c) Blocking the routes taken by communicable diseases; prophylactic measures—vaccination, inoculation, etc.

B. Environmental phase (sanitation). (a) Location, construction, ventilation, heating and lighting of school building; (b) adequate floor space, seats and desks adapted to pupils; (c) sewage disposal, water, milk, food supply; (d) playground facilities—space, equipment, etc.; (e) sanitation of school building and playground; (f) sanitation of homes through cooperation with outside health agencies.

C. Educational phase (teaching of hygiene). (a) Graded instruction in health promotion and disease prevention, with auxiliary lectures, placards, posters, moving pictures, etc., for each year; (b) inculcation of keen and impelling appreciation of health and the duty of each individual to himself, to society and to his country to maintain at all times health physical efficiency; (c) instilling lasting health habits.

ECTOPIC GESTATION WITH REPORT OF CASES.*

BY THOMAS W. NUZUM, M. D.,

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Ectopic gestation occurs sufficiently often, is attended with such alarming symptoms, and if not early recognized and properly treated is attended with so high a mortality rate that it is properly classed as one of the major causes of an acute abdomen.

The primary attachment occurs in the tube in the majority of instances, and when the tube becomes over distended, which occurs at the end of 4-8 weeks, it ruptures, causing more or less severe pain, shock and hemorrhage, often accompanied by vomiting and syncope, at which time the foetus dies or the ovum becomes attached to some of the surrounding viscera, also retaining some attachment to the ruptured tube.

From this time on the ovum continues to grow and form for itself a sack composed of the uterus, broad ligaments, omentum and intestines, a number of cases having been recorded where full term pregnancy was reached.

1. The most frequent cause of this condition is tubal disease, this making the descent of the impregnated ovum from the peritoneal cavity to the uterus through the tube more or less difficult and slow.

2. Double uterus with more or less deformity of the tube.

3. Sterility from lack of development, stricture of the tube, peritoneal adhesions or accessory tubal ostia.

The intestines, omentum, uterus, broad ligaments and peritoneum become vascularized and so firmly attached as to form a portion of the sack from which it is quite impossible to separate them.

The ovum may rupture into the broad ligaments, and there develop, or the fertilized ovum may remain in the ruptured Graafian follicle. Williams has proved that the fertilized ovum has traveled from the opposite side from the corpus luteum and may have become enlarged to such an extent as to become stuck in the tube.

A history of gonorrhoeal salpingitis has been found in 66% of the cases by Kustner.

Obritz found adhesions of the tips of the fimbriae in fifteen out of twenty-three cases. Mandel and Schmidt ligated one tube in fertilized rabbits and pregnancy occurred in the distal end of the ligated tube and in the opposite tube; when both were ligated they developed in the distal end of each; when the ligatures were applied to the uterine ends extra uterine pregnancy did not occur though dead ovum were found in the tubes.

2. On physical examination the uterus is enlarged, the parts are blue and congested and the uterus is pushed to one side when the ovum has obtained considerable size. Often a decidua is shed which is a complete cast of the inside of the uterus; this has diagnostic significance when found.

The early symptoms are: 1st, missed or unnatural menstrual period followed by more or less dribbling as a rule, and breast phenomena which are common to early pregnancy. 2nd, at the end of 4, 6 or 8 weeks, a sudden attack of pain, faintness, shock and maybe nausea and vomiting occurs from which the patient may rally after a time, unless the amount of hemorrhage is great and continues in which case prompt surgical relief is necessary to prevent a fatal issue.

Rupture may take place into the broad ligaments in which case the foetus may continue to develop and possibly go on to term, or into the peritoneal cavity where the fate of the ovum will depend upon the amount of hemorrhage or whether the placental attachment has remained intact in which case abdominal pregnancy may occur as in one case here reported.

Diagnosis: By bimannual examination one can determine before rupture takes place that there is a small tumor mass in one fornix, and this in connection with the symptoms will warrant one in making the diagnosis.

Many cases, when the rupture takes place early and hemorrhage is not extreme, recover without a diagnosis having been made, or the symptoms are attributed to miscarriage and the uterus is curetted as I have many times observed, or diagnosed as appendicitis, uterine colic, or merely colic.

I have even known cases where the symptoms were alarming, and the amount of hemorrhage quite large and the necessity of immediate operation seemed urgent, recover after evacuation of a so-called pelvic hematocele.

The diagnosis is usually easy if one can secure

*Read before the Tri-State District Medical Association.

a careful and intelligent history and link this with the physical findings.

The missed or unnatural period, the dribbling over a period of weeks, breast symptoms which are strongly suggestive of pregnancy, attacks of pain more or less severe, the sudden onset of pain, collapse, shock, syncope, nausea and maybe vomiting are all indicative, and likely in a short time to show evidence of severe or extreme loss of blood, such as rapid feeble pulse, pale, blanched countenance, nausea, sub-normal temperature, and cold clammy sweat, and upon bimanual examination one can determine the presence of a mass at the side of, or posterior to the uterus.

Differential Diagnosis:

1st. Without a careful history one might easily mistake the condition for an appendiceal abscess, especially where the mass is on the right.

2nd. A ruptured stomach or duodenal ulcer seldom occurs without a history of digestive disturbances of a recurrent nature which have extended over a long period of time. The sudden onset following a full meal, the intensity of the pain, the location of the pain, is quite in contrast with that of a ruptured ectopic.

3. A gangrenous or ruptured gall bladder would give symptoms much like the former and here one must consider the history of former digestive disturbances, attacks of colic with pain extending to the right scapula, jaundice, more or less marked tenderness and rigidity in the hepatic region, and a palpable mass which may often be made out below the liver margin.

4. A cyst with a twisted pedicle may cause menstrual disturbances which simulate a ruptured ectopic but the symptoms come on more gradually and are less severe and unless there is much peritonitis and distention one can outline the tumor by bimanual examination.

5. A diverticulum with obstruction of the bowels gives a history of former attacks of pain of a colicky nature, the pain comes in paroxysms, often the peristalsis can be seen and felt on the surface, vomiting is severe and soon becomes fecal, great shock and prostration quickly supervene, more especially if the small intestine is involved, and without speedy relief the patient dies of toxemia.

6. Pus tubes are usually bilateral. There is a history of vaginal discharge, urinary disturbance,

and often menstrual disturbance, with aggravation of the pain at that time.

Physical examination reveals the uterus "eingemauert," or set in a stone wall, as the German express it.

In some cases the diagnosis may still be in doubt, but there is very evident an acute abdominal condition which requires immediate surgical relief.

The prognosis in the vast majority of cases, is grave without early surgical intervention; but when operated early, with the aid of transfusions when required, the percentage of recoveries is large; without early and proper surgical interference the percentage of mortality is high. Medical treatment is limited to relief of pain and to the combat of symptoms as encountered.

Report of cases:

1. Mrs. B., a young married lady of 22, had the usual signs of extra-uterine gestation, pain, nausea, syncope, extreme shock, and a mass which could be felt in the right fornix and Douglas culdesack. Upon the history and findings a diagnosis of extra-uterine gestation was made and an operation speedily performed.

The right tube was ruptured and adherent to the sack. The uterus was double, each body having a separate cervix, and the septum in the vagina reached to within two inches of the ostium vaginae.

She made a good recovery and five years later gave birth to a fine son and this was followed rapidly by 4 or 5 more children.

2. Another was a young married woman with her first pregnancy. She had been very ill for nine days, was treated for abortion and curetted, being also treated for displaced uterus. When I saw her she was suffering from peritonitis, but the history and findings were classical for a neglected extra-uterine gestation which had ruptured, bled profusely, and excited an active peritonitis. Upon opening the abdomen we found a ruptured appendix complicating the case with an extensive peritonitis which rapidly proved fatal.

The pelvic contents were evacuated through the vagina and consisted of some three pints of infected blood clots.

Our records show 29 cases of ectopic gestation with three fatalities. The other was due to influenza complicated by double pneumonia which came on one week after operation when the patient was

well on her way to recovery. This occurred at Ft. Sheridan during the first onset of influenza, and she was in the hospital where the boys were dropping away fast.

On the day of her death four died in that hospital inside of thirty minutes, all of flu pneumonia.

This lady was the wife of an officer, and the diagnosis had been made before rupture; but operation was refused. Later she was curetted by our superior officer and only came to operation after rupture had taken place and her condition from pain, shock and hemorrhage was extreme.

Two cases of severe type refused operation and recovered after a protracted illness.

The last case which I wish to present was as follows: The patient's weight 3 months before, was 157 pounds, at present 132 pounds.

Her family history was good with the exception that one sister died from cancer of the breast. She had never been ill.

Last January she was seized with severe pain in the abdomen, which came on suddenly; she had been constipated for two weeks before; she went to bed, took enemata which gave relief, was confined to bed for two days, and has not been well since, having suffered from abdominal pain and compelled to take physic each afternoon.

Physical examination: Appetite is poor, there is gas on stomach, distress after eating, constipation, heart is rapid and feeble, pulse 110 and temperature $99\frac{1}{2}$, she coughs some and raises a trifle, sleeps poorly and sweats at night, has much abdominal pain, is very nervous, passes urine often and with marked distress, urine negative, tonsils diseased and large, menses absent since January last. There was a bloody watery discharge which had been present for four weeks past.

Pelvic examination revealed a large hard tumor mass which filled the pelvis and extended to the navel.

The uterus was moderately enlarged, was crowded up above the pubes, and a small polypus extended out from the cervix.

The vagina and all parts were very blue, no foetal heart nor bruit could be heard, nor had she felt motion at anytime. The breasts were large and contained milk.

The x-ray revealed a child present. She returned home under the care of Dr. Dewire and I am indebted to him for the following report.

Patient was taken seriously ill on May 27, and Dr. Dewire was summoned. She complained of aching body, dry throat and feverishness. Temperature 101 F., pulse 120 and weak. Some cough and expectoration. Some small liquid bowel movements and very frequent pains of gripping nature. Very restless. Anodynes and antipyretics given and hot applications applied to abdomen. June 1, patient weaker, still coughing, breathing labored, abdomen tympanitic and tender, pulse rapid, temperature 102, respiration 45, pulse 120. June 2, Dr. Nuzum in consultation. Pelvis full, vagina and cervix blue, mass in back of womb, and motion of child felt in it. Uterus not palpable because of distention. Patient put in knee chest position and gravity helped to relieve pressure in pelvis. This position maintained from 10 to 20 minutes every four hours. June 6, Dr. Nuzum saw her again. Mass higher in abdomen, womb plainly palpable, anterior to mass and empty. Congestion a little better, but patient growing weaker. Peritonitis subsiding. Lips and extremities purple, circulation poor, but no heart audible. Feet and ankles became edematous and patient died on morning of June 7. Autopsy at request of family at 2 P. M. A woman somewhat thin, with well formed and filled breasts, abdomen rounded like six months pregnancy. Opening in median line. Great mass back of womb, dark blue, full of fluid and containing placenta adherent to everything. Intestines matted, placenta of normal size for six months attached to intestines, tube obliterated or stretched beyond recognition, transverse and descending colon full of hard feces. Left tube occluded and full of pus.

Girl baby normal for six months, weight 2 pounds and 8 ounces. Length of body and head, $10\frac{1}{2}$ inches, circumference of head 9 inches, of chest, $9\frac{1}{2}$ inches, hair on head about $\frac{1}{2}$ inch long and brownish color, nails imperfect. No deformities of arms or limbs.

Child a little thin but fairly plump for mother's condition.

Autopsy by Dr. T. W. Nuzum, report by Dr. Dewire.

Pember-Nuzum Clinic,
Per T. W. Nuzum.

"The annual meeting is primarily a post-graduate course. Justice to your patients and to yourself demands that you avail yourself of this course." Pres. F. Gregory Connell in August Journal.

THE SURGICAL ASPECTS OF UTERINE MAL-POSITIONS.*

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The surgical consideration of displacements of the uterus is rather a broad subject, and a discussion of the same must necessarily take up separately the types of mal-positions, not alone from an anatomical standpoint, but also from the standpoint of the age of the individual and associated pathologic conditions. In reviewing the subject of the various mal-positions within the limited scope of a single paper, an endeavor will be made to make a simple classification and succinctly consider each group separately upon its own merits.

The largest number of mal-positions of the uterus would seem to come in a classification of retrodisplacements of varying degrees. In a general way, retrodisplacements may be classified as (1) simple retrodisplacements; and (2) complicated retrodisplacements.

Simple or uncomplicated retroversions are common. It is estimated that in over one-fourth of the women the uterus occupies a retroverted position. Apparently in the majority of them there are no symptoms which can be correctly assigned to this position of the uterus. It is probable that in many such cases the cure of cervicitis, or endocervicitis, or the repair of a pathologic cervix will remove all existing symptoms without treatment of the retroposition. Backaches or other general symptoms should not indicate a surgical procedure for a simple or uncomplicated retroversion until all other potential causes, gynecologic or otherwise, have been removed.

In the second group may be placed those cases in which concomitant pathology has existed for some time and the uterus has developed some pathologic conditions of the endometrium or metrium. Pelvic adhesions interfering with the free mobility of the retroverted uterus may produce symptoms worthy of surgical relief. This condition may exist to a greater or less degree of severity. The time has come about, however, when retroversions are taken less seriously by the gynecologists than some twenty years ago.

For the relief of uterine misplacements, without

prolapse or with a moderate degree of prolapse, some type of round ligament operation is probably the most logical. The uterus is movable in its normal suspensory mechanism of the round and broad ligaments and rests upon the pelvic floor. This anatomic fact should be the governing principle of all procedures for replacements of uterine mal-positions. Those procedures which are antagonistic to this principle do not give the full degree of relief that should be had from an operation for a retrodisplacement. Either the attachment of the uterus to the abdominal parietes or some acrobatic handling of the round ligaments will frequently lead to the production of some symptoms not previously existing, even though the uterus is apparently held thereby in a perfectly normal position.

The various types of round ligament plications present recognized merits. The Coffey technique is very efficient in many mal-positions.

The degree of mal-positions varies in different cases, as well as the degree of laxity of the peritoneal suspensory ligaments of the uterus. The important feature, however, is the fact that the relative planes of the internal ring and of the fundus of the uterus vary remarkably in individual cases. It has always appeared to us that each case should be individually considered; and, instead of making a more or less universal application of a particular type of plication to all cases, one should upon inspecting the pelvis consider himself in the position of a carpenter who has before him material from which to work out a result. By separately and with forceps grasping the fundus of the uterus and the two round ligaments, the uterus can be lifted to a desired position and the round ligaments and pelvic folds laid out upon it in a manner which would seem best to maintain the desired position. By painstaking measurements, a position for the best plication of the ligaments can be ascertained. This should be one which will produce an even distribution of weight bearing and at the same time the maximum degree of peritoneal fixation. It is recognized that the musculature of the round ligaments will finally draw out of any sutured situation, and our ultimate dependence must be placed upon that peritoneal fold of the broad ligament (and associated fibrous tissue) which is a part of the round ligament. The pursuance of this principle will disclose the fact that in some cases plication should extend largely over

*Read at the Tri-State District Medical Society.

the fundus and the upper portion of the posterior surface, and in other cases the relative planes of the uterus and interior rings indicate a plication largely to the fundus and anterior surface of the uterus.

The suturing technique is of less consequence, excepting that it should be adequate and extensive, so as to give the ligament a firm and thorough hold which will not draw out.

Pulling the round ligaments through the broad ligaments beneath the tubes apparently does not constitute as durable or as anatomic a result, and at the same time may lead to subsequent symptoms not previously existing. In those cases showing an extreme anterior situation of the cervix, a shortening of the sacro-uterine folds materially helps to hold the uterus in its restored situation, as well as relieving the pull upon the shortened round ligaments. It is probable that the shortening of the sacro-uterine folds should be more often performed.

It is especially desired to emphasize in this paper the principle of adapting the technique used to the anatomic conditions found in individual cases, instead of applying a fixed technique universally to all retroversions. It is believed that the result obtained in a series of cases will be materially better if we apply mechanical principles to each case of retroversion, rather than fit each case to certain mechanical ideas.

The type of uterine mal-position commonly termed prolapse seldom exists without symptoms, and usually progresses until it becomes a surgical disease. Prolapse of the uterus might more technically be placed in the classification of a hernia through the pelvic floor. Phases of prolapse of the uterus are extremely variable. It may be manifested only by a cystocele without the appearance of the cervix at the vulva, unless traction is applied to the cervix to demonstrate beginning hernia.

Prolapse of the uterus has often been divided into a classification according to the degree of prolapse; namely, first, second, third, and fourth degree of prolapse. A surgical consideration of prolapse, or hernia of the pelvic floor, however, usually calls for a classification not so much according to degree, as according to age; namely, prolapses which occur between the ages of twenty and forty; those which occur during the menopause; and those which occur in patients who

have passed the menopause. The treatment required during these different periods of life are usually entirely different.

A prolapse occurring prior to the age of forty is seldom of the third or fourth degree. The problem in this class of cases can usually be effectively met by an efficient repair of the pelvic floor and a round ligament suspension. It is probable that a restoration of a small hernia at this time of life would prevent many of the third and fourth degrees of prolapse which present themselves for consideration at a later date.

The pelvic hernias occurring in the second period of a woman's life are frequently of the third and fourth degree of prolapse. In such cases, cystocele is the conspicuous symptoms. In this period, if the prolapse is only of the first and second degree, the repair of the pelvic floor and the round ligament procedure is usually efficient. But in the third and fourth degree of cases, a more radical procedure is indicated. The interposition operation, as perfected by Watkins, is very logical. When done strictly in accordance with his technique, followed by an efficient perineorrhaphy, a perfect result is obtained in selected cases. The operation is relatively free from danger, as well as free from most operative discomforts, and gives a relatively short convalescence. The technique is so well known that we are not warranted in consuming your time with a discussion of the details.

For this second period of life, an operation which we advocate for the third period is also applicable, especially if there is any existing or potential uterine pathology; namely, the vaginal hysterectomy procedure, which will be taken up in the consideration of the third period.

In the third period of life, the usual hernia of the pelvic floor is of the third or fourth degree, instead of the first and second, as in the first period. The uterus is usually atrophic, or in the early stages of atrophy. It is too small to serve the purpose required of it in the interposition procedure. If the interposition is done at this time, it is probable that ultimately the fundus will present itself at the vulva instead of the cervix, and the bladder will follow it to the outside.

Kocher's technique, consisting of placing the body of the uterus outside of the linea-alba; Murphy's technique of putting the uterus in the same position, having previously split it in two

and spreading out the two halves laterally on the external surface of the external fascia; and Mayo's technique of a supra-cervical hysterectomy, suture of cervical stump to the internal surface of the sheath of the rectus—are all applicable only to those cases where the vaginal walls are long enough to permit of so extreme an elevation of the uterus. As pointed out by Franklin Martin many years ago, there is usually in such cases an atrophy of the posterior vaginal wall. These procedures appear strong and efficient. In the event that they can be carried out, however, they do not give the anatomic result that is obtained by the Mayo technique of vaginal hysterectomy with a folding over of the relaxed broad ligaments. It must be borne in mind that the anatomic support of the outlet of the pelvis above the true pelvic floor consists of the structures of the broad ligament, including the round ligament. Hysterectomy removes the weight of the uterus, and at the same time the lateral ligaments are shortened by folding them upon each other. The firmness of this support is always adequate to maintain the vault of the vagina in its normal situation. The bladder, fastened to this new transverse peritoneal ligament, is adequately held upward so as to cure the cystocele. By turning the cut edges of the broad ligaments downward and outward, no exposed surface is presented in the peritoneal cavity, and the danger of intraabdominal bleeding is obviated. We have found this procedure extremely efficient and its effects lasting. The repair of the perineum is of course always used to supplement this procedure.

In conclusion: First, the average simple retroversion is not pathologic and is not a surgical lesion. When it is complicated, and when it presents surgical symptoms, the type of round ligament operation employed should be such as to meet mechanically the requirements of the individual anatomy of the subject under consideration, rather than following out any definite type of round ligament operation.

Second, when hernia of the pelvic floor occurs during the child bearing period, it is usually of the first or second degree of prolapse, and can be best remedied by the round ligament operation with repair of the pelvic floor.

Third, during the second period of life, prolapse of the uterus may be best relieved by either Wat-

kins' interposition operation or the Mayo technique of vaginal hysterectomy.

Fourth, during the third period of a woman's life the vaginal hysterectomy with reconstruction of the transverse peritoneal ligaments gives the best anatomic repair and the best functional results.

Fifth, all repair procedures should be made with the principles of normal anatomic conditions in mind and with special efforts to make said procedures in consonance and harmony with normal anatomy.

Sixth, attachments of movable viscera to fixed structures, or in situations where a normal degree of mobility cannot occur, or in such a manner as to subject the new formed attachments to any undue degree of tension, are neither durable nor functionally correct.

THE VALUE OF FORCING FLUID IN THE TREATMENT OF MERCURIC CHLORID POISONING.

Having determined that 15 mg. of mercuric chlorid per kilogram of weight was the fatal dose for dogs, Charles C. Haskell, J. R. Carder and R. S. Coffindaffer, Richmond, Va. (*Journal A. M. A.*, Aug. 11, 1923), attempted to ascertain whether dogs could be saved after this dose. The mercury was given to the treated dogs in the same manner as to the controls. After allowing from thirty minutes to a little more than two hours to elapse, they gave the dogs an injection, into the jugular vein, of 25 c.c. of an 0.8 per cent saline solution per kilogram of body weight; this was followed by injection of a similar amount either subcutaneously or intraperitoneally. The animals were kept in metabolism cages, and intraperitoneal injection of 50 c.c. of salt solution per kilogram of body weight was repeated daily for varying lengths of time, until death or apparent recovery. If the dog was in good condition after one month, it was considered as having "survived." It was evident that a definitely favorable influence is exerted by the use of large amounts of physiologic sodium chlorid solution in dogs poisoned by mercuric chlorid. Thus, of the twenty-five dogs receiving the fatal dose of 20 mg. of mercuric chlorid per kilogram of body weight, and subsequently treated by intravenous subcutaneous and intraperitoneal injections of large amounts of saline solution, twenty survived. So far as experiments justify conclusions, it seems permissible to the authors to state that the intravenous injection of salt solutions comparatively soon after oral ingestion of mercuric chlorid possesses a definitely beneficial action and effects the recovery of animals that have received what is probably the surely fatal dose for untreated dogs.

CYSTOGRAPHY IN THE DIAGNOSIS OF UROLOGIC CONDITIONS.

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Cystography as a diagnostic procedure has been practiced by urologists for many years and yet on a casual review of the literature one is impressed



Fig. 1.

with the infrequent reference to this method, as compared with the voluminous literature on related subjects pertaining to the kidneys and ureters. This is perhaps due to the simplicity of the procedure and to the fact that its field of usefulness is rather small.

The indications for cystography are multiple and some of the most outstanding are: (1) cases of diverticula of the bladder, or cases in which diverticula are suspected, (2) extensive tumors of the bladder, (3) all cases of hypertrophy of the prostate in which operation is contemplated (for purposes of determining if other disease is present).

The media most commonly in use are: (1) silver iodid emulsion, (2) solution of sodium iodid or sodium bromid, (3) solution of thorium nitrate, (4) colloidal silver preparations, such as collargol,

argyrol, silvol, and so forth, and (5) air and oxygen. I have found the silver iodid emulsion most satisfactory for routine use as it is not irritating and is mildly antiseptic.

The technic of cystography is very simple. After the parts have been prepared, a sterile, soft, rubber catheter is passed and the bladder is filled with the medium. The catheter is then removed and four radiograms are taken. One exposure is made directly through the bladder, two are taken diagonally, one from each side, and a fourth is taken directly through after the patient has been permitted to void. We have found it wise to permit the patient to empty the bladder voluntarily by voiding rather than by the use of a catheter, as catheterization may empty diverticula which do not become emptied when the patient voids.

The information to be gained from cystography is greater in cases of diverticula of the bladder than in any other pathologic condition. Cystoscopic examination should be made in these cases, but not infrequently the openings which connect diverticula with the bladder are overlooked, even on careful cystoscopic inspection, and the examiner is surprised to find a large diverticulum revealed by the cystogram. Figure 1 shows a large diverticulum of the left side of the bladder with both the bladder and diverticulum injected. The



Fig. 2.



Fig. 3.

exposure was made diagonally from the right side and as a consequence all of the bladder is not shown. The same case is illustrated in Figure 2



Fig. 5.

after the patient has voided, and the cystogram shows the diverticulum filled, and some residual medium, which the patient was unable to expel, has remained in the bladder.

A case similar to the first is shown in Figures 3 and 4, in which the diverticulum is located on the right side of the bladder. In this case a leaded



Fig. 4.



Fig. 6.



Fig. 7.

catheter was coiled in the diverticulum through the cystoscope. Catheters alone are of some value in determining the size of diverticula, but as is shown in this case, an opaque medium gives a much more definite idea of the size. If it is desired, one may inject the diverticulum through the catheter and use air or gas in the bladder for purposes of contrast, as suggested by Kretschmer.



Fig. 8.



Fig. 9.

A small diverticulum is seen in Figures 5 and 6, which, as in the preceding, fails to empty when the patient voids. There is also a small amount of residual medium, as shown in Figure 6.

Figure 7 shows another small diverticulum similar to that in Figures 5 and 6. In this case, how-



Fig. 10.



Fig. 11.

ever, the diverticulum does not project as far beyond the side of the bladder, but lies more posteriorly.

Figures 8, 9, 10, 11, and 12 illustrate the types of bladders frequently seen with obstruction and



Fig. 12.

chronic infection of long standing accompanying prostatic hypertrophy. The outline of the bladders is ragged and there are many small diverticula and cellules. The larger of these small diverticula and cellules frequently retain a little urine and produce chronic irritation in the bladder after the prostate has been removed. In Figure 12 one ureter is shown to be dilated and the medium from the bladder has filled it.

Figure 13 shows a large area of lessened density due to hypertrophy of the prostate. As a diagnostic point this is perhaps of some value, but the fact should be borne in mind that unless the lower bowel is thoroughly cleaned before the cystogram



Fig. 13.

is made, an accumulation of feces in the rectum may produce the same picture. Cystoscopy and rectal palpation are the diagnostic methods of choice in cases of hypertrophy of the prostate, and although the cystographic picture may reveal some information of interest, too much dependence should not be placed on it in determining the amount of increase in the size of the gland.

SUMMARY.

Cystography is a valuable adjunct in diagnosis of lesions involving the bladder. It is of greatest value in the diagnosis and in the determination of the size of diverticula of the bladder. The

technic is simple and may be easily carried out. Too much reliance should not be placed on the cystographic picture in determining the degree of enlargement of the prostate, but cystograms should be made routinely in cases of hypertrophy of the prostate, since not infrequently other conditions, such as diverticula, are present.

REFERENCE.

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THE BARRAQUER METHOD OF CATARACT EXTRACTION.*

BY VERNON A. CHAPMAN, M. D., F. A. C. S.,

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The restoration of vision lost through presence of cataract formation in some one of its various types is one of the oldest problems of medicine and surgery.

Medicine has concerned itself more or less with the problem of prevention of cataract formation, or with that of stopping the formation in its early stages, or in the dissipation or clearing up of the opacities after they have formed. These attempts have, perhaps, met with more or less success, and I believe will eventually become more successful. Until medicine does do more than it has in the past, the restoration of vision in these cases is, as it always has been in the past, a surgical problem, and requires the most delicate operative technique in all surgery. It would be delightfully interesting to trace the developments of the surgical treatment of cataract from the old time method of couching through the past years to the present time. It would carry this paper far past the time allotted to it and is not permissible on this occasion. I must be content to say that different operations have been devised and that different modifications of these different operations have been brought forth from time to time. Nearly all of these various modifications are in use today, and well need to be, because the types of cataract formation are so many and existing conditions so varied that no one type or method of operation can be successfully made to apply to all of them. The essayist first assisted at cataract operations when fifteen years of age and has endeavored to keep in

close touch with all measures devised for treatment of cataracts for the past thirty-five years. The conclusions formed by this period of observation and experience are: that eventually much more will be done in the prevention and cure of cataract by non-surgical methods, that the best surgical results today depend largely upon careful study of each case and its complications before operation, and upon the careful carrying out of the operative procedure best adapted to the particular case in question. Even after all this has been determined conditions frequently arise during the operation that make it necessary to change the method planned for extraction of the lens. Provision must always be made for this before beginning operation.

The after care of the operated case is of the utmost importance for the final results. Most cases have too much after care. Too early removal of the first dressing, too much interference after the removal of the first dressing, and too long continuance of pressure and bandage over closed eye after removal of the first dressing, are factors resulting in poor eventual results after successful operative removal of the lens.

My purpose tonight is to present to you what is probably the very most recent method of importance devised for extraction of the lens. This is the Barraquer method devised by Dr. S. Ignacio Barraquer of Barcelona, Spain, and presented by him before the Royal Academies of Medicine and Surgery of Madrid and Barcelona in July, 1917. The method consists in withdrawing from the eye the cataractous lens contained in its capsule, by means of a lifting spoon attached to the capsule of the upper surface of the lens by vacuum pressure produced by a suction pump running in oil and actuated by a small high speed motor. The method has not been of rapid or widespread adoption largely because those who have tried the method have not given careful enough attention to the working of the mechanical apparatus necessary to this operation. The apparatus as approved by Dr. Barraquer is made only at the North Spanish laboratories in Spain. Several workers in this country have tried to modify this apparatus, but the fact remains that the Spanish apparatus is the best so far and probably will so remain.

I am told by an instrument maker in this country in whose judgment I have great confidence,

*Read before the Milwaukee Academy of Medicine, May 22, 1923.

that he has spent much time and money in an effort to manufacture this and the modified types of this apparatus and that it cannot be made in this country at anywhere near the price of the imported outfit, even with the increased tariff duty now necessarily added.

The instrument which I use and which is here before you is one of the earlier types manufactured in Spain and I believe it is better than some of the later types. This one has no leather or rubber valves or washers; all parts of the hand piece are of metal with delicately machined valve surfaces.

In our work with the Barraquer method of cataract extraction at the Milwaukee County Hospital we have followed the usual methods of preparation of the eye and patient for operation. A mydriatic is used in order to get the pupil well open at the time of operation. Cocain locally (in both eyes) has been relied upon for anesthesia in adult cases.

In the eye to be operated on enough cocain to produce sufficient anaesthesia, and, just a few moments before the incision it to be made, a free installation of adrenalin. Cocain in small amount is used in the eye *not* to be operated on for the reason that it enables the patient to keep that eye open better during the operation and lessens the tendency to squeezing of the lids during operation.

We have not used an anaesthetic hypodermically to paralyze the orbicularis. We have relied upon the use of the Fisher lid hooks in the hands of a careful assistant, and this method has been very satisfactory. All preparations are made for the use of the Barraquer method of extraction; all instruments are in readiness for employing the Smith-Indian method of extraction should any condition arise which would make the Barraquer method inexpedient; and all instruments are also in readiness for performing the capsulotomy and extra capsular extraction, should the behavior of the patient or eye complications make it seem expedient to abandon both the Barraquer method and the Smith-Indian method and do the old time extraction.

Over the patient's head and face is laid a good sized piece of coarse gauze of three or four thicknesses, which has been squeezed out of cyanide of mercury solution. In my opinion, cyanide of mercury is much better for use in eye work than the bichloride of mercury. Cyanide of mercury is much more effective in the same strength solu-

tion than bichloride, and may be used in greater strength solution than bichloride. Bichloride of mercury coagulates albumen immediately upon contact, and the antiseptic action of the solution is thus greatly lessened. Cyanide of mercury does not coagulate albumen, and its antiseptic action is not thus inhibited. Furthermore, cyanide of mercury does not tarnish instruments.

After the gauze is squeezed out of the cyanide of mercury solution, and before placing it over the patient's face, a good sized hole is pulled in the gauze to afford access to the eye to be operated. I say this hole is *pulled*: I say that to emphasize the fact that the hole is *not* made by *cutting*. Cutting a hole in the gauze leaves a lot of loose and protruding gauze thread ends about the edge of the hole that interfere with the field of operation and are often very annoying. By *pulling* the hole with the fingers, it can be made of any size desired, and the border of the hole is a firm smooth rounded edge with no loose end threads to cause annoyance during the operation.

Wet gauze stays in place by its own weight and conforms to the face much better than dry gauze or cotton sheeting; and the fact that the gauze is saturated with cyanide of mercury solution is an added prevention against infection.

The patient breathes freely and comfortably through the gauze mesh over his face and has no sense of suffocation or discomfort. If the eye not to be operated on, is a seeing eye, the patient can also see through this gauze mesh and his sense of fear or anxiety is lessened.

Operating with the patient on the cart, the wheels of which are well blocked front and rear with sandbags, is another aid. It avoids the transfer of the patient from operation table to cart following the operation.

For the successful use of the Barraquer method of extraction of the lens the pupil should be well open. The anterior chamber should be free from hemorrhage. The Barraquer apparatus should be working smoothly with about sixty centimeters vacuum registering steadily at the vacuumeter. Perfect illumination of the operation field is essential.

The suction spoon must be introduced into the anterior chamber, passing across the pupil area, the tip well under the iris margin at the opposite side and then applied carefully and accurately over the surface of the lens capsule. The vacuum, which

must be absolutely under perfect control at the handpiece, is then released to the spoon suction cup by thumb and finger pressure upon the valves. This affords a direct traction hold upon the capsule containing the lens and the whole can be gently broken from its attachments and with drawn intact from the globe.

Whether or not there is a true vibratory vacuum present which aids in breaking the zonule, I do not know. I do not believe that much dependence can be placed on that. Possibly there is such help present. But careful manipulation with the suction spoon must be depended upon to break the lens in its capsule from its attachments.

The Barraquer extraction method is most admirably suitable for extraction of congenital non-membranous cataract in the young; and I believe there is no other way in which the so-called dislocated congenital cataract can be as successfully handled. I say "so-called" dislocated congenital cataract because I believe that is a misnomer. It is *not a dislocated* lens: it is a rudimentary *misplaced* lens which never was properly located behind the pupil area.

In these cases general anaesthesia should be used, and preferably, from the standpoint of the surgeon and the vision results, chloroform.

Chloroform can be safely given in these cases by a careful anaesthetist who *knows* chloroform.

I do not see any good reason for doing an iridectomy, even a button hole one, when the Barraquer method of extraction is to be employed. In fact, I believe that an iridectomy is contra-indicated. There is liability of bleeding into the anterior chamber when iridectomy is done, thus obscuring the field of introduction and emplacement of the suction spoon. Cases of old iritic adhesions to the lens capsule are not favorable cases for the Barraquer extraction apparatus. For this reason I believe that it is not wise to do an iridectomy operation preliminary to a later lens extraction operation if one expects to use the Barraquer apparatus for the extraction. There are almost certain to be iris adhesions to the capsule by organized inflammatory or traumatic exudate following an iridectomy.

There are dangers peculiar to the Barraquer method of lens extraction as well as in all other methods: the principle ones being: the entanglement of iris in the suction spoon cup, and suction withdrawal of vitreous.

The advantages of the Barraquer method of intracapsular extraction are: much less traumatism and a clear round pupil, both of which are of great importance in procuring *and maintaining* good vision following the operation.

BACTERIAL ENDOCARDITIS IN CONGENITAL HEART DISEASE.

The case reported by Norman E. Clarke, Ann Arbor, Mich. (*Journal A. M. A.*, Aug. 4, 1923), presents a most interesting and instructive example of the picture produced by the engrafting of a subacute bacterial endocarditis on a congenital heart lesion, and of the difficulties in diagnosis to which it gives rise.

INFECTIOUS JAUNDICE IN THE UNITED STATES.

In his report on an outbreak of jaundice which occurred at Halifax Court House, Va., in 1857-1858, Faulkner states that the disease occurred in Norfolk, Va., during the War of 1912. This, according to George Blumer, New Haven, Conn. (*Journal A. M. A.*, Aug. 4, 1923), is the first record of its occurrence in the United States, and no further outbreak is recorded until 1839, when it appeared at Jacksonville, Ala. From 1812 to 1886 there are but eleven outbreaks recorded in the American literature, and of these nine occurred south of Mason and Dixon's line, four of them in Alabama. The remaining two occurred in Orange, N. J., in 1858, and in Montgomery County, Pa., in 1860. During this period only one outbreak is recorded in any one year, with the exception of 1860, when the disease appeared in Richmond, Va., and in Montgomery County, Pa. Beginning with the late eighties of the nineteenth century, reports become more frequent, and records of fifty-one outbreaks occurring, between 1886 and 1920 have been obtained. During this period as many as seven outbreaks have occurred in one year, and these in widely separated districts. The disease no longer remained confined mainly to the Southern states, but was found all over the United States except in some of the Pacific Coast states; it also appeared during this period in the province of Ontario. Beginning in 1920, but more particularly in 1921 and 1922, numerous epidemics were observed, of which more than 200 occurred in New York state alone, constituting the only really state wide incidence of the disease on record. Up to the present the disease has been reported in every state except Arkansas, Delaware, Florida, Kentucky, Louisiana, Mississippi, Nevada, Oklahoma and the District of Columbia. Blumer details the clinical history of this disease. It may occur in small family or institutional outbreaks or as a widespread disease with local foci scattered through an entire city, country district or state. It is mainly a disease of adolescence, attacking the two sexes equally. The exciting cause is unknown. Fatalities are lacking in most epidemics; when they occur, the victims are usually pregnant women or young children, and the fatal cases resemble acute yellow atrophy of the liver. Catarrhal jaundice, so called, is probably the sporadic type of the disease.

IS THE DOCTOR A GOOD CITIZEN?

Is the physician of to-day a good citizen? asks Dr. Louis D. Wilson, writing in *The California State Journal of Medicine* (San Francisco). In the sense that he usually keeps out of jail and the almshouse—yes. He usually pays his debts, lives peaceably with his neighbors and does not make himself a nuisance in the community. He is ready to give freely of his means to charity, to pay his taxes promptly, though grudgingly, and to serve his country in time of war. But according to Dr. Wilson, he takes little interest in the public health of his community, in medical legislation, in county, State or national politics. In these respects, we are sadly assured, he does not live up to his capabilities, his opportunities, or his obligations. Dr. Wilson goes on:

"We talk a great deal as a profession about the hold that the members of certain medical cults are obtaining in the communities in which they live. We deplore the fact that in many places they are becoming health officers and members of county boards and of State legislatures. Yet, as physicians we are prone to neglect these positions ourselves and to leave them to those members of our profession who can not make a living in their profession or to the members of the cults. We are inclined to regard the occasional enthusiastic young physician who goes in for public-health work as an incompetent or a crank and to fail to support him either by our interest or our cooperation. When a young physician asks our advice about public health as a career, we tell him to go into surgery.

"The teaching of public health in our medical schools is almost everywhere a farce. Despite this bad teaching, however, many men with years of experience in infectious diseases, for example, come to have very excellent judgment which should be placed at the disposition of the community in public-health affairs. But too often they simply stand aloof and criticize.

"Why do we not have better men holding the position of County Coroner? Because better men do not seek it. This position should be held by physicians with good judgment and keen investigative ability. The punishment of crime in our country is so lax that criminals multiply. Many of the failures of justice in homicide may be traced directly to the stupidity of the coroner or his assistant in not discovering the essential facts.

"There is almost as great necessity for physicians to take part in community and State affairs, not primarily related to their profession, as in those principally concerned therewith. The most schooled citizen of the community is all too seldom on the school board. The real-estate agent, the coal-dealer, the banker are there because they are, forsooth business men and are presumed to save the taxpayers' money. But the health of the school children is seldom considered officially by the citizens who should know most about it, and educational policies of school men receive no authoritative constructive criticism from physicians who should be most fitted to so criticize.

"Rarely do physicians of sound judgment seek election to State legislatures. Or if they do, it is in a half-

hearted manner and without adequate support from the other members of their own profession. As a result we have the spectacle yearly of State legislatures perpetrating the most asinine legislation in relation to health, to medical licensure, and to education. In the meantime the legislative committee of State medical societies in their reports annually deplore the legislative actions taken, and express futile hopes for improvement in the future. The way for physicians to get for the community sane health, licensure, and educational legislation is to take a hand directly in its making. Unfortunately, getting elected to do this is not so easy for the physician. He has so long and so assiduously cultivated the narrow view that his duty is solely to the patient, that the patient when turned voter is apt to regard the doctor as his personal attendant only and without knowledge or experience beyond that function."

If we had in the halls of Congress more broad-gage physicians, men who had previously proved their public worth in narrower civic fields, would we have so much stupidity, stalling and gallery-play as now exist there, asks Dr. Wilson. It is fair to assume, he thinks, that the physician's training both in and after school fits him to analyze data, draw logical conclusions, and make estimates of probable consequences. Certainly in all matters involving natural phenomena, including physiological, his observation and judgment should be the equal of if not superior to that of any man of any other calling. He proceeds:

"But so long as physicians foster the fiction that their sole duty is caring for the sick, so long will the well take them at their word and concede to them no measure of public worth either in small or large affairs of state. I would urge, therefore, physicians to be not less faithful in their duties as physicians, but also to be much more faithful in their studies as citizens, since they owe it to themselves, to their profession and to the community.

"Is it possible for the physician to be successful professionally, to be on the surface a good citizen, and to have the appearance of culture and yet be without character? Yes. Of course, it is difficult to conceive that the really honest practitioner, the really thoughtful student, who takes a live interest in his community and in his State, and who steadfastly seeks knowledge may still be without integrity, yet there is at least sufficient of a margin of such possibility to warrant our speaking specifically of the necessity for every man giving thought to this side of his nature as well as to those already mentioned.

"The American medical graduate of the last ten years has become on the face of it the most schooled man of his age. He should be not only the most scholarly, but he should come to stand in his community for the highest citizenship, the broadest culture, and the most noble character. If he does not seek in his daily life, professionally, intellectually, and morally to develop himself to the highest level to which he is capable of attaining, he is betraying the trust of the State which has expended on his early training thousands of dollars more than he or his parents have ever paid into school treasuries."—*The Literary Digest*.

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OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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558 Jefferson Street, Milwaukee

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EDITORIALS

YEARS OF SERVICE.

AFTER six years of service as medical editor of this Journal, Dr. Rock Sleyster has presented his resignation to the Publication Committee. For the present, at least, the Publication Committee will act as an editorial board for supervision of the scientific sections of the Journal.

For fifteen years Dr. Sleyster has seen the development and expansion of the State Medical Society, three years as its assistant secretary and ten years as its secretary. For six years he has seen the development and expansion of this Journal as its editor.

No words of appreciation that we pen can measure that service. Nor can we hope to indicate the feeling of indebtedness held by the fellow members of the Society.

In the future conduct of this Journal, however, we anticipate his continued interest and helpful suggestions that will go far to shape our policies and maintain the standard set so high. He has resigned from an active work that made heavy demands upon his time but we know that his continued interest will be our inspiration.

For the work that has been done, we express to Dr. Sleyster the hope that the hours he has spent will be in a measure repaid by a feeling of satisfaction. Repaid by such a feeling as must come to the relay runner who passes on the baton to a team mate with an advantage that can not be

overcome. That, Dr. Sleyster has earned many times over.

AN HONORED GUEST.

ELSEWHERE in this issue the Program Committee for the October annual meeting has an announcement that will be of interest to every member of our society. President-Elect William A. Pusey of the American Medical Association will be our guest at the banquet Thursday evening, October 4th.

Doctor Pusey will give to us our only banquet address, speaking on "A Study of the Wilderness Road to Kentucky—A Doctor's Diversion."

J. G. C.

HOME OR ON THE TABLE?

IT was in the smoking compartment of a parlor car on the Milwaukee-Madison train. A young man was sitting in the corner looking out the window with one hand occasionally feeling of a bandaged ear. A sympathetic neighbor asked concerning the injury to which the young man replied:

"I had to have an infection cleaned out," and then after a pause added, "Say, you know I read something darn interesting today. While I was waiting for the Doctor I read that the flea carries the bubonic plague and —"

That was the beginning of a conversation on health and disease that lasted for nearly an hour. All because the physician had left his Hygeia on his office reading table. Where do you leave yours?
J. G. C.

"HE WHO SERVES —"

WHEN approached by the secretary of our society to exhibit at the annual meeting in October, the head of a Milwaukee firm patronizingly offered his *contribution* instead. Asked to cooperate in a service to the physicians of Wisconsin, this man offered a donation "if you come out in the hole."

Here is a Wisconsin firm deriving its business and profits from Wisconsin physicians who now offers to *patronize* them. We fall back upon Shakespeare for a quotation in which to express our resentment:

"Upon what meat doth this our Caesar feed,
 "That he has grown so great?
 "Why, man, he doth bestride the narrow world
 "Like a colossus; and we petty men
 "Walk under his huge legs, and peep about
 "To find ourselves dishonorable graves."

THE EXHIBIT AND THE PHYSICIAN.

It is altogether fitting that those who help the physician better to serve his patients should profit financially. We are prepared to support the saying that "he who serves best, profits most." It should be so and it will be so. It is hoped that the members of the State Medical Society will patronize, so far as they can, the advertisers in their Journal and the exhibitors at their annual meetings.

Physicians are indebted to commercial-scientific houses for much that is valuable in medical practice. If it were not for such houses the individual physician might still be dispensing his large hand-rolled pills instead of the more elegant chocolate-coated ones. Think, for another example, of the cumbersome apparatus we would have today if each physician were to order made, according to his own specifications, an apparatus for testing blood pressure. Think of the improved apparatus of all kinds which the doctor now has at his command where but a few years ago much of it had not yet been discovered and much was still in the cumbersome developmental stage. And we are greatly indebted to the publisher who by quantity production places the illustrated papers, dealing with the day by day advancement of medical science, at the disposal of every practitioner.

This is truly service. It is truly cooperative work. The physician attending the annual meeting of the State Society can see that which is new—that which has been tried and found good.

The exhibit hall of the present day annual meet-

ing of medical societies has become a demonstration hall; and the exhibit has become an integral part of the meeting. Commercial firms are sending their representatives to our October meeting to serve the physicians of Wisconsin. Some of them are traveling hundreds of miles to demonstrate equipment that has been invented to lighten the work or to enable us to refine our technique. It does not detract an iota to realize that they frankly expect to profit thereby.

In behalf of these exhibitors, who are presenting probably the most extensive exhibit in the history of our annual meeting; and on behalf of the members of the State Medical Society of the great state of Wisconsin, we ask your support of them. Is it going too far to suggest that you withhold patronage from those who are disdainful of your organization's interest?

H. E. D.

COLUMN OPEN TO MEMBERS.

Members in good standing of the State Medical Society may insert notices in the Physicians' Exchange column of this Journal without charge hereafter. This change was authorized at the recent meeting of the Publication Committee.

Such notices will be dropped after second publication, however, unless request is made at that time for further appearance.

CHILD HEALTH SCHOLARSHIPS.

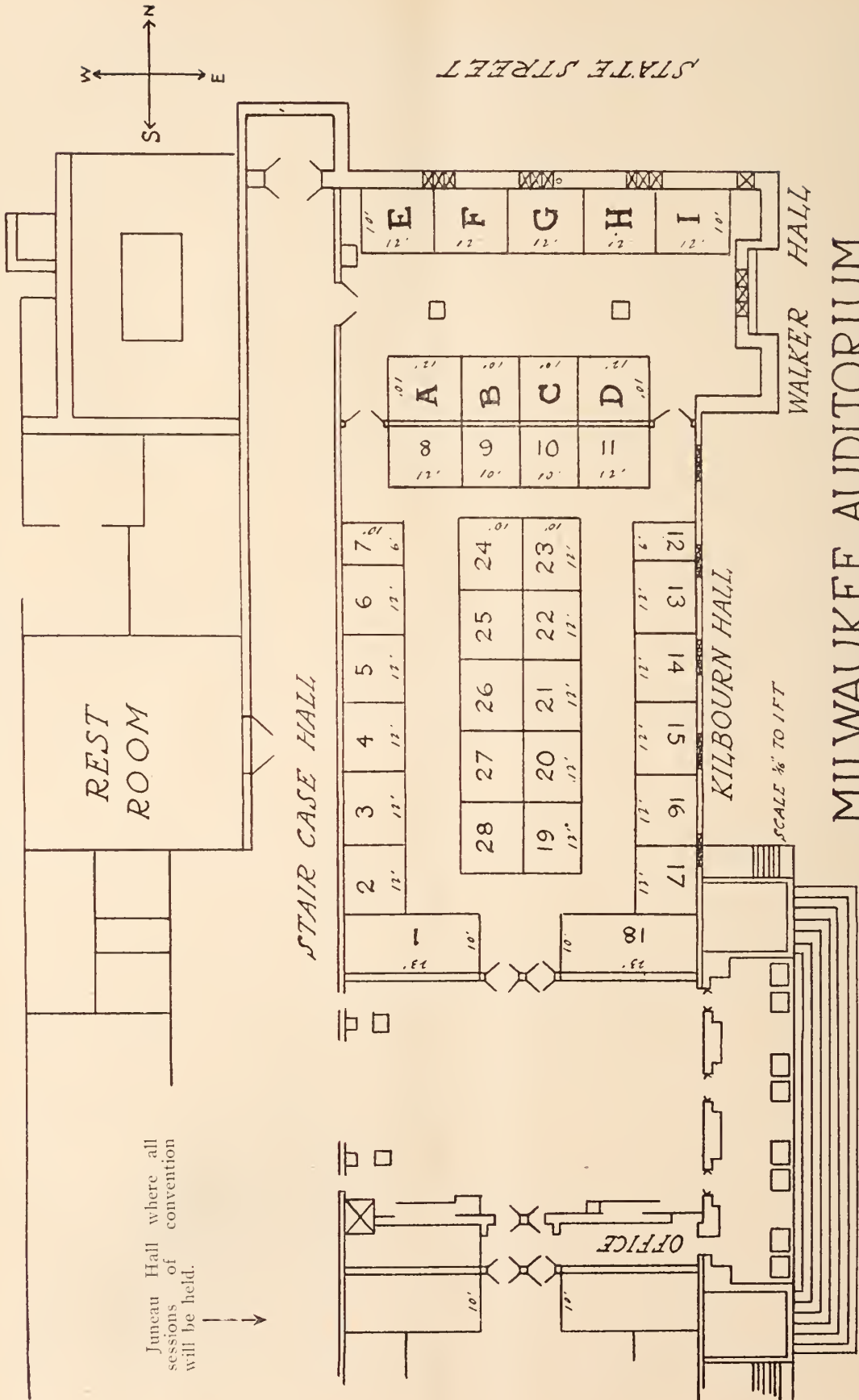
The American CHILD HEALTH Association has appropriated \$10,000 for resident and travel scholarships to physicians. These scholarships are for the purpose of affording an opportunity to secure training in child health work which will better fit them to fill positions with state and municipal divisions of child health or organizations engaged in child health work, or to enable physicians already engaged in the child hygiene field to secure additional training or experience. The fund will be allotted in amounts suited to the objectives arranged for the respective students.

Applicants eligible for these will be physicians who are in good standing in their local and state medical societies, and who shall present evidence of the following qualifications:

- (a) Graduation from a Grade A medical school and a license to practice in the state from which they apply.
- (b) Real interest in child health.
- (c) Either special instruction or practical experience in public health or child hygiene, including school health work. Those who have had such experience will be given preference in the selection of candidates.

Application blanks and further information will be furnished on request to the American CHILD HEALTH Association, 370 Seventh Avenue, New York City.

FLOOR PLAN FOR EXPOSITION.



MILWAUKEE AUDITORIUM
JOS.C. GRIEB, MANAGER. AUG. 1917

FINAL ARRANGEMENT MADE FOR 77th ANNUAL MEETING AT MILWAUKEE, OCTOBER 3, 4 and 5

Upwards of six hundred Wisconsin physicians are expected to attend the annual meeting, now but a few days away. With the announcement that Dr. William A. Pusey, Chicago, President-Elect of the American Medical Association, will give his illustrated address "A Study of the Wilderness Road to Kentucky—A Doctor's Diversion" at the banquet on Thursday evening, the Program Committee has completed most of its detailed work and all is in readiness for the meeting.

While the general scientific program is arranged so as to present those subjects of interest to all, the dry clinics on Friday will provide an unusual opportunity for group sectional work. Because of the work involved in securing the subjects needed, the schedule for Friday will only be published in the final program distributed at the meeting. Every sectional interest will be represented on this program.

Milwaukee hotels report many early reservations and while there will be room for all, members are advised to make reservations where convenient.

The House of Delegates will hold its first meeting Tuesday evening, October second, in the Red Room of Hotel Pfister at eight. Delegates are urged to be present at this first meeting. The time of the subsequent meetings of the House will be set before adjournment. All subsequent meetings will be held at the Milwaukee Auditorium, Fifth and Cedar streets.

CONVENTION EXHIBITS.

The most representative commercial-scientific exhibit in the history of our annual meetings will be housed in Kilbourn and Walker Halls. All exhibits will be placed in standard booths which will add much to the attractiveness of an exhibit which we are proud to present:

For the information of the members a diagram of the exhibit halls is given on the opposite page. The location of the exhibiting firms to date and their representatives are listed herewith for your convenience. It will be noted that a Service booth has been established for the convenience of the members. You will find a stenographer ready there to take your letters without charge.

By seeing the exhibits in both halls you will but take advantage of an opportunity that has taken many months to make possible.

THE EXHIBITORS.

- 1 and 2. The Oakland Automobile Company of Milwaukee.
3. The Milwaukee Optical Manufacturing Company. Messrs. Charles Tribe, Crab, Peugh, and Oehler.
- 4.
5. Mead Johnson & Company, Evansville, Indiana.
- 6.
7. G. D. Searle and Company, Chicago. Mr. F. A. Gerritt.
8. W. B. Saunders Company, Philadelphia.
- 9.
10. Hygeia and Post Office.
11. REGISTRATION BOOTH.
12. Pitman-Moore Company, Indianapolis, Indiana. Mr. S. W. Ruch.
13. The Abbott Laboratories, Chicago. Messrs. J. W. Ranson, C. W. Jackson, and Boyland.
14. The Medical Protective Company of Fort Wayne, Indiana. Mr. C. S. Brayton.
15. F. A. Hardy and Company, Milwaukee, Wis.
16. A. S. Aloe Company, St. Louis, Mo. Mr. Willey.
17. The Pengally X-Ray Company, Minneapolis and Milwaukee. Mr. A. H. Binger.
18. Nash Sales Company, Milwaukee, Wisconsin.
19. Mellin's Food Company, Boston, Mass.
20. Frank S. Betz Company, Hammond, Indiana. Messrs. H. R. Boyd and E. Hill.
21. Harold D. McIntosh, Milwaukee—Middlewest Laboratories, Chicago, Mr. H. M. Jones.
22. Brook Hill Farm, Genessee Depot, Wisconsin. Mr. Howard T. Greene.
25. State Board of Health, Madison, Wisconsin.
26. The Kolynos Company, New Haven, Conn.
27. Burdick Cabinet Company, Milton, Wisconsin.
28. Horlick's Malted Milk, Racine, Wisconsin.

WALKER HALL.

- A. Service Booth.
- B. American Medical Association.
- C. Extension Division, University of Wisconsin.
- D. H. G. Fischer and Company, Chicago. Mr. C. C. Remington.
- E. John McIntosh Company, Milwaukee and Chicago. Mr. John McIntosh.
- F. Wisconsin Anti-Tuberculosis Association.
- G. Wisconsin Anti-Tuberculosis Association.
- H. DeVilbiss Manufacturing Company, Toledo, Ohio.
- I. Huston Brothers Company, Chicago. Mr. R. M. Huston.

The President-Elect of the American Medical Association will attend your annual meeting. Will you be there to meet him?

DELEGATES AND ALTERNATES CHOSEN FOR 1923 HOUSE OF DELEGATES

Society	Delegate	Alternate
Ashland-B.-I.	J. M. Dodd, Ashland.	M. S. Hosmer, Ashland.
Barron-P.-W.-S.-B.	J. H. Wallis, Rice Lake.	A. N. Nelson, Clear Lake.
Brown-Kewaunee	J. R. Minahan, Green Bay.	E. G. Nadeau, Green Bay.
Calumet	I. W. McComb, Brillion.	H. C. Krohn, New Holstein.
Chippewa	A. J. Somers, Chippewa Falls.	H. Trankle, Bloomer.
Clark	S. M. Keyes, Owen.	A. L. Schemmer, Colby.
Columbia	A. F. Schmeling, Columbus.	C. W. Henney, Portage.
Crawford	F. J. Antoine, Prairie du Chien.	C. B. Lunsford, Gays Mills.
Dane	H. P. Greeley, Madison. F. A. Davis, Madison.	W. T. Lindsay, Madison. Arthur Sullivan, Madison.
Dodge	A. E. Bachhuber, Mayville.	E. S. Elliott, Fox Lake.
Door	John Hirschboeck, Forestville.	T. C. Proctor, Sturgeon Bay.
Douglas	L. A. Potter, Superior.	T. H. Shastid, Superior.
Dunn-Pepin	Julius Blom, Menomonie.	E. C. Jacobs, Durand.
Eau Claire	Percy E. Riley, Eau Claire.	E. E. Tupper, Eau Claire.
Fond du Lac	D. N. Walters, Fond du Lac.	C. W. Leonard, Fond du Lac.
Grant	Rush Godfrey, Lancaster.	J. C. Betz, Boscobel.
Green	J. F. Mauermann, Monroe.	Edward Blumer, Monticello.
Green Lake-W.-A.	B. E. Scott, Berlin.	Orvil O'Neal, Ripon.
Iowa	G. H. McCallister, Avoca.	C. P. Banfield, Mineral Point.
Jefferson	H. O. Caswell, Ft. Atkinson.	W. A. Engsborg, Lake Mills.
Juneau	Carl Vogel, Elroy.	
Kenosha	H. A. Robinson, Kenosha.	O. W. McClusky, Kenosha.
LaCrosse	G. J. Egan, LaCrosse.	E. H. Townsend, LaCrosse.
Lafayette		
Langlade	J. C. Wright, Antigo.	G. W. Moore, Antigo.
Lincoln		
Manitowoc	J. E. Meany, Manitowoc.	C. M. Gleason, Manitowoc.
Marathon	F. H. Frey, Wausau.	J. M. Freeman, Wausau.
Marinette-Florence	C. H. Boren, Marinette. A. T. Nadeau, Marinette.	H. F. Schroeder, Marinette. G. S. Horswell, Wausaukee.
Milwaukee	R. Blumenthal, Milwaukee. S. R. Mitchell, Milwaukee. H. Heeb, Milwaukee. J. J. Seelman, Milwaukee. F. Pfister, Milwaukee. S. Higgins, Milwaukee. F. Thompson, Milwaukee. M. L. Henderson, Milwaukee. J. W. Hanson, Milwaukee.	G. Kaumheimer, Milwaukee. W. V. Nelson, Milwaukee. F. Peterson, Milwaukee. W. Malone, Milwaukee. W. C. F. Witte, Milwaukee. E. W. Miller, Milwaukee. W. Jobse, Milwaukee. C. Beebe, Milwaukee. W. Egan, Milwaukee.
Monroe	H. B. Johnson, Tomah. H. Williams, Sparta.	T. J. Shechy, Tomah. S. D. Beebe, Sparta.
Oconto	C. J. Ouellette, Oconto.	W. C. Watkins, Oconto.
Oneida-Forest-Vilas	T. B. McIndoe, Rhinelander.	C. A. Richards, Rhinelander.
Outagamie	G. A. Ritchie, Appleton.	V. F. Marshall, Appleton.
Pierce	C. A. Dawson, River Falls.	Rolla Cairns, River Falls.
Portage	E. P. Crosby, Stevens Point.	W. F. Cowan, Stevens Point.
Price-Taylor	G. E. McKinnon, Prentice. W. P. Sperry, Phillips.	J. Sieberth, Lugerville. F. W. Mitchell, Ogema.
Racine	G. W. Nott, Racine.	J. H. Hogan, Racine.
Richland	John Ross, Richland Center.	W. R. Coumbe, Richland Center.
Rock	T. W. Nuzum, Janesville.	C. H. Sutherland, Janesville.
Rusk	W. F. O'Connor, Ladysmith.	J. C. Baker, Hawkins.
Sauk	H. J. Irwin, Baraboo.	L. W. Sayles, Baraboo.
Shawano	A. J. Gates, Tigerton.	C. E. Stubenvall, Shawano.
Sheboygan	Otho Fiedler, Sheboygan.	A. J. Knauf, Sheboygan.
St. Croix	T. S. Wade, New Richmond.	E. B. Bradford, Hudson.
Trempealeau-J.-B.	H. A. Jegi, Galesville.	Wm. Belitz, Cochrane.
Vernon	J. M. Christenson, Westby.	C. E. Lauder, Viroqua.
Walworth	M. V. Dewire, Sharon.	R. C. Halsey, Lake Geneva.
Washington-Ozaukee	G. Savage, Port Washington.	H. H. Albers, Allenton.
Waukesha	A. W. Rogers, Oconomowoc.	F. W. Aplin, Waukesha.
Waupaca	T. E. Loope, Iola.	L. H. Pelton, Waupaca.
Winnebago	I. E. Ozanne, Neenah.	Ronald Rogers, Neenah.
Wood	V. A. Mason, Marshfield.	Edward Hongen, Grand Rapids.

PROGRAM FOR 77th ANNUAL MEETING

INCLUDES PRESIDENT-ELECT, A. M. A.

PROGRAM FOR ANNUAL MEETING.

THE PROGRAM COMMITTEE.

Dr. J. Gurney Taylor, Milwaukee, Chairman
 Dr. Francis B. McMahon, Milwaukee.
 Dr. Carl Henry Davis, Milwaukee.
 Dr. William E. Kylie, Milwaukee.
 Mr. J. G. Crownhart, Milwaukee, Secretary.

TUESDAY, OCTOBER SECOND.

6:00 P. M.

Dinner for Secretaries, Red Room, Hotel Pfister, Headquarters.

8:00 P. M.

House of Delegates meets Red Room, Hotel Pfister, Headquarters.

WEDNESDAY, OCTOBER THIRD.

9:00 A. M.

Scientific Program opens at Juneau Hall, the Auditorium.

"The Pathology, Diagnosis, Prognosis and Treatment of Acute Intestinal Obstruction"—D. R. Connell, Beloit.

"The Surgical Treatment of Toxic Goitre"—(Illustrated)—A. S. Jackson, Madison.

Discussion—Reginald H. Jackson, Madison.

"Chronic Gonorrhoea in Women" — Harold Shutter, Milwaukee.

"Cardio Vascular Symptoms and Signs of Early Hyperthyroidism"—J. A. E. Eyster, Madison.

"Filiform Stricture of Urethra"—James C. Sargent, Milwaukee.

"Hematuria, including causes, diagnostics and therapy"—Gideon Timberlake, Baltimore.

Discussion—Walter K. Gray, Milwaukee.

2:00 P. M.

Afternoon session opens.

President's Address by F. Gregory Connell, Oshkosh.

"Relative Importance of History, Symptoms, Physical Signs, X-ray and Laboratory in diagnosis of Pulmonary Tuberculosis"—(Illustrated)—Charles E. Ide, Milwaukee.

"Anaesthesia and Analgesia in Obstetrics"—William Clark Danforth, Chicago.

"The Purpose and Benefits of Maternal Welfare"—(Illustrated)—Fred L. Adair, Asso. Prof. of Obstetrics and Gynecology, University of Minnesota.

Discussion—C. H. Davis, Milwaukee.

"Pathologic Cellular Malfunction"—(Illustrated)—J. L. Yates, Milwaukee.

8:15 P. M.

Evening meeting open to the public.

"Public Health Work Pays"—W. A. Evans, Chicago.

THURSDAY, OCTOBER FOURTH.

9:00 A. M.

Morning session opens.

"Insulin Treatment of Post-Operative (Non-Diabetic) Acidosis"—William Thalheimer, Milwaukee.

"The Present Status of the Management of Diabetes Mellitus"—William S. Middleton, Madison.

"Surgical Complications of Diabetes"—(Illustrated)—Russell M. Wilder, Rochester, Minn.

"The Management of some Milder Forms of Diabetes with especial reference to Treatment of Diabetes in Elderly Subjects"—R. T. Woodyatt, Chicago.

2:00 P. M.

Afternoon session opens.

"Cancer of the Breast"—George P. Muller, Prof. Clinical Surgery, Univ. of Penn.

"The Cancer Problem from the Standpoint of the Otolaryngologist"—Frank J. Novak, Jr., Chicago.

"Cancer of the Ovary"—Henry Schmitz, Chicago.

"Radium for Uterine Bleeding and Leukorrhoea of Benign Origin"—Thomas J. Watkins, Chicago.

Subject to be announced—James B. Murphy, New York, Rockefeller Foundation.

6:45 P. M.

Banquet at the Wisconsin Club, Grand Ave., and Ninth Street.

Dr. William A. Pusey, Chicago, President-Elect of the American Medical Association, will present the only address of the evening. He will speak on "A Study of the Wilderness Road to Kentucky—A Doctor's Diversion"; the talk to be illustrated. Dancing and cards at 9:00. Bring your wife.

FRIDAY, OCTOBER FIFTH

9:00 A. M.

Morning session opens. Day devoted to dry clinics with presentation of patients. Among those on the program are George P. Muller, Gideon Timberlake, and Joseph S. Evans of Madison—subjects to be announced.

2:00 P. M.

Afternoon session for dry clinics. The special sectional interests will be included at this time. The complete schedule will be announced in the final program.

GENERAL INFORMATION.

All meetings, except where noted, will be held in Juneau Hall, Milwaukee Auditorium. The entrance used will be on Cedar Street between Fifth and Sixth Streets.

Registration booth will be in Kilbourne Hall, Milwaukee Auditorium.

Post Office will also be maintained next to Registration booth. Have all mail or telegrams addressed care State Medical Society Convention, Auditorium Building, Milwaukee.

Municipal parking area is located just across from the Cedar Street entrance to the Auditorium.

It has taken three months to work out your annual meeting program. Will you spend three days with us?

THE JOURNAL CLINIC

Edited and Published by

THE BUREAU OF POST GRADUATE MEDICAL
INSTRUCTION

UNIVERSITY EXTENSION DIVISION

The University of Wisconsin.

MILWAUKEE COUNTY HOSPITAL CLINIC.

BY FRANCIS D. MURPHY, M.D., AND
LOUIS F. JERMAIN, M.D.

In sifting out suitable cases for teaching students in the clinics at Milwaukee County Hospital, we find many that are of unusual interest, especially from the viewpoint of diagnosis. The following is the report of one of those which seemed exceedingly interesting to us.

W. F., a white, single, male laborer, age 57, entered the Milwaukee County Hospital on March 8, 1923. His family history was negative. He had been strong and healthy all his life, except that he had gonorrhoea at the age of 23, for which he was successfully treated. He denied having had syphilis.

The present illness started in the early part of December, 1922, when he began to have fever in the late afternoons and to have drenching night sweats. This state of affairs continued for about two weeks. One morning he was awakened by a severe chill that lasted one-half an hour, after which he was too tired and sick to go to work. On this morning he first noticed that he was markedly jaundiced. The chills recurred once or twice a day, toward evening, for several weeks, then stopped; but the jaundice and the fever persisted. From the date of the onset of chills, his strength and health began gradually to decline and anorexia rapidly developed. He stated that the jaundice did not fluctuate in intensity since the onset; and he noticed the stools were gray. He also said that he suffered no pain nor distress except when someone pressed on his abdomen over the region of the liver and spleen.

On examination, the patient was found very emaciated with dry and very intensely jaundiced skin. The pulse was 100, the pupils were irregular and reacted sluggishly to light. The tongue was heavily coated yellow and was fissured. The heart examination showed a double aortic murmur and a mitral systolic. The lungs were found to be practically normal. The liver was very much enlarged four fingers' breadth below the costal border and was extremely tender on slight pressure. There was no irregularity of the liver edge. The spleen was found to be enlarged. No marked adenopathy was present. The fever, from the time of entrance to the hospital, was of the intermittent type, ranging from 98° in the morning to 103° in the afternoon. The W. B. C. was 9000; R. B. C., 2,500,000; the B. P. was 110/75/40. The urine contained bile, otherwise it was negative. The stools were gray and no ova nor parasites were found. The sputum was

negative for Tb. The Wassermann reaction was ++++ on two occasions.

Hb. 50—c.l.=1.

n.	lymph.	endo.	baso.	eos.	myelo.	nucl.
89	10	1	0	0	0	2

Poikilocytosis and anisocytosis marked.

POSTMORTEM EXAMINATION.

External examination: The body was emaciated. The pupils were somewhat dilated, but equal. The skin and visible mucous membranes were deeply jaundiced.

Internal examination: The skull was not examined. The thymus was not present. In the middle part of the anterior mediastinum there was a small bulging, the size of a peach; further preparation showed that it belonged to the ascendant part of the aorta.

Right lung: There was an adhesion of the apex, lateral and posterior portions of the superior lobe, to the thoracic wall. The anterior surface of the pleura near the apex was covered with fibrinous membranes. At this site there was a subpleural lobular pneumonic focus, the size of a cherry.

Left lung: The apex was retracted and contained pigmented scars.

Both lungs showed the picture of a chronic substancial emphysema; the tissue was edematous and somewhat congested. In the pleura of both lungs echymoses were visible.

The heart was enlarged vertically but particularly horizontally. The left ventricle appeared well rounded. The right ventricle was dilated. The papillary muscles and the trabeculae were flattened. The left ventricle was somewhat dilated and possessed thickened walls. The papillary muscles and the trabeculae showed a pronounced projection into the lumen. The apices of the papillary muscles in the left ventricle were fibrous. The foramen ovale was obliterated. The aortic valves showed a rounded thickening of their free edges.

The ascendant aorta was extensively dilated and contained, in its anterior wall, a sacculated aneurysm, the size of a peach. The intima was diffusely wrinkled, particularly in sinuasi of Valsalvae and in the ascendant portion of the aorta. No calcifications were present.

The coronary arteries and their ramifications contained, in the intima, a few small yellowish patches.

The liver was enlarged. At its surface, one could notice multiple small circumscribed fluctuating bulgings of greenish color and surrounded by a hyperemic and partly hemorrhagic zone. At the region of the gall bladder there were firm adhesions to the pyloric region of the stomach and duodenum, as well as to the hepatic flexure of the colon. The right portion of the omentum adhered also to this site. After preparation of this region, it was found that the gall bladder was shrunken to a very pronounced extent and contained six spheroidal, brown green calculi (combination form), the size of a hazelnut, and with rough surface (mulberry-like), which were embedded in a thickened mucous and greenish mass.

The middle portion of the ductus choledochus was embedded in the firm and fibrous adhesions which surrounded and involved the ligamentum hepatodoudenale

and was compressed further by the enlarged and indurated head section of the pancreas.

The mucosa of the distal portion of the common bile duct was free of changes and did not show any bile imbibition, while the proximal part was dilated and contained thickened bile. Both hepatic ducts, as well as their ramifications at the hilus of the liver, were greatly distended (to the size of a thumb), and one could easily penetrate with the finger into the parenchyma of the liver. The mucosa of the larger bile ducts was covered with thin purulent membranes.

At the cut surface of the liver, one could find scattered numerous small and large abscesses, from the size of a hazelnut to that of a walnut, which were imbibed with bile. The parenchyma of the liver was brown yellow, partly greenish and brittle.

The lymph glands at the hilus of the liver were enlarged and gray red in color.

The pancreas was covered with pinhead-sized opaque areas, which were particularly distributed within the fat tissue. The head portion was very thickened and dissected by fibrous tissue, while the other sections of the parenchyma were hard in consistence. The pancreatic duct was dilated and filled with thin, partly-mucous secretion.

The spleen was enlarged (nearly three times its usual size); the pulp was reddish, somewhat softened, but not buldging; the follicles could not be seen.

Both kidneys possessed a brown yellow and brittle tissue.

The stomach was only slightly dilated. The mucosa was ecchymosed.

The small and the large intestine was without pathological changes.

The urinary bladder was distended; the prostate was not enlarged.

ANATOMICAL DIAGNOSIS.

Multiple cholangitic abscesses of the liver following purulent ascending cholangitis.

Obstruction of ductus choledochus by retracting sclerotic adhesions.

Cholelithiasis with chronic cholecystitis and chronic adhesive pericholecystitis.

Tumorlike induration of the head of pancreas with compression of the pancreatic duct, dilatation of the same and fresh peripancreatic fat necrosis.

Cholemia.

Diffuse leucic mesaortitis with fusiform dilatation of the ascendant aorta containing a sacculated aneurysm in the anterior wall.

Insufficiency of the aortic valves with eccentric hypertrophy of the left ventricle.

Healed tuberculosis of both apices of the lung with retraction of the right apex and bullous emphysema.

Partial adhesion of the right superior lobe.

Fatty degeneration of myocardium and kidneys.

Ecchymoses of mucous and serous membranes.

DISCUSSION.

From the diagnostic standpoint this patient was extremely interesting and instructive. The pres-

ence of jaundice not deep enough to be the result of a complete obstruction of the ducts; the septic temperature; liver enlargement; splenic enlargement; double aortic murmur and positive Wassermann all contributed to considerable speculation and difference of opinion as to diagnosis.

The positive Wassermann and aortic murmur indicated that, without doubt, the patient was a syphilitic and that the aorta was the seat of a syphilitic mesaortitis. The jaundice and enlargement of the liver were more obscure. The septic temperature, pronounced chills and appearance of the patient suggested that there was a pyogenic infection of gall tracts and liver in addition to a possible syphilis of the liver, and that in all probability a chronic pancreatitis had developed. The healed tuberculosis was not discovered until autopsy. Carcinoma of the liver was practically excluded by the absence of nodules.

In view of the facts presented, the diagnosis of primary syphilis with secondary pyogenic infection seemed most credible.

RAPID PRECIPITATION PHASE OF THE KAHN TEST FOR SYPHILIS.

The original procedures of the precipitation test for syphilis proposed by R. L. Kahn, Lansing Mich. (*Journal A. M. A.*, July 14, 1923), possess two important limitations: 1. The weaker serums require overnight incubation to bring forth precipitates. 2. Occasionally, serums from active syphilis give negative reactions although employing a presumably sensitive antigen. A procedure is presented in this paper which entirely overcomes the first limitation, and practically overcomes the second. At least 95 per cent of the precipitation reactions with the new procedure are completed in from five to ten minutes after mixing serum with the antigen-salt solution mixture, and the final reading is taken after about one hour's incubation. Three equal amounts of serum are employed in each test with varying amounts of antigen mixture. The final reaction is essentially one of the following: (1) precipitation with all amounts of antigen mixture; (2) precipitation with the larger amounts of antigen mixture and negative with the smaller amounts; (3) precipitation with the smaller amounts of antigen mixture and negative with the larger amounts, or (4) no precipitation with all amounts. It is believed that the degree of the reaction with the larger or smaller amounts of antigen mixture is indicative of a definite clinical condition in the patient. Furthermore, experience gained with about 2,000 examinations indicates that there is no tendency with this procedure to lose serologic reactions.

The call of the annual meeting is not an office call.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical
Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

THE PREVENTION OF SIMPLE GOITER.*

BY F. A. SOUTHWICK, M.D.,

STEVENS POINT.

During the last twenty-five years the thyroid gland has been the subject of a great deal of investigation, and during the last ten years more has been definitely learned concerning its structure, chemistry and function than was learned in all the preceding centuries.

It is my purpose, in this paper, to give a resumé of the scientific work done by Beauman, Marine, Kimball, Kendal, Plummer and others which has apparently placed simple goiter in the list of preventive diseases.

From my conversation with physicians I am convinced that the majority of them have not correlated the data that has recently appeared upon the subject, but they are excusable since there has not been an abundance of literature available and much that has appeared has dealt with single phases of the subject. It is my intention, therefore, to assemble in this paper as many of these discoveries as are necessary to present the subject upon a workable basis, giving due credit to the men named who have done the original work.

Goiters are generally classified as Exophthalmic, Adenoma and Colloid. I shall not consider the exophthalmic, neither shall I consider the adenomatous variety except to say that the latter frequently has its inception in simple goiter, and when simple goiter is controlled, it will reduce to a considerable degree the number of adenoma's. This talk, then, will refer only to simple, endemic, adolescent or colloid goiters, any one of which names is applicable.

We, here in Wisconsin, should be interested in these goiters since more than fifty per cent of our girls have them either during adolescence or soon thereafter, and it means more to them than a cer-

vical deformity; it means mental and physical impairment, as shown in lowered metabolism with resulting early fatigue, instability of the nervous system, menstrual derangements, etc.

In order to properly and successfully carry out the prevention of any chronic disease the public must be educated regarding that disease; they must be made to realize that the work is being honestly conducted in their interest and not for the physician's financial gain: physicians may know about the danger of letting chronic diseases run on month after month and year after year, but the public must also know about these dangers if anything is to be done about controlling them; for that reason different organizations have, in the last few years, instituted propaganda regarding tuberculosis, cancer, diphtheria, goiter, etc. That upon tuberculosis has been carried on by the Anti-tuberculosis Associations all over the country, and as a result of the general education of the public the death rate has been reduced more than 30 per cent; where there were formerly 200,000 deaths from tuberculosis in the United States, there are now approximately 125,000. Where there were 2600 in Wisconsin, there are now fewer than 1800.

We are also having propaganda regarding cancer. This emanated from the Bureau of Cancer Research and is now being extensively and widely carried on. While not so much is known about cancer, even by the physicians, yet we have every reason to expect a lowered death rate because the public will earlier seek medical advice, and so many of these cases will be attacked in the pre-cancerous stage.

There is now a propaganda on in many cities and children's institutions to immunize against diphtheria. When this is generally accepted by the public and the work finally carried out, diphtheria will be practically eliminated from our land. On account of an extensive propaganda carried on in Stevens Point last year we were able to immunize 1150 children and I attribute this generous response to the fact that the public believed it was an honest propaganda in the interest of saving the lives of their children.

The last propaganda to which I shall call your attention is that regarding the prevention of simple goiter. The original work in this was done by Cleveland physicians and the first propaganda and control was instituted by them; it is

*Read before the Ninth Councilor District Medical Society, May 17th, '23.

now being carried out as a practical health measure in scores of cities throughout the middle west.

There are certain districts throughout the world where goiter is extremely prevalent and goiter has been known to exist in these regions since the earliest history of the district. Goiter is characteristic of the locality and therefore is said to be "endemic." There are a few especially noted endemic goiter districts, such as

The Alpine Mountain region of southern Europe.

The Himalyan Mountain region of Asia.

The Andes Mountain region of South America.

The Cascade Mountain region of North America.

In the United States there is a goiter belt extending across this whole northern section, beginning at the St. Lawrence River Basin, extending south of the Great Lakes, up through Wisconsin into the Pacific Northwest of the United States and Canada, with the greatest incidence in Idaho, Oregon and Washington.

In olden times goiter and non-goiter belts were rather sharply defined, but the lines have now become largely obliterated on account of the migration which is constantly going on from one section to another. It remains true, however, that the great majority of simple goiters in this country are found in adolescent girls residing in this northern goiter belt.

From very early times the cause of goiter has been attributed to the water supply. Many different theories have been advanced, but the most adequate, sufficient and definite has recently been given by McClendon and his associates in laboratory work: At intervals, from the first geological period to the last geological period, much of the United States was submerged under the sea, and in that way was soaked in sea water for ages. As the sea contains about sixty billion tons of iodine, which is the great bulk of the iodine of the world, a store of it was deposited at that time in the earth's strata. This iodine was laid down in the form of Iodide of Sodium, and Iodide of Sodium is four times as soluble as Chloride of Sodium or common salt. As the water began to recede and the land to emerge above the sea, the iodine was gradually leached out by the rains, except where buried at great depths, and that accounts for the fact that there is an increased goiter inci-

dence in countries depending upon surface waters and shallow wells for their supply.

The southern part of the United States is the only large region that was submerged by the sea at a late geological period, and here the sea salts are not entirely leached out, so goiter is not common in this southern region. McClendon and his associates have been analyzing the water from different parts of the United States to ascertain its iodine content, and they have found it requires ten quarts of water from the south to produce one milligram (Mg.) of iodine, while in this northern belt it requires fifteen times as much water to produce the same amount of iodine. It has been determined, as I shall show you later, that one Mg. a day is the *least amount that is permissible to obtain in the human system to keep free from goiter*; therefore in the southern states one must drink ten quarts of water a day and here in the north one must drink one hundred and fifty quarts a day if he is to get enough iodine from the water he drinks to prevent goiter. Of course, this is preposterous, but the following is given as reasonable and more probable: That the iodine in the water is an indication that iodine is in the soil from which the water comes, and the iodine in the soil is concentrated and appropriated by the plants growing in the soil; and as we live largely on food that grows in the soil, we receive the great bulk of our iodine through the food we eat and not through the water we drink.

The incidence of goiter along the coast states is very low, and would be even lower except for immigration from goiter belts to which I have already referred. The reason for this low incidence is supposed to be on account of the sea spray being carried inland depositing upon the soil the iodine which it contains. I formerly practiced medicine within ten miles of the Atlantic coast. I was there nine years and I never saw a simple goiter in that territory.

There are several instances where the body demands certain elements; the hemoglobin of the red blood cells must have iron or the individual becomes anaemic; the bones of the child demands calcium or the child develops rickets; other tissues of the body require what are known as vitamins to prevent scurvy. An important element connected with the thyroid secretion is iodine, and the reason the thyroid starts to enlarge is that there is a deficiency of iodine. Colloid or simple goiter

can, then, very properly be called a *deficiency disease*.

The thyroid is one of the important glands of the body; a child develops according to whether his gland is normal, deficient or absent; it determines whether he shall be mentally alert, or mentally dull, if not an idiot; it continues to play an important part in growth and development throughout puberty. If a girl of approximately seven or eight years of age should have her thyroid removed she would never pass through the changes of puberty and develop into womanhood; if a woman should have her thyroid totally removed, and afterwards have a child, the child would be born with a goiter unless thyroid gland extract was given throughout pregnancy. Therefore, we can say that the thyroid gland has an important influence in controlling the normal growth and development in the young, and has its influence, also, over metabolism throughout life.

The study of the history of endemic goiter is the study of the human race. The Romans were familiar with the disease, and Caesar commented on it as being one of the peculiar characteristics of the Gauls; yet it was not until the middle of the last century that the different governments of the European countries began to see the economic importance of the problem. Their observation had led them to believe that the highest percentage of Cretins was found in the districts where the incidence of goiter was the greatest; so they appointed commissions to study the problem.

The Sardinian Government was the first to appoint a commission in 1848; then the French in 1864, and other countries at a later date. The French commission reported that there were 500,000 goiters and 120,000 Cretins in France. In these reports it was stated as their belief that goiter was the first stopping place on the road to Cretinism, and that the end result of a continuous goiterous condition was Myxedema in the individual affected and Cretinism in the next generation. The most these commissions did was to make a survey and report conditions, and there was no scientific knowledge gained concerning the cause of goiter until 1895 when *Beauman made the discovery that iodine was a normal constituent of the thyroid gland*. Since that date definite knowledge of the gland and its functions has been fast accumulating.

In 1907 Marine emphasized the fact that iodine

was not only a normal constituent of the gland, but that it was absolutely necessary for proper functioning. Later experiments by Marine and Lenhart established the fact that in all animals and in man the iodine store was decreased in goiterous glands and that the highest percentage of iodine was found in normal thyroids, it being approximately 0.2 of one (1) per cent of the weight of the dried gland. In 1914 Kendal, of the Mayo Clinic, found the active principle of the gland, isolated it in crystalline form, and gave it the name of "Thyroxin."

At the Boston meeting of the American Medical Association in 1921 Plummer, also of the Mayo Clinic, gave a most interesting and instructive paper in which he made many important deductions, some of which are substantially as follows:

That the Thyroid Gland has an essential and an accessory function: The essential function is the elaboration of the so called Thyroxin, discovered by Kendal, for distribution to the cells throughout the tissues of the body. The accessory function is the secretion of the so called Colloid; this colloid is retained in the cells of the gland (acini) and in it is stored the iodine taken from the blood as it passes through the gland, the iodine being the basic material in the elaboration of Thyroxin.

That this Thyroxin is active, either directly or indirectly, in producing potential energy on stimulation or excitation of the cell. There is at all times in the body of an average man, exclusive of what is contained in the thyroid gland, approximately 14 Mg. of Thyroxin. There has to be this much to function properly. Between one-half and one Mg. is exhausted every day in performing the ordinary duties of life. A shift of one (1) Mg. of Thyroxin in the tissues of the body is accompanied by a corresponding rise or fall of between two and three per cent in the basal metabolism. Since Basal Metabolism is the determination of the heat production in a person under standard conditions, it becomes a valuable diagnostic aid in determining the functional activity of the thyroid gland.

It is well known that in Cretins, Myxedematous, and in thyroid-less patients the metabolic rate is exceptionally low, and Plummer in several hundred instances, has given intravenously the maximum dose of 14 to 22 Mg. of Thyroxin to these patients at a single dose. The effect was to bring the metabolic rate to normal in approxi-

mately ten days, hold it there for the same length of time, after which it would gradually return to its preexisting state. In the large colloid goiter he has found the metabolic rate is often from 8 to 15 per cent below normal, and though the thyroid vessels are distended and a thrill and bruit present, in from 12 to 24 hours following the administration of a maximum dose of thyroxin intravenously, the thyroid vessels are not palpable and the thrill and bruit are no longer audible. The gland, then rapidly shrinks and becomes barely palpable in three weeks. This condition can then be usually maintained by the administration of iodine.

The "modus operandi" in the formation of colloid goiter is of some interest. As has been said there should be approximately 14 Mg. of thyroxin in the tissue cells at all times in order to function properly, but as one-half to one Mg. is exhausted every day it is incumbent upon the thyroid gland to elaborate and deliver enough to maintain that amount. It can, and will do it provided it can get the raw material (iodine) from which to manufacture the thyroxin, but when the iodine intake is insufficient it is unable to do it, consequently the thyroxin standard in the individual is not maintained. Now when the thyroxin falls below normal it causes a fall in basal metabolism and this is supposed to automatically call upon the thyroid for increased work. Attempting to respond to this call and acting under the continued stimulation, the gland increases its secretion of colloid which, upon accumulating in the cells, distends them and forms the tumor which we call "Colloid Goiter."

In the beginning I said that a colloid goiter was a handicap to any girl possessing it; the reason for this can now be better understood, since any colloid goiter of considerable size signifies lowered metabolism, and lowered metabolism means less pep and energy.

There is, then, a very delicate balance being maintained at all times between the iodine intake and the thyroxin consumed, and a point below which the iodine intake cannot fall without a resulting goiter, while if the gland is kept saturated with iodine, and above this point, no goiter can develop. The term "saturation" may suggest to your mind massive doses, but no such doses are required as it has been definitely determined that

one (1) Mg. of thyroxin a day is enough to fulfill the requirements, surely not a ponderous dose.

Fortunately, about the time this research was going on, there was an abundant opportunity to confirm the findings. It had already been determined that in goiterous districts animals were affected, as well as man, and that the percentage of iodine to the weight of the dried gland was identical. This gave an opportunity for animal experimentation. The first application was made in the fish industry in the year 1910. There had been such a loss at the Pennsylvania fish hatchery that the industry was about to be abandoned; when Marine and Lenhart investigated they were able to demonstrate that the fish were affected with endemic goiter, caused from feeding an artificial food devoid of iodine. The whole problem was solved by adding a small quantity of iodine to the water. In Michigan the sheep industry was becoming paralyzed; many lambs were dying and the general condition was bad. An investigation showed that the sheep had endemic goiter. A salt was obtained and given that contained iodine, and the sheep industry was saved to the state. In the Pacific Northwest animals were affected to such an extent that the raising of calves, pigs and chickens was fast becoming unprofitable, but this condition was all changed when iodine was added to the food and drink.

After this animal experimentation the treatment was applied at the Lakeside Dispensary in Cleveland, and later taken up on a large scale with the school children at Akron in 1917.

The method of prevention used here was the giving of three grains of Iodide of Sodium in a glass of drinking water every school day for two weeks, fall and spring; as there are five school days in a week, this means that only twenty doses, or altogether one dram of Iodide of Sodium was given during the whole year.

Girls only were examined and treated, and no girl was permitted to take the treatment without a written permit from her parents. 4495 were examined each fall and spring over a period of two and one-half years and a record kept on a special individual chart. Of the 4495 examined 2165 were normal and 2330 had goiters at the first examination. 2190 elected to take the treatment and 2305 elected not to take it. Of the 2190 taking the treatment only five showed an increased glandular growth during the period of ob-

servation; four of these were found to be suffering from neglected infections. This is in keeping with Swan's report that "if children are freed from the harmful effects of focal and local infections, the goiter incidence will be decreased, that even when goiter is present they will often disappear following the removal of diseased tonsils or the extraction of carious teeth, and that when early colloid goiter does not respond to adequate iodine therapy search will usually disclose an infectious factor."

Of the 2305 who elected not to take the treatment 495 showed increased thyroid enlargement during this demonstration; 347 of these were normal at the first examination but developed goiter during the two and one-half years of observation.

The treatment had no more than got under way in Akron before Klinger of Switzerland undertook to carry out the same in the schools there, but instead of giving the Iodide of Sodium he gave an organic iodide incorporated in a chocolate tablet, and instead of giving it every day for two weeks, he gave it once a week throughout the school year. After this plan these children received twice as many doses by the end of the year as did the Akron children. At the end of twenty months he reported that in a school of 760 where there was a goiter incidence of 90 per cent he had reduced it to 28.6/10. More than one-half the Cantons of Switzerland are said to be carrying out this treatment at this time, and it is recommended to become a compulsory measure throughout the state.

Of course the Medical Profession was skeptical, when this treatment was started about giving iodine so promiscuously, but neither in Akron or in Switzerland was there any evidence of Exophthalmic Goiter, or any evidence of nervous irritability simulating goiter, traceable to its administration.

The results obtained in Akron were with adolescent girls; boys were not treated for two reasons; first, because there are six to eight times as many goiters in girls as in boys, this greater number being on account of the close inter-relationship between the thyroid gland and the organs of reproduction, and second, because the majority of goiters in boys are congenital. There are, then, two other periods in life besides the adolescent period when simple goiters may develop. Namely: In foetal life and during pregnancy.

While a great percentage of all simple goiters oc-

cur during the adolescent period, those occurring at the other periods are important and can also be prevented by giving the mother iodine in almost any form during the first half of pregnancy. Treatment of the pregnant mother, therefore, serves a double purpose—it saves herself and also saves her offspring from goiter.

When it becomes the universal practice among physicians to administer iodine to the pregnant mother there should be no congenital goiters and therefore few, if any, goiters in boys.

In my examination of more than one thousand girls in the schools of Stevens Point, preparatory to giving this treatment, I found an unexpectedly large number having an enlarged thyroid isthmus; as it was my understanding that this was a congenital indication I questioned these girls regarding their mothers, and they universally reported that their mothers, also, had a goiter, hence the necessity was demonstrated to me of giving gravid women in goiter belts iodine in order to prevent goiter in their offspring.

In Conclusion. There are three periods in life when simple goiter frequently develops: First, congenital, that is, starting before the child is born, due to a thyroid deficiency in the mother.

Second, during puberty.

Third, during pregnancy.

Since it has been definitely proven these simple goiters are caused from iodine deficiency, and since the statement is now made that "simple goiter is the easiest to prevent of any known disease" Kimball says the problem is simply this: "That in endemic goiter districts every woman should keep her thyroid saturated with iodine during every pregnancy, if she will do this she will not develop any goiter, and her baby will be born with a perfectly normal thyroid. This takes care of two of the goiter periods in the life of the individual. Again, every girl should keep her thyroid saturated with iodine during puberty, that is, from the ages of 10 to 18 approximately; if they will do this they will not develop any goiter."

It is the duty of the family physician to treat the expectant mother and so prevent foetal goiters and those brought upon the mother through pregnancy, but in the adolescent period it should become a public health measure and be carried out in the schools, for the reason that the public school group furnishes the best census of goiter in any community, and a more extensive, systematic, eco-

omical and practical plan of treatment can be carried out through this organization, than can be done in any other way.

Further, under this plan those taking treatment can be kept under closer observation over a longer time than those voluntarily presenting themselves to their family physician for treatment. In fact it is impossible to conceive that any great number of girls would voluntarily and regularly present themselves to their family physician for treatment, but under the plan suggested it becomes a part of the school regime and is therefore carried through their school life.

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4495 Examined	2190 Treated	908 Normal	{ 2 Goiters developed (in 2½ yrs.) 0.2%
		1139 Small	
2165 Normal		143 Large	{ 114 Decreased (79%) 29 Unchanged 0 Increased
		1257 Normal	
2330 Goiters 52%	2305 not Treated	959 Small	{ 134 Decreased (13%) 698 Unchanged 127 Increased
		89 Large	

(Diagrammed from the summarized records of the work done in the Akron schools, published by Kimball in Nation's Health, Nov., 1922.)

PUBLIC HEALTH NEWS.

No cases of "Devil's Grippe," said to be prevalent in the past, have been reported in Wisconsin.

It was stated that the state board of health will not operate under the new state health code, which

the legislature recently enacted to bring all health laws into compact form, until Jan. 1, 1924.

The administration of the Schick test in schools was advised in the case of a city where an outbreak of diphtheria seems probable. It is sometimes possible to have assistance in the work by a physician from the state department.

An inquiry from a northern Wisconsin resort as to when a hay fever sufferer may safely return to Milwaukee was answered by the statement that usually the return can be made immediately after the first killing frost, particularly in those cases caused by ragweed pollen.

An appointment as assistant collaborating epidemiologist in the U. S. Public Health service need not be renewed or changed because of a removal to another city in the state, and entitles him to use of the postal franking privilege anywhere in the state.

Assignments of deputy state health officers to speak at county school board conventions were made in various sections of the state. The control of communicable disease in schools, the fatality of closing schools on account of ordinary epidemics, etc., are subjects of such talks.

Owner of a cottage at a well known summer resort was threatened with an order closing it for further leasing to tourists unless vermin is eradicated and the place maintained in a clean condition. "The people of this state who enjoy a lucrative income from vacationists must keep their property in good condition," said the board in a letter to the owner, "and must see to it that a safe water supply be provided at all times."

No deaths from snake bites in this state have been reported in recent years, although there is an occasional death from snake poisoning. The department was informed by the New York Zoological society that it is gathering statistics from all states regarding fatalities from bites of venomous snake with a view of demonstrating the necessity of preparing reliable anti-venomous serums for general distribution, which have been perfected to a point where they are very efficacious, even after the bites of the largest poisonous snakes of the southern states.

Attend the annual meeting, Milwaukee, October 25.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

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J. L. YATES, Milwaukee, 2nd Vice President

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LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists medical societies across Wisconsin counties with their respective officers.

SOCIETY PROCEEDINGS

ASHLAND-BAYFIELD-IRON COUNTY

Members of the Ashland-B-I County Medical Society were the guests of Dr. J. M. Dodd for a dinner at The Clinic, Ashland, on Tuesday noon, August 21st. Following the dinner Mr. J. G. Crownhart spoke to the members on the duties of the state secretary and experiences at the 1923 legislature. Practically a complete attendance of the society was present at the meeting.

BARRON-P-W-S-B COUNTY

The Barron-P-W-S-B County Medical Society met in the court house at Barron on Tuesday, September 4th. Dr. John T. Roggers, St. Paul, spoke on "Visceroptotics in Surgery." Dr. A. N. Nelson, Clear Lake, read a paper on "Vitamin." Mr. J. G. Crownhart, secretary of the State Medical Society, gave an informal talk on his duties and experiences at the 1923 legislature.

CLARK COUNTY

A meeting of the Clark County Medical Society was held at Neillsville on August 24th. A seven o'clock dinner was served at the Sweet Shop which was followed with a business meeting at the Public Library.

The following officers were elected for the ensuing year: Dr. Frank Boeckmann, Greenwood, president; Dr. R. R. Rath, Granton, secretary. Drs. S. E. Williams and Riopelle, Chippewa Falls, gave an interesting paper on "The Modern Tendencies of Medical Practice." A general discussion followed.

DODGE COUNTY

The Dodge County Medical Society met at Beaver Dam on Thursday, August 2nd. Dr. Harold Marsh, Madison, gave a paper on "Insulin Treatment for Diabetes."

DOUGLAS COUNTY

Members of the Douglas County Medical Society were the guests of Dr. George Saunders for a dinner at his summer home at Solon Springs on Wednesday evening, August 29th. Following the dinner Mr. J. G. Crownhart spoke to the members on different phases of his work as secretary of the State Medical Society. Following a short discussion "wanderers" related experiences had during recent trips to Europe.

JUNEAU COUNTY

A meeting of the Juneau County Medical Society was held at Maunston Friday afternoon, August 17th. After a business session the society was addressed by Mr. J. G. Crownhart, secretary of the State Medical Society. The society voted to support a clinic soon to be held under the auspices of the Red Cross.

WALWORTH COUNTY

Members of the Walworth County Medical Society met at Lake Geneva Friday evening, August 24th at the Y. M. C. A. Dr. Milton Portis, Chicago, gave a paper on "The Diagnosis of Diseases of the Upper Portion of the Abdomen."

At this meeting it was decided that a joint picnic comprising the membership of the Walworth, Rock and Green County societies will be held at Lake Lawn, Delavan, September 12th.

NEWS ITEMS AND PERSONALS

Doctors W. F. Lorenz, Madison, and Erwin C. Cary, Reedsville, were elected vice commanders of the Wisconsin Department of the American Legion at the recent state convention held in Superior.

Dr. Roland S. Cron is now associated with Dr. C. Henry Davis in the practice of obstetrics and gynecology at Milwaukee. Doctor Cron was assistant professor of obstetrics and gynecology at the University of Michigan.

Manitowoc is now organizing a Medical Detachment for the 121st Battalion of Field Artillery, Wisconsin National Guard. Doctor Max Staehle has been commissioned captain of the unit.

Twenty-two physicians were found listed among the creditors of a Milwaukee salesman who recently filed a petition in bankruptcy.

Dr. H. L. Jefferson, Clintonville, has sold his practice to Dr. Fred Walch, Black Creek. Doctor Jefferson, a resident of Clintonville for ten years, will move to Flint, Michigan.

A new \$100,000 sanitarium has been proposed for Madison. Its service, according to plans, will be of a general nature.

Dr. R. C. Buerki, California, has been appointed acting superintendent of the new state general hospital at Madison. Doctor Buerki is an alumnus of the university and his appointment was announced by the regents on September 6th.

Dr. John H. Karsten has opened his practice at Horicon.

Dr. L. H. Prince, for five years superintendent of the state school for dependent children at Sparta, is now a member of the medical staff at Waukesha Springs Sanitarium.

Dr. Ralph E. Rugh, Racine, is in a serious condition as a result of a stroke of paralysis on Friday, August 24th.

Thirty-five members of a graduate chapter of Alpha Mu Pi Omega came from all parts of Wisconsin to attend the annual summer picnic at Racine recently. Following an afternoon of out-door sports, dinner was served at the Racine Country Club. Dr. Morris Fishbein, Chicago, was a guest of the society.

The Ashland County board has named Dr. Dell Andrus, Ashland, as county physician for the ensuing year.

Dr. H. B. Sears, Beaver Dam, has sold his home to move to Madison where he is connected with the State Board of Health.

At the annual convention of the National Fraternal Congress of America, Dr. George H. Williamson, Neenah, was chosen president of the medical section.

Dr. and Mrs. W. J. Clement, Berlin, will leave shortly for Honolulu, Hawaii, where they will remain for the winter.

Five Fond du Lac physicians have moved to new quarters on the sixth floor of the new Commercial National Bank Building. Those taking up offices in the

suite are Doctors C. W. Leonard, G. T. Boyd, P. G. McCabe, J. J. Sharpe, and H. R. Sharpe.

Dr. F. A. Wright, formerly of Fond du Lac, is in an Oshkosh hospital following a major operation.

With the completion of the State General Hospital early in 1924, the University of Wisconsin expects to start its new four year course in medicine next fall. The hospital will have 300 beds with 12 large wards.

Announcement has been made of the transfer of Dr. Porras, government physician on the Rosebud Indian Reservation, S. Dakota, to the Lower Brule Reservation, Wis. Dr. Porras is a native Filipino.

Dr. and Mrs. C. E. Reineck, Appleton, returned this month after a journey around the world. The trip was of several months duration.

Dr. G. C. Harper, Humbird, is to move to Durand, Wisconsin. He will continue his practice at the new location.

SEVENTY-FIVE RECEIVE LICENSES.

The Wisconsin State Board of Medical Examiners announces that seventy-five physicians have been licensed to practice in Wisconsin following the examinations conducted in Milwaukee June 26-28. Of the total number admitted, twenty-four were admitted upon reciprocity and fifty-one were licensed following examination.

Following is the list of new licensees:

EXAMINATION.

John Marchese-Albino	John Karsten
Ernest G. Aston	Harry T. King
Clarence E. Bach	Edward J. Konop
Mark J. Bach	Fred A. Kretlow
Charles H. Bachman	Russell M. Kurten
James E. Bercey	Maxwell Lando
Louis A. Bernhard	Hans Lee
Joseph L. Bettag	James W. McGregor
John F. Blair	Ben J. Malnekoff
John A. Butzer	Charles D. Miller
Burton Clark, Jr.	Russell H. Miller
Sarah Mu Jin Ching	Edward L. Miloslavich
William T. Crowley	Edward B. O'Connor
Lawrence F. Dugan	Oliver W. Pfeifer
Adolph C. Engel	Lawrence D. Quigley
David Fisher	Francis P. Quinn
Gilbert F. Fitzgerald	Maurice J. Reuter
Jacques P. Guequierre	Rob Roy Roberts
Alf H. Gundersen	Erwin G. Seybold
Edgar A. W. Habeck	Clarence K. F. Schubert
Hal W. Hogue	Herman A. F. Schulz
John A. Hurlbut	Irwin W. P. Schulz
John Huston	Edmund D. Sorenson
Robert K. Irvine	Edgar Thomas
Everett D. Ivey	William A. Wagner
Ben F. Johnson	

RECIPROACITY.

Robert W. Adams	George W. Coon
Charles E. Anderson	Harriet Davies
Clesson C. Atherton	William P. Donovan
Karl K. Borsack	John B. Doyle
Guy W. Carlson	Robert S. Gutsell

Vernon J. Hittner
Arthur R. Knauf
Franklin L. Leister
Lawrence V. Littig
Walter L. Mattick
Marriott T. Morrison
William H. Neumann

Mynie G. Peterman
Charles W. Powell
Conrad O. Rogne
Henry J. Schmid
Julius A. Toren
Arthur J. Hall
Ross W. Thompson

MARRIAGES.

Dr. Samuel Plahner, Milwaukee, to Mrs. Naomi Wilson Manlove, Milwaukee, on Friday, August 24th.

Dr. George Keskey, Kenosha, to Miss Stella Blackmore, Ely, Minn., at Kenosha, July 31st.

DEATHS.

Dr. Erwin G. Seybold, Forest Junction, was drowned when swimming at a summer resort near Westboro, Mass., August 23rd. Dr. Seybold was a 1923 graduate of Harvard medical school and a graduate of the University of Wisconsin in 1920.

Dr. J. P. Taugher, Milwaukee, died at Waukesha municipal hospital on Saturday, Sept. 8th, as result of injuries received when his automobile was struck by a fast express on the Milwaukee road.

Dr. Taugher was born at Manitowoc in 1862. He was a graduate of Northwestern Medical School, Chicago, 1893, immediately establishing his practice and home in Milwaukee. He was a member of the staff of Trinity Hospital, the Milwaukee Academy of Medicine, the Milwaukee County Medical Society, the State Medical Society and the American Medical Association.

HEALTH PERSONNEL CHANGES.

The public health nursing service in several cities and counties will undergo changes this fall. Two changes in the public health nursing staff of the state board of health also are reported. Miss Bessie Crandall, Milton, Wis., formerly with the child hygiene division of the Michigan department of health, has assumed duties as maternity and infant health center nurse for the district comprising Dane, Rock, Green and Grant counties, with headquarters at Milton. Miss Mary Dunwiddie has resigned as state supervising nurse to become instructor in the Central School of Nursing at Milwaukee. Her resignation is effective Sept. 15.

Miss Ethelyn Town, graduate of Milwaukee hospital and of a four months' course in public health nursing at Western Reserve university, Cleveland, O., becomes county nurse of Ozaukee county.

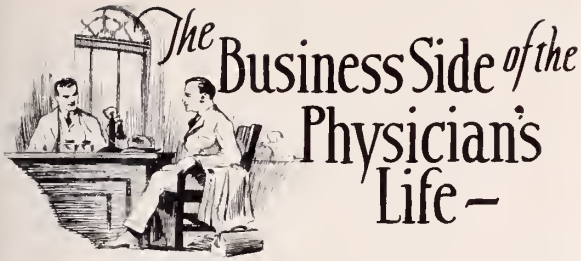
Miss Marie Klein, formerly school nurse of Ripon until a year ago, has returned to fill the same post.

Miss Mildred Kolar, Milwaukee, has become city nurse of Beaver Dam. She recently took the public health nursing course of the Wisconsin Anti-Tuberculosis association.

Miss Dagmar Holm, city nurse of South Milwaukee resigned to join the nursing service of the Milwaukee county health organization.

Miss Anna Low has resigned as Green county nurse to become superintendent of the new Memorial hospital at Edgerton. No successor has been named.

Miss Loretta Rice, New London, has accepted the position of city nurse in New London.



THE WIFE AS A BUSINESS PARTNER.

By Ethel B. Scully.

Whether men like it or not, and in justice to them most men do, women have thoroughly established themselves in the business world, and are threatening to edge men out of some of their most jealously guarded positions. The writer of the following article speaks with authority. Miss Scully is one of the conspicuous business successes of Milwaukee, not merely among women, but men as well. She is secretary and treasurer of Morris F. Fox & Co., one of Milwaukee's largest investment houses. Like most successful business women, Miss Scully has been able to retain a "home viewpoint" and has a deeper appreciation of the problems of the home woman and wife than many of the latter have themselves. The subject that she discusses in this month's article is a very timely "live" matter to women. Perhaps it will open a few husbandly eyes to the fact that the wife is a business partner as well as a sharer of the families' joys and sorrows.—EDITOR.

Why your editor should have asked me to write on this subject, instead of one of the many wives who *are* business partners, I cannot say, unless he figured that the perspective gained from the experiences of the wives who are our clients would be useful and encouraging to you.

To go back a bit—the wife's status as a business partner seems to have fluctuated in direct proportion to the commercial prosperity of the ages. Referring to Mr. Wells, we learn that the first ladies were almost as active in pursuing the meat and bone as were their worthy husbands, but, that as soon as a surplus of wealth (or bones) was amassed, the lady was told to stay in her cave and gnaw a fine seam—friend husband would do a little hunting for sport. So the ladies, down the ages, gradually became acclimated to their caves; but note that they kept ever a watchful eye on the larder and reminded the gentlemen when they need shoot for necessity and when for sport.

I think it must have been a wife who first thought of preserving food for future use. You see they have a weather eye open and are natural conservers. That instinct for conservation, that eye on the future, has come down through the ages, until today women feel the kickback of over-development and are often afraid of the next turn. Man continues to plan and achieve, to produce and create wealth. Does it not seem logical then that the conserver would make the best of business partners for the producer?

Looking back again, we find, in the unusually prosperous eras, women calmly took the luxuries and comforts which came to them, and so it is today. But in the pioneering eras, we find them again side by side in the partnership. Individually, that condition holds, for most often do you find the wife of moderate means a more active partner than the wife of wealth. Necessity is the mother, not only of invention, but of abilities we did not guess.

If only wives were reading this, I would urge them to screw up their courage and their self-confidence, for they have the abilities which can make them business partners. But to the husbands who read this, I suggest only that you encourage your better half to be your business partner. You know competition is keen, collections often poor, your main energies are needed in the productive end. Little time is left for figuring out where you stand and why your net results are no better. Now, the wife has plenty to do—of a kind—but, by and large, she has more leisure for figuring, for planning the budget, for shopping to advantage, for making the smaller economies, for increasing the savings and for investing the surplus. After all, doesn't she do most of the real buying for the family now? She really handles the purse; is, in fact, the treasurer. In any business, the treasurer also suggests the disposition of the surplus. It is not handed over to the president or to the advertising department for experimental or promotion work. No, sir! They may each have their share, but the big end of surplus must be placed at work steadily, ready for the rainy day (usually caused by too much experimenting).

Of course, every man likes to think he has the makings of a financier. But if you could see the results! If friend wife were to look in your lock box today, how many skeletons would she find? From the requests we get to locate markets on "Tom, Dick and Harry" stocks, there's at least one in every family. Skeletons are all right in a physician's office, but the fewer of this kind that are in your lock box, the sooner will you be able to take a day off.

But, suppose you decide you're going to handle the surplus while you live. Then, suddenly, the latest germ carries you off. The wife and family know nothing of your investments—where are they? why chosen? Have you been fair to your

family? You ask, "What shall I do? How do I go about it?" First, the family budget; next, the savings account; insurance for protection; then the investment of surplus. You receive many suggestions now as to where and how to invest, from the ultra-dignified and conservative to the lurid, sure things. Just as you know, because of the human element, any operation may fail, so the reputable investment banker knows that the human element in business, in management, makes a "perfectly safe" investment impossible. Ask your wife, then, to read the circulars and letters. You will find her judgment and intuition pretty fair appraisers. Then, together, you can choose your financial physician. And, remember, that just as you can give more nearly perfect care to the patient who has confidence in you and *follows your advice*, so it is in your relations with your financial physician—you are the patient.

Perhaps the foregoing sounds theoretical. Here are a couple of actual cases taken from our experience:

1. The husband has never earned more than \$4500 a year. He and his wife are both thrifty. The first years he did the investing, or rather, put their savings into various enterprises promoted by different friends. His wife said from the beginning that if one can't afford to lose, one should never place money on the recommendation of a person vitally interested in the project himself, for, however honest, his judgment would unconsciously be biased by his hopes of success. After several of his bets went wrong, she suggested that they go to a disinterested investment banker and take his recommendation. Since then, she has taken entire charge of affairs and they have a list of some twenty bonds. They plan and talk things over together, but the husband never dictates, for two reasons, he says—first, because events have proven his wife's judgment to be the better, and second, because she has never referred to those events.

2. A young woman was married to a middle-aged man, who laughed at the idea of any business sense in his wife and teased her about spending every cent she could lay her hands on. Just to prove to herself and him that she could save and take care of savings, she started to buy baby bonds out of her modest allowance. Her plan was not to let him know until she had saved \$1000, for, as she said, her husband was a \$1000-man. However, after four years of laborious economy, with

seven little bonds tucked away, she told him one day and she said that nothing she has ever done has so impressed and pleased her husband. A self-made man himself, he knew what it meant to save \$700 out of that allowance. Now she is buying \$500 bonds, investing half of the family savings.

We might go on—the wealthy wife who handles all her own money; the widow who carried on her husband's business and is now retired, clipping coupons for recreation; the wife who is in business with her husband and has complete charge of investing the profits; and, last but not least, a score of doctors' wives who gather the circulars, read, digest, talk it over with the "head" of the house, and then come in to invest. They are careful planners and they enjoy it. Some day their families will call them blessed.

LEGAL NOTES.

Any physician in Wisconsin, regardless of place of birth, or present citizenship, may receive the permit to write liquor prescriptions. This opinion from Attorney General H. L. Ekern was given to the state prohibition commissioner last month. The fact that the physician is not an American citizen is held no bar to his receiving a permit.

THE PROGRESS OF MEDICINE.

As soon as the laboratory man, because of a more complete knowledge of the clinical branches of medicine, begins to appreciate the work and aspirations of the clinician, as soon as the clinician possesses a better knowledge of the fundamental sciences, then, says Arno B. Luckhardt, Chicago (*Journal A. M. A.*, Aug. 4, 1923), will both cease to avoid each other as bad medical company. With a common interest and a common knowledge, aided by detailed information of their own respective specialty, they will attack with vigor and effect problems of immediate practical moment. History reveals that medicine has evolved to its present status because of the work of both types of investigators. But the progress might have been faster had clinicians following the lead of Harvey and laboratory workers following the lead of Claude Bernard and others kept in sympathetic touch with one another instead of cultivating a mental aloofness of critical attitude toward one another. As a result of concerted action, scientific medicine will make more rapid strides, the education of our medical students will improve, the fundamental sciences will in turn develop at a more rapid rate—all of which will redound to the more certain control of disease and cure of the sick.

Your friends and classmates will be in Milwaukee for the annual meeting. They will be looking for you.

BOTULISM EPIDEMICS.

Botulism is due to a poison secreted by certain species of bacteria that are common in some parts of the United States and Canada, but that seem to be nearly harmless unless they are given a chance to produce their poison in foods that have been imperfectly preserved and have been sealed in air-proof receptacles. They cannot live within the animal body and consequently cannot produce their poison there.

Botulism has been known for centuries in parts of Germany, where it was called "sausage poisoning," but the germ was not discovered until 1895; and no cases of it are known to have occurred in the United States until about 1909. Since then, according to a bulletin recently published by the U. S. Public Health Service, 91 single or group outbreaks of botulism have been reported in the United States and Canada. A total of 345 persons have been affected, of whom 213 have died, giving a case mortality of 61.7 per cent.

Of the 91 outbreaks only 30 have been proved bacteriologically or toxicologically to be due to botulism, the other being so adjudged from the symptoms. About two-thirds of the outbreaks (25 proved and 38 not proved to be botulism) were caused by plant food, and about one-third (5 proved and 14 not proved) were caused by animal food.

The following products have been proved or assigned as the particular food in which the germ causing this disease developed in the cases investigated: String beans, home canned 17, commercially canned, 3; corn, home canned, 9, commercially canned, 1; asparagus, home canned, 5; apricots, home canned, 3; pears, home canned, 2; spinach, home canned, 2, commercially canned, 6; beets, home canned, 1, commercially packed, 2; liquor, home brewed, from old home-canned products, 1; cottage cheese, home prepared, 2; pickled mackerel and herring, home preserved, 1; ham, home cured, 2, commercially cured, 1; sausage, home prepared, 1, commercially prepared, 2; salt pork, home cured, and beef products, home prepared, 3; minced olive relish, commercially canned, 3; ripe olives, commercially pickled and bottled, 7; pork and beans, commercially canned, 1; tomato catsup, commercially bottled, 1; clam juice, commercially bottled, 2; tuna fish, commercially canned, 1; evaporated milk, commercially canned, 1; and minced chicken, commercially prepared, 1.

Spoilage, due to botulism germs, adds the Public Health Service cannot always be determined by the appearance or odor of the food.

Fibroform and the Nolan Inhaler. "A cure for pulmonary tuberculosis by the use of pure carbon and calcium was claimed by Dr. Wm. T. Nolan of Jeannette, Pa., in an address before the Westmoorland County Medical Society in Greensburg, Pa." This was the first paragraph of a news story sent out by the Associated Press. The treatment, it seems, consists of the inhalation of a fine powder said to be made by mixing soot with calcium carbonate, phosphate, chloride and lactate. This, Dr. Nolan calls "Fibroform." Fibroform is used by means of the Nolan Inhaler. The outfit appears to be supplied by Dr. Nolan for one hundred dollars. As

no quantities are given, the composition of this latest "consumption cure" is secret. The treatment is put forward on the basis of utterly inadequate tests made only by its sponsor. (*Jour. A. M. A.*, May 26, 1923, p. 1535).

PERCIVAL'S CODE: A CHAPTER IN THE HISTORICAL DEVELOPMENT OF MEDICAL ETHICS.

Percival's code was published in 1803. From the period of Percival's code to the present, Chauncey D. Leake, Madison, Wis. (*Journal A. M. A.*, Aug. 4, 1923), says that most laws relating to medical practice have been instigated by responsible physicians, and all standards of professional morality have been based on his work. Leake examines briefly the character of Thomas Percival, M. D., and his most important contribution. In 1771 he outlined a system for the "Internal Regulation of Hospitals." As the preface to the first edition of the "Medical Ethics" indicates, he composed in 1792, at the request of the physicians of the infirmary, "A Scheme of Professional Conduct Relative to Hospitals and Other Medical Charities." This became the code of laws under which the infirmary operated. In 1794, this code was printed for private circulation, in order to gather the criticisms of friends. Percival wished to call his work "Medical Jurisprudence," but was persuaded that "Medical Ethics" was a more suitable title. With the corrections made by friendly criticism, and with the endorsement of a long list of prominent English physicians, among whom was Erasmus Darwin, the work was published at Manchester in 1803. Percival's "Medical Ethics" is a charmingly written book, expressed quite in that leisurely, quaint and scholarly style one associates with a true English gentleman of the old school. Meeting at once with marked success, its wide distribution among all practitioners and medical students was urged by influential physicians. This was done, and it became the standard code of professional morality enjoined upon all practitioners in the British Empire. Two other editions were published after Percival's death. The first, in 1827, was edited anonymously, and is interesting because of the editorial notes exposing the medical evils of the time. Attacks are made on the "diploma mongering" Colleges of Physicians of London and Dublin, and on the unworthy character of contemporary physicians. The last edition was issued in 1849 under the editorial supervision of Dr. Greenhill of Oxford.

THE ROLE OF PRENATAL NUTRITION IN THE CAUSATION OF RICKETS.

In a series of animal experiments made by Albert H. Byfield and Amy L. Daniels, Iowa City (*Journal A. M. A.*, Aug. 4, 1923), it was possible to produce gross rickets by faulty diet only in the second generation, because the parent stock received in abundance a diet containing all the constituents necessary to proper nutrition.

"Quick, Watson, the calendar pad—Milwaukee, October 2-5."

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

- The Handbook of Tuberculosis.** By John Ritter, M. D.
- Applied Psychology for Nurses.** By Prof. D. A. Laird. J. B. Lippincott Co., Philadelphia, 1923. \$2.50.
- Scuille Cataract.** By W. A. Fisher, M. D., and collaborators. Chicago Eye, Ear, Nose and Throat College. Illustrated, 1923. \$2.50.
- The Life of Pasteur.** By Rene Vallery-Radot. Doubleday, Page & Co., New York, 1923. \$3.00.
- Intelligence Measurement.** By S. C. Kohns, Ph. D. The Macmillan Co., New York, 1923. \$3.00.
- Diseases of the Rectum, Anus and Colon.** By Samuel G. Gant, M. D., LL. D. W. B. Saunders Co., Philadelphia. Three octavo volumes, 1616 pages, 1128 illustrations, and 10 color insets, 1923. Cloth, \$25.00 net.
- The Riddle of the Rhine.** By Victor Lefebvre. E. P. Dutton Co., New York.
- The Rose in America.** By J. H. McFarland. The Macmillan Co., New York, 1923. \$3.00.
- As I Was Saying.** By Burges Johnson. The Macmillan Co., New York, 1923. \$2.50.
- Men Like Gods.** By H. G. Wells. The Macmillan Co., New York, 1923. \$2.00.
- The Wisconsin Blue Book.** By Fred L. Holmes and collaborators.
- Text Book of Therapeutics including the Essentials of Pharmacology and Materia Medica.** By A. A. Stevens, M. D., Professor of Applied Therapeutics, University of Pennsylvania, Philadelphia. Sixth edition, entirely reset. Octavo of 793 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$6.25 net.
- Medical State Board Questions and Answers.** By R. Max Goepff, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Professor of Clinical Medicine, Jefferson Medical College. Fifth Edition. Thoroughly Revised. Octavo volume of 731 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$6.00 net.
- 1922 Collected Papers of the Mayo Clinic, Rochester, Minn.** Octavo of 1304 pages, 488 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$13.00 net.
- Excursions into Surgical Subjects.** By John B. Deaver, M. D., Emeritus Professor of Surgery, University of Pennsylvania; Surgeon-in-Chief, Langenkamp Hospital, Philadelphia; and Stanley P. Rieman, M. D., Assistant Professor of Experimental Pathology, University of Pennsylvania; Chief of the Department of Pathology and Bacteriology, Langenkamp Hospital, Philadelphia. Octavo volume of 188 pages and 30 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$4.50 net.
- What to Eat.** By Benjamin Harrow, Ph. D. New York. The E. P. Dutton Company, 1923.
- Primitive Mentality.** By Lucian Levy Bruhl translated by Lilian A. Clare. New York: The Macmillan Company, 1923.
- Transactions of the College of Physicians of Philadelphia.** Third series Volume 44, 1922.
- Constipation.** By William S. Walsh, M. D., New York: E. P. Dutton Company, 1923.
- Stuttering, Lispering and Correction of the Speech of the Deaf.** By E. W. Scripture, M. D. Second edition. New York: The Macmillan Company, 1923.
- A Practical Treatise on the Causes, Symptoms and Treatment of Sexual Impotence.** By William J. Robinson, M. D. Eleventh Edition. New York: The Cosmopolitan Press, 1923.
- Insanity and the Criminal Law.** By William A. White, M. D. New York: The Macmillan Company, 1923.
- Collected Reprints from the Department of Experimental Surgery.** New York. University and Bellevue Hospital Medical College. Volume 3—1920-1922.
- Optotypes.** By John Green, M. D. St. Louis: C. V. Mosby Company, 1923. Paper cover, 24 pages, 35 engraved plates.
- Tonsillectomy.** By Greenfield Sluder, M. D. St. Louis: C. V. Mosby Company, 1923. Price \$5.00.
- The Tonsils.** By Harry A. Barnes, M. D. St. Louis: C. V. Mosby Company, 1923. Illustrated. Price \$5.00.

BOOK REVIEWS

Textbook of Ophthalmology, Paul Roemer, Prof. and Director of the eye clinic in the University of Bonn. Fourth revised edition. 500 pages with 306 illustrations in the text and 32 colored plates. Urban and Schwarzenberg, Berlin and Wien, 1923.

In our review of the 4th edition of Roemer's well-known textbook, we set forth its recommendable features which have been preserved and adapted to the progress of Ophthalmology in the new edition, without increasing its volume. It excels in clear disposition and very easily readable style. The description of the clinical aspects is greatly helped by the still greater abundance of photographs and well executed colored pictures, also of the normal and pathological histology and ophthalmoscopic plates. The single chapters are preceded by brief presentations of normal anatomy and histology. One section is devoted to neurology of the eye, including the physiology and pathology of the reactions of the pupils, the eye symptoms in a series of diseases of the brain and spinal cord, and the anatomy of the visual paths. Under anomalies and refraction a paragraph on the usefulness of telescopic spectacles for far and near vision is inserted with illustrations. The chapter on simulation with new methods of its exposure is also very serviceable. Thus the new edition of this valuable work can be highly recommended.

C. Zimmerman.

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Hydro and Thermo-Therapy of Internal and Nervous Diseases. Eleven lectures with an appendix on diathermy. Ernst Tobias, Berlin. With a preface by Prof. Goldscheider, 280 PP. Berlin and Wien. Urban and Schwarzenberg 1823, 420 NK (Gold). These lectures originated from practical post-graduate courses held by the author for a period of 12 years at the University of Berlin. They are based on the principle that hydrotherapy is an equivalent remedy within all available therapeutic measures which in some cases achieves more than others, in some less, or is not applicable at all. After an historical introduction the physiological principles are considered, then hydrotherapy in diseases of the nervous system, muscles, joints, digestive tract, metabolism, circulation, respiration, kidneys, acute infectious diseases, and diathermy, in a very easily readable manner.

C. Zimmerman.

Optical Methods in Control and Research Laboratories. J. N. Goldsmith, S. J. Lewis and F. Twyman, Vol. I. Adam Hilger, Ltd., London.

"The optical methods," as the preface says, "dealt in this book are those employing spectrosopes or spectrographs, spectrophotometers, refractometers, and polarimeters. No detailed account descriptions of these instruments or their technique are included but in each case references are given to sources of information on these points." Thus for the use of the refractometer in physiological and clinical analysis many references in Abderhalden's Handbook of biochemical methods are given.

C. Zimmerman.

A Mind That Found Itself. An autobiography by Clifford W. Beers. New York. Doubleday Page & Co., 1923. Price, \$2.00.

This is one of the most unusual and interesting books in the English language and attracted world wide attention when first published some years ago. It is the autobiography of a gifted writer who between his 24th and 26th year suffered a mental breakdown. It is a difficult theme indeed but is handled with delicate skill and is a story of vital interest to the scientist or to the layman. The earlier edition has been carefully revised and certain parts omitted. Interesting letters and an autobiographical account of important work that has grown out of the publication of the book has been added.

Endocrine Diseases by Wilhelm Falta (Vienna). Translated by Milton K. Meyers, M.D. Third Edition. Illustrated. Philadelphia. P. Blakiston's Son & Co., 1923.

Falta's work dealing with the clinical aspects of the diseases of the ductless glands has been recognized since its first publication as one of the most valuable contributions to literature on the subject. A wealth of literature has appeared since his last edition and from this an appropriate selection has been made for this revision. Excellent judgment has been used in this and Falta, one of the pioneers in the field, will continue through his revised publication to hold a most promi-

ent place as an authoritative writer on the subject. The new edition covers the entire field of endocrine diseases including their diagnosis and treatment. There are 104 illustrations and some 600 large reading pages. The publishers are complimented on the book work which is excellent.

Thirty Years of Psychological Research by Charles Richet, Ph.D. New York: The Macmillan Co., 1923. Price, \$6.00.

This work is an exhaustive, original and startling theory in regard to spiritualism by the Professor of Physiology in the University of Paris and is translated from the French. It presents his experiments with "Spiritistic" phenomena and the conclusions he has reached. He believes these phenomena constitute material for a new science which he calls metapsychic. Without attempt to theorize he admits three fundamental phenomena: "Cryptesthesia" (A faculty of cognition that differs from normal sensorial faculties), "Telekinesis" (A mechanical action exerted at a distance and without contact on persons or objects), and "Ectoplasm." These he states make up "Metopsychics"—attempts to prove them but states that to go further is to go beyond the present limits of science.

The Common Neuroses. Their treatment by Psychotherapy by T. A. Ross, M.D. New York: Longmans, Green & Co., 1923. Price, \$4.00.

There can be no question but that the average medical practitioner has laid himself open to very just criticism for his utter neglect and failure to even attempt to understand the patient with a functional neurosis. This failure on his part accounts largely for the success of quackery, cult medicine, etc. This work covers the field of such conditions as neurosthenia, the hysterical reaction, the compulsion or obsessional neuroses, etc., and gives their treatment. It will give the reader an understanding of this type of patient which will be of tremendous value to him and to his patient alike. It is recommended and is well worth the time of any physician.

Recovery Record for use in Tuberculosis by Gerald B. Webb, M.D. New York: Paul B. Hoeber, Inc., 1923. Price, \$2.00.

While many books are available for the tubercular patient, the combination of this with a recovery record has been wanting. As a result, too often such books have been too soon laid aside, whereas it has seemed to the writers that the patients should be in daily touch with a book of this kind.

Mental cheerfulness is all important in the cure of this disease, and the aim of this little book is to keep courage and cheer at the highest level without making the patient too introspective.

Following the text there are 108 chart sheets. They are each good for one week and on them the patient is expected to keep his own recovery record from day to day. Above and below each chart there is an optimistic or cheerful quotation, either prose or verse, taken from sources medical as well as literary, each quotation carrying a distinct message for the patient. The

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daily use of the book for the purpose of recording, insures the continual reading and rereading of these epigrammatic thoughts, which cannot help but put the patient in that most desirable state—a happy frame of mind.

The Infant and Young Child. Its care and feeding from birth until school age. A manual for Mothers. By John Lovett Morse, M.D., Edwin T. Wyman, M.D., and Louis Webb Hill, M.D., of Harvard Medical School and Children's Hospital, Boston. 12mo. of 271 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$1.75, net.

This little work of 270 pages covers the whole subject of the infant and young child. It is written to tell mothers what they should know in order to intelligently feed and care for their children from birth to six years of age. It is the best work we have seen for the purpose and a copy should be within the reach of every physician dealing with the young or inexperienced mother.

Physiotherapy Technic. A manual of applied physics by C. M. Sampson, M.D. St. Louis: C. V. Mosby Co., Illustrated, 1923. Price, \$6.50.

The reconstruction hospitals which followed the late war have been of the greatest value perhaps in awakening a new interest in therapeutics and routing the so-called therapeutic nihilist. The results attained in the fields of physiotherapy in these institutions have revived a general interest in this much neglected field and it is hoped that the profession will come into its own, make use of these means of treatment and no longer leave these matters to the quack and layman. Doctor Sampson's work is most timely. It covers the entire field of physiotherapy, shows what can be done and how to do it. It is well written and splendidly illustrated.

International Clinics. Volume II. Thirty-Third series. 1923. Philadelphia and London: J. B. Lippincott Co.

This quarterly of illustrated clinical lectures and especially prepared original articles has for years maintained the highest standards and furnished the profession with some of its best current literature. The present volume is divided into three sections: insulin, medical diagnosis and treatment and surgery. The section on insulin is especially timely and is written by men like McPhedran, Banting, Seole Harris, Hamburger and Petty. A year by year subscription to this series is well worth while.

Practical Dietetics by Alida Frances Pattee. Fourteenth Edition. 1923. Mt. Vernon, N. Y.: A. F. Pattee, Publisher. Price, \$2.60.

This is the fourteenth edition of a remarkably successful little work on dietetics which has reached a sale of nearly 250,000 copies. The former edition which was reviewed in this column a year or two ago has been brought strictly up to the minute and the assistance of many of the leading authorities has been secured. It is concise and practical, yet overlooks no essentials. It is a work of some 600 pages.

Cerebro-Spinal Fluid in Health and Disease by

Abraham Levinson, M.D., with 69 illustrations and 5 color plates, second edition. St. Louis: C. V. Mosby Company, 1923. Price, \$5.00.

The first edition of this work was reported in this column some years ago. As predicted the work was favorably received as a timely comprehensive text on an important subject and filled a very definite want. Much new data is added in the second edition and a revision has been made of some of the old chapters. Some methods of examination have been simplified, references have been brought up to date, errors corrected and results of the most recent research have been incorporated. It is highly recommended.

The Constitutional Factors in Dementia Precox by Nolan C. Lewis, M.D. New York and Washington: The Nervous & Mental Disease Publishing Co., 1923. Price, \$3.00.

This is number 35 of the nervous and mental disease monograph series and is written with particular attention to the circulatory system and to some of the endocrine glands. The subject matter has been considered under such headings as the circulatory organization as an organic component in the Dementia Precox states; case summaries of Hebephremic, catatonic and mixed states; discussion; conclusions; and Bibliography. It is a splendid piece of work and one of the most valuable contributions to psychiatric literature in recent years.

A Report on the Scientific Work of the Surgical Staff of the Woman's Hospital of New York, 1921-1922.

A volume of 300 pages representing the scientific work of this hospital. A valuable collection of papers on various surgical subjects.

My Memories of Eighty Years by Chauncey M. Depew. New York: Charles Scribner's Sons, 1923. Price, \$4.00.

No American was so well qualified as Chauncey M. Depew to write a book of reminiscences extending from the opening of the Civil War to the present day. He above all knew the leaders in politics, finance, journalism, and society in general, from the presidency of Lincoln to that of Harding. He has something new to tell of Lincoln, Grant, Seward, Conkling, Blaine, Cleveland, Greeley, Russell Sage, Commodore Vanderbilt, George William Curtis, Colonel Watterson, Mark Twain, Robert Ingersoll, Theodore Roosevelt, Joseph Jefferson, Richard Mansfield, to mention only a few.

He knew every president of his time; many of our statesmen were his colleagues during his years in the Senate; his fifty-six years as a railroad man have brought him in contact with the great figures in business life; through his yearly visits abroad he came to know the leaders of thought in England.

From his full life, he has set down vivid memories. His book is a revelation of the men of the times and of the times themselves by a man who knew and understood them. This is a work for any full-blooded American. It is a book for your "evening off" at home and you will be well repaid.

The Wisconsin Medical Journal

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Number 5

ORIGINAL ARTICLES

AIDS TO DIAGNOSIS IN MEDICINE.

BY HENRY ENOS TULEY, M.D., F.A.C.P.,

DEAN, AND PROFESSOR PEDIATRICS, UNIVERSITY OF LOUISVILLE, MEDICAL DEPARTMENT; SUPERINTENDENT LOUISVILLE CITY HOSPITAL; SECRETARY MISSISSIPPI VALLEY MEDICAL ASSOCIATION, ETC.,

LOUISVILLE, KY.

We approach the subject of this paper with some misgivings, as at the outset we must disclaim any originality or the outlining of any new discoveries. We are attempting rather to call to mind aids to diagnosis which we feel are often overlooked or neglected.

We think the medical profession, both general practitioner and specialist, might be condemned for laxity in methods and a tendency to the development of a routine leading to "snap" diagnoses. The treatment of patients without adequate investigation is unquestionably in vogue.

We maintain that a careful, painstaking written report of the personal and family history, followed by a thorough physical examination of the patient, is a *sine qua non* before an opinion can possibly be expressed in regard to the individual patient, proper advice given or adequate treatment instituted.

Hughlings Jackson in 1870 pointed out that the study of the individual patient comes before the study of the disease, for a disease is rarely typical but is modified by the characteristics of the patient.

In the effort to standardize hospitals the greatest stress has been very rightly laid upon case histories, for they are certainly the basis for the intelligent and scientific care of the patient. With an average clientele, it is beyond possibility for any practitioner to remember the details of the illness or disability of any patient for any length of time, and entirely impossible for scientific reports to be made with clinical data to support them unless careful and painstaking histories are taken and as careful physical examinations made and recorded. To those who are content with merely keeping a copy of prescriptions writ-

ten, or who record in a day-book or visiting list some sign indicating the service rendered and charge to be made, we urge the adoption, at once, of hospital methods of case history records. A trial of the complete method will certainly convince the doubters of the wisdom of this routine.

The younger generation of physicians is thoroughly grounded in the methods of history taking, and the importance of accurately kept records to the physician, to the hospital and to the patient.

During the school sessions of the Medical Department of the University of Louisville, the histories and physicals of all new patients in the City Hospital wards are taken by the students and when corrected by the staff or instructors, are typed and made part of the permanent record of the hospital. A duplicate of the history and physical is filed in the library—like diseases and conditions grouped, as a reference library for new classes, and the original is returned to the student for his files. This relieves the intern of much routine work and gives him more time for other work on the ward and for special laboratory investigations.

THE CLINICAL HISTORY.

The clinical history consists of five parts, and is not complete unless all five headings are dealt with:

1. *Anamnesis*, or an account given by the patient or friends of the life of the patient previous to the time of the examination. Leading questions should not be asked until after the patient has told his story.

2. *Status Praesens*. This includes the physical, chemical and biologic examination made by the physician. We wish it were possible to emphasize forcefully enough the importance of the education of the special senses in their application to physical diagnosis, and the correlation of these findings by an active, discriminating brain. The outcome of this is the development of a clinical sense, that ability which comes with training, which enables one to place a precise value upon symptoms or sign. Through the aid of this clinical sense one is able to arrive at a diagnosis by the differential, direct or indirect method.

3. *Clinical Impression.* The recording of one's impression of a case, even though a positive diagnosis is not or cannot be made, is an excellent discipline for every practitioner be he surgeon or internist. Pre-operative diagnoses or impressions are as important, perhaps more important, than an ante-mortem diagnosis in a purely medical case.

4. *Catamnesis.* This is the subsequent history of the patient including notes on the course of the disease, the kind of treatment used and the results thereof.

5. *Epicrisis.* This is the final judgment of the case with discussion of all findings. If the surgical or autopsy findings are available they should be summarized under this heading.

Medical literature has contained many articles of late, emphasizing the tendency of the profession to neglect the art of physical diagnosis. We feel that in a measure this criticism is just, though we do not believe, as has been said by one author, that physical diagnosis is a lost art. This criticism is borne out by the questions asked by most life insurance companies in their medical examination blanks, "Has this examination been made without removing the clothing covering the chest?" How can a chest examination be made through one or two shirts? Yet it is constantly being done.

Inspection, palpation, percussion, auscultation, mensuration! How pregnant with meaning if properly applied! Keeness of vision, seeing, feeling, and hearing understandingly can only be acquired by constant application, thorough mastering of the normal, and its comparison with the abnormal. We are constantly endeavoring to impress this fact upon the younger clinicians in their teaching, that the healthy student himself is the best clinic possible for the sophomore student upon which to begin his practical work in physical diagnosis. The student must first be taught physical diagnosis from the physiologic standpoint, normal breath sounds, normal heart sounds, normal heart dullness, normal resonance, normal chest measurements, etc. The sounds are conditions produced by pathological conditions and can then be more easily recognized. Closer co-operation between the so-called pre-clinical branches and the clinical in medical schools must be had. The well rounded general practitioner is the

product we are endeavoring to send out from our medical schools, not specialists in any branch.

The use of the special senses, with instruments of precision, and chemical, bacteriological and biological methods are rapidly bringing medicine into the domain of a science. It is being said that only the special senses and instruments of precision are necessary in diagnosis, that the laboratories are not needed, that they are refinements for which the patient must pay but which add little to the outcome of the case. We do not believe it necessary to combat this idea in the presence of this audience but rather to call attention briefly to certain of the diagnostic aids which can and should be used by the practitioner in his daily work. Many general practitioners do not use these aids, fearing they need too elaborate an equipment and for this reason do not familiarize themselves with method or technic. As an illustration, of a group of eight practitioners recently in attendance at a City Hospital clinic, not one knew anything of the phenolsulphonophthaline test for kidney efficiency or had ever seen it applied. These men had missed using a valuable aid in the estimation of kidney efficiency, and their patients the benefit of this procedure. This test is so easily done and at so little inconvenience to the patient, that it should be used as a routine in all patients in whom disordered function of the kidney is suspected. It is a routine procedure in the Louisville City Hospital and is considered a most valuable diagnostic aid.

Gerstley¹ has sounded a note of warning against too great emphasis being laid upon pathology in reasoning in regard to the epicrisis of a case, to the exclusion of the physiologic point of view. He states: "To the medical man of the future, far more important than the problem, 'What are the pathologic findings in this intestine, in this heart, in this kidney?' will be the diagnosis, 'What is the tolerance of this intestine to food, the capacity of this heart or this kidney for work?' The community will demand of us that we apply all our skill in keeping the child at play or at school, the adult at work. This physiological point of view has given rise to a change in our conceptions of therapy infinitely more fortunate than anything developed from the pathologic standpoint."

FUNCTIONAL TESTS OF THE KIDNEYS.

This as an introduction to the mention of the physiologic or function tests of the kidney which

are so little used. The value of the concentration urine test is too little appreciated. It is not necessary to put a patient upon the elaborate Mosen-thal or other diet. Carry it out with the patient living his usual routine as to food, drink, exercise, rest, etc. All fluid intake is carefully measured, recorded and totaled for the periods from 8 A. M. to 8 P. M., and from 8 P. M. to 8 A. M. The day urine is passed at two hour intervals and saved in separate bottles, and the night urine saved in one specimen. The specific gravity, amount, and reaction of each specimen is carefully taken and recorded. If there is a fixation of the specific gravity of less than 9 points, or an intake of 25% more fluid than the total output of urine, or if there is a nycturia, or a larger amount passed during the night than during the day, there is a serious functional disturbance of the kidney. This may be found in the absence of albumin and casts. This tells us what the kidneys are doing, their capacity for work. If in addition to this there is a reduction in the percentage of phenolsulphonephthalein recovered in the one and two hour specimens we have learned more than can be told from a dozen chemical urinalyses.

These are tests which can be made by anyone and should be a routine in all patients in whom the kidney function is questioned. There is absolutely no difficulty in obtaining the co-operation of the patient in carrying out the directions for these functional tests in detail. The patient realizes that the results are of vital interest to him and there is no trouble in obtaining his fullest co-operation. Emerson has done excellent work in his studies of nephropathies and his latest report² calls attention to the necessity for a study of the temperature and albumin concentration curves in chronic nephritis, as all patients with chronic nephritis show, at times, slight rises of temperature and definite changes in the blood and urine.

Preventive medicine is economically important. Emerson points out (*loc cit*) that the kidneys are the third organ of importance as a cause of death, and regular examination of kidney function in the apparently well cannot be too forcefully emphasized. Do not be content with a chemical and microscopic examination of the urine, but learn the capacity of the kidneys for work.

BLOOD CHEMISTRY.

Of what value is the newer blood chemistry as originated by Folin and others? Estimation of the retention of nitrogenous products in the blood is of very great value in the summing up of a case, especially as to prognosis. Total nitrogen, urea nitrogen, urea, and creatinin in excess in the blood corroborates the functional test and clinical findings. To illustrate: A graduate nurse on private duty complained to the physician in charge of the patient she was nursing, that she did not feel well; she had a temperature, headache, and her feet were swollen. He asked for a specimen of urine, and it was almost solid with albumin after boiling. She came to the hospital and was admitted to the metabolic ward under Dr. John Walker Moore, Professor of Research Medicine. She gave a history of a recent attack of tonsilitis, the hospital admission diagnosis being acute toxic nephritis, which any tyro could have made. The following is a resume of her case:

Aged 28. Entered hospital January 17, 1921. Chief complaint, swelling of feet, hands and face; drowsiness and headache; decreased urinary output. On January 9 had a chill, followed by swelling and soreness at angle of right jaw, with pain over right antrum accompanied by discharge of thick bloody pus, which persisted three or four days and gradually subsided. Had an abscessed tooth, which was extracted five months ago, with three more found abscessed and later extracted.

January 17, 1921—Blood Pressure 130/70.

URINALYSES.

January 17.	January 20.
ColorAmber.	
AppearanceVery turbid—smoky.	
Specific Gravity1043.	1007
AlbumenPlus 4. Solid cake.	Less.
MicroscopicalLarge number fine and coarse granular casts. Leucocytes and Red Blood Cells.	

BLOOD CHEMISTRY.

	January	17	19	20	22	24	26	Feb. 5
Total Non-Protein Nitrogen.....		61.8	98.4	81.	68.	42.	31.2	32.6
Urea Nitrogen		37.5	51.7	49.	39.	21.	13.	14.3
Creatinin		6.	6.	5.	4.4	3.	2.9	1.4
Uric Acid		5.					4.5	
Plasma Bicarbonate		51.9	48.5		53.2		58.	
Alveolar CO ₂		32.5	Vol. %					
Blood Pressure		130/72	115/70					
January	18	19	20	21	22	23	26	30
Fluid Intake	1180 c.c.	1090	1090	1165	1010	773	1000	800
Urinary Output	264 c.c.	369	602	1120	1007	1718	1065	711

Six points variation in specific gravity in two hour specimen on the 21st.

Eight points difference in specific gravity in two hour specimen on the 30th.

On February 12, the patient was discharged. The kidneys were able to concentrate, fluctuating twelve points daily.

We believe the blood chemistry findings were of the greatest aid in the care of this patient during the acute stage, and the subsequent treatment much more intelligently carried out with the blood chemistry known than if it had not been done.

We would specially emphasize the importance of blood chemistry, as a routine measure of surgery in ascertaining the operative risk to the patient. This is specially true in genito-urinary surgery. We believe some fatalities in prostatic surgery might be avoided if careful blood chemistry examinations were made.

The finding of creatinin above normal limits is of especial prognostic importance, especially in acute surgical conditions of the genito-urinary tract.

In this connection we would state that a regular part of the training of undergraduates is an attempt to teach them biochemistry in their junior year, and a practical application of these methods at the bedside in their senior medical work. The general practitioner need not fit up a laboratory for the carrying out of these tests if he is too busy, as laboratories are available where they can be carried out, if he will send to them a specimen of oxalated blood. He should, however, familiarize himself with the normal limits of the various nitrogenous products and the significance of their increase.

The following are the upper normal limits of the various blood chemistry findings:

Total Non-Protein Nitrogen—	25-35 mg. per 100 c.c. blood
Urea Nitrogen—	12-16 mg. per 100 c.c. blood
Creatinin—	1-2.5 mg. per 100 c.c. blood
Uric Acid—	1-2.5 mg. per 100 c.c. blood
Plasma Bi-Carbonate—	54 to 77
Alveolar Co.—	40 to 45 volume %
Blood Sugar—	80-120 mg. per 100 c.c. blood

POLLINOSIS.

No class of sufferers, perhaps, are more appealing than those subject to pollinosis or food idiosyncrasies, resulting in bronchial asthma, hay fever, the urticarias, eczema, angio-neurotic edema, erythemas, diarrhea, etc.

Much valuable original work has been done in the study of anaphylaxis and allergy by many observers, yet the average general practitioner seems to think but little of the possibilities of this field of endeavor.

Bronchial asthma has long been considered as hopeless and incurable until these studies were begun and sufficient evidence is presented by many observers to warrant the statement that in fully 50 per cent of cases the cause can be determined and successful treatment instituted.³

There is no difficulty in diagnosing an attack of bronchial asthma, so typical is the history and clinical picture of obstructed respiration, character of breathing, auscultatory signs, etc. Looking at the condition from the physiologic standpoint its etiology becomes apparent. A foreign protein, acting upon abnormally sensitive nerve fibers in the mucous membrane of the upper respiratory tract, through the nerve centers cause a spasm of

the muscles of the large and small bronchi, resulting in a typical attack of bronchial asthma. The irritation may be confined to the nasal mucous membrane, causing typical suffusion, sneezing, burning, lachrymation and nasal discharge of a so-called hay fever attack.

Differentiated from the typical bronchial asthma may be mentioned the so-called asthmatic bronchitis, due not to protein irritation, but to a bacterial infection either direct or to the bacterial protein, engrafted usually upon a more or less chronic bronchial irritation, so-called cold or rhinitis. This type should be borne in mind and ruled out if results from protein therapy are to be expected.

Protein sensitiveness may be demonstrated by the intradermal test or the cutaneous test, with every argument, but especially that of safety, for the cutaneous method.

The flexor surface of the forearm is bared and cleansed. Small cuts are made with a sharp scalpel, deep enough to draw serum but not to cause bleeding. On each cut is placed a protein dissolved in a drop of 1-10 normal sodium hydroxide solution. A control upon which the hydroxide solution but no protein is placed, is used for comparison.

In from ten minutes to half an hour the proteins are washed off and the reactions made. A positive reaction consists in the formation of a raised, urticarial wheal surrounding the cut which must measure 0.5 cm. or more in diameter. A wheal less than this in diameter is considered suspicious but not positive, and those larger are indicated as one, two or three plus.

Patients suffering from asthmatic bronchitis do not respond to the ordinary protein reaction though they may to the bacterial protein. A careful inquiry into the habits of patients regarding diet should be made in case of a modified reaction or an entirely negative reaction. Certain articles of diet, which are eaten regularly, but sparingly, eaten may not cause evidences of allergy, but the eating of a large amount of the offending material may cause an attack.

Duke⁴ reports food allergy as an occasional cause of abdominal pain. He reports cases in which intra dermal skin test showed reactions to the same food which had apparently caused the abdominal pain or indigestion. With the pain were associated nausea and vomiting, and occasionally gaseous distension, diarrhea with mucus

and less frequently purpura, edema and hives. Duke explains the pain and other symptoms as due to the allergy caused by contact between the sensitive gastro-intestinal mucosa and the food protein.

Many proteins have been isolated and are available for diagnostic purposes. The following are recommended specially to be used routinely: horsehair or dandruff; cat hair; feathers; the pollen of sunflower, rose, June grass, red top and ragweed; egg; milk; cereals; meats; chicken; potato. Our experience with the bacterial protein has not been satisfactory, although Walker and Goodale report ten per cent positive reactions in sixty patients suffering with asthma.

After the diagnosis of the offending protein the specific protein treatment should be employed, the endeavor being to desensitize or render the patient immune to the offending protein. In food idiosyncrasies the omission of the food found as a cause or strongly suspected, as in the case of suspicious skin readings, is usually sufficient. Where there is bacterial pollen or animal emanation protein irritation, the inoculation by subcutaneous injection of the offending protein should be recommended. The injections should always be controlled by skin tests of the strength of the solution to be injected. That is to say, if there is a reaction to a 1 to 5000 dilution, the first injection should be of a solution not stronger than 1-10,000.

The treatment should be begun sufficiently early in seasonal allergy to complete the course of treatment before the usual time of the attack. Otherwise serious anaphylaxis might result.

BASAL METABOLISM.

The subject of endocrinology has been a most alluring one. There are, however, certain doubters. Dr. Cushing states,⁵ "We find ourselves embarked on the fog bound and poorly charted sea of endocrinology. It is easy to lose our bearings for we have, most of us, little knowledge of seafaring and only a vague idea of our destination. Our motives are varied. Some unquestionably follow the lure of discovery; some are earnest colonizers; some have the spirit of missionaries and would spread the gospel; some are attracted merely by the prospect of gain and are running full sail before the trade wind." Many other observers are optimists and judging by their writings are better seafarers than those referred to above.

Perhaps one reason for this difference of opinion

is that no two persons suffering from endocrine disorders present the same symptoms, hence the difficulty of recognizing those cases of polyglandular intoxication in which endocrines predominate.

The thyroid gland has been more closely studied, perhaps, than any of the internal secretory glands. One of the main functions of the thyroid gland is to regulate the intensity of combustion in the body.⁶ Two general functional disorders of this gland are recognized: hyperthyroidism, or Graves' or Basedow's disease, and hypothyroidism or myxedema. In the former basal metabolism is increased, in the latter it is decreased.

In the patient who presents the typical symptoms of a thyrotoxicosis the condition can be diagnosed by anyone, but there are few in whom all the cardinal symptoms are found. It is in those cases which present but few of the cardinal symptoms and which the general practitioner usually sees first and diagnoses as neurasthenia, that the aids to diagnosis must be used.

The symptoms which should be borne in mind in the diagnosis of a case of thyrotoxicosis are persistent tachycardia, enlarged thyroid, fine tremor, exophthalmos, widening of the slits between the lids, dissociation of the movements of the eyeball and those of the upper lid, inability to maintain convergence of the eyes, profuse sweating, watery and painless diarrhea, rapid and shallow respiration, weakness and other signs of myocardial degeneration, lymphocytosis, insomnia, loss of flesh with good appetite.

Thyrotoxicosis seems to exert its influence principally upon the autonomic nervous system, made up of the sympathetic system and the vagal autonomic system.

The Goetsch or epinephrin test for determining thyrotoxicosis is unstable and unreliable, as positive reactions are found in so many other conditions than thyrotoxicosis. Epinephrin solution is injected intramuscularly, and its effect upon the pulse rate, blood pressure, muscular tremor and subjective nervous symptoms are carefully noted over a given period of time.

In certain cases there is a predominance of the sympatheticotonia, in others the vagotonia; in certain cases there is an involvement of both systems. In the patient presenting the mixed type of symptoms the diagnosis is frequently in doubt and in these the determination of the basal metabolic rate is a most valuable diagnostic aid.

The chemical transformation of the products of digestion within the body, to its demands of nutrition, constitutes metabolism. Total metabolism may be expressed in terms of energy, and the heat unit, or large calorie, is commonly used for this purpose. The large calorie is the amount of heat required to raise one kilogram of water to one degree centigrade of temperature. Following the lead of Lavarsier, workers in this field of investigation have been able to develop the fact that heat production can be measured by the oxygen intake and carbon dioxide output, thus indirect calorimetry.⁷

Several types of respiratory apparatus are in use in indirect calorimetry: the closed circuit apparatus of the portable unit type devised by Benedict, the smaller portable unit type of Jones, and the gasometer type using Haldane method of gas analysis.

Basal metabolism is the heat production of an organism at complete muscular rest after a fasting period of 14 to 18 hours. The rates vary with age, sex, height, weight, food, muscular activity, temperature of patient, certain diseases, drugs, etc.

Disorders of the endocrine system affect the basal metabolism decidedly, causing an increase or a decrease according to the glands affected. Involvement of the thyroid gland in which there is an increased activity and secretion causes an increased rate with great regularity. Very severe cases show a plus 75% or more, severe cases plus 50% or more, and moderately severe cases show a plus 50% or less.

Engelbach has shown that an involvement of the posterior lobe of the pituitary gland causes an increased metabolic rate. Fevers, carcinoma, pernicious anemia, cardiac diseases, lymphatic leukemia, pulmonary tuberculosis and certain drugs, such as thyroid extract, caffeine, adrenalin, cause an increased rate.⁸

The estimation of the basal metabolic rate is a functional test of the thyroid gland and can be looked upon as a diagnostic aid of the greatest value. As McCaskey has demonstrated, certain conditions, such as psycho-neurotic disturbances and those presenting circulatory disturbances, bradycardia, tachycardia, cardiac myasthenia and certain arrhythmias, fine tremors, hyperidrosis, loss of weight, slight temperature disturbances and leucocytosis, can be definitely differentiated from hyperthyroidism. Cases with symptoms of

psychoneurotic instability and tachycardia, with or without thyroid enlargement, may be difficult to diagnose and a basal metabolic reading is of the greatest assistance. In highly nervous individuals, however, the first reading may show a slight increase, this being due to the muscular instability of a nervous person, rather than to a thyrotoxicosis. In these patients a second test should be made. Basal metabolism is of great value also in diagnosing a simple obesity from an obesity of endocrine origin.

Readings between a minus eight to a plus ten per cent may be considered within normal limits.

Ill fitting mouth pieces, nose clamp, etc., has made it necessary for one of us (Dr. Moore) to invent a combination nose and mouth piece, which enables the patient to breathe with perfect freedom and great regularity. As the original mouth piece and nose clip causes the patient to be much irritated, an increase in the reading of the basal rate often occurs.

Of what value, then, is the basal metabolic rate?

The diagnostic value of basal metabolism in endocrine disorders is no less important than its value in determining the proper method and outline of treatment. In brief, it may be said, in ductless glands disorders the basal metabolic rate determines whether the method of treatment used has been beneficial, or of no value, or even harmful. For instance, in goiter therapy, it serves as no other means at our disposal in indicating the effect of certain lines of treatment in hyperthyroidism, whether be carried out by means of surgery, x-ray, or what not. It offers a definite means whereby the thyrotoxicosis can be measured from time to time, thus enabling the physician to direct more intelligently the proper line of treatment.

In hypothyroid cases, whether of a congenital or of a post-operative type, our line of thyroid feeding can be accurately determined by ascertaining from time to time the metabolic rate. In hypopituitarism it is of value in diagnosis and in guiding treatment.

The question is often asked, is the metabolic rate a measure of the patient's ability to withstand thyroidectomy?

This question should be answered emphatically no. The rate gives information of the degree of thyroid intoxication, but in no way does it signify that the patient would be able to stand the superimposed stress of operation. We do know, as has

been pointed out by Boothby, that the higher the metabolic rate the greater the stress to which the patient is being subjected, and the greater the consequent reduction in his reserve power. He states as a general rule that preliminary ligations are less frequently indicated with patients having rates below plus 50%, and very rarely with patients having rates below plus 40%. We agree with this author that the mortality of thyroidectomy is lower in cases with basal metabolic rates below plus 50%, but we do not feel that we can concur in the statement that preliminary ligation is mainly indicated in cases with rates below plus 40%. If the mortality rate is reduced by preliminary ligation, why not ligate in all cases preliminary to thyroidectomy? It is found not only in our series, but also in most other reports, that there is a mortality rate in patients whose basal metabolic rate is below plus 40%.

The basal rate does not tell us the duration of thyroid disorders, nor is it an index to myocardial degeneration. Thus, a patient in a state of remission may have a very slightly increased rate; but as a result of previous thyroid exacerbation, his myocardium might have suffered hypertrophy and degeneration with a marked reduction of reserve forces, even to the point of decompensation. It is obvious that in such a case the metabolic rate would not serve as an index for operative risk. So we conclude that in cases with a rate below plus 40% in which thyroidectomy is contemplated, the decision should not rest upon the basal rate alone, but upon surgical judgment.

THE ROENTGEN RAYS.

The Roentgen rays offer us one of our most valuable aids in diagnosis. Physical findings are confirmed by them and often they reveal unsuspected pathology. By means of the rays the internist is able to locate various foci of infection, to verify the outlines of the heart and visualize various chest conditions, especially pleural effusions, pneumonias and tuberculosis. McGowan states: "In the diagnosis of tuberculosis in children, the Roentgen ray is a most valuable and reliable evidence." Rosenblatz writes: "It is commonly accepted that the Roentgen ray usually shows structural changes much earlier than physical examination, and in many cases where the physical examination is negative, the roentgenogram is positive."

With the aid of the fluoroscope, barium meal

and enema one is able to demonstrate esophageal, gastric and intestinal pathology. With the fluoroscope also, the size of the heart and aorta, the excursion of the diaphragm, and mediastinal and lung conditions are usually seen clearly. By no other method is it possible to visualize suspected pathology.

By means of intraperitoneal injection of gas we are able to outline all abdominal and pelvic organs, viz: diaphragm, liver, spleen, kidneys, uterus, tubes and ovaries, while in conjunction with oxygen enema the colon is clearly shown. Adhesions to the diaphragm, adhesions of the intestinal coils to the parietal peritoneum, omental fixation, fibromyomata of the uterus, ovarian tumors, enlarged livers and gall bladders can be made out by the intraperitoneal injection of gas. One of us (Dr. Turner), in his work at the Louisville City Hospital, as yet unpublished, has not only been able to show the normal uterus, tubes and ovaries, but the gravid uterus, showing its gradual increase in size and the appearance of foetal bones. Positive diagnosis of pregnancy has been made as early as three months. It has been found of service in certain doubtful cases to diagnose presentation and position.

Danby and others by intra-ventricular and intraspinal injection of air have been able to demonstrate the cerebral ventricles, and by changed relations to localize intra-cranial neoplasms, and to differentiate the different forms of hydrocephalus.

Orendorf has reported rather important observations by means of direct peritonoscopy. By these direct observations within the peritoneal cavity, he and others have been able to examine the under surface of the liver, gall bladder, peritoneum and female pelvic organs. The value of this direct examination over an exploratory laparotomy is evident.

The value of the ray to the orthopedist is paramount, for in no other way is he able to tell as accurately the position and severity of fractures, the results of his manipulations in bringing the fragments in correct apposition and alignment, and the various pathological bone conditions.

To the genito-urinary surgeon the ray offers the only positive evidence of renal calculi, and verifies his suspicion of ureteral and vesical calculi.

By the injection of certain solutions impene- trable by the rays, we are able to determine the extent of infection of the pelvis, of the kidney,

vesical diverticulae, tumors, dilated and thickened ureters, etc.

FUNCTIONAL DIAGNOSIS OF THE HEART.

William Harvey, writing in the seventeenth century, states that "the heart is the beginning of life; the sun of Microcosm, even as the sun in his turn might well be designated the heart of the world; for it is the heart by whose virtue and pulse the blood is moved, perfected, made apt to nourish, and is preserved from corruption and coagulation; it is the household divinity which discharging its function, nourishes, cherishes, quickens the whole body, and is indeed the foundation of life, the source of all action."

Perfect functioning of the heart would imply a state in which all the qualities of the cardiac structure are normal and coordinate. If there is any derangement of the qualities, the question is then asked, to what degree does the disturbance effect the efficiency of the whole organ.

The recognition and significance of cardiac disorders can usually be arrived at by clinical study combined with the use of various technical methods.

The clinical symptoms and physical signs, though of utmost importance in the study of cardiac conditions, probably do not indicate the exact level of cardiac efficiency. It is for this reason that technical methods by means of the sphygmograph, polygraph and electrocardiograph have proven themselves valuable aids.

POLYGRAPH.

It must be admitted that a wonderful advance in cardiovascular diagnosis has come through the use of such instruments as the polygraph and the electrocardiograph.

Long before the electrocardiograph had been perfected, workers, like Mackenzie, with the polygraph, showed characteristic variation of the a, c and v waves, which made it possible to interpret definitely the various cardiac arrhythmias.

That the "a" represents the beginning of auricular systole, the "c" the beginning of ventricular contraction and the drop of the v wave, the opening of the tricuspid valves, cannot be denied, even in the light of the electrocardiograph findings. The polygraph, therefore, is invaluable in diagnosing the various cardiac arrhythmias, and owing to the compactness of its mechanism, and the simplicity of its manipulation, the physician

is no longer justified in saying that this or that patient has a cardiac arrhythmia without determining its type.

ELECTROCARDIOGRAPH.

The electrocardiograph may be said to be in its infancy. Nevertheless, workers with this instrument of precision, have brought to light many invaluable phenomena taking place during the cardiac actions. Not only can the various types of arrhythmias be accurately established, but the preponderance of one ventricle over the other when present, is almost always clearly depicted. Special emphasis should be laid upon the electrocardiographic changes that are associated with myocardial involvement. Such conditions as bundle branch block and arborization block, may be shown in an electrocardiogram long before any serious clinical symptoms have developed.

The results of the study of the cardiac impulse along with x-ray and post-mortem findings are promising; nevertheless, much data is yet necessary to make this field a useful adjunct in cardiac diagnosis.

Of the less technical methods may be classed blood pressure and muscular efficiency tests.

The value of the former method is familiar to all of us, and will not be dwelt upon. Of the latter, many methods such as hopping, climbing steps, walking up inclines, dumb bell exercises, etc., have been advocated. While any of these methods are valuable aids in testing the cardiac reserve power in a beginning stage of weakened myocardium, nevertheless they fall short of their purposes in the advanced stages of myocardial insufficiencies.

GALL BLADDER DRAINAGE.

Direct drainage of the gall bladder by the Lyon Meltzer method is one of the distinct advances in the diagnosis and treatment of disease of the gall bladder and ducts. Meltzer's suggestion that magnesium sulphate solution injected directly into the duodenum has the effect of relaxing the common duct sphincter and causing a contraction of the gall bladder, thus emptying it of its contents, Lyon proved clinically. Lyon states: "We can make a differential diagnosis between cholecystitis, choledithiasis, and choledochitis in a more scientific manner than by any other method yet advanced."

With a patient fasting for twelve or fourteen

hours, a duodenal tube with metal tip is swallowed, the stomach contents aspirated and the patient swallows the tube to the third marking. The patient lying on the right side the tip passes into the duodenum in fifteen to twenty minutes, evidenced by the tug and the character of the fluid aspirated. This aspiration may be done by the vacuum bottle or by the syringe. The first fluid is usually bile free and of syrupy consistence. Seventy-five c.c. of a twenty-five per cent solution magnesium sulphate is injected through the tube or allowed to flow by gravity. Lyon describes the fluid obtained, first from the common duct, light in color, second from the gall bladder, thick and dark, and third, from the liver itself, clear lemon yellow.

Repeated drainage by this method has been found most beneficial in a number of conditions, so-called "biliousness," recurrent headaches with nausea, chronic indigestion with attacks of colic, chronic constipation, catarrhal jaundice, gall stones, etc.

We might go on indefinitely—there are so many diagnostic aids which could be mentioned—but our time is limited and we feel we have mentioned the principal ones which to our mind are too little used.

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VALUE OF CARBON TETRACHLORID AS AN ANTHELMINTIC.

Several hundred men who had been exposed to hook-worm infection previous to imprisonment and who had been in custody for from three months to three years were chosen by J. F. Docherty, Ceylon (*Journal A. M. A.*, Aug. 11, 1923), to try out various anthelmintics, thymol, chenopodium, betanaphthol and carbon tetrachlorid. Carbon tetrachlorid proved to be the most efficient anthelmintic in 3 c.c. doses. The anthelmintic value of carbon tetrachlorid is practically unaltered by differences in the number of worms harbored. The apparent futility of prolonged treatment was well demonstrated, likewise that a 3 c.c. dose of carbon tetrachlorid does not produce any lesion of the kidney.

THE PRESENT STATUS OF THE MANAGEMENT OF DIABETES MELLITUS.*

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Insulin was first prepared by Banting and his coworkers in the laboratory of Macleod at the University of Toronto from the pancreas of the dog after ligation of its ducts had led to the atrophy of the acini, leaving the islands of Langerhans intact. Later this substance was secured from foetal beef pancreas. An acidified alcoholic extract is purified and the final product is an aqueous extract made acid to a $\text{pH}=2.5$. This product is stable and no deterioration has been noted after eight months. No instances of loss of efficacy of the extract kept sealed have been reported since January, 1923. Insulin has been found in many mammalian tissues, human blood and urine, and in the pancreas of several species of fish. In the last case, where the islands of Langerhans are anatomically separate from the rest of the pancreas, combined studies of histology and chemistry have completed the proof that insulin is produced by the islands. Acid aqueous extracts of pancreas have been prepared which are also decidedly effective; this method has been extended with success to perfusion of excised pancreas. At present many efforts are being made to secure insulin or similar bodies from plants. The results so far indicate that there are some substances widely distributed in the plant kingdom which can reduce the normal blood sugar, but almost always there is associated some other substance either toxic or antagonistic, which is removed with difficulty. More significant is the fact that except in the results from the Toronto laboratories these substances exert a much slower and more sustained action than insulin. They may be useful in treating diabetes, but unless insulin can be derived in the manufacture they will never supplant insulin.

Clinically it is necessary to give insulin by subcutaneous injection. Slow injection with care to avoid the formation of a swelling is best. It has been administered directly into the small intestine with success, but this is not useful clinically. The rectal, intraperitoneal, or intranasal routes are so slightly effective or useless that they are not ad-

vised. A few times, results have been obtained when the drug was given by mouth, but constant results cannot be secured even with the use of the duodenal tube.

Insulin is still an unknown substance chemically. It is not an enzyme, but may possibly be a protein-like body. It is stable to boiling in acid solution. Its assay must be made by biological means. An empirical unit has been utilized, based on the ability of insulin to lower the blood sugar to a certain level in normal fasting rabbits of a given size. Standardization cannot be made any more certain by the use of humans, either normal or diabetic, or by the ability of insulin to alter the glucose tolerance curve or to antidote the hyperglycemia of epinephrine. There is some variation in the effect on different animals of the same species, and marked differences between species. The "unit" is merely a convenient standard for clinical use. It does not vary from one lot to another by more than about 15 per cent.

The effect of insulin in exact chemical terms cannot yet be stated. It has been suggested that insulin plus some other factor from the liver changes the food sugar, called alpha and beta glucose, into gamma glucose which can be oxidized in the body or stored as glycogen. This is still a doubtful explanation of its mode of action. It seems unquestionably true that insulin changes the glucose so that the body can use it. Allen, who has championed the pancreatic theory of diabetes mellitus for years, has seen fit to define diabetes as a partial or complete lack of insulin. Others feel that there are other types of diabetes, less common, in which some other factors are involved.

The effects of insulin may be briefly summarized. When injected into either normal or diabetic individuals it causes a fall in the blood sugar concentration, beginning within a half hour. It raises the respiratory quotient, meaning that there is an increased combustion of carbohydrate. This elevation of the respiratory quotient is more pronounced in diabetics where fat is used so largely because of a lack of an available form of carbohydrate. In diabetics insulin enables the liver once more to store glycogen, the consumption of glucose by the heart is markedly increased, the abnormal storage of glycogen in the diabetic heart is diminished, and the abnormal fat of the diabetic liver is reduced. Consequent on the improved metabolism of glucose the fats are used in normal fashion.

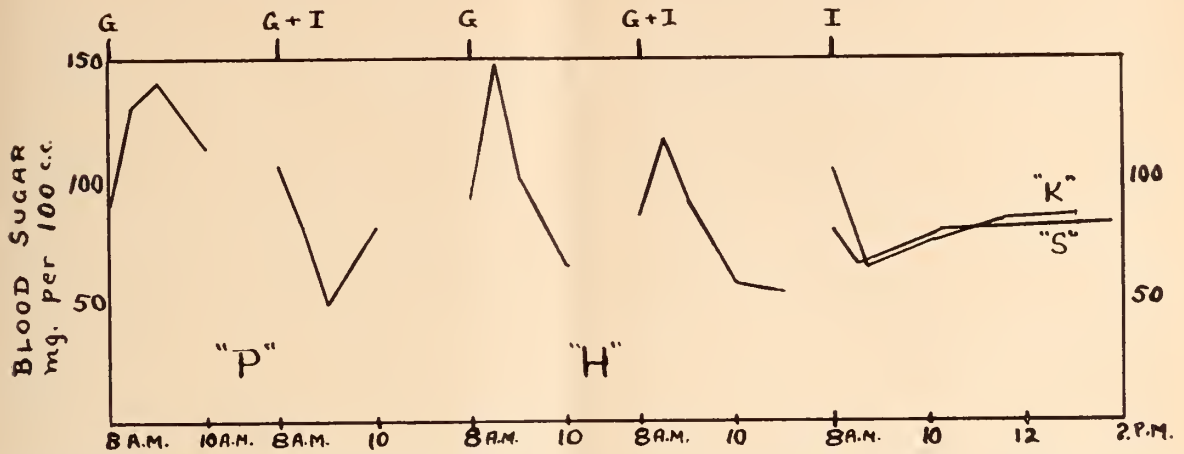


Fig. 1. Effect of insulin on glucose tolerance test and on fasting blood sugar of normal humans.

The glucose tolerance test was made with 100 grams of glucose by mouth, given just after the first blood sample had been taken. In the second of the pairs of curves 16 units of insulin were given just before the blood sample was drawn. The pairs of curves are from two women of almost the same weight, showing the variability in normal

tolerance curves and in the effect of insulin. The two curves on the right show the effect of 10 units of insulin given to two normal men who were fasting. The body weight of "K" was 63 kilos, of "S", 84 kilos. The effect is not proportional to the units per kilo. Both subjects noticed slight symptoms of insulin shock beginning at the time of the lowest part of the curves.

The lipemia of diabetes disappears, the formation of acetone stops, the acidosis due to acetone bodies is promptly removed, and coma is quickly cleared up if it is not too far advanced when the use of insulin is begun. The hypoglycemia caused by ether anesthesia, by morphine in large doses, by mechanical asphyxia or carbon monoxide poisoning, by subcutaneous injection of epinephrine, or by puncture of the fourth ventricle are all prevented or removed by the use of insulin at appropriate times. The completeness of this picture makes it certain that insulin is a normal product of the pancreas for constant use in the body.

The use of too large an amount of insulin leads to a depression of the blood sugar concentration to such a degree that the supply from the blood is hindered, and a "sugar vacuum" is established. Insulin has too greatly facilitated the use and the storage of glucose. This sugar vacuum begins to make itself manifest by symptoms at various levels of blood sugar, from 40 to 65 mg. per 100 c.c. of blood. The variations depend on the rate of the drop in blood sugar, and on individual variations in the necessary blood sugar concentration for normal body metabolism. The symptoms commonly seen are hunger, tremor, muscular weakness and twitching, profuse sweating, blurring of vision, and in more severe cases convulsions occur, followed by coma, and eventually death. Except in the deepest coma these symptoms may be completely relieved by the administration of glucose. If the symptoms be moderate or come on slowly,

glucose, orange juice, or cane sugar by mouth are ample. If quick relief be needed, the intravenous injections of glucose are called for. For immediate and temporary relief subcutaneous epinephrine has been used, but its efficacy is doubtful. In no case should it be a substitute for the use of the glucose. Epinephrine serves to mobilize quickly a small amount of glucose from the liver. There is less danger of the occurrence of these untoward symptoms and more certainty of spontaneous recovery in individuals who are well nourished and have a good reserve of glycogen in the body. The liver is essential to spontaneous recovery from such "insulin shock."

Many clinical reports on the use of insulin are now available. These agree that there is no exact equivalence between the amount of insulin and the diet, in terms of either glucose or any other factor in the food. There is variation between patients and in the same patient. Nevertheless it is not difficult to select a practical and agreeable diet for any patient, and to find in the course of a very few weeks at the most the dosage which will be most useful for that patient, and will give the least danger of glycosuria on the one hand or of insulin shock on the other. Most of the experienced clinicians are giving diets which will enable the patient to maintain his proper body weight for his age and height without obesity, allowing for the activity necessary in the patient's life of choice. With the exception of the grave diabetic or those in whom impending acidosis is determined, a thorough trial

of dietetic measures is indicated. Even in those cases responding to dietetic measures time may be saved in arriving at a maintenance level by the supplemental use of insulin. Two plans of dietetic approach are applicable to the average case of diabetes. A fairly liberal diet may be exhibited and the individual's tolerance determined by subtracting the glucose lost in the urine from that received in the diet. A second advantage of resting the pancreas is derived from the plan of ascending from a safe minimal level by easy stages to a tolerance level. Sufficient insulin is given to keep the urine sugar free, or to maintain as nearly as possible a normal blood sugar level. Many reports have planned diets to obtain an accurate balance of the ketogenic and antiketogenic factors after the principles of Woodyatt and Shaffer. Allen continues to insist on the benefits of undernutrition in improving the tolerance. Any improvement resultant from this plan of approach must be due to a diminished drain on the pancreatic function. Consequently the most effective, the most pleasant, and the promptest way to "rest the pancreas" is to use insulin, furnishing from the outside what the pancreas is otherwise called upon to deliver constantly.

Coma of diabetic origin is dramatically cleared up by the use of appropriately large

amounts of insulin. Failures here have come from two causes: the use of insufficient doses to get the effect in the short time left to save life, or the beginning of the treatment after the coma has existed for such a length of time or to such a degree that secondary damage has been done to the nervous system. Ketosis from other types of deranged metabolism such as infections, anesthesia, and starvation may possibly be benefited by the use of insulin plus glucose.

Most of the reports so far have come from clinicians who determine blood sugar concentrations frequently. This procedure is not possible for the majority of clinicians at present. Yet insulin may be used successfully by general practitioners who will give careful attention to the study of dietetics and the use of insulin. To facilitate such work without the use of blood sugar determinations special care must be taken in the study of the urine. We firmly believe that better treatment can be done with the use of blood chemistry, but the advantage is not enough to deter the average practitioner from using insulin. Page has recently published work on urine sugar which is directed to this end. His methods are little simpler than blood chemistry. We have found that we can get practically as much useful clinical information by testing the urine with the ordinary Benedict's test. The

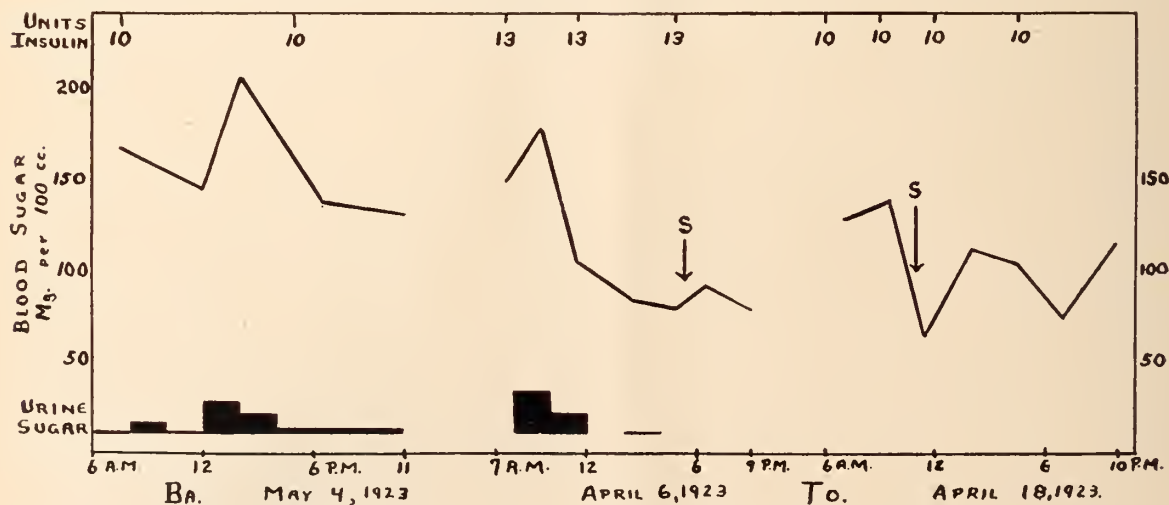


Fig. 11. Blood and urine sugar of diabetics under insulin.

The dosage of insulin was timed as shown at the top. At the times indicated by arrows marked with "S" the patient, To, experienced mild symptoms of insulin shock. On another day he was found to have a blood sugar level of 60 mg. per 100 c.c. of blood during the time of a similar shock. It is therefore probable that at the time of the symptoms on 4/6/23 the blood sugar was really lower than the curve indicates. This is because the blood sample was taken before symptoms began, and while the blood sugar was decreasing. The second and third curves illustrate the different effect in the same patient of a different distribution of the same daily dosage of insulin. With four

doses glycosuria was abolished and a more uniform blood sugar established. This patient left the hospital with much less insulin daily, but still free from glycosuria or shock.

The shaded areas indicate the urine sugar in the two hourly samples. The lowest areas represent the slightest trace of sugar, the highest areas as almost complete reduction of Benedict's reagent. Roughly this test will give the information given by the blood sugar values. The first curve, drawn to the same scale as the other two, shows how necessary the blood sugar estimations are to accurately locate the threshold and control glycosuria. Under treatment this patient, Ba, acquired a higher threshold, no longer showing glycosuria at levels such as the lower parts of the curve above.

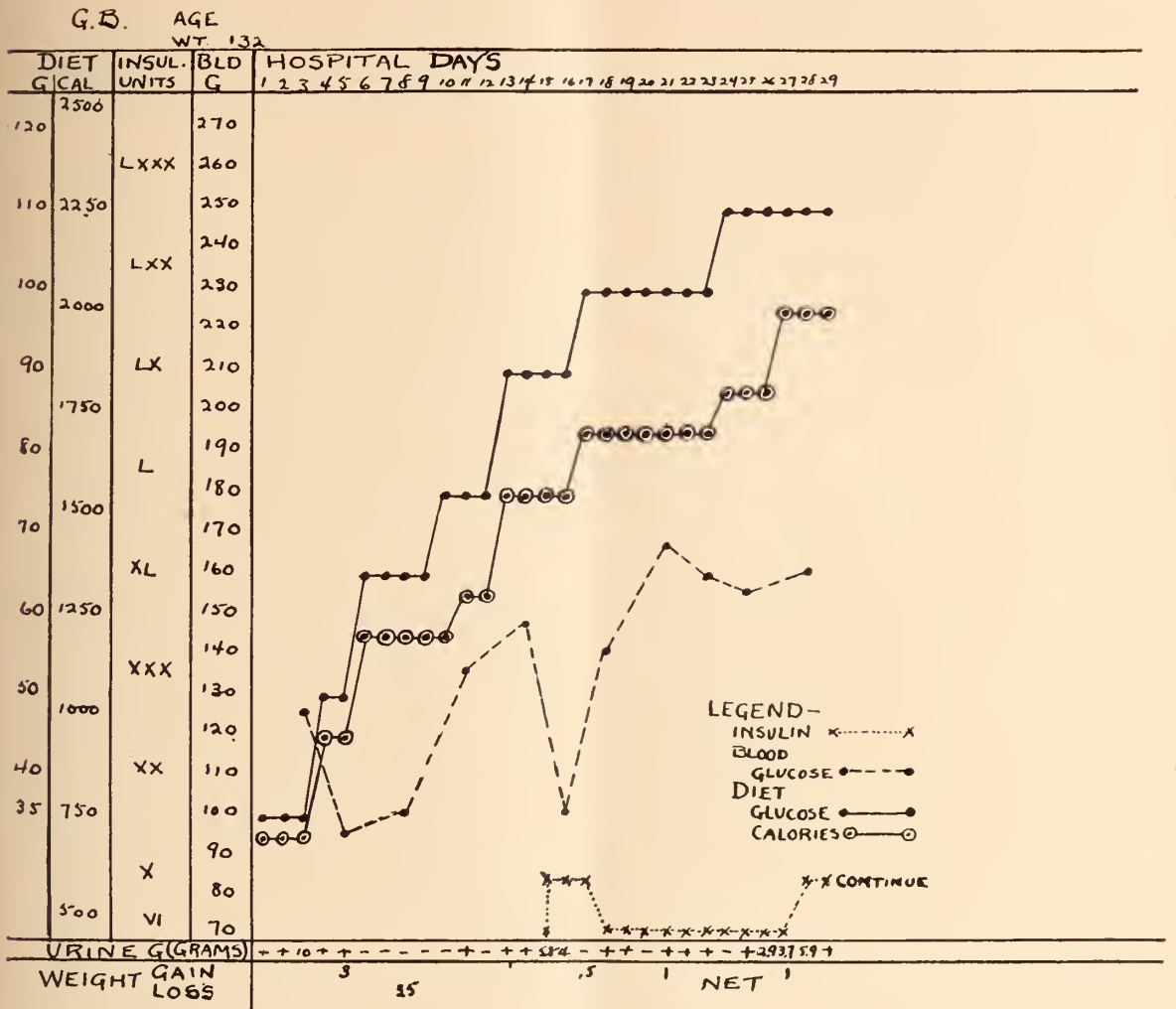


Fig. V.

In conclusion it should be clearly understood that the introduction of insulin has in no way reduced the dietetic limitations of the diabetic. While his range and variety of food may be greatly enhanced by the exhibition of insulin, the tendency of physicians to treat the newer biologic product as a short cut in the management of diabetes is to be decried. Grounded in the fundamentals of dietetics, the newer methods of handling diabetes should bear no terrors for the clinician, since the problem has been simplified rather than complicated by the recent contributions to the subject.

No attempt will be made to give credit to all the workers whose articles are summarized. The following references will give the sources of most of this material, and furnish further references to other pertinent articles.

1. Banting, Best, Collip, Macleod, and Noble: *Amer. Jour. Physiol.*, 1922, lxi, 162. Contains a summary

and a bibliography of the work from von Mering and Minkowski to the discovery of insulin.

2. Allen: *Jour. Metab. Res.*, 1922, ii, 125. Summary of the work on insulin up to Sept., 1922.

3. Murlin, Clough, Gibbs, and Stone, *Amer. Jour. Physiol.*, 1923, lxiv, 348. Aqueous extracts and per-fusates.

4. Hewitt: *Brit. Med. Jour.*, June 9, 1923, 994. Gamma glucose.

5. *Jour. Metab. Res.*, 1922, ii, 547. A detailed series of clinical reports from eight of the best clinics which have used insulin for some time. Obtainable from the Physiatrie Institute, Morristown, N. J.

6. Vaughan, *Jour. Lab. & Clin. Med.*, 1923, viii, 761. A good summary of the above clinical reports.

7. Insulin Committee of the Univ. of Toronto: *J. A. M. A.*, June 23, 1923, lxxx, 1847. An excellent article covering the subject.

8. The Eli Lilly and Co. booklet on Iletin for free distribution to physicians.

*Read by title at the meeting of the Wisconsin State Medical Society, Milwaukee, Oct., 1923.

†From the Bradley Memorial Hospital, University of Wisconsin, Madison.

‡It is a pleasure for the authors to acknowledge the cooperation of the Eli Lilly and Co. in supplying "Iletin" which has been the only insulin used by them.

SURGICAL JUDGMENT.

BY JOHN H. GIBBON, M.D.,

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To an audience made up of representatives of all the different departments of medicine, it seems hardly fair to present a purely surgical paper, which would appeal to but a small percentage of the listeners; and I have, therefore, determined to attempt to give you what would seem to me should be the characteristics of a surgeon of today and discuss his relation to the rest of the body medical.

No attempt will be made to indicate to you the great advances made in surgery during the past fifty years and its consequently greatly increased field. Those of you who graduated thirty years ago have witnessed the steady growth of the surgical domain and those of you who received your diplomas more recently are familiar with the history of it. With this change in the field of his activities, there must have been a change in the surgeon himself, and the surgeon of today and tomorrow must come to his work with a far wider knowledge and training than his predecessor of a generation ago. Formerly a practical knowledge of anatomy, a poorer one of pathology, and a certain facility with his hands, together with a fair judgment as to when and how to use them, were considered sufficient to enable one to style himself a surgeon. No such equipment today would inspire sufficient confidence, even in the laity, to enable one to obtain recognition.

Surgery, like all other specialties in medicine, is best practiced by the man who has had the broadest kind of foundation in the basic sciences of anatomy, biology, physiology, chemistry and pathology, and who is familiar with the work being done in other fields of medicine. It is of course true, and it goes without saying, that he must possess dexterity and have developed a proper surgical technique, but these are the essentials most easily acquired.

"Surgical judgment" is an expression familiar to you all and is considered by the wise the highest compliment that can be paid a surgeon. It is supposed by some that this comes with years, that it attaches itself almost unconsciously to the man doing surgery constantly over a long period and that it is not a thing which can be taught or learned early. Let us entertain no such erroneous idea of this finest of qualities in a surgeon. This

judgment does not rest on the number of operations performed or the years during which they have been done, but rather on the knowledge one has of normal physiological processes, of pathology and of general medicine. Experience, it is true, is the greatest of all teachers, but what is experience? It certainly is not simply time spent in an occupation or the amount of product turned out in a certain number of years; it is, I take it, the ability to observe, to estimate at their proper value the things observed, to consider them in relation to established laws and to remember them. It is also important to develop a philosophical mind and to pay constant attention to medical literature. The surgeon who is so busy operating that he has not time for the proper pre- and post-operative study of his cases and who is too busy to read and to see the work of others, is a man of limited experience, however occupied he may be in the actual performance of operations. The man who has removed the greatest number of colons may be the best man one could have to remove his colon, but he might, if he does not possess the kind of surgical judgment we have in mind, at the same time be the worst man one could choose to determine whether his colon should be removed. This type of illustration might be applied to any field of surgical activity, I have only taken the colon as it has been much in the professional and lay mind in recent years. My own judgment would be that the removal of the colon to cure constipation is comparable to the removal of the ovaries to cure dysmenorrhea. How the fad of oophorectomy to cure all female ills survived so long is hard to understand. One can imagine the success of an attempt to popularize the analogous operation in the male! It is true that the normal testis has recently been removed, but only to be transplanted into a new and sterile field where it is hoped it would retain its fertility and gives its host a new virility. But this is a long cry from the removal of both testes to cure backache.

The modern surgeon is exposed to temptations that he of fifty years ago did not know for nowadays with a fair technique and an aseptic habit nearly any operation can be done without fear of a fatal infection. It is this degree of safety which exposes us to the danger of falling into the habit of doing unnecessary operations and developing a fad for doing a particular operation in the absence of proper indications, just because we do it well

and with no mortality. A peculiar facility in the performance of an operation puts a surgeon too often in the category of the proverbial doctor who was "hell on fits."

The mere development then of the ability to perform certain operations with a fair degree of safety and the constant performance of them does not alone constitute experience, nor does it possess one of surgical judgment. To the ability to do the operation must be attached the knowledge which permits one to determine the indications for it in the individual case.

It is far more important to teach the student of medicine differential diagnosis, the indications for and against operation and to inculcate in him the diagnostic habit rather than to teach him the steps of operative procedures, because he naturally practices what he is taught. This admonition does not apply alone to those engaged regularly in teaching students, but to everyone having younger men working under him as internes and assistants; every such person is a teacher and is often the one who is listened to and observed with much more interest and attention than the man occupying a "teaching position." Every hospital surgeon should consider himself a disseminator of surgical knowledge, not a simple demonstrator of surgical technique. Many a young man's promising future in surgery has been thwarted by the careless methods employed by the man under whom he has served as an interne or an assistant. These young men should be taught surgical judgment and should be encouraged to observe and record their observations, to exercise in every case under their care the knowledge which they are supposed to possess. If this is not done they naturally in most instances become careless automatons doing operations perhaps well, but regardless of conditions, taking out appendices to cure duodenal ulcer, doing gastro-enterostomy to cure the gastric crises of tabes, removing hemorrhoids for cancer of the rectum, performing Caesarean sections to save labor pains, removing colons to cure neurasthenia, plating fractures that need no plating, etc., etc. Such surgery and such surgeons do nothing to advance even the art, let alone the science, and do much to discredit real surgery.

The modern surgeon must be a diagnostician. The late H. C. Wood said the difference between a surgeon and a physician was that the one worked with his hands and the other with his brains. If

this was ever true, it is not true today and it must not be true tomorrow. Medicine can only be advanced by the working together of the internist, the surgeon, the chemist, the pathologist, the physiologist and the roentgenologist, and each must work with his brains as well as with his hands; each in weighing facts and drawing conclusions must use all the knowledge he has and can obtain from others.

A diagnostic habit and ability must be early established and regularly enlarged by the would-be surgeon of today. Most of the mistakes we surgeons make result not from a lack of knowledge, but from a failure to use it. How many of us have not looked back with chagrin and shame at the removal of a primary malignant growth in the presence of a metastasis, the existence of which a careful examination or an X-ray study would have revealed. Or how easy it is to fall into the habit of doing "exploratory operations" to find out what a little study or the exercise of a little knowledge would have shown us.

The modern surgeon must not enlarge, but rather curtail his list of emergency operations, that is those done without a careful study of history, of signs and symptoms. A diagnosis should be made if possible and a relative diagnosis, if a positive one is impossible, and the reasons for it given. Hemorrhage and obstruction of the air passages stand nearly alone as indications for immediate operation. Never to worry one's mind about the diagnosis but simply to "open and see" often means unnecessary operations and does nothing to develop one's surgical judgment and enlarge one's experience. To make a wrong diagnosis is better than to make no diagnosis at all. If a young surgeon would write down his diagnosis, his basis for it and his reasons for operating in his first two hundred cases, and then his findings and results, he would possess more surgical judgment and experience and be a better surgeon than the man possessed of the same knowledge and same operative skill, who performed a thousand operations without this exercise of his brains.

Mark Twain said if one did not open his letters until two weeks after their arrival, only one out of ten would require an answer; if one studies his cases before operating he will certainly operate upon fewer and he will greatly reduce his surgical errors. It is the inexperienced surgeon or occasional operator who takes risks, and yet he is the

last one who should. The difference in the mortality rates of certain clinics is not due to unusual skill or to the selection of cases, but to careful study and preparation. The time to obviate post-operative complication is before the operation.

I believe a survey of the recent contributions to surgical literature from the hands of men of recognized ability will show distinctly a tendency toward the development of surgical judgment. A notable example is to be found in the surgery of the breast. The man who removes a breast in a young woman for a benign tumor is not saving her from a cancer death, but is doing an unnecessarily mutilating operation, when a simple one would have relieved the patient of her trouble. I should like in this connection to endorse and emphasize the following paragraph from a recent paper by Peck and White (*Annals of Surgery*, June, '22): "We have long believed that unnecessary mutilation by the performance of radical operations for these distinctly benign conditions was unwarranted, and speaks for lack of ability or confidence in diagnosis by the surgeon, rather than consideration for the future comfort and safety of the patient."

The removal of certain diseases from the category of those requiring extensive, mutilating and dangerous operations and the putting of them in the class which can be cured by simple and safe methods represents real surgical advance. Take for example the so-called myeloid sarcomata of the long bones for which amputation was considered, until recent years, the proper treatment and compare this operation with the simple removal of the growth which recent study has shown to be quite sufficient, as the tumor is really not malignant. Again think of the amputations and the resections of joints in our civil war and then of their comparative rarity in the recent great war.

And I would cite one other recent example of surgical advance and the exercise of surgical judgment. Up to the time of the great war there had been developing for years a tendency to operate upon and plate most simple fractures, a pernicious tendency which it seemed nearly impossible to stem, but with the enormous experience afforded by the war it was easily shown that this method of treatment should be greatly curtailed and we passed back to the use of our brains and revived the mechanical and anatomical knowledge in the treatment of fractures which, for a time, many of us had lost in our craze to apply a plate. There

are enough fractures requiring open reduction without operating on those which do not need it. I should like too to suggest in this connection that open reduction need not necessarily be followed by a plate or other device, and the surgeon must have the judgment to determine the necessity for this second step and the courage to avoid it, if deemed unnecessary.

Before a surgeon undertakes the operative treatment of fractures, he should have learned by experience and by reading what nature herself can do, if only given a little intelligent help; what she can do alone, as is shown in the rare instances of non-union in animals like the dog and the birds; and how she is apt to lie down on her job when the matter is taken entirely out of her hands by the absolute mathematical immobilization of the fragments by a plate. I should like to emphasize three things said by Doctor Dodd in his communication. First: that the plate is a cause of delayed union and sometimes of non-union, and his skiagrams illustrated this; second: that plates should be removed when they have produced enough fixation to allow their removal without disturbance of the position; and third: the great importance of early motion of neighboring joints and muscles. We would all, who work in this field, do well to go back a generation in surgical literature and read Lucas-Champonnière and study his method of mobilization in the treatment of fractures. This field is one of the best in which to cultivate and develop surgical judgment.

The surgery of the future is not going to rest on further development of surgical technique or the invasion of new fields, but on an increased knowledge of disease, its causes and manifestations, and the men who are going to advance surgery are those who learn early in their careers to use their brains as well as their hands, and who make their brains direct their hands.

The day is passed, if it ever existed, when a surgeon must do a certain operation at the request or direction of another and the surgeon of today who operates for any other reason than that he believes the operation indicated, after a careful study of all the facts and evidence, or who operates on the judgment of another, becomes a menace to society, a disgrace to surgery and a man without the respect and confidence of those who are able to judge ability. A surgeon must be courageous enough

not to fear the charge of timidity, when it is based on the exercise of surgical judgment.

Self satisfaction, which is always based on a lack of knowledge and experience, is a dangerous characteristic in a surgeon, especially a young one, for it usually means arrest of development. It is only dissatisfaction with one's accomplishments which stimulates him to effort. Self confidence in a surgeon is, however, an asset and does much to help him through difficult situations and to devise new methods.

In conclusion I would suggest that the surgeon who does an unnecessary or wrong operation should be obliged to look after the patient for the rest of his or her life and not be permitted to turn the patient over to the long suffering family physician. If this plan could be put into practice and if all surgeons studied their mistakes and their ultimate results, surgical judgment would be a common characteristic and surgery enormously advanced.

MALIGN CELLULAR MALFUNCTION.*

BY J. L. YATES, M.D.,

MILWAUKEE.

Sizes, shapes and functions of cells are established primarily by heredity, but subject to secondary modification through environment, accident and disease. In order to live normally cells must generate or receive sufficient stimulation to exercise all of their capabilities yet not enough to cause degenerations consequent upon too prolonged or too severe exertions.

The sundry activities of cells are exhibited in their interdependent, specific and common functions. Specific functions, e. g., protection, support, contraction, absorption, secretion, transmission, co-ordination and cerebration, depend upon metabolism peculiar to differentiated cell groups. All cells utilize the same sources of energy, oxygen, water, carbohydrates, proteids and fats, but those constituting the various cell groups utilize them differently. So despite qualitative similarity of intake, the total output in types of energy developed and nature of metabolic products is dissimilar. Likewise the common functions of ingestion, digestion, excretion, growth and reproduction are metabolic processes that fabricate by-

products and end-products which differ among cell varieties because of the divers requirements of each variety.

A healthy organism is composed of co-ordinated cell aggregates whose functions are mutually helpful. The length and character of life are determined by the ability of each individual to develop its inherited stock of cells advantageously by exercising their functions so as to escape the atrophy of disuse and the degenerations of exhaustion, which are the structural changes that assure malfunction.

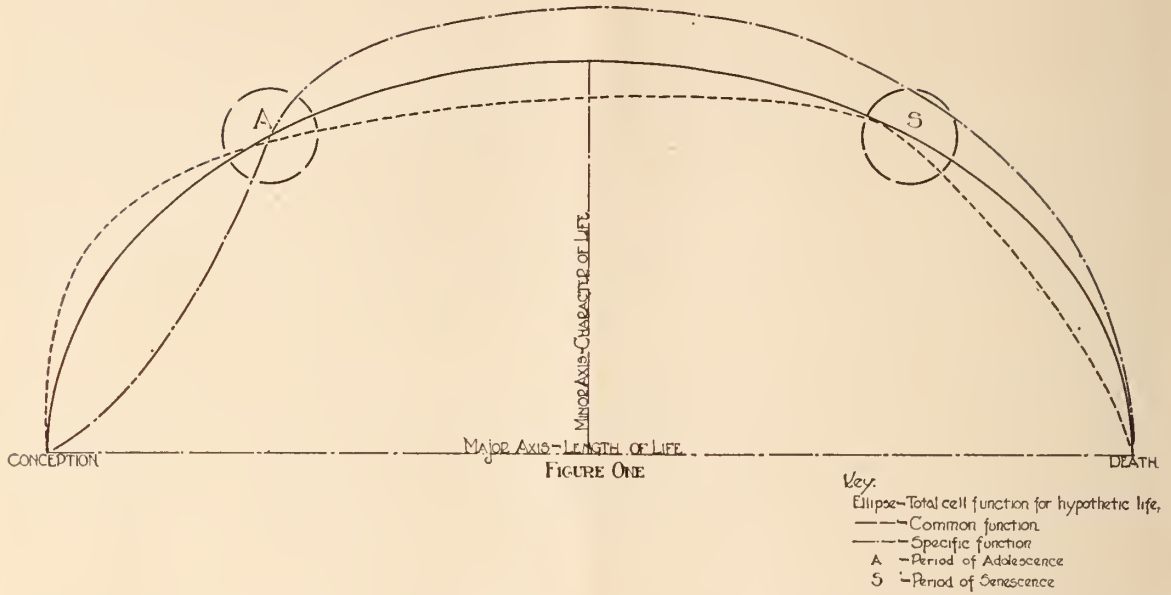
If an organism might so live as to escape every form of under stimulation or over stimulation, then the strictly normal activities of its constituent cells could be followed through three periods, from conception through adolescence, then to senescence, and from senescence to death.

During the first period reproduction would exceed destruction and growth continue until inherited requirements for number and distributions of cells had been satisfied. Normal growth stimulus, primarily at its maximum, diminishes with progressive rapidity, ceasing with the production of an adult. In this phase of life the total common functional rate is at its highest and exceeds the corresponding specific functional rate. Throughout the second period proliferation and growth are far less active, having only to replace cells at the end of their normal existence and to meet the demands for work hyperplasias and hypertrophies. In consequence the common and specific functions run at more nearly parallel rates. In the third period senile exhaustion with increasing inactivity permits atrophy to exceed replacements and specific functions are more exercised than common.

The sum of all cell functions developed during such a hypothetical existence is represented diagrammatically by a semi-ellipse (Fig. 1). The major axis indicates the length and the minor axis the character of life. Noteworthy periods occur at adolescence (A) and at senescence (S), and in both there is a fall in rate of common functions. At (A) the rate of common functions, hitherto excessive, drops below the level of the rate of specific functions. At (S) the common rate, which has been running approximately parallel to the specific, drops still farther below it.

Even were so sheltered an existence possible all forms of disease could not be eliminated. Throughout life, but particularly at the A and S periods,

*Read before the State Medical Society of Wisconsin at Milwaukee Oct. 3, 1923.



would occur maladies caused by malfunction of essential cells, due largely to premature exhaustions in cells responsible for action or inhibition and attributable to inherited deficiencies in them. Mental derangements at adolescence and senescence, precocious cardiovascular renal disorders and diabetes are fair examples. In other words actions that stimulate normal cells to healthy reactions over-stimulate or irritate subnormal cells to excessive or degenerative responses.

The conditions of actual life, which is inseparable from a succession of irritations, tend to hasten the exhaustion of subnormal cells and to initiate degenerations in normal cells. Thus arise the inco-ordinations of cell activities causing disease and death.

Whatever be the nature and source of irritants their effects depend upon their intensity, duration of action and somatic distribution and upon the reactivity of the individual. In general, irritants cause necroses or excite over-activities in either or both the common and specific functions followed by under-activities.

Although the periods of hyper and hypo-activities of various cell groups are not synchronous they may be so represented diagrammatically. The curve of a protected existence (Fig. 1) requires modification, if illustrative of actual conditions, to a saw-tooth outline (Fig. 2) that extends at irregular intervals above and below the ellipse.

Accordingly, in a normal existence, the curve representing the mean of all cellular activities would approximate an ellipse. When the hyper

or hypo-function would, if charted, suffice materially to distort the ellipse, there is disease. Should the organism be able spontaneously to modify abnormal cell function so as to re-establish an ellipse the disease is benign; otherwise it is malign. The character of life, largely dependent upon specific functional capacity, is expressed by the minor axis; the length of life, principally the result of common functional integrity, is indicated by the major axis.

The cell aggregates constituting an organism are farther organized into physiologic units of structurally correlated cells and these units like the common and specific cell functions are interdependent; some are of greater, some are of less significance; some function positively, action, some function negatively, inhibition. For example, the unit responsible for the formation and delivery of blood cannot continue to function if the lungs and kidneys are organically inactive or if cardiac acceleration exceed cardiac inhibition so as to produce myocardial exhaustion. In general, if the sum of the up strokes in a curve representing all of the various primary or hyperactive responses to irritation exceeds the sum of the down strokes indicating secondary or hypoactive responses, there is increased resistance to the irritant which, if adequate and permanent, is acquired immunity. Contrarily, there would be susceptibility proportionate to the excess of down strokes over up strokes. If, together with what has preceded, it be recognized that the hyperactive and hypoactive phases in the various physiologic units are not synchron-

ous and that every chain has its weakest link, it is easy to understand apparent paradoxes. For instance, why resistance fluctuates, at times increasing, at others decreasing even to the vanishing point and due to temporary or complete exhaustion of cells essential to defense. Or why death occurs unexpectedly when convalescence seems established as in postpneumonic myocardial exhaustion.

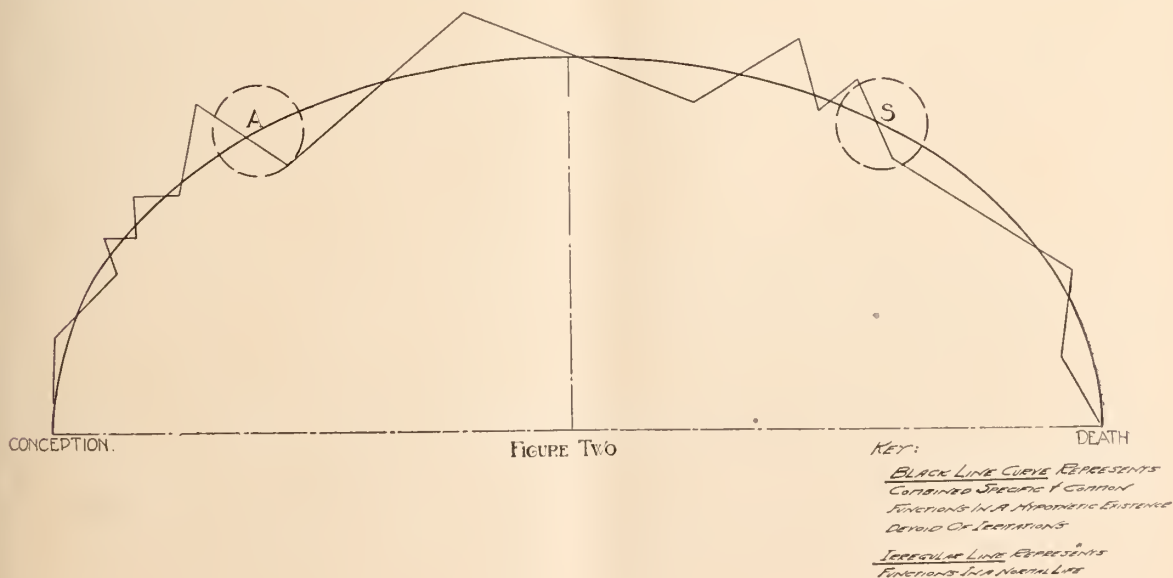
Methods applicable to prevention and treatment of disease depend on conceptions of the nature of irritants and the reactions they provoke since disease is a derangement of cell functions sufficing through functional hyperactivities or hypoactivities to disturb somatic equilibrium.

It is convenient to separate irritants into classes, major and minor. Major irritants include the toxins of parasites, the products of tissue degenerations following contusions, lacerations, burns, and infarctions, poisons (including narcotics), radioactive emanations and extreme exhaustion. Minor irritants are produced by slow growing or comparatively avirulent parasites, by protracted exhibitions of major irritants in limited amounts or by prolonged repair after major irritation and by too continued demands upon cells for increased activities.

Major irritants cause acute types of disease wherein the contest is chiefly between the initiating irritant and the immediate response of the physiologic units upon whose adaptability depends the defensive strength of the host. They are promptly diffused through the circulation in effective quantities. Their action may be so intense as

to cause death promptly almost without reactions or early death with excessively great or little response. Commonly the outcome of a longer contest is settled by the final preponderance of offense or defense. During the conflict the noxious substances, called antagonistic so as to include toxins, toxoids and poisons, which are not eliminated, provoke protective responses. Increased resistance or protection includes greater tolerance and the formation of anti-antagonistic or protective substances that serve not only to neutralize noxious or antagonistic substances but to inhibit the activities of parasitic cells.

Minor irritants act gradually and provoke less effective responses. In chronic maladies the protracted irritation may result in exhaustion of essential cells in the physiologic units involved without appreciated evidence of a preceding period of over-activity as, for example, in diabetes and in certain affections of kidney and liver. Or intervals of temporarily adequate over-activity separate intervals of inadequate, perhaps hypo-activity. Such are seen in some forms of tuberculosis, in maladies in the Hodgkin's series and in malign neoplasms. The outcome, possibly decades later, is determined by the algebraic sum of the up and down strokes. This time factor introduces an element that often complicates the offense-defense relationships in chronic diseases to an extent not evident in acute processes. Cells subjected to irritation over long periods gradually acquire characteristics farther and farther removed from normal, due to necessarily altered metabolism. In consequence their secre-



tions and excretions, the anabolic and catabolic products, become more noxious in quality and, if the cells are not exhausted by over activity, also in quantity. Thus the organism may be denied secretions necessary for its equilibrium and be provided with antagonistic substances through the malfunction of its constituent cells whose activities have exceeded physiologic limits. The host has then not only to protect itself against the initiating irritant but to combat the antagonistic substances produced by cells made atypical through the continued play of that irritant. Two kinds of protective substances must be developed, the one antagonistic to the primary irritant, the second antagonistic to the products of extra physiologic or pathologic cell activities, activities not essential to processes of repair or of compensation. Protective substances not only tend to neutralize noxious products but also to interfere with the cells producing them. If the interference is adequate, the offending cells are destroyed; if it be slightly less adequate, their activities are inhibited permanently or temporarily, but if inadequate, the cells are actually stimulated to greater activities because protective substances antagonize or irritate them.

The effects of continued irritation and inadequate control is to compel virile cells to continue hyperactive and under conditions which become progressively more atypical. Through adaptation to an unwholesome environment the irritated cells assume characteristics which make them approach a state of parasitism. If this state is finally established, the result is a malign process because the cells, escaped from somatic control, provided with excess nourishment and continued irritation, have acquired autonomy. Either they continued to be hyperactive in specific functions, e. g., true toxic goiter, or in common functions, e. g., malign neoplasms.

SUMMARY.

Cells respond to irritation by increasing their functional rates. The weak cells degenerate, either in their common or specific functions. The virile cells continue hyperactive. When these hyperactivities exceed the demands for repair or compensation their metabolic products become harmful to the organism which proceeds to remedy the effects of the hyperactivities by the formation of protective substances, thus to neutralize diffused noxious substances and to inhibit cell activities. Usually the control is effective. When it fails a

malign disease is established. Malignancy is the degree of preponderance of the offensive powers of a process over the adaptability of a host.

Chronic malign cellular malfunction may occur as disturbances in either the common or specific and be due either to hyper or hypo-activities.

Therapeutic methods are only as clearly defined as modern biologic knowledge permits. One detail is paramount, the elimination of all probable and possible sources of irritation.

If the malfunction is a state of hypo-activity, the best and often the only means of stimulation is provision of the rest required to give full opportunity for recovery, or, if recovery be impossible, to assure the largest measure of adaptation. Should both recovery and adaptation be unattainable, there remains the chance of some compensation through chemical and physical protheses.

For examples, resting fatigued heart muscle may be all that can be done in a crisis of decompensation but before or after such crises occur it is expedient to eliminate such harmful influences as infected tonsils or gall bladders or by drainage or cardiolysis to reduce the handicaps of pericardial effusion or of an adherent pericardium. So too in combating grave anemias it is as essential to remove the causes of blood loss or of destruction as to resort to transfusions though transfusion can be required first to meet an emergency. Cretinism and myxedema can be improved by administering thyroid extract or preferably thyroxin but better had there been timely dosing with iodine. Insulin is being given as a prothetic measure. The time will come when the early irritations of islet cells will be recognized and controlled while insulin can be used to promote rest leading to recovery. Nor is it impossible that ligation of a part of the pancreatic ducts may lead to effective islet hyperplasia, particularly with a use of insulin to reduce burdens during the period of compensatory overgrowth. Such methods are comparable to plastic operations to remedy tissue defects and paralyses or to braces and artificial limbs.

When the malfunction is due to over-activities a removal of the causal irritation is more obviously required and the more commonly effected. Hyperactivities in specific function seen in exophthalmic goiter, in adenomatous hyperthyroidism and in some forms of insanity present more or less difficult problems to solve. None would consider permitting a patient recovering after thyroidectomy

for toxic goiter to return to the same habits and environment that produced the disease. Nor should a patient convalescing from strumectomy, particularly one who had had hyperthyroidism, be allowed to return to a goitrous community without directions as to the prevention of a recurrence of the thyroid hyperplasia that precedes adenomatous growth. Likewise the psychologists are combating the irritations and faulty mental habits that lead to the unrestrained activities of brain cells.

Diseases due to chronic over-activities in common functions include granulomas, notably tuberculosis, malignant neoplasms and the intermediate series, Hodgkin's Disease, leukemias, lymphosarcoma and polycythemia vera. Notions differ as to how the initial lesions or portals of entry should be removed, how the pathologic cells should be destroyed or their proliferation controlled and what, if any, subsequent treatment should be given. Disagreement is due to different conceptions of biologic reactions.

None will dispute that the problems involved revolve about a central factor, the offense-defense complex, and that because of wide variations between patients and at intervals in the same patient there can never be an universally applicable routine treatment. The chief object is not to effect cures since these diseases arise only in individuals whose defense units are defective in that they cannot fabricate the required quality or quantity of protection. Though cures be unattainable, permanent recoveries are not impossible. Greater numbers of patients can be helped to more complete and durable recoveries if this be recognized. The object is to remove the primary source of irritation, the secondary sources of irritation which are the morbid cells and to raise and to maintain the activities of defense units and to accomplish the same surely, safely and promptly. In brief, this demands the least degree and duration of inactivation, either local or general.

The means to these ends, knife, cautery, radiation and hygiene, have their indications and, save hygiene, their contra-indications. Failures in the past have led to unwarranted pessimism because failures have been due to empiricism born of ignorance of biology. Progress is bound to be the more rapid henceforth as investigations are revealing the actions, reactions and interdependence of cells and of physiologic units and how they determine health, disease and the length of life of the organisms they form.

SOME DIFFICULTIES IN THE DIAGNOSIS OF CHRONIC GALL-BLADDER DISEASE.*

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With the advent of newer methods and instruments of precision in diagnosis, the gall bladder and biliary passages have come to assume more important roles in abdominal complaints, and whereas, heretofore, the appendix has been accused of being the chief offender in the abdomen, the gall bladder is an active competitor for the honor. It is not at all surprising that this is so, for if one groups any large number of patients who complain of trouble subjectively or objectively in the abdomen, one is astonished to find how large a percentage of these can be referred, after careful examination, to the biliary passages. Based upon the experiences of many observers, the importance of this organ has been forcibly emphasized in considering symptoms referred to the abdomen. Blackford analyzed a series of 1,000 cases coming in for gastric complaints seen over a period of three years, and it is interesting to note that in 25% of these there was no recognizable organic pathological condition; in 6% he was unable to classify the condition; in 2% the complaints followed operation; in 35% the condition was intra-abdominal, but not in the stomach; in 18% the pathological condition was systemic. This leaves but 14% in whom definite gastric disease was demonstrated. Of the 35% intra-abdominal causes, the gall-bladder was first with 15.5%, the appendix next with 7.8%, constipation 7.1%, then followed some scattering ailments. Thus, it is seen that gall-bladder pathology assumes a role of prime importance in that its occurrence in intra-abdominal reflex disturbances is more common than any other cause.

In our own series of 200 consecutive cases seen during the past year, complaining of stomach trouble, 86% were intra-abdominal; of these 41% were found to be due to gall-bladder disease, while 22% were primarily referable to the appendix. Since these were selected surgical cases the percentage of intra-abdominal pathology will be much higher than in a general series. In analyzing any

*From the Surgical Clinics—National Military Hospitals, U. S. A.

series of gastric complaints, gall bladder disease will always be well up to the fore. As a famous surgeon once said, "Although the stomach is the spokesman of the abdomen, nevertheless we must remember likewise that it is the greatest liar in the human anatomy." In view of these facts it is highly important that the diagnosis of gall-bladder disease be made early, for by so doing further serious complications can be avoided.

CAUSES OF GALL-BLADDER DISEASE.

The commonest conceptions as to the mechanism of infection of the gall bladder and its associated tracts may be summed up as follows: (1) descending infection from the liver carried down by the bile; (2) ascending infection from the duodenum by the way of the common duct; (3) hematogenous infections; (4) spreading infection through the wall of the gall bladder from an inflamed contiguous organ. Certainly not all bacteria that enter the gall bladder lead to its infection. Factors that lead to bile stasis are apparently those that determine whether or no an organism will colonize to bring on a pathological condition. If this be so, then lack of exercise, a sedentary life, etc., may be regarded as predisposing to gall-bladder disease, and are items well worth inquiring into when taking the patient's history. In connection with this, it is very important to realize that cholecystitis is nearly always accompanied by varying degrees of hepatitis or pancreatitis, or both. The degree of gall bladder involvement is no criterion of the severity of liver or pancreatic infection, and in some cases the disease seems farther advanced in the liver or pancreas, leading one to the conclusion that the gall bladder became secondarily involved in the process; although this is possible, nevertheless all evidence tends to point to the fact that infection is really primary in the gall bladder. Graham not long ago called attention to the fact that there is a close association between the liver and gall bladder by means of lymphatics, and feels that in certain cases the gall bladder may become infected through the lymphatics from the liver.

This discussion is not at all concerned with that class of case that gives a typical history of gall stone colic with or without good health between, for the diagnosis here is too obvious to dwell upon; but rather that class of case whose only complaint is chronic stomach trouble with no definite history

pointing to the gall bladder over long periods of time. It is for this class of patients that accurate diagnosis and treatment is imperative since the chronicity in itself is a bad omen to the future well being of the individual. One soon becomes impressed with the importance of recognizing the cases when he sees numbers of them coming in still complaining of "stomach trouble" even though abdominal operations have been performed in an attempt to alleviate the condition.

To diagnose a chronic cholecystitis with no definite evidence pointing toward the gall bladder is certainly not an easy matter, for many pitfalls await the unwary ready to lead him far afield, and many times after all precedures have most carefully been gone into, one is at a loss in regard to the true intra-abdominal condition.

In the recognition of chronic gall-bladder disease we have at our disposal, (1) history; (2) physical examination; (3) laboratory findings; (4) X-ray and fluoroscope. The larger the experience one has in these types of cases, the more is he convinced that the most valuable diagnostic asset is the history. If this be obtained chronologically and in detail, one can often come to a conclusion which is subsequently borne out by other findings. The average patient will relate a long history of indigestion with a fullness or dragging sensation in the epigastrium usually shortly after meals. Pain, if any, is always dull and continuous until the fullness disappears. The pain is usually felt in the epigastrium, in the right or left upper quadrants or in all three places. Belching of gas is a fairly common complaint, while nausea and vomiting may or may not occur. Vomiting, if present, may be directly after meals, or early in the morning before breakfast. The striking thing in the story in these cases is the absence of any sharp cramplike or colicky pain coming on suddenly or slowly, unless of course due to the passage of a calculus, whence the diagnosis becomes clear and the case no longer falls in this category. Some patients tell a story that would perfectly well fit that of gastric ulcer, while others with no appetite, loss of weight, muddy jaundice and indigestion arouse the suspicion of gastric cancer. Many such cases have been admitted with the diagnosis of nervous indigestion because nothing better could be found for them. Loss of weight, appetite, color and general bodily vigor seem to be characteristic of a large percentage of cases.

The aid that physical examination gives one is wholly uncertain and unreliable for very often no signs at all are obtained at one or more examinations. In many cases pain is elicited in the epigastrium and the right and left upper quadrants. When pain is present, rigidity is also found to some degree. If definite pain and rigidity be found in the left upper quadrant, one should suspect an associated pancreatitis. Since these chronic gall bladders are small and contracted, a tumor mass is seldom palpable in the right upper quadrant unless a stone has become impacted in the cystic duct, or as has happened in some cases, the omentum has walled off the entire gall bladder area causing the formation of a good deal of inflammatory tissue.

The laboratory findings assist the diagnosis to some degree. There are 2 findings which we wish to emphasize particularly, namely (1) the presence of free bile in the fasting contents in amounts sufficient to be visible to the naked eye, and (2) clean achylia. It must be remembered that gastric analysis of fasting contents or after a test meal do not give characteristic findings of gall-bladder disease. Just as many or more cases show hyperacidity as do anacidity, and some of the highest acidities we have obtained in gastric analysis are those in gall bladder cases. The presence of free or occult blood does not by any means rule out the gall bladder in favor of ulcer, cancer, etc. Very often ulcer and cholecystitis are associated. Judd reports four cases in which he operated, in every one of which the ulcer could be easily demonstrated, but in each the pathology was more extensive in the gall bladder than in the duodenum, the former all containing stones and infected bile. One patient had severe hemorrhages, but at operation there was no evidence of a break in the mucous membrane of the duodenum. As a result of these four cases, Judd was strongly impressed with the importance of chronic cholecystitis as a possible etiological factor in gastro-intestinal bleeding. He has had a case in which hemorrhage occurred regularly every few days and at operation no ulcer was found, but rather a chronic cholecystitis with stones. We recently had a case in whom the presenting symptoms were indigestion and hematemesis. At operation the stomach and duodenum were negative; a severe grade of cholecystitis was found with extensive scar tissue formation in the liver, which organ bled profusely upon removal of

the gall bladder. Balfour had a case in whom the bleeding ceased after the removal of a chronically inflamed gall bladder. Deaver in 1914 reported extensive bleeding in hemorrhagic infections of the biliary tract. In one case the blood reached the duodenum by way of the common bile duct and then was regurgitated to the stomach, the primary cause being streptococcal cholecystitis. Kelliug, quoted by Judd, says that occult blood with duodenal ulcer may mean nothing since it can also be due to gall bladder infections. Crispin, studying a series of cases of gall-bladder disease in the Mayo Clinic, found a history of gastro-intestinal bleeding in about 5%. The follow up history of all these patients showed that in nearly every instance after the gall bladder was taken care of, the bleeding ceased. In a review of gall bladder cases in the Mayo Clinic in 1918 and 1919, hemorrhage was a symptom in 2.43%. In our series of 100 consecutive cases, hemorrhage was a prominent factor in 7%. Thus there is sufficient evidence to show that gastro-intestinal bleeding may be due to infection of the biliary passages. Hence it is very important to realize that if gross or occult blood be found upon gastric analysis, or if gastric bleeding be a prominent symptom, that the gall bladder and not the stomach may be the etiologic factor.

The presence of visible bile in the fasting contents means reverse peristalsis of the duodenum which usually results from adhesions between the duodenum and the gall bladder, yet this can be produced by ulcer or other disease aside from cholecystitis. Lyon showed that bile is normally discharged into the duodenum only in response to the stimulus of taking food, and should not be there in the fasting state. Whatever the mechanism be, bile in the fasting contents is not the normal thing and should direct one's attention to the biliary tract.

As for the significance of achylia, it must be said that just as many cases show hyperacidity as do hypoacidity, but that achylia is more often associated with gall bladder than any other extra-gastric disease. A positive finding is another link in the chain.

Something should be said in regard to the Lyon-Meltzer method of duodenal drainage in the diagnosis of chronic gall-bladder disease. At present there is wide divergence of opinion among various observers as to its real value, the results obtained being different in different hands. We used this

method in our first twenty cases, and the results were very poor, often missing evidence that was present, and at other times obtaining information that could not be substantiated at operation. Whether the A. B. C. bile obtained in sequence really comes down in that order is difficult to prove or disprove, the A bile supposedly coming from the common duct, B bile from the gall bladder with perhaps a few drops mixed still with common duct bile and C bile assumed to be freshly secreted liver bile. On this hypothetical differentiation, Lyon has promulgated a method for the diagnosis of biliary disease by translating variations of color, quantity, consistency, cytology, bacterial and crystalline content of the bile, into terms of pathology of the biliary passages. Dunn and Connell report some experiments carried out on a patient without gall bladder or common duct, on whom a hepato-duodenostomy had been performed. By introducing 30% magnesium sulphate directly into the duodenum, they obtained typical A. B. C. bile without the presence of a gall bladder or common duct, and at the previous operation it was clearly shown that there was no dilatation of the hepatic ducts which might be serving as a gall bladder in the concentration of the bile. They obtained the same sequence of bile by injecting magnesium sulphate into the jejunum 32 cm. distant from the second portion of the duodenum. They conclude from their experiments that there is no justification in localizing disease of the biliary tract on evidence afforded by the Lyon-Meltzer method of bile segregation. They feel that the A. B. C. bile sequence is due to the reaction of the liver to the presence of the magnesium sulphate in the portal blood. Cutler and Newton in an intensive study of the "Meltzer-Lyon test in gall-bladder disease conclude that there is much to be proven before the so-called "Meltzer-Lyon" test can be accepted as of value in aiding diagnosis, that it is still to be considered as only in an experimental stage and its use should be discouraged by any except those who are qualified and equipped to study and criticize its value. The test depends upon the law of contrary innervation which itself must be proven as yet; that at the present time it would seem to show that syphonage is the principle factor in the defection of bile into the duodenum. Cutler and Newton believe that the dark bile comes from the gall bladder and agree in this with Rous and Mc-Masters, Harer, Hargis and Van Meter. Their

own experience is that the test cannot be depended upon even when accurately performed.

The X-ray and fluoroscope can be of great assistance in the diagnosis of chronic gall-bladder disease. If the wall of the gall bladder is thickened, and perhaps slightly calcified, its outline can then be seen; other evidence worthy of consideration is a filling defect in the duodenum due to adhesions between it and the gall bladder. Calculi, if present, are seen in about 50% of the cases. Reverse peristalsis of the duodenum may be seen by fluoroscope, or a high fixed position of the hepatic flexure of the colon, due to the adhesions between the gall bladder and the adjacent organs. The absence of any of these signs is not conclusive evidence against gall-bladder disease. Negative evidence of gastric pathology assists in incriminating the gall bladder.

DIFFERENTIAL DIAGNOSIS.

1. *Ulcer.* The history of an ulcer may so clearly simulate cases of the type under discussion, that a differential diagnosis is well nigh impossible, especially if the ulcer be at the pylorus or in the duodenum. If on the gastric side, the X-ray should find it. An ulcer case complains of sharper pain and the attacks are periodical rather than continuous. They lose much more weight than gall bladder cases, and are usually more anemic, due to the more common incidence of hemorrhage in ulcer cases. The hunger and night pain is more pronounced than in gall bladder disease. In spite of these theoretical points of difference, there are some border line cases that defy accurate diagnosis. Cancer should not confuse one very much, for although the history may closely simulate the gall bladder case, the X-ray and laboratory findings should aid materially in the differentiation.

Liver: The liver must be remembered as a source of symptoms in gall bladder disease. Cirrhosis particularly causes a chronic disturbance of the stomach, with or without right upper quadrant pain. Physical examination usually reveals an enlarged tender liver and gastric analysis nearly always gives achylia or hyposcretion. X-ray is valuable negative evidence. Chronic passive congestion can be ruled out by the absence of signs of a weak myocardium or poor circulation. Syphilis of the liver can be eliminated by the Wassermann reaction. Primary cancer of the liver is rare, but

when present causes a pronounced enlargement, smooth or nodular, with no X-ray signs.

Chronic Appendicitis: This, with gastric ulcer, perhaps causes more confusion in differentiating true gall-bladder disease than any other conditions. Usually in appendicitis the location of the pain is different, but if an appendix be retrocecal with the tip pointing upwards, pain will be found at the right costal margin as in gall bladder disease, and it is not uncommon for a diseased gall bladder to give reference of pain downward. Gastric analysis does not assist much, the X-ray may or may not be of value, and in the last analysis an exploratory becomes necessary.

Diseases of the Nervous System:

1. *Tabes:* The gastric crises may resemble a perforated gall bladder, with its attendant violent acute symptoms, but physical examination of the abdomen is negative, while examination of the reflexes and an abnormal spinal fluid should clear up the condition.

2. *Lead Colic:* This does not cause disturbance of digestion between attacks, the pain is colicky, unlike the dull dragging pain of gall bladder disease. Examination of the gums, blood and nervous system usually prevent error.

CONCLUSIONS.

1. Gall bladder disease is a very common cause of intra-abdominal complaints, and is more often the determining factor in chronic indigestion of extra-gastric origin in the abdomen than any other single factor.

2. The diagnosis of chronic gall bladder disease in the class of cases whose only complaint is "stomach trouble" for long periods of time with no definite history pointing to the gall bladder is fraught with many difficulties.

3. A good detailed history is perhaps the most valuable tool with which to work.

4. Too much stress should not be placed upon laboratory findings as being typical of gall-bladder disease.

5. Gastric ulcer and chronic appendicitis are the most common diseases causing confusion, and in many cases, the differentiation is well nigh impossible.

We wish to thank Col. B. F. Hayden for permission to publish this.

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PREGNANCY AFTER INTERPOSITION OF THE UTERUS.

Although a successful procedure for prolapse, interposition of the uterus presents a decided hazard to future pregnancy, as is shown by the cases reported by Irving F. Stein, Chicago (*Journal A. M. A.*, Aug. 11, 1923). Because of the fixation of the anterior wall and fundus of the uterus, only the posterior wall is available for development during pregnancy, and at term the cervical canal is perpendicular to the axis of the inlet. Thus, the pelvic inlet is obstructed by the undeveloped anterior wall of the uterus, and labor results in a tendency to flatten the cervical canal from side to side instead of obliterating it from above downward. With the cervix in this position, rendering spontaneous labor impossible, and the anterior uterine wall fixed to the anterior vagina there is only one rational procedure for the treatment of advanced pregnancy, namely, abdominal hysterotomy.

THE TREATMENT OF CALCIFIED SUBDELTOID (SUBACROMIAL) BURSTITIS BY DIATHERMIA.

Six cases are reported by Joseph F. Harris, New York (*Journal A. M. A.*, July 14, 1923). He says that about 80 per cent of the patients recover and 20 per cent are not helped, or discontinue treatment. The treatment itself is not painful, the patient merely experiencing a sense of heat. Patients who have been advised to have this calcification removed surgically are able to testify to the merits of this form of treatment. Diathermia is not a specific in every case of bursitis with calcification, but Harris feels sure that in those cases which have failed to respond, the result was due to the nature of the deposit as well as to the duration of the condition.

INSULIN TREATMENT IN POST-OPERATIVE (NON-DIABETIC) ACIDOSIS.*

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In a recent article, Thalhimer¹ reports three cases of post-operative acidosis treated successfully by the use of insulin and glucose. The results obtained were more rapid and more certain than by the use of glucose alone. This immediately opens a large new field for the therapeutic use of insulin, unforeseen by its original investigators, and at the same time if properly placed upon a distinct clinical basis, puts into the hands of the surgeon a potential remedy for a complication most feared by him.

The success of insulin in diabetic acidosis has already been established; if the same effect can be shown to exist in starvation acidosis, post-operative acidosis or in acidosis of toxic vomiting of pregnancy, then the clinical value of this new remedy will be tremendously enhanced. It is thus highly important that immediate investigations be carried out along these lines, and any cases so treated be placed in the literature in order that proper deductions may be drawn.

The following is a report of a case of pre-operative starvation acidosis intensified by operation, treated by the method described by Thalhimer, with excellent results:

Case Report: Mr. H. T., age 27, was admitted to the National Military Hospital August 17, 1923. He had had severe abdominal pain and vomiting for six days before admission and had eaten no food during this time. Temperature was 100.8, pulse 110, respiration 24. Patient had a severe chill lasting eight minutes. Abdomen was tense, rigid, with generalized tenderness. Urine—acid—amber—sp. gravity 1.028—acetone three plus (Sodium Nitroprusside test) diacetic acid three plus (ferric chloride test)—no albumin or sugar. Operation under local. Gangrenous appendix removed and drainage instituted.

After the abdominal incision was closed he was given 500 c.c. of a 10% glucose solution intravenously so that the entire time of administration consumed 1 hour and ten minutes. Soon after the

glucose was started 20 units of insulin† was given hypodermically and another 20 units at the end of administration. At the same time soda bicarbonate solution was given rectally. Two hours after the glucose was given, vomiting ceased, and the acetone and diacetic acid were reduced to 1 plus. 500 c.c. of glucose were given again and 15 units of insulin at the beginning and end of administration. Three hours later the acetone and diacetic acid had entirely disappeared, but the urine this time showed a slight trace of sugar. The well being of the patient was 100% improved. He refused any food for the next 36 hours and at the end of this time the urine showed acetone two plus. This was quickly controlled with 500 c.c. glucose with 20 units insulin. Convalescence from here on was uneventful.

COMMENT.

The fundamental nature of the ketoses is still unknown; however it appears that the causative factors are either insufficient carbohydrate intake or perverted carbohydrate metabolism, or a combination of both. In the non-diabetic type of acidosis under discussion, we have to deal with a vicious circle, vomiting occurs, preceded or followed by ketosis, preventing carbohydrate intake necessary to burn fats with a resultant aggravation of all symptoms.

Harding and Potter² have carefully investigated the acidosis of toxemic vomiting of pregnancy, and in this condition were able to bring about a cessation of the vomiting and acidosis by the use of glucose per rectum, subcutaneously, and occasionally intravenously. It took five or six days to effect this. It is evident that in perverted body metabolism, the carbohydrate cannot be utilized as quickly or as satisfactorily as is the case in normal metabolism, and it seems evident that the introduction of insulin supplies the unknown factor needed in acidosis to make immediately available for body needs the introduced carbohydrate. Where time is an important factor in the treatment of acidosis, the tremendous advantage of insulin and glucose over glucose alone can readily be seen.

Which of the two factors, insulin or glucose, is the more important it is quite difficult to say. Thalhimer had the opportunity to observe¹ the effects of glucose administration alone in one of his cases. The ketosis still persisted, and only

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after the addition of insulin were the desired results obtained, and obtained rather quickly. To give insulin alone is to assume the presence of a sufficient available quantity of carbohydrate in the body, which usually is not the case in these conditions, and hence renders such a procedure dangerous. It is quite important that enough glucose be administered to take care of the number of units of insulin given and it is best to give enough so that there will be some glucose remaining in the blood stream after the insulin has been utilized, furnishing a safety valve on the blood sugar content. Two gms. of glucose should be given for every unit of insulin injected.¹ If the urine shows the presence of sugar in the face of the disappearance of the acetone and diacetic acid, this may be ascribed to the carbohydrate administered.

In the combined method of insulin and glucose administration in the non-diabetic acidosis, it seems that we have a therapeutic vehicle almost specific in action, taking place in a very short period of time, and which can be repeated as often as becomes necessary. It seems to control, at the will of the operator, the very delicate metabolic balance of the organism, as in this case, where after 36 hours of no food intake, the acetone again appeared, but was immediately driven off by another injection of insulin plus the intravenous administration of glucose. The ability of insulin to cause a rapid utilization of carbohydrate in normal and diabetic individuals is an established fact; the severe vomiting which usually occurs in non-diabetic acidosis causes a decrease in available carbohydrate, hence it seems that a combination of both factors is scientifically sound in the therapy of acidoses, and the four cases thus recorded demonstrate this.

It must be remembered that unless accurate laboratory control be available it is exceedingly dangerous to administer insulin for without this check the physician will be groping in the darkness.

CONCLUSIONS.

1. Hypodermic administration of insulin together with intravenous injection of glucose caused the disappearance of severe acidosis in twelve hours in a non-diabetic patient operated on for gangrenous appendicitis.

2. Unless laboratory control be available this therapy becomes dangerous.

We wish to thank Col. B. F. Hayden for permission to publish this report.

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NONUNION IN FRACTURES: THE MASSIVE BONE GRAFT.

Of 221 cases of nonunion analyzed by Melvin S. Henderson, Rochester, Minn. (*Journal A. M. A.*, Aug. 11, 1923), 184 were traced; 138 have obtained union, and forty-six failed to obtain union. The nonunion was in the lower extremity in 133, and in the upper, in eighty-eight. The femur was involved in seventy cases, forty in the neck and thirty in the shaft; the tibia in fifty-four; the forearm in forty-six; the radius alone in twenty, the radius and ulna together in eighteen, and the ulna alone in eight; the humerus in forty-one, the patella in nine, and the clavicle in one. The most common site for nonunion in the shaft of the femur was in the middle third; in the tibia, the lower one third; in the humerus it was about evenly divided between the middle and lower third; in the radius and ulna combined, the site was most common in the middle third. In the radius alone it was most common in the lower third, and in the ulna alone, in the middle third. The bones named in the order in which the best results were obtained are the patella, the radius, the ulna, the tibia, the humerus, the shaft of the femur, and the neck of the femur. The massive autogenous graft is preferred, and firm internal fixation of the graft to the fragments is also essential. The fact that occasionally success follows the use of metal plates, bone screws, beef-bone plates, and so forth, does not establish the fact that they are to be preferred to the bone graft. In a large series of cases there is ample proof of their inadequacy. Adequate external fixation must also be provided.

INTRODUCTION OF COCCIDIOIDAL GRANULOMA INTO CHICAGO.

The report made by Edwin F. Hirsch, Chicago (*Journal A. M. A.*, Aug. 4, 1923), besides placing on record another instance of coccidioidal granuloma, concerns the possible permanent introduction of the disease into parts of the country which now are not infested. Judging from reports of this infection in Missouri, Kansas and South Carolina, the disease is either more widespread than has been thought, or it is slowly being carried into places which formerly were free. There may be some peculiar intermediate host or carrier in the natural transmission of the disease which makes human infection relatively infrequent and possible only in the natural habitat of such a carrier or host.

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EDITORIALS

A WORTHWHILE EFFORT.

THE October Crusader of the Wisconsin Anti-Tuberculosis Association will probably prove to be more interesting to physicians than to the majority of lay readers, for whom it is primarily published. It is a Trudeau number and is issued to commemorate the seventy-fifth anniversary of the birth of one of America's—yes, one of the world's greatest physicians.

Every physician should read Trudeau's Autobiography for inspiration, interest and the glow of pride that comes from being a member of the same profession. This Crusader is largely made up of interesting abstracts from the book. Read it before passing it along to the reception room table.

The Trudeau number of the Crusader is the third of a remarkable series (Pasteur and Jenner numbers have preceded it) in which the Wisconsin Anti-Tuberculosis Association is attempting to bring the names and accomplishments of great medical scientists into the consciousness of the school children and adult citizens of the state. The enterprise is an ambitious one and we fear a more or less visionary one. Nevertheless it should be done by somebody and if scientific medicine and cultism and quackery are ever established in their proper respective positions, it will be only by some such means. If ignorance, on the part of the educators and students, of the names of such benefactors of humanity as Pasteur, Jenner and Trudeau can be made quite as much a stigma as ignor-

ance of such names as Shakespeare, Bryant and Longfellow; Scientific Medicine will come into its own.

We bespeak for this effort that is being made to spread popular knowledge of medicine and a wider and keener appreciation of the great service that has been rendered by medical men and by scientists closely allied with them, the interest and support of every member of the State Medical Society. It is another instance of the manner in which the "W. A. T. A." is upholding the hands of the physicians.

ANNIVERSARY MEETINGS.

IF reputable physicians were as zealous of maintaining and upbuilding the good reputation of their science and art as they might well be, discussion of medical scientists and scientific medicine would occupy a larger place than it does in the programs of the men's luncheon and dinner clubs. Every such club should have had a Pasteur Centennial Meeting last year and it would be appropriate for them all to have a Seventy-fifth Anniversary Trudeau Meeting during October of this year.

We are, as a profession, prone to make one of two errors: 1. To assume that laymen should *sense truths* of which we have been made well aware by our education. 2. To fail to appreciate the inarticulate longings and ubiquitous interest of the public in subjects pertaining to their physical well being. Nobody, of course, should countenance *self-seeking* advertisement on the part of any physician-member of such men's clubs as are

here being considered. Good taste, if nothing else, should forbid that. But neither have we the right to remain aloof and disdainful of popular ignorance, misconceptions and misinformation of our science and art.

Between obnoxious, self-seeking puffery on the one side and real or pretended aloofness or superiority to public opinion is a vast field which should be cultivated for the good of the profession and the profit of humanity. And insofar as our profession does really offer profit to humanity, it will profit as a profession.

H. E. D.

ASSISTANCE OFFERED.

ELSEWHERE in this issue we are printing the invitation of the Medical School of the University of Wisconsin to physicians offering a six-day course in the treatment of Diabetes Mellitus. No charge is made for the course.

In extending this cordial invitation our State University has opened a new field of service to the physicians of this state. The use of insulin in the treatment of diabetes requires study and care. Not many physicians have the opportunity to make such original studies but will have the time to take the intensive six-day course that is offered.

This offer of service will undoubtedly have the wide acceptance it deserves. Recently this Journal said editorially "There is no class of men who find it more imperative to keep up with the latest developments in professional lines than the members of the medical profession."

In reasserting this statement we extend our hearty thanks to the University for offering a means by which Wisconsin physicians may become familiar with a comparatively new and valuable therapeutic agent.

J. G. C.

"LET GEORGE DO IT."

TAKING it all in all there is probably too much of "letting George do it" in this world.

In this instance, however, the phrase is used in a somewhat different manner.

Your full time Secretary-Managing Editor is ready and seeking to be of service to the members, both as a group and as individuals. There is a need for such work and its possibilities are many. We are listing now for the first time some of the things that you can let George do. Additions will be made from time to time but whether the particular service you desire is listed or not—write George and he will do it or see that it is done.

1. Books. If you would like to borrow some medical publication you can now obtain it by addressing Mr. Walter Smith, Librarian, Medical School, University of Wisconsin, Madison.

2. Current literature. The need for the so-called "package library" on medical subjects is constant. You may now obtain such a package of clippings from medical journals and publications on any subject by addressing the Library, Extension Division, University of Wisconsin, Madison.

The Wisconsin Medical Journal is turning over all its exchange copies each month for this work and other magazines will be subscribed for direct. It will take a little time for this service to be of its greatest value but it is now established.

3. Magazines. By the time this issue appears every member, and hence subscriber to this Journal, will receive a list of magazines that may be had at publishers' prices by reason of subscription to this Journal. All remittances and orders must be made to the Wisconsin Medical Journal, 558 Jefferson Street, Milwaukee. The saving is for you.

Other fields in which George may be of service are being developed and will be announced as established. Have you a suggestion?

GEORGE CROWNHART.

TWENTY YEARS AGO.

In 1903, the year this Journal was established, Dr. Arthur Patek, its Editor, wrote an editorial on the subject of medical testimony. Twenty years have passed; ten legislatures have come and gone; bar associations have met twenty times and still that editorial is as apropos today as the day it was written. Because of that fact we are reprinting the editorial which appeared in May, 1903.

EXPERT TESTIMONY.

There is great need of a change in the manner of securing so-called expert testimony. Judges and lawyers vie with each other in making adverse criticisms upon the testimony of experts, but in the main, they are responsible for the existing conditions which they so loudly deery.

It is time that the medical profession as a body, made its influence felt in this matter, and endeavored to bring about a decided change in the unsatisfactory methods now employed.

When an attorney, or any other honest man, is called upon to express an opinion about a business matter, he expects or demands to be made acquainted with all the facts, and if he be honest, he will not venture to give an opinion until he does know all the facts. Indeed, it is a common remark made by conscientious attorneys that

they will have nothing to do with a case unless they are first made acquainted with all the facts. Then they are prepared to express an opinion upon the merits of the business entrusted to them.

It is said, and we believe the saying to be true, that an attorney will dismiss a client, for the reason that the client has not made known the whole truth; in other words has attempted to deceive, by withholding important material which might change the aspect of the case, and the attorney's opinion. But this very important measure which they demand for themselves and without which they will not proceed with their investigations, attorneys deny to the medical man whom they call upon for opinions which are to be used for the sole purpose of influencing the court and jury.

As such affairs are conducted at present, the attorneys interested upon one side introduce every atom of evidence favorable to their side, and by every artifice known to the profession, attempt to belittle or destroy all adverse testimony.

Having heard but one side of the case, and often only the least important testimony, a medical gentleman is called upon to state his opinion upon the circumstances brought out in that testimony.

Then the other attorneys, having charge of the defense, bring out all the testimony they can collect, which may be vastly more important in its bearing upon the subject of disease or injury than any already introduced, and another medical gentleman is asked to express his opinion upon the last testimony introduced, without reference to any preceding testimony; and his opinion may be the reverse of the first expert, yet each one has given an honest opinion.

Indeed, it is not infrequently the case that the same expert says "yes" to the questions propounded by the lawyers on one side, and "no" to those propounded by the lawyers on the other side, yet giving an honest answer in each instance.

No man, be he judge, lawyer or doctor, can give an intelligent opinion upon any subject when only one part of the subject has been presented; and yet that is just what medical men and experts in all departments of human experience are now required to do.

As a result the attorneys wrangle about the differences in the opinions of the medical profession, for which they are themselves blameworthy. The remedy is not hard to find. There can be no question as to who is meant by an expert, namely one who has special skill in some branch of science; and not only special skill, but practical experience. The experts should be named by the judge after consultation with all the attorneys interested. When selected, the experts should first hear all the testimony before being permitted to express an opinion.

To simplify matters still further, and, we believe, to secure better results, the judge should be authorized to examine the experts, receiving any suggestions from the attorneys which they may see fit to make, and which the judge may use or not, as he may think proper.

We have seen this method used in two important trials and the results were satisfactory in every way;

it was creditable to all concerned and there were no differences of opinion among the experts in any essential point. The "hypothetical questions" ordinarily propounded are often misleading and unjust, sometimes being drawn for the express purpose of bewildering the witness and perverting the truth. These are sharp accusations, but anyone who has watched carefully the proceedings in cases where expert testimony is used, can vouch for the truthfulness of the statements.

While it is not our purpose to disparage in any manner the value of testimony given by medical men, something remains to be said about the subject of experts in the medical profession.

At present any reputable person holding a diploma from a regular incorporated medical college may testify as an expert, although he may never have had any personal experience with the disease or injury which is the subject of controversy. This is manifestly unjust and unfair.

Not only should an expert be well read in his profession, but added to his reading should be the very important factor of personal experience, and observation of cases like the one before the court.

It is unfair to all, to place upon the witness stand as an expert one who is a tyro in the profession, no matter how well informed he may be in book lore, or how suave he may be in speech, but who has had no practical experience.

Just so long as these unwise things are permitted, just so long will so-called expert testimony be a laughing stock. It is time for the medical profession to enter a decided protest against the methods now employed to secure expert testimony and attempt to correct the unfair and illogical way now in use.

CHIROS LEAD LIST.

Madison, Wis.—Lobbyists spent over \$100,000 on the last Wisconsin legislature.

A tabulation made in the secretary of state's office shows that two hundred eight-nine firms and organizations that maintained lobbyists at the capital admitted expenditure of \$96,666.64 in promoting and defeating bills during the last session and besides this there were numerous personal expenditures.

The Wisconsin Chiropractors association spent the greatest amount of any one firm, a total of \$8,541.43. Members engaged in one of the most intense fights of the session to gain advantages for their profession. The State Medical society of Wisconsin spent \$1,625.01.

Among those filing reports with the Secretary of State and the amounts spent are:

Milwaukee Association of Commerce.....	\$2,823.93
Milwaukee Automotive Dealers' Assn.....	2,161.25
Milwaukee Contractors' Assn.....	2,050.00
Brotherhood of Locomotive Engineers.....	2,055.00
Chicago, Milwaukee & St. Paul Road.....	3,294.79

Chicago, St. Paul, Minneapolis & Omaha Road	2,316.45
Chicago & Northwestern Road.....	4,202.18
City of Milwaukee.....	3,155.65
Concordia Fire Insurance Co.....	2,078.00
Milwaukee Hotel Assn.....	2,199.99
Milwaukee Mechanics Fire Insurance.....	2,144.57
Milwaukee Real Estate Board.....	1,320.75
Minneapolis, St. Paul & Sault Ste. Marie Road	2,965.58
Montreal Mining Co.....	5,557.15
Northwestern Nat. Insurance Co.....	2,093.09
Order of Railroad Conductors.....	2,336.00
Pulp Wood Company.....	3,190.08
Standard Oil Co.....	2,716.61
State Medical Society of Wisconsin.....	1,625.01
Wisconsin Anti-Saloon League.....	1,296.67
Wisconsin Brotherhood of R. R. Trainmen...	1,104.00
Wisconsin Chiropractic Assn.....	8,541.43
Wisconsin Coal Dock Operators' Assn.....	2,050.71
Wisconsin State Hotel Assn.....	1,454.71

—*Wisconsin News*, Sept. 7, 1923.

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MALARIA IN WISCONSIN.

H. M. COON, M.D., AND O. V. OVERTON, M. D.*

MADISON, WISCONSIN.

Malaria is considered, as a matter of course, as a disease belonging to the tropical and subtropical climates. The factor chiefly responsible for this regional distribution we now know to be the manner in which the disease is spread—by the mosquito which flourishes in the warm and damp lowlands, in these climates. When an occasional case comes under observation in the more temperate regions, previous residence in a warmer climate can usually be established. These cases are regarded as more or less interesting, merely because of their occurrence at a distance from the usually accepted region of incidence.

Brief notes of the six cases at the University Infirmary are given below. The last four have occurred within the past year:

1. M. L., admitted November 29, 1918. History rather indefinite. One chill, with subsequent fever rise to 102.4 on the second day after admission.

2. A. R., admitted November 17, 1921, complaining of fever, chilly sensations, and drowsiness. History of

malaria ten years previously. Examination revealed an icteroid tinge of the soft palate, easily palpable liver, spleen descending two centimeters on inspiration, and in addition the following laboratory data: Two negative Widal reactions, negative blood-Wassermann, and three negative blood-cultures. On November 28, two unusual blood forms were discovered in the blood smears, and were designated as Aestivo-autumnal type of Plasmodia. Discharged December 6.

3. J. W., a native of Birmingham, Alabama, admitted June 30, 1922, because of chills and apathy. Had five chills on alternate days, previous to admission. After admission, there were no further chills. July 3, blood smears showed tertian organisms. Discharged July 15, but readmitted the 17th, because of continued general weakness. At this time, no plasmodia were found in the blood smears, but some cell-stippling was present.

The two following cases chanced to be admitted on the same day, October 3, 1922:

4. D. E., because of fever and chills, and a history of having had for two weeks, chills on alternate days, followed by fever as high as 104 degrees, and a subnormal temperature on the alternate days. Her home was in Madison, Indiana, and during the preceding summer there had been considerable malaria near her home. On the afternoon of admission, there was a chill of forty-five minutes duration, followed by a temperature of 103. Spleen was markedly enlarged, four cm. below the costal margin. Liver palpable. Blood smears early the following morning showed typical tertian plasmodia.

5. C. C., a Chinese student, complained of chills and fever. Three months previously, in Shanghai, China, had had a similar attack. An American physician there, early suspected typhoid fever, but subsequently gave quinine intramuscularly, for four weeks. On the morning of admission, there was noted pain in the upper left abdominal quadrant, with chilly sensation. On going to bed, there was a severe chill, which lasted thirty minutes. Examination showed the spleen descending four cm. on inspiration, firm and smooth. There were noted several evanescent vesicles; all of these cleared up within a short time after admission. Blood smears revealed various stages of the tertian organism.

6. F. D., who had been in America but seven days, having had an attack of malaria in India thirty days preceding. While in New York, had a slight chill, attributed to the rawness of the weather. The preceding night, had a severe chill, preceded by headache, nausea, and vomiting. The headache became more severe. The spleen was palpable, but neither tender nor hard. The following morning, organisms of the aestivo-autumnal type were observed in the stained blood-smears.

Medication in the above series, consisted of the usual course of quinine by mouth, with satisfactory results.

With the increasing frequency of malaria among the University students, the question of the pos-

*From the University of Wisconsin Students' Infirmary, Madison, Wis.

sibility of its dissemination may well be brought up. True, a number of the cases were seen during the cooler autumn months, when the mosquito is absent, and when the question of dissemination is obviously slight. However, the *anopheles* is found in the vicinity of Madison during the summer months, and there are a considerable number of Oriental and Southern students who come directly to the university.

In this connection, Dr. A. S. Pearse, of the department of Zoology of the University, gave his opinion that the climate is neither sufficiently warm nor humid, to permit the development of large numbers of the *Anopheles* mosquito. Consequently, he doubts the possibility of malaria dissemination in this locality.

On the other hand, a letter is quoted from W. D. Stovall, M. D., of the Laboratory of Hygiene: "In the last year and a half, we have had two cases of malaria develop in Madison—one, a boy living in South Madison; another, a woman living in the city. The former case had never been outside of Dane County. In other words, he had always lived here. The woman gave a history of having lived in the South." Dr. Stovall further cited the case of an Oshkosh woman, who had malaria, and who nevertheless had never been outside of her home county.

It may be concluded that while perhaps the question of the spread of malaria in this so-called temperate region is a purely academic possibility, it is nevertheless interesting.

Ethyl Chlorid as a General Anesthetic.—The published mortality rate from ethyl chlorid anesthesia varies from 1 in 15,000, which is also the mortality rate of ether anesthesia, to about 1 in 6,000. From these statistics, therefore, one might judge that ethyl chlorid stands between ether and chloroform; but it is probably closer to the latter, which gives a mortality of about 1 in 3,500. Ethyl chlorid, however, is used for minor anesthesia, and it is unfair to compare it with the major anesthetics for prolonged operations. The fair comparison for ethyl chlorid is with nitrous oxid, the accepted mortality rate from which is about 1 death in 1,000,000 anesthetics. Hence, whether for induction of anesthesia or for minor anesthesia, ethyl chlorid is somewhere between 200 and 66 times more dangerous than nitrous oxid. It is, on the other hand, somewhat safer than chloroform. The essential danger from ethyl chlorid lies in the suddenness of the death which may occur within half a minute from the beginning of the inhalation. The danger signs are such as may be overlooked by any but the most experienced anesthetist. (Jour. A. M. A., July 28, 1923. p. 320)

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

THE ROLE OF THE PRIVATE PRACTITIONER IN THE CONTROL OF DIPHTHERIA.*

BY W. D. STOVALL, M.D.,

STATE LABORATORY OF HYGIENE,

MADISON.

My purpose in this paper is not to present a description of the Schick test or an account of the method used for the preparation of toxin-antitoxin mixture. It is my purpose to emphasize the importance of physicians using in private practice means proven to be efficacious in preventing diphtheria, and to suggest a plan whereby practicing physicians, school boards and health departments may work together in accomplishing the immunization of the whole child—pre-school and school children—population of the State.

There seems to be an opinion in the profession, among many anyway, that any discussion of diphtheria must be the discussion of an old and hackneyed subject. The facts are far different. During the last few years there has come into use much new information, which can be used in a practical way by every physician.

The economic importance of the subject needs no discussion. Last year in Wisconsin there were reported 3593 cases and 238 deaths. Aside from the deaths which resulted, the inconvenience and economic loss from quarantine alone was large. A paper published last year from our laboratory showed that the average period of quarantine in Wisconsin is nineteen days. And this does not mean that we are retaining in isolation all patients until they are no longer carriers.

Much valuable work has been done during the last few years on the subject of diphtheria carriers and many interesting publications have appeared. In order to get more definite data on diphtheria carriers, Moss, Guethrie and Marshall have made

*Read before the State Medical Society of Wisconsin at Milwaukee Oct. 4, 1923.

interesting observations as to the duration of the carrier state after inoculating the throats of healthy individuals with avirulent diphtheria bacilli. Their studies show that they were able to isolate avirulent diphtheria bacilli from those inoculated as long as 132 days after the inoculation. Hartley and Martin estimate the average stay in the hospital of patients released on one culture as 21 days, on two cultures as 34 days, and on three cultures as 45 days.

The free use of antitoxin has cut the death rate in New York City from 150 per 100,000 in the decade before 1895 to 22 per 100,000 at the present time. It has not reduced so much the morbidity from this disease, and because of the shortness of the duration of the immunity which it confers, can not be expected to do more than prevent diphtheria in members of the family in which the case occurs, and then only for the period usually covered by the first case.

All things considered indicate that diphtheria is still a very live problem and that more attention should be given by the physician in private practice to its prevention. This is especially so since there has been provided a simple, safe and certain means for establishing a lasting immunity.

This is not a new subject. Everybody who reads either the scientific journals or lay magazines has become familiar with the purpose of the administration of toxin-antitoxin mixture. In spite of this familiarity with the mixture very little is being used. Public health departments are almost the exclusive users of this means of diphtheria prevention. There are a few physicians in private practice who use it but they are few. If diphtheria is going to be materially influenced by the use of toxin-antitoxin, it must be used widely by physicians.

I have many cases referred to me for the administration of this mixture when it could be just as well done by the physicians who first see the children. The reason for referring the cases to me is because of a feeling that it is first necessary to do a Schick test on all cases before the toxin-antitoxin is administered. I believe that this is a quite common belief in the profession, and accounts for the neglect of this important means of preventing diphtheria.

The Schick test itself has nothing to do with the prevention of diphtheria. The Schick test simply determines those who are already immune to diphtheria and those who are not. It also is service-

able as an indicator of those who are sensitive to foreign proteins, particularly those of the kind found in the Schick test material and in the toxin-antitoxin mixture. As such an indicator it points out those who if given toxin-antitoxin may be expected to give a more or less severe foreign protein reaction. The information thus afforded is very serviceable when advising adults and older children concerning the necessity of using toxin-antitoxin. For younger children the information is not so valuable.

Adults and older children are more generally sensitive to various foreign proteins. It is in this age group that more severe reactions follow the administration of toxin-antitoxin and it is in this age group where the Schick test becomes serviceable as an indicator of sensitivity to foreign proteins. Adults and older children are also less susceptible to diphtheria; that is to say, as one grows older immunity to diphtheria is frequently acquired. Thus fewer in this age group are susceptible to diphtheria. For this reason the results of Schick tests in this group are important for economic reasons. In a group of children aged twelve to fifteen years, only about 20% to 30% will be susceptible so that if a large group is to be treated considerable saving in toxin-antitoxin mixture will be effected by the use of the Schick test to say nothing of the inconvenience.

The Schick test also serves another most useful purpose. After toxin-antitoxin has been administered, three to six months later it will indicate those who have secured an immunity following the injections.

For reasons opposite to those showing why the Schick test is serviceable in adults and older children, it is not so important when contemplating the immunization of younger children.

Children between the age of one to five years are rarely susceptible to the foreign proteins found in the toxin-antitoxin mixture, and for that reason they practically never give a reaction which gives any inconvenience. In this period of life they are most susceptible, 80% to 85% being susceptible, to diphtheria. It is obvious then that the Schick test is neither very important as an indicator of foreign protein sensitivity nor for economic reasons because a large per cent of the children of this age are susceptible, and the small per cent who would not require the mixture does not pay for the time and expense required to do the test.

It is obvious then that the Schick test has a very

limited field of usefulness when it comes to the practical use of toxin-antitoxin mixture, and also that toxin-antitoxin can be given with perfect safety without the use of the Schick test. This means that every physician should be using toxin-antitoxin mixture in his practice every day.

There are some good reasons why physicians should not attempt to use the Schick test in private practice. First, no physician should attempt to use it who is not familiar with it. Second, diphtheria toxin is so unstable that it does not retain its potency long unless very special conditions are provided for preserving it.

What then is a good working plan whereby physicians in private practice and health officials can cooperate in using toxin-antitoxin mixture on a large scale for the prevention of diphtheria?

It has been shown that the young children, age one to five years, are the most susceptible and that the Schick test has no special advantage in this age group. The problem then is resolved to the simple matter of each physician advising the families under his care to have all children over one year of age and under ten immunized against diphtheria. He can do it by having the children come to his office for the injections. By this means all of the pre-school children will receive their immunization.

The next step concerns the health departments. When school opens in the fall all children entering for the first time should be Schicked, and all who react positive should be given toxin-antitoxin. The following fall this procedure should be repeated, and in addition to Schicking the new entrants, all children who required the toxin antitoxin mixture the previous fall should be again Schicked.

This method leaves the use of the Schick test to health departments, who should have a man especially trained to use this test. It also points a way by which every physician can contribute another great service to "his families" by immunizing pre-school children against diphtheria. I hope that it will not be long before every physician will feel it his duty to insist that children in families who regularly seek his advice be actively immunized against diphtheria.

PUBLIC HEALTH NEWS

The State Board of Health was notified that the Vilas county board has re-hired Miss Ann B.

Christmann as county nurse until January, 1925, the action being taken without a dissenting vote.

* * *

An eastern attorney applying for copy of record of marriage contracted in Milwaukee in 1839 was informed that marriage records for Milwaukee county did not begin until 1852.

* * *

On a complaint prosecuted by the State Board of Health, a West Allis physician was fined \$50 and costs for failing to report a diphtheria case under conditions not to be condoned.

* * *

In a letter the Board strongly advised against the use of patent preparations for treatment of asthma or other organic conditions, holding that in most cases such medications represent time and money wasted.

* * *

In responding to requests for assistance in the matter of drainage ditch nuisances, the bureau of sanitary engineering is permitted to deal only with the sanitary aspects of the problem, a complainant was informed.

* * *

There is no state law nor any rule of the Board which requires owners of property to furnish their tenants with drinking water. The remedy advised was vacation of the premises and renting of a home where this necessity is provided.

* * *

An undertaker was advised that a coroner is not authorized to act in cases of death from violence without the authority of the district attorney. The undertaker should report all deaths from violence to the district attorney.

* * *

Unless the family physician collected release cultures (for termination of quarantine) under the direction of the local health officer, a town is not legally bound to pay the charges for such medical services, a district attorney was told.

* * *

An unofficial opinion was given that a license is not required to operate a Turkish bath parlor providing massaging and other treatments are not given. The state law provides for the licensing of masseurs by the state board of medical examiners, which has offices at Ashland.

* * *

Blanks for recording physical examination results for males under the eugenics law are not

furnished to physicians by this department, but may be purchased from a Milwaukee printing company, or in some counties obtained from the county clerk.

* * *

The Board appointed Miss Harriet Hill, Kenosha, as social worker in connection with the venereal disease clinic maintained at Oshkosh, to succeed Miss Fern Chase, resigned. She begins work Oct. 1.

* * *

"Under the state regulations," said a letter to a county nurse, "the attendance at school, except open-air schools, of pupils or teachers who have tuberculosis of the lungs is prohibited. Although it seems hard to compel any girl to discontinue her high school work at this time, we believe her future health and possibly her life depends upon proper treatment without delay." Treatment at home or at a sanatorium was urged.

* * *

Tabulations announced show that in 1922 there were reported 1,809 deaths from tuberculosis (all forms) in the state. This was a reduction of 154 from the 1921 mortality.

* * *

The resignation of Dr. Mildred Van Cleve as physician for the maternity and infant health centers operating under the Sheppard-Towner law was received, effective Oct. 15. She will engage in private practice in Illinois.

* * *

A health officer who visits a case of communicable disease for purposes of confirming diagnosis, taking cultures, or determining on duration of quarantine, cannot charge a fee, this work being part of the service for which he is paid by the city or town.

* * *

Miss Marie U. Puls, New York City, a former Wisconsin girl, was given the appointment of maternity and infant health center nurse for Wood, Jackson, Clark and Marathon counties, to fill a vacancy made by resignation. Headquarters will be at Marshfield.

* * *

A local registrar of vital statistics was warned against long delays in filing death certificates and permitting burial or shipment without issuance of a burial permit. Violation of this rule is ground for prosecution under the state's agreement with the Census bureau.

The National Federation of Day Nurseries was informed, in response to its questionnaire, that Wisconsin exercises no supervision nor regulation of day nurseries. All maternity hospitals and boarding homes for children are, however, required to be licensed and are under close supervision by the state.

* * *

A city attorney was advised that a registered nurse who has not had public health training is not qualified under the law for employment as a school or other public health nurse. The latter type of nurse must be certified by the state board of health to cities or counties for employment.

* * *

An official test by federal agents of the adequacy of Wisconsin birth recording is a possibility at any time, a local official was informed. That the state may be kept in the registration area, delinquent physicians, midwives and others charged with filing birth certificates are constantly being admonished to report every birth attended, on penalty of prosecution for continued failure to do so.

* * *

A Milwaukee inquirer asked about the legality of the action of a health department nurse in compelling persons in a home where a diphtheria patient has been confined, to submit to having a throat culture taken before permitted release from quarantine. "There is no law which specifically compels well persons in the family to have cultures taken," the department answered, "but until negative cultures are obtained from these persons quarantine should be kept on the premises." Rules to this effect adopted by the board and officially published have the force of law.

PRIMARY CARCINOMA OF THE URETER.

To the thirty-two cases of carcinoma of the ureter recorded in the literature, Louise H. Meeker and Joseph F. McCarthy, New York (*Journal A. M. A.*, July 14, 1923), add one case. The origin and nature of the fatal illness was primary carcinoma of the right ureter. Secondary and terminal factors were generalized metastases to the liver, pericardium, lungs, spleen, pancreas, left kidney, lymph nodes and skin. There was right hydronephrosis. Anatomic findings consisted of dense adhesions about the tumor; right external iliac vessels embedded in the tumor, and a polypoid nodule, 1 by 2 mm., in the bladder mucosa near the orifice of the right ureter. Concerning the histogenesis of this tumor, the evidence indicates that it had developed from the epithelium lining the ureter.

INSULIN COURSE OFFERED

A six day course in the treatment of Diabetes Mellitus, open without charge to all physicians of Wisconsin, was announced at the 77th annual meeting of the State Medical Society. The first course began Monday, Oct. 8, and will be continued as long as justified by applications.

The schedule for the course is: 8 A. M., Laboratory work on blood and urine; 10 A. M., Clinical rounds on diabetic cases; 11 A. M., Lectures on chemistry, pathology and treatment, and 2 P. M., Class work in Dietetics. The course includes library work on assigned readings and the preparation of diet sheets. The University offers the course without charge except for a \$5 fee to cover the use of laboratory materials. The announcement of the course follows:

"To Wisconsin Physicians:

"The use of Insulin in the treatment of diabetes mellitus is now on such a well established footing that it should be carried on by every practitioner who cares to familiarize himself with the technical details. Yet there are many members of the profession who have tried this new addition to therapy and have been disappointed because results were not as reported in current literature. This is not due to any fault in the pancreatic extract. It has now shown a degree of permanence and a uniformity in results which are highly gratifying. The difficulty encountered by most men has been in a lack of familiarity with the details which are so essential to success. This does not reflect on the intelligence or the training of the profession, for the use of the specific pancreatic extract is less than two years old, and the definite advances in dietetic control, which are equally important, are little older.

"The clinical staff of the Medical School has been using Insulin for treatment of the different types of diabetes mellitus and for research work for nearly a year past. The staff wishes now to invite the members of the profession in the state of Wisconsin to come in and share the opportunity to study the treatment of diabetes in the Bradley Memorial Hospital. For that purpose a six day course of instruction will be given to groups of not more than six physicians at a time. This course will include lectures on the chemistry of diabetes and carbohydrate metabolism, the pathology of diabetes, the dietetic control of the disease, the use of Insulin in the usual types and in the complications and emergencies. There will be a series of classes in the prescribing and calculating of diets, designed to aid the physician in the instruction which he must give his patients. A simple text will be used and practice in working out diets will be carried on under the hospital dietitian. Laboratory methods of blood and urine examinations will be demonstrated, and the simpler ones practised. The visiting physicians will make daily visits to the diabetic patients in the hospital, observing the detailed handling of each case.

"The cases treated here have come from various parts of the state. They have been referred back to local physicians for continued treatment. A limited number of cases will continue to be accepted for the treatment. The difficult types are especially desired. Needy cases for study are accepted as far as possible. It is necessary also to have a certain portion of self-sustaining cases. \$5 per day provides for all medical attention, nursing, board, laboratory fees, and drugs during the stay of the latter class of patients in the hospital. Applications for admission should be sent not less than two weeks in advance to insure reservation of space. Four beds will be held for diabetics. Physicians who desire to have a difficult case, selected from their own patients, studied while they are here, should arrange by correspondence for the patient to precede them by two or three days.

"There will be no tuition fee for this course. The only charge will be a laboratory fee of \$5 for the week. Instruction will begin Monday morning and close Saturday noon. The first course will be given beginning Oct. 8. It will be repeated weekly while the enrollment justifies it. Enrollments will be made in the order of applications, which should be addressed to E. L. Sevringhaus, M. D., at the Bradley Memorial Hospital, Madison. Enrollments may be made in person at the State Medical Society meeting in Milwaukee, Oct. 3-5, at the booth of the University Medical School. Every licensed physician in the state is invited to spend a week at the hospital."

PACKAGE LIBRARY SERVICE.

The first request for package library service established at the University Extension Division, as announced in our editorial column of this issue, was received from Vernon County. So that the members may know of what this service consists, we list herewith the material forwarded on the first request.

The physician asked for material bearing on periodic physical examination. The following material was forwarded:

"Look for Your Danger Signals," Eugene Lyman Fisk, M.D., *American Mag.*, Dec., 1920.

"Fifteen Extra Years of Life," *Woman's Home Companion*, May, 1922.

"Working for Dear Life," R. W. Riis, *Collier's*, June 30, 1923.

"Tests For Good Health," H. Brooks, *Delineator*, March, 1923.

"The Human Inventory," *Survey*, Dec. 3, 1921.

"Keeping the Human Machinery Off Scrap Pile," E. S. Cordick, *Industrial Manag.*, June, 1922.

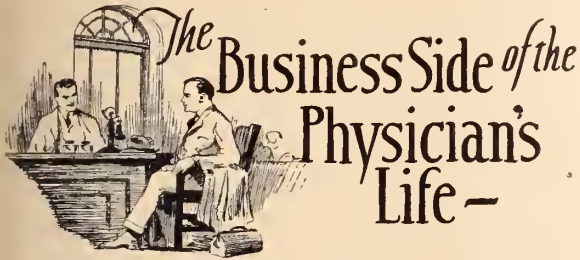
"The Value of Periodic Medical Examinations," *Nations' Health*, Feb., 1922.

"Increased Mortality Past Middle Age," M. T. McCarty, Nation's Health, April, 1922.

"Periodic Medical Examinations of Apparently Health Persons," Haven Emerson, M.D., The Journal (Am. Med. Assn.), May 12, 1923.

"What's a Health Examination, Anyway?" Haven Emerson, M.D., Hygeia, June, 1923.

"Physical Examination of the Healthy," Atlantic Medical Journal, July, 1923.



F. X. Suydam lived and prospered in the days just preceding the Civil War. At half past two Friday afternoon in 1860, the day he went insane, he had fifty thousand dollars on deposit in the bank. Small change nowadays, of course, for bricklayers, steelmongers and drug stores with a nice Saturday night prescription business, but counted as quite a pile in those days, and favorably looked upon.

As is so frequently the case, once F. X. went insane, he stayed that way, and in the course of events departed this vale of tears, leaving his \$50,000 where it was in the bank, industriously grinding away, earning a little each year, and leaving that little with its principal to compound. Litigation developed, and relatives began to pick the bones of the estate. F. X. didn't care, and no one else could disturb that fifty thousand until the courts got through with it. So for a few more years it kept right on where it was, doing business at the same old bank, and letting three per cent interest grow, blossom, and go to seed, which in turn stayed where it was planted and waxed fruitful.

A few months ago the lawyers finally exhausted all the possibilities for litigation that they could think of and the estate was settled. The heirs stepped around to the bank to collect their money. Instead of \$50,000 awaiting them, compound interest had been working so industriously that the pile had risen to half a million dollars.

Had F. X. Suydam been a sane and wise man, he doubtless would have drawn out his money

years ago, and put it into the promoting of an invention to make codfish taste like chicken and conservatively guaranteed to make its stockholders rich in two years time—and this story would never have been told. But because he was crazy, his money, through no fault of his own, it is true, became as prolific as a family of jack rabbits. Now his heirs and assigns are debating on whether to make the family car this year a Cadillac or go the whole way and wrap a Rolls-Royce around themselves.

There is a lesson to be gleaned therefrom—but as we are all of us sound, conservative and sane, there's no use mentioning it. We won't believe it anyway.

There is a very fine distinction between speculation and investment, so fine indeed that it is very generally overlooked. When we think of speculation in a loose way, we think of the wild-cat schemes that are being foisted on the public constantly and in various forms. This, of course, isn't true at all. There are perfectly legitimate speculations. Most new business enterprises are speculations. Few businesses are organized with ample funds and an absolute assurance of success. If honestly and wisely administered, they will eventually arrive on safe ground. If they appear to have excellent possibilities, the purchase of stock in these ventures is sound and legitimate and offers possibilities of return that cannot be expected from sound protected securities. But the man who puts his money into an enterprise of this nature should recognize very clearly that this is not an investment in any but the very broadest sense of the word. It is a speculation—a speculation measured in extent by the amount of capital behind it, and the feasibility of the enterprise it expects to put across.

An investment, on the other hand, is a medium for the use of money in a manner which thoroughly protects the principal, and returns a fair normal rate for its use. The greater the protection, the smaller the rate of interest return.

Old stuff, of course, but more observed in the breach than the observance, as old Bill Shakespeare observed some hundred years ago.

**We accept only honest ads.
Favor those who favor us.**

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1923

F. GREGORY CONNELL, Oshkosh, President
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TERM EXPIRES 1924: 3d Dist., E. B. Brown - Beloit; 4th Dist., W. Cunningham - Platteville
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TERM EXPIRES 1926: 9th Dist., Joseph Smith - Wausau; 10th Dist., R. E. Mitchell - Eau Claire; 11th Dist., J. M. Dodd - Ashland; 12th Dist., Hoyt E. Dearholt - Milwaukee
TERM EXPIRES 1928: 11th Dist., J. M. Dodd - Ashland; 12th Dist., Hoyt E. Dearholt - Milwaukee

Delegates to American Medical Association

H. M. BROWN, Milwaukee; ROCK SLEYSER, Wauwatosa; JOSEPH F. SMITH, Wausau

Alternates

W. E. BANNEN, La Crosse; F. G. CONNELL, Oshkosh; R. E. MITCHELL, Eau Claire

Committee on Public Policy and Legislation

EDWARD QUICK, Milwaukee, Chairman; GEO. RUHLAND, Milwaukee; O. B. BOCK, Sheboygan

Committee on Medical Defense

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Committee on Health and Public Instruction

W. D. STOVALL, Madison; W. H. WASHBURN, Milwaukee; I. F. THOMPSON, Madison

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SURGICAL SECTION

EYE, EAR, NOSE, THROAT SECTION

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists medical societies across Wisconsin counties with their respective officers.

SOCIETY PROCEEDINGS

ASHLAND-BAYFIELD-IRON

A special meeting of the Ashland-Bayfield-Iron County Medical Society was held September 24th at Ashland to discuss means for a local campaign for lay education. A committee was appointed consisting of Dr. M. S. Hosmer, Dr. C. O. Hertzman and Dr. J. M. Dodd. The committee will report at the next meeting offering concrete suggestions as to how the work may be best accomplished.

DANE COUNTY

A discussion of the relative merits of lake and well water for Madison and the use of insulin in the treatment of diabetes featured the meeting of the Dane County Medical Society at Madison, September 10th. The society extended an invitation to the State Medical Society to hold the 1924 meeting at Madison.

GREEN LAKE-WAUSHARA-ADAMS

Five meetings of the Green Lake-Waushara-Adams County Medical Society are being held this fall to take advantage of the post-graduate medical instruction offered by the University Extension Division. The meetings will continue until November and will have been held in Green Lake, Brandon, Princeton, Berlin and Ripon.

MARINETTE-FLORENCE

The Marinette-Florence County Medical Society, entertained its members, their families and friends, at a picnic at Henes park August 23. This was the first affair of this kind ever held, and was a decided success. Plans were at once started for a similar event for next year on a larger and more elaborate scale.

The society met at Peshtigo September 14, and was entertained by Doctor W. H. Dohearty.

Doctor D. S. Cron of Ann Arbor read a most interesting paper on "Medical vs. Surgical Treatment in Gynecology." Doctor H. A. Vennema of Menominee, had for his subject, "Treatment and Prevention of Simple and Endemic Goiter." This was then put to a general discussion, and was the means of a committee being appointed to take steps with the school boards, of Marinette and Florence counties in Wisconsin and Menominee County in Michigan, to assist in alleviating this growing malady.

Doctor Dohearty then produced the surprise of the evening when a five piece orchestra informed the members that the serious part of the program was over, a sumptuous banquet, prepared by Chef Hanson was then enjoyed by all, songs and after dinner talks being the diversion until an early hour.

MILWAUKEE ACADEMY OF MEDICINE

The first fall meeting of the Milwaukee Academy of Medicine was held on Tuesday, October 9th. Following presentation of cases Dr. Roy M. Greenthal read a paper on "Pre-operative Management of Infants and Children."

and S. A. Barrett read a paper on "Some Medical Practices of the Indians."

NINTH COUNCILOR DISTRICT

The fall meeting of the Ninth Councilor District Medical Society was held at Wausau Thursday afternoon and evening September 27th. At an afternoon meeting Dr. Julius H. Hess, University of Illinois, gave a children's clinic at St. Mary's Hospital.

Following supper at Hotel Bellis the following papers were represented: "The Early Treatment of Injuries to the Eye-ball," (illustrated), Dr. Lyman A. Copps, Marshfield; "The Present Status of Tonsillectomy," Dr. H. B. Hitz, Milwaukee; "Some Chronic Abdominal Conditions in Infancy and Childhood" (illustrated), Dr. Julius H. Hess, Chicago, Ill.

ROCK COUNTY

Dr. Fred L. Adair of the University of Minnesota read a paper at the meeting of the Rock County Medical Society at Beloit on October 2nd. Dinner was served at the Y. M. C. A. preceding the meeting.

ROCK-GREEN-WALWORTH

Close to seventy-five members of the Rock, Green and Walworth County Medical Societies accompanied by their families attended a joint picnic at Delevan Lake on September 10th. A dinner was served at Lake Lawn with dancing in the evening.

SAUK COUNTY

Fourteen members of the Sauk County Medical Society met at Delton on September 6th. Following a 6:30 dinner, Dr. Carl Henry Davis, Milwaukee, read a paper before the society.

SECOND COUNCILOR DISTRICT

Fifty members of the Second Councilor District Medical Society were guests of Willowbrook Sanatorium, Kenosha, for a fall meeting on September 27th. Following a dinner a business meeting was held and later Dr. A. A. Pleyte of the Wisconsin Anti-Tuberculosis Association conducted a tuberculosis clinic.

TREMPEALEAU-JACKSON-BUFFALO

The Trempealeau-Jackson-Buffalo County Medical Society met at Cochrane on September 9th. Dr. C. Verne Hunt, Mayo Clinic, Rochester, addressed the meeting on "The Diagnosis of Surgical Conditions of the Abdomen."

VERNON COUNTY

The Vernon County Medical Society met at Viroqua Wednesday afternoon, October 10th. After a dinner at Hotel Fortney, Mr. J. G. Crownhart, secretary of the State Society, talked to the members on the work of the State Society.

WAUKESHA COUNTY

Members of the Waukesha County Medical Society met at Menomonie Falls Wednesday afternoon Oct. 10th. Several papers were read before the society.

Over 550 Attend Annual Meeting at Milwaukee; Sleyster Chosen President

Five hundred and fifty members of the State Society attended sessions of the 77th Annual Meeting held in Milwaukee, October third, fourth and fifth. The registration was the largest in the history of the society and every session of the meeting had an attendance of at least two hundred.

The general sessions were preceded by a dinner for secretaries and councilors Tuesday evening, October 2, at which Dr. Olin West, secretary of the American Medical Association, was a guest. Doctor West, in a most interesting informal talk emphasized the importance of maintaining high standards of membership in the constituent societies. Following the dinner the House of Delegates held its first meeting disposing of all committee reports and recommendations.

Dr. Arthur W. Rogers, Oconomowoc, was elected councilor for the 1st District to succeed Dr. M. R. Wilkinson, who declined re-election. Dr. G. Windesheim, Kenosha, was re-elected as councilor for the 2nd District and Dr. C. A. Harper, Madison, councilor 3rd District to succeed Dr. E. B. Brown, Beloit, resigned.

The general sessions opened Wednesday morning at the Auditorium and three hundred had registered by noon. Thirty commercial exhibits and seven scientific exhibits filled Walker and Kilbourne Halls with attractive displays.

Dr. Rock Sleyster, Wauwatosa, for thirteen years an active officer in the society, was elected president for 1924 upon the adoption of the report of the Committee on Nominations Thursday morning. Dr. M. R. Wilkinson, Oconomowoc, was elected 1st vice-president; Dr. John Minahan, Green Bay, 2nd vice-president, and Dr. Carl Beebe, Sparta, 3rd vice-president. With invitations to hold the next meeting at Green Bay, Madison, Janesville, Wausau and Ashland, the committee recommended Green Bay and the recommendation was adopted by the house.

Two hundred and seventy-five attended the informal banquet-dance given in honor of President-elect William Allen Pusey of the American Medical Association, held at the Wisconsin Club Thursday evening. Following the dinner, Fred Carberry prescribed songs for every ill and the singing was loud and long. Dr. John Dodson, editor of *Hygeia*, was first introduced by President Connell.

He presented the reasons for the founding of the new magazine and drove home the point that to be of greater value it required the support of every member of the medical profession.

Doctor Pusey followed speaking on "The Wilderness Trail to Kentucky—O Doctor's Diversion." Doctor Pusey told of the history of this early pioneer trail. His illustrations were taken from photographs made during the three year period in which he traced the footsteps of the pioneers.

Two orchestras provided dance music after ten o'clock and it was not until one Friday morning that the music was halted.

Dry clinics, with presentation of patients, filled the program for Friday's general sessions and the attendance continued excellent until the final adjournment was taken at four Friday afternoon.

Here and There

Dr. J. F. Mauermann, Monroe, could not attend the Secretaries' Dinner but forwarded one of Green County's famous cheeses and there was none left over.

Doctor Dodson declared that he had acted as the opener to many a banquet but never before had he acted as the opener to "a travelog artist."

The full proceedings of the 77th annual meeting will be published in an early number of the *Journal*.

The Evans family was well represented at the speakers' table Thursday evening. Dr. Curtis Evans, Milwaukee; Dr. Edward Evans, La Crosse, and Dr. Joseph S. Evans of Madison were all seated at the table of honor.

Exhibitors reported that Wisconsin had never seen a better meeting. One representative informed Dr. J. Gurney Taylor, chairman of the program arrangement committee, that his samples were all gone Thursday noon and that he had nothing left to hand out but "hot air."

In appreciation of his many years of service for the society, Dr. Rock Sleyster was presented with a cut glass vase before the general session Thursday morning.

Upwards of five hundred members heard Dr. W. A. Evans, Chicago, Wednesday evening, describe how public health work had paid in Chicago.

Probably the most popular exhibit booth was that of the American Medical Association with its attractive display for *Hygeia* and interesting material illustrating the word done in the Department of Investigation and Propaganda. Pamphlets on Abrams and on fraud and fake cures were distributed and the supply was soon exhausted.

Dr. W. F. Nuzum, Madison, won the Sherman vaccine case on display at the Sherman Booth.

NEWS ITEMS AND PERSONALS

The University Extension Division has just announced that Dr. Roland S. Cron, Milwaukee, has been added to their staff for post-graduate medical instruction. Doctor Cron was formerly resident physician at the University Hospital, Ann Arbor, Michigan. Until recently he has been Assistant Professor of Obstetrics and Gynecology at the University of Michigan and attending Obstetrician and Gynecologist to Ann Arbor Private Hospital. He is now associated in practice with Dr. Carl Henry Davis of Milwaukee.

Dr. W. W. Bauer, formerly of the Milwaukee Health Department, has now taken up his new duties as Commissioner of Health for Racine.

Announcement has been made of the opening November 1st of the Milwaukee Sanitarium for Diabetes. The sanitarium will be under the supervision of Mrs. Grace Reynolds and will be located at 272 Ogden Avenue.

Chiropractors may not use the title "Doctor," the abbreviation "D. C." nor any other abbreviation that gives the impression that they are doctors. This was the ruling by the attorney general at Madison in an opinion recently to Dr. J. M. Dodd, Ashland, secretary of the State Medical Board of Medical Examiners.

Dr. R. O. Brunkhorst, Milwaukee, has moved his offices from the Colby-Abbott Building to 416 North Avenue. Dr. William J. Murphy, Milwaukee, has resumed his practice after several months' absence. He is located in the Matthews Building.

An obliging burglar called on Dr. L. W. Blumenthal, Milwaukee, this month. Not finding narcotics he took a gold watch. When Doctor Blumenthal returned later in the afternoon the burglar called him on the phone and told him that he had left the watch at a public service station where it might be recovered.

Three physicians have been added to the staff of the Milwaukee County Dispensary. They are Dr. A. B. Magnus, neuro-psychiatrist, Boston; Dr. Bertha Haessler, pediatrician, Chicago, and Dr. Sadie Meyers Shel-
low, psychologist from Smith College.

Dr. S. M. Smith was elected president of the Milwaukee South Side Physicians' and Surgeons' Association this month. Doctor Urban Schleuter was elected vice-president and Dr. Arthur Nugent, secretary-treasurer.

Fifty-five friends of Dr. and Mrs. Filip Forsbeck attended a banquet, September 19th, in honor of the latter's silver wedding anniversary.

Dr. E. S. Scheiders, University Clinic, Madison, will enter practice the first of the year with Doctors Joseph and James P. Dean and G. H. Robbins at Madison.

Announcement was made this month that Dr. Thomas Arneson, formerly at Crookston, Minn., and Cumberland, Wis., has taken up practice at Alma, Wis.

ENGAGEMENTS

Dr. John O. Dieterle, Milwaukee, to Miss Florence Irene Philipp, daughter of Gov. and Mrs. E. L. Philipp.

MARRIAGES

Dr. Ira R. Sisk, Madison, to Miss Frederica Atwood at Madison, September 12th.

Dr. Harry Sargeant, Milwaukee, to Miss Katherine McCord, Seymour, at Milwaukee September 21.

DEATHS

Dr. C. E. Cole, Prairie du Chien, Wis. Doctor Cole was a member of the Crawford County Medical Society, the State Medical Society and the American Medical Association.

Dr. Carl von Neupert, Sr., died at his home at Stevens Point on Sunday September 23rd. Doctor von Neupert was one of Wisconsin's oldest practicing physicians. He had been on the surgical staff of the Soo railroad for a continuous period of thirty-nine years.

Doctor von Neupert settled at Stevens Point in 1889 and was four times city physician and later a member of the Government Pension Board. He was a member of the Portage County Medical Society, the State Medical Society and the American Medical Association.

Dr. Charles D. Stanhope, Milwaukee, died at the Soldiers' Home Hospital on Tuesday, September 18th at the age of 79. Doctor Stanhope came to Milwaukee over fifty years ago. During the Civil War he served with the 28th Wisconsin Infantry. Due to failing health he retired from practice last winter.

Dr. Frank Babcock, Cumberland, died at St. John's Hospital, St. Paul, September 5th following an operation for appendicitis. Doctor Babcock was the eldest son of Dr. and Mrs. I. G. Babcock. He was born in Cumberland in 1885 and graduated from Marquette in 1913. He was a member of the Barron-Washburn-Polk-Sawyer-Burnett County Medical Society, the State Medical Society and the American Medical Association.

Ethanesal.—In 1921, Dr. H. E. G. Boyle of London read a paper before the Section on Miscellaneous Topics at the annual meeting of the American Medical Association. The paper dealt, in part, with so-called improved ether—"Ethanesal." The paper was not published in *The Journal A. M. A.* on the ground that *The Journal* does not publish articles on new remedies until those products have been reported on favorably by the Council on Pharmacy and Chemistry. The investigation of "Ethanesal" by Dale, Hadfield and King which makes plain the fallacy of the claims for the product, demonstrates again the advantage to the medical profession of a competent judicial body—the Council on Pharmacy and Chemistry—to investigate new additions to our materia medica. (*Jour. A. M. A.*, Sept. 22, 1923, p. 1025).

The Nature of Insulin.—The manufacture of insulin from the pancreas is a costly and laborious undertaking. Therefore, the artificial synthesis is important. Before the prospect of a synthesis can be entertained, however, the chemical structure must be ascertained. Evidence is developing that insulin is protein in nature. Consequently the hope of its isolation as a chemically pure substance becomes slender. (*Jour. A. M. A.*, Sept. 29, 1923, p. 1117).

Tri - State Association Announces Program For Assembly Oct. 29 - Nov. 1

The complete program for the four day annual assembly of the Tri-State District Medical Association is published herewith as being of interest to its many Wisconsin members.

The first general session opens Monday morning, October 29th. The sessions will be held in the new Women's Club Building at Des Moines, while the headquarters have been established at the Fort Des Moines Hotel. The detailed program follows:

FIRST DAY.

Monday, October 29th, 1923.

1. Diagnostic Clinic (Medical). Heart failure, cardiac decompensation of any type.
Dr. G. Canby Robinson, Member of Medical Staff, Johns Hopkins Hospital, Baltimore, Maryland.
2. Diagnostic Clinic (Surgical). Thoracic and abdominal cases.
Dr. Evarts A. Graham, Prof. of Surgery, Washington University, Medical School, St. Louis, Missouri.
3. Diagnostic Clinic (Medical). (a) Kidney diseases (nephritis or infectious). (b) Blood diseases (anemia, leukemia, purpura). (c) Obscure eye cases (choroiditis, uveitis, etc.).
Dr. Oliver H. Pepper, Assistant Prof. of Medicine, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

INTERMISSION.

4. Diagnostic Clinic (Surgical). Fracture cases.
Dr. Frederick J. Cotton, Associate in Surgery, Harvard University, School of Medicine, Boston, Mass.
5. Diagnostic Clinic (Surgical). Stomach, gall-bladder and other abdominal cases.
Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

AFTERNOON.

6. Diagnostic Clinic (Urological).
Dr. W. F. Braasch, Prof. of Urology, University of Minnesota Graduate School of Medicine (Mayo Clinic), Rochester, Minn.
7. Diagnostic Clinic (Surgical).
Dr. Frederick Atwood Besley, Prof. of Surgery, Northwestern University, School of Medicine, Chicago, Illinois.
8. Diagnostic Clinic (Surgical). Abdominal cases, gall-bladder, ulcer, malignancies of colon or cecum.
Dr. John F. Erdmann, Prof. of Surgery, New York Post-Graduate School of Medicine, New York, N. Y.
9. Symposium, Northwestern University, Medical Department.
Supervised by Dr. Frederick Atwood Besley, Prof.

of Surgery. "Angina Pectoris." "Angina Pectoris and Operative Relief," Dr. William A. Holmes, Assistant Prof. of Medicine. "The Sympathetic Nervous System and Bodily Pain," Dr. S. Walter Ranson, Prof. of Anatomy. "The Electro-cardiography of Angina Pectoris," Dr. James G. Carr, Assistant Prof. of Medicine.

10. Subject later.

Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

INTERMISSION.

11. "The Relation of the Circulation and Respiration."
Dr. G. Canby Robinson, Member of Medical Staff, Johns Hopkins Hospital, Baltimore, Maryland.
12. "The Diagnosis and Treatment of Chronic Suppuration of the Lung."
Dr. Evarts A. Graham, Prof. of Surgery, Washington University, Medical School, St. Louis, Missouri.
13. "Purpura Hemorrhagica."
Dr. H. C. Giffin, Mayo Clinic, Rochester, Minnesota.
14. Symposium, University of Indiana, Medical Department.
Supervised by Dr. Charles P. Emmerson, Dean and Prof. of Medicine, Indianapolis, Indiana.
15. Subject later.
Dr. William S. Baer, Associate Prof. of Orthopedic Surgery, Johns Hopkins University, School of Medicine, Baltimore, Md.

EVENING.

16. Symposium, University of Iowa, Medical Department.
Supervised by Dr. Walter L. Bierring, Des Moines.
17. "Operative Treatment on Fractures, Old and New."
Dr. Frederick J. Cotton, Associate in Surgery, Harvard University, School of Medicine, Boston, Mass.
18. Subject later.
Dr. Charles P. Emmerson, Dean and Prof. of Medicine, Indiana University, School of Medicine, Indianapolis, Ind.
19. "What Progress are we making in the Treatment of Cancer?"
Dr. Byron B. Davis, Prof. of Clinical Surgery, University of Nebraska, College of Medicine, Omaha, Nebr.
20. "The Early Stages of Chronic Bronchitis."
Dr. Charles N. Meader, Dean and Prof. of Medicine, University of Colorado, School of Medicine, Denver, Colorado.
21. "Meeting the Surgical Indications of the Acute Abdomen by the Local Anesthesia Method." (Lantern slides.)
Dr. Robert E. Farr, Minneapolis, Minnesota.

SECOND DAY.

Tuesday, October 30th, 7 A. M.

1. Diagnostic Clinics (Orthopedic). Orthopedic cases.
Dr. Fred H. Albee, Prof. of Orthopedic Surgery,
New York Post-Graduate Medical School, New
York, N. Y.
2. Dr. William S. Baer, Associate Prof. of Ortho-
pedic Surgery, Johns Hopkins University, School
of Medicine, Baltimore, Md.
3. Diagnostic Clinic (Medical). General medicine.
Dr. William S. Thayer, Emeritus Prof. of Medicine,
Johns Hopkins University, School of Medicine,
Baltimore, Md.

INTERMISSION.

4. Diagnostic Clinic (Surgical). Abdominal, bone and
nerve injury cases.
Dr. Dean Lewis, Prof. of Surgery, Rush Medical
College, Chicago, Illinois.
5. Diagnostic Clinic (Dermatology). Skin diseases.
Dr. Frank C. Knowles, Prof. of Dermatology, Jef-
ferson Medical College, Philadelphia, Pa.
6. Diagnostic Clinic (Surgical). Diseases of the thy-
roid; goitre cases.
Dr. Charles H. Mayo, Mayo Clinic, Rochester, Minn.

AFTERNOON.

7. Diagnostic Clinic (Diabetes). The Treatment of
Diabetes Mellitus.
Dr. Elliott P. Joslin, Prof. of Clinical Medicine,
Harvard University, School of Medicine, Boston,
Mass.
8. Symposium, University of Chicago (Rush).
Supervised by Dr. Dean Lewis, Prof. of Surgery.
9. Subject later.
Dr. Edward William Archibald, Associate Prof. of
Clinical Surgery, University of McGill, Montreal,
Canada.
10. Tumors of the Breast."
Dr. John F. Erdmann, Prof. of Surgery, New York
Post-Graduate School of Medicine, New York, N.
Y.

INTERMISSION.

11. "The Symptoms of Nephritis, their bearing on
Treatment."
Dr. Oliver H. Pepper, Assistant Prof. of Medicine,
University of Pennsylvania, School of Medicine,
Philadelphia, Pa.
12. "Insulin and the General Practitioner."
Dr. Elliott P. Joslin, Prof. of Clinical Medicine,
Harvard University, School of Medicine, Boston,
Mass.
13. "The Surgical Treatment of Ulcer of the Duodenum
and Stomach."
Dr. Charles H. Mayo, Mayo Clinic, Rochester, Minn.
14. Subject later.
Dr. William S. Thayer, Emeritus Prof. of Medicine,
Johns Hopkins University, School of Medicine,
Baltimore, Md.
15. Symposium "Diabetes."
Dr. Elliott P. Joslin, Prof. of Clinical Medicine,
Harvard University, School of Medicine, Boston,
Mass.

- Dr. Louis H. Newburgh, Ann Arbor, Michigan.
Dr. Roland Turner Woodyat, Associate Prof. of
Medicine, Rush Medical College, Chicago, Ill.

EVENING.

16. "Conclusions Drawn from a Series of 260 cases of
Gangrenous Appendicitis."
Dr. Willis D. Gatch, Prof. of Surgery, Indiana Uni-
versity, School of Medicine, Indianapolis, Ind.
17. Symposium "Fractures."
Dr. William S. Baer, Associate Prof. of Orthopedic
Surgery, Johns Hopkins University, School of
Medicine, Baltimore, Md.
Dr. Frederick J. Cotton, Associate in Surgery, Har-
vard University, School of Medicine, Boston,
Mass.
Dr. Leonard W. Ely, Associate Prof. of Orthopedic
Surgery, Stanford University, School of Medicine,
San Francisco, Cal.
Dr. Dean Lewis, Prof. of Surgery, Rush Medical
College, School of Medicine, Chicago, Illinois.
Dr. Hugh H. Trout, Roanoke, Virginia.
18. "The Relationship between Dermatology and Inter-
nal Medicine."
Dr. Frank C. Knowles, Prof. of Dermatology, Jef-
ferson Medical College, Philadelphia, Pa.
19. Subject later.
Dr. Hugh Cabot, Dean and Prof. of Surgery, Uni-
versity of Michigan, Medical School, Ann Arbor,
Michigan.
20. "Reconstruction Surgery."
Dr. Fred H. Albee, Prof. of Orthopedic Surgery,
New York Post-Graduate Medical School, New
York, N. Y.

THIRD DAY.

Wednesday, Oct. 31st, 7 A. M.

1. Diagnostic Clinics (Neurosurgical). Neurosurgical
cases.
Dr. Charles H. Frazier, Prof. of Neurosurgery, Uni-
versity of Pennsylvania, School of Medicine,
Philadelphia, Pa.
 2. Dr. Ernest Sachs, Prof. of Clinical Neurosurgery,
Washington University, School of Medicine, St.
Louis, Missouri.
 3. Diagnostic Clinic (Medical). Pernicious Anemia.
Dr. Charles F. Martin, Prof. of Medicine, McGill
University, Faculty of Medicine, Montreal, Can.
- INTERMISSION.
4. Diagnostic Clinic (Surgical). (a) Female children
with chronic pyelitis. (b) Kidney infection
(tubercular or otherwise). (c) Genital tuber-
culosis with lesions of the epididymis. (d) Gas-
tric ulcer, lesions of the gall-bladder. (e) Frac-
ture of the femur.
Dr. Hugh Cabot, Dean and Prof. of Surgery, Uni-
versity of Michigan, Medical School, Ann Arbor,
Michigan.
 5. Diagnostic Clinic (Medical). Pneumonia, lobar
and broncho.
Dr. Francis G. Blake, Prof. of Medicine, Yale Uni-
versity, School of Medicine, New Haven, Conn.
 6. Diagnostic Clinic (Surgical).

Dr. George W. Crile, Prof. of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio.

AFTERNOON.

7. Diagnostic Clinic (Surgical).
Dr. Edward William Archibald, Associate Prof. of Clinical Surgery, University of McGill, Montreal, Canada.
8. Diagnostic Clinic (Surgical).
Dr. Allen Whipple, Prof. of Surgery, Columbia University, College of Physicians and Surgeons, New York, N. Y.
9. Symposium and other contributions by Staff, Medical Department, University of Wisconsin.
"The Development of New Arsenicals in the Treatment of Neuro-Syphilis."
Dr. A. S. Loevenhart, Prof. of Pharmacology, University of Wisconsin.
Dr. W. F. Lorenz, Prof. of Neuro-Phychiatry, University of Wisconsin, Director of Wisconsin Psychiatric Institute.
"The Surgery of Spastic Paralysis."
Dr. Frederick J. Gaenslen, Orthopedic Surgeon to the Wisconsin General Hospital at the University of Wisconsin.
"Lymphoid Resistance and Susceptibility."
Dr. C. H. Bunting, Prof. of Pathology, University of Wisconsin.
"The Surgery of Cleft Palate with Special Reference to a New Method of Treatment."
Dr. George V. I. Brown, Plastic Surgeon to the Wisconsin General Hospital at the University of Wisconsin.
10. "Arterial Hypertension; Its Management and Its Significance."
Dr. William A. Jenkins, Prof. of Medicine and Clinical Medicine, University of Louisville, Medical Department, Louisville, Ky.

INTERMISSION.

11. Subject later.
Dr. Charles H. Frazier, Prof. of Neurosurgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.
12. "Cardiac Sufficiency."
Dr. Charles F. Martin, Prof. of Medicine, McGill University, Faculty of Medicine, Montreal, Canada.
13. "Differentiation Between the Quick and the Dead."
Dr. George W. Crile, Prof. of Surgery, Western Reserve University School of Medicine, Cleveland, Ohio.
14. "Observations on Pneumonia."
Dr. Francis G. Blake, Prof. of Medicine, Yale University, School of Medicine, New Haven, Conn.

EVENING.

15. Symposium. Western Reserve University (Crile Clinic), Cleveland, Ohio.
"The General Roles of Surgery, the X-rays and Radium in the Treatment of benign and malignant tumors of the uterus."
Surgical side by Dr. George W. Crile.
X-ray Therapy by Dr. U. V. Portmann.

Radium Therapy by Dr. T. E. Jones.

16. "The Factor of 'Coincidence' in Surgery."
Dr. Leonard Freeman, Prof. of Surgery, University of Colorado, School of Medicine, Denver, Colorado.
17. "Certain Factors in the Differential Diagnosis of Non-acute Surgical Lesions of the Stomach, Biliary Tract and Appendix."
Dr. Allen Whipple, Prof. of Surgery, Columbia University, College of Physicians and Surgeons, New York, N. Y.
18. Symposium, University of Michigan, Medical Department, "Nephritis."
"The Etiology of Nephritis," Dr. L. H. Newburgh.
"The Pathology of Renal Diseases," Dr. A. S. Warthin.
"Infections of the Kidney Other than Tubercular,"
Dr. Hugh Cabot.
19. "Some of the more common Neurosurgical Conditions."
Dr. Ernest Sachs, Prof. of Clinical Neurosurgery, Washington University, School of Medicine, St. Louis, Mo.

SMOKER

FOURTH DAY.

Thursday, Nov. 1st, 7 A. M.

1. Diagnostic Clinic (Pediatrics). Infants suffering from nutritional disturbances, diarrhea and feeding difficulties.
Dr. William McKim Marriott, Prof. of Pediatrics, Washington University, School of Medicine, St. Louis, Mo.
2. Diagnostic Clinic (Surgical). Fractures, cases of osteomyelitis, bone tumors, various joint lesions, traumatic peripheral nerve lesions and other general surgical conditions of the extremities.
Dr. Clarence L. Starr, Prof. of Surgery, University of Toronto, Faculty of Medicine, Toronto, Can.
3. Diagnostic Clinic (Medical).
Dr. Richard Cabot, Prof. of Medicine, Harvard University, School of Medicine, Boston, Mass.

INTERMISSION.

4. Diagnostic Clinic (Medical). Cases of urethritis, prostatitis, hematuria (various types), tuberculosis of urinary or seminal tract along with lantern slides bringing out points in diagnosis and treatment.
Dr. Hugh H. Young, Clinical Prof. of Urology, Johns Hopkins University, Baltimore, Md.
5. Diagnostic Clinic (Surgical). Some medical and surgical aspects of diseases of the biliary apparatus, including gallstone disease, carcinoma, chronic pancreatitis and all those conditions which result in infections of the biliary passages, jaundice, etc.
Dr. William J. Mayo, Mayo Clinic, Rochester, Minn.

AFTERNOON.

6. Diagnostic Clinic (Medical). Heart and lung cases.
Dr. Frank Billings, Prof. of Medicine, Rush Medical College, School of Medicine, Chicago, Ill.

7. Symposium, University of Minnesota Graduate School of Medicine (Mayo Clinic).
8. "Some Practical Points in Infant Feeding."
Dr. William McKim Marriott, Prof. of Pediatrics, Washington University, School of Medicine, St. Louis, Mo.
9. "The Treatment of Compound Fractures."
Dr. Clarence L. Starr, Prof. of Surgery, University of Toronto, Faculty of Medicine, Toronto, Can.

INTERMISSION.

10. Subject later.
Dr. Richard Cabot, Prof. of Medicine, Harvard University, School of Medicine, Boston, Mass.
11. "Biophysics as an approach to scientific medicine of the future."
Dr. William J. Mayo, Mayo Clinic, Rochester, Minn.
12. "Remarks on the Diagnosis and Treatment of Various Diseases of the Prostate." (Lantern slides.)
Dr. Hugh H. Young, Clinical Prof. of Urology, Johns Hopkins University, Baltimore, Md.
13. "The Fashioning of the English Speaking Peoples."
Sir Robert Falconer, President of University of Toronto, Toronto, Canada.
14. Subject later.
Mr. A. J. Walton, F. R. C. S., London Hospital, London, England.

BANQUET.

ADDRESSES.

- Sir Robert Falconer, President of University of Toronto, Toronto, Canada.
- Sir William DeCourcy Wheeler, President of Royal College of Surgeons of Ireland, Dublin, Ireland.
- Dr. Ray Lyman Wilbur, President of Leland-Stanford University and President of American Medical Association, Stanford University, California.
- Dr. Charles F. Martin, Prof. of Medicine, McGill University, Faculty of Medicine, Montreal, Canada.
- Honorable Albert B. Cummins, United States Senator, Washington, D. C.
- Honorable Nathan E. Kendall, Governor of Iowa, Des Moines.
- DR. HORACE M. BROWN, President,
Milwaukee, Wisconsin.
- DR. WILLIAM B. PECK, Managing-Director,
Freeport, Illinois.
- DR. EDWIN HENES, JR., Secretary,
Milwaukee, Wisconsin.

Program Committee.

- DR. DEAN LEWIS,
Chicago, Illinois.
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Rochester, Minnesota.
- DR. JOHN L. YATES,
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- DR. WALTER L. BIERRING,
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MEDICAL WOMEN'S ASSOCIATION

The Ninth Annual Meeting of the Medical Women's National Association was held in San Francisco, June 25-26, in conjunction with the

American Medical Association Meetings, Dr. Grace N. Kimball, President; Dr. Kate Campbell Mead, President--Elect. At the open session, Monday evening, Dr. Ray Lyman Wilbur, President-Elect of the A. M. A., delivered an eloquent address on the Power of the Minority.

At the open session, Tuesday morning, a Five Year Program was presented by the Executive Committee and Council, and was adopted. This Program is under Five Heads:

1. Continuation of the work of the Committee on Medical Service, American Women's Hospitals; Dr. Esther P. Lovejoy, Chairman, 637 Madison Ave., New York.

2. Federation of Medical Women's Organizations with the Medical Women's National Association, under Organization Committee; Gertrude A. Walker, Chairman, Whitefield, N. H.

3. Public Health, co-operating with A. M. A. Council on Health and Public Instruction, Hygiene, and Women's Foundation for Health, etc. Dr. Elizabeth B. Thelberg, Chairman, Vassar College, Poughkeepsie, N. Y.

4. Committee for Medical Opportunities for Women, Dr. Sue Radcliff, Chairman, 21 Morris St., Yonkers, N. Y. Internships for young Graduate Members of the M. W. N. A., in Hospitals conducted by the American Women's Hospitals; in Missionary Hospitals and in Hospitals in U. S. A., as well as opportunities for private practice, Service on Boards of Health, Government Appointments, etc.

5. Publicity for the Medical Women's National Association through the Bulletin and an Editorial Staff, consisting of the President and Executive Committee, President-Elect and an Editor-in-Chief. Dr. Grace N. Kimball, Poughkeepsie, N. Y., was appointed Editor-in-Chief.

The following officers were elected:

First Vice-President, Dr. Martha Welpton, San Diego.

Second Vice-President, Dr. Marjory J. Potter, San Diego.

Third Vice-President, Dr. Florence W. Duckering, Boston, Mass.

Secretary, Dr. Jessie W. Fisher, Middletown, Conn.

Treasurer, Dr. Rosa H. Gantt, Spartanburg, S. C.

The 1924 Annual Meeting of the Medical Women's National Association will be held in Chicago, Ill.

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

- Text Book of Therapeutics including the Essentials of Pharmacology and Materia Medica.** By A. A. Stevens, M. D., Professor of Applied Therapeutics, University of Pennsylvania, Philadelphia. Sixth edition, entirely reset. Octavo of 793 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$6.25 net.
- Medical State Board Questions and Answers.** By R. Max Goepf, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Professor of Clinical Medicine, Jefferson Medical College. Fifth Edition. Thoroughly Revised. Octavo volume of 731 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$6.00 net.
- 1922 Collected Papers of the Mayo Clinic, Rochester, Minn.** Octavo of 1394 pages, 488 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$13.00 net.
- Excursions into Surgical Subjects.** By John B. Deaver, M. D., Emeritus Professor of Surgery, University of Pennsylvania; Surgeon-in-Chief, Lankenau Hospital, Philadelphia; and Stanley P. Rieman, M. D., Assistant Professor of Experimental Pathology, University of Pennsylvania; Chief of the Department of Pathology and Bacteriology, Lankenau Hospital, Philadelphia. Octavo volume of 188 pages and 30 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$4.50 net.
- What to Eat.** By Benjamin Harrow, Ph. D. New York: The E. P. Dutton Company, 1923.
- Primitive Mentality.** By Luelan Levy-Brubl translated by Lillian A. Clare. New York: The Macmillan Company, 1923.
- Transactions of the College of Physicians of Philadelphia.** Third series—Volume 44. 1922.
- Constipation.** By William S. Walsh, M. D., New York: E. P. Dutton Company, 1923.
- Stuttering, Lispings and Correction of the Speech of the Deaf.** By E. W. Scripture, M. D. Second edition. New York: The Macmillan Company, 1923.
- A Practical Treatise on the Causes, Symptoms and Treatment of Sexual Impotence.** By William J. Robinson, M. D. Eleventh Edition. New York: The Cosmopolitan Press, 1923.
- Insanity and the Criminal Law.** By William A. White, M. D. New York: The Macmillan Company, 1923.
- Collected Reprints from the Department of Experimental Surgery.** New York. University and Bellevue Hospital Medical College. Volume 3—1920-1922.
- Optotypes.** By John Green, M. D. St. Louis: C. V. Mosby Company, 1923. Paper cover, 24 pages, 35 engraved plates.
- Tonsillectomy.** By Greenfield Sluder, M. D. St. Louis: C. V. Mosby Company, 1923. Price \$5.00.
- The Tonsils.** By Harry A. Barnes, M. D. St. Louis: C. V. Mosby Company, 1923. Illustrated. Price \$5.00.
- Infant and Young Child.** Its care and feeding from birth until school age. A manual for Mothers. By Johu Lovett Morse, M.D., Edwin T. Wyman, M.D., and Louis Webb Hill, M.D., of Harvard Medical School and Children's Hospital, Boston. 12mo of 271 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$1.75, net.
- Practical Dietetics** by Alida Frances Pattee. Fourteenth Edition. 1923. Mt. Vernon, N. Y.: A. F. Pattee, Publisher. Price, \$2.60.
- International Clinics.** Volume II. Thirty-Third series. 1923. Philadelphia and London: J. B. Lippincott Co.
- Physiotherapy Technic.** A manual of applied physics by C. M. Sampson, M.D. St. Louis: C. V. Mosby Co., illustrated, 1923. Price, \$6.50.
- The Constitutional Factors in Dementia Precox,** by Nolan C. Lewis, M.D. New York and Washington: The Nerves & Mental Disease Publishing Co., 1923. Price, \$3.00.
- A Report on the Scientific Work of the Surgical Staff of the Woman's Hospital of New York, 1921-1922.** A volume of 300 pages representing the scientific work of this hospital. A valuable collection of papers on various surgical subjects.
- My Memories of Eighty Years,** by Chauncey M. Depew. New York: Charles Scribner's Sons, 1923. Price, \$4.00.
- Cerebro-Spinal Fluid in Health and Disease,** by Abraham Levinson, M.D., with 69 illustrations and 5 color plates, second edition. St. Louis: C. V. Mosby Company, 1923. Price, \$5.00.
- Textbook of Ophthalmology,** Paul Roemer, Prof. and Director of the eye clinic in the University of Bonn. Fourth revised edition. 500 pages with 306 illustrations in the text and 32 colored plates. Urban and Schwarzenberg, Berlin and Wien, 1923.
- Hydro and Thermo-Therapy of Internal and Nervous Diseases.** Eleven lectures with an appendix on diathermy. Ernst Tobias, Berlin. With a preface by Prof. Goldscheider, 280 pp. Berlin and Wien. Urban and Schwarzenberg 1923, 420 MK (Gold).
- Optical Methods in Control and Research Laboratories.** J. N. Goldsmith, S. J. Lewis and F. Twyman, Vol. I. Adam Hilger, Ltd., London.
- A Mind That Found Itself.** An autobiography by Clifford W. Beers. New York. Doubleday Page & Co., 1923. Price, \$2.00.
- Endocrine Diseases,** by Wilhelm Falta (Vienna). Translated by Milton K. Meyers, M.D. Third Edition. Illustrated. Philadelphia. P. Blakiston's Son & Co., 1923.
- Thirty Years of Psychical Research,** by Charles Richet Ph.D. New York: The Macmillan Co., 1923. Price, \$6.00.
- The Common Neuroses.** Their treatment by Psychotherapy by T. A. Ross, M.D. New York: Longmans, Green & Co., 1923. Price, \$4.00.
- Recovery Record for Use in Tuberculosis,** by Gerald B. Webb, M.D. New York: Paul B. Hoeber, Inc., 1923. Price, \$2.00.

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BOOK REVIEWS

Ductless and Other Glands by Fred E. Wynn, B.A. New York: Alfred A. Knopf, 1923. Price \$1.50.

A brief description of the results of recent research into the physiology and functions of the ductless glands and the application of this knowledge to the prevention and cure of diseases. The study of "endocrines" or secretions of these glands, represents one of the most important and fruitful branches of recent research and has aroused the interest of the public as well as the medical profession. This book is written in simple language so as to correct some of the misapprehensions on the subject that have unfortunately become current and to give the general reader and the busy practitioner an easy intelligible introduction to the subject.

What is Psychology? By Charles W. Hayward, M.D., M.R.C.S. New York: Alfred A. Knopf, 1923.

This book is not intended by the author to be a scientific treatise upon Psychology. He demonstrates that "Psychology" depends upon "environment" from birth; and that although "heredity" is responsible for the "force" or "quantity" of Psychology, it is "environment," alone which produces the "quality" of Psychology, be this good or evil. The formation of a "Psychology" is traced; dangers and hopes explained.

He opens an entirely new field of study and, while he foretells marvellous possibilities for wise study, he demonstrates terrible responsibilities for parents and teachers which have, so far, been only dimly recognized. "Human Nature is just what we have made it, and it can be just what we will to make it."

The Heart, Its Physiology, Pathology and Clinical Aspects. By Selian Neuhof, M.D., Visiting Physician, Central and Neurological Hospital, Consulting Cardiologist, Broad Street Hospital, New York City. Cloth, \$10.00. 8vo, xii + 701 pages with 300 illustrations. P. Blakiston's Son & Co., Publishers, Philadelphia.

It presents the entire subjects of Cardiac and Cardiovascular disturbances and diseases in a clear, well-balanced manner from the Clinician's viewpoint. It is a practical, comprehensive reference book for all interested in the subject. It is a work for the internist, the general practitioner and the specialist alike, and is sure to find a splendid reception from the profession as a whole and earn a permanent place in the best literature on the subject. The author is to be congratulated, and the publishers have not failed to do their part. We predict an early exhaustion of the first edition.

The Hope of the Variant. By John George Gehring, M.D., Se.D. Price, \$2.00. Charles Scribners Sons, New York. 1923.

The variant of which Dr. Gehring writes so illuminating a book is that person who because of nervous or physical disorder, habits formed in childhood, improper training, or any one of a hundred other causes, in some measure varies from what we call "normal," and the book is the fascinating account of the methods and

results obtained during thirty years in treating those whose variation was a real obstacle in life. His methods are those of suggestion and autosuggestion, education in optimism, etc., but with these he combines careful physical treatment of digestion and other sources from which nervous troubles so often spring. He writes of obsession, habits, morbidness, melancholy, improper mental functioning, the beginnings of breakdowns, and many other varyings from the normal, and illustrates them by exceedingly interesting specific examples out of his own experience at Bethel, Maine. It is exceedingly cheering to the sufferer and interesting to the well man. While written for the layman it is a book any physician will do well to read for this type of patient is only too often misunderstood and neglected and as a result drifts into the hands of the quack and charlatan.

Obstetrics for Nurses. By Charles B. Reed, M. D. Price, \$3.50. 144 illustrations and 2 color plates. C. V. Mosby Co., 1923.

Principles of Bacteriology. By Arthur A. Eisenberg, M.D. Price, \$2.25. C. V. Mosby Co., St. Louis, 1923.

Chemistry for Nurses. By Fredus N. Peters, A.M., Ph.D. Illustrated. Price, \$2.50. C. V. Mosby Co., St. Louis. 1923.

These are all from Mosby's most excellent series of text books for nurses—the latter two second editions of works previously reviewed in this department of the Journal.

Eisenberg and Peters have each brought their works up to date, made necessary corrections and improved them in many ways.

Reed has produced the best text for nurses we remember of reviewing.

These works are all splendidly adapted for use in the training school and will be most valuable references for graduates. They meet every expectation and keep up the high standards set by Mosby's series.

The Doctor Looks at Literature. By Joseph Collins, New York. Price, \$3.00. George H. Doran Co., 1923.

This is a series of psychological studies of life and letters, and tells what lies behind the new fiction. It is written by a distinguished neurologist and psychiatrist and those who read it will never view the most modern literature from quite the same angle as before. The book breaks new ground and establishes a rationale of criticism which is at once intensely interesting and valuable. The doctor looks at literature and he sees James Joyce, Fedor Dostoevsky, D. H. Lawrence, Marcel Proust, Georges Duhamel, Henri Amiel, W. N. T. Barbellion, Stella Benson, Rebecca West, Katherine Mansfield, Virginia Woolf and Dorothy Richardson.

Outlines of Medical Zoology. By Robert W. Hegner, Wm. W. Cort and Francis M. Root. The Macmillan Company, New York. 1923.

The authors of this work, all of the Department of Medical Zoology, School of Hygiene, Johns Hopkins

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A. I. ROSENBERGER, M. D., Res. Physician

University, are known authorities on the subjects covered and we are indeed indebted to them for this elaboration of their first bulletin published in 1921 "Diagnosis of Protozoa and Worms Parasitic in Man." The present work in three parts covers protozoa parasitic in man, worms parasitic in man and arthropods of medical importance. It will be of special interest and value to public health officers and those practicing in the tropics, though it is well worth a place in any medical library.

The Dominant Sex. By Mathilde and Mathias Vaerting. The George H. Doran Co. 1923. Translated from the German. Price, \$3.00. New York.

Are there "masculine" and "feminine" characteristics? The answer given in this book is, No. The authors assert, and cite chapter and verse to prove, that those physical, mental, moral or social traits, habits and customs which we are wont to regard as "masculine" are simply those of the dominant sex: that those we call "feminine" are merely the characteristics of a subordinated sex.

In various states at various times when woman was dominant she was possessed of most of the "manly" qualities and practised the "masculine" customs. She wooed the man and supported him, she did hard physical work while he performed the household tasks and cared for the children, she was polyandrous while the man was monogamous, she was taller and stronger and in every way more influential than the man.

The authors conclude that no civilization can reach its highest development under a monosexual government, and that the ideal government is one in which the sexes are absolutely equal. This is an exceedingly interesting work and is intended as the initial contribution to a series of publications on the subject.

An Experimental Study of Psychopathic Delinquent Women. By Edith R. Spaulding, M. D. Published for the Bureau of Social Hygiene by Rand McNally & Co., New York, 1923.

This is an excellent account of the work of Dr. Spaulding at the Psychopathic Hospital connected with the Laboratory of Social Hygiene at the New York State Reformatory for Women at Bedford Hills. Dr. Spaulding who received her early training with Healy stands out as the leading woman physician in her field.

The Medical Clinics of North America. July, 1923. W. B. Saunders Co., Philadelphia. The Mayo Clinic number.

The Surgical Clinics of North America. August, 1923. W. B. Saunders Co., Philadelphia. The Chicago number.

Heart Records, Their Interpretation and Preparation. By S. Clavin Smith, M. S., M. D. First edition. Cloth. 313 pages with 128 illustrations. F. A. Davis Co., Philadelphia, 1923.

This manual is an excellent and most complete elementary guide for those interested in clinical electrocardiography. It presents graphic records in such a

manner as to avoid the usual pitfalls of interpretation and preparation which beset the path of the beginner. Hair-splitting interpretations and finely drawn deductions are pleasingly lacking in this volume. The work is replete with excellent illustrations. Electrocardiographic equipment, its installation, the taking, developing, mounting, and filing of electrocardiograms are well treated. A short review of polygraphy concludes this valuable volume.

MALCOLM F. ROGERS.

Crime, Abnormal Minds and the Law. By Ernest H. Williams, M.D., and Ernest Bryant Hoag, M.D., with introduction by Henry H. Goddard. The Bobbs-Merrill Co., 1923.

Here is a really good work on a subject much neglected by the medical profession and entirely misunderstood from a scientific standpoint by the law. The work is divided into three general parts considering crime and criminals in general, the drug addict, and study of causes and treatment of delinquents and criminals. An appendix gives case histories, types of delinquents and the relation of law and medicine in medico-legal case histories. This splendid work is most heartily recommended to physicians who are interested in abnormal behavior or whose work calls them into court. It should also be placed in the hands of jurists throughout the country.

The Medical Clinics of North America. Chicago number. W. B. Saunders Co., Philadelphia and London. (Issued Serially, one number every other month.) Vol. VII, Number II, September, 1923. Octavo of 310 pages and 37 illustrations. Per clinic year (July, 1923, to May, 1924). Paper, \$12.00; cloth, \$16.00, net.

Accidents with Local Anesthetics.—The chairman of the committee for the study of toxic effects of local anesthetics, appointed by the Therapeutic Research Committee of the Council on Pharmacy and Chemistry, publishes a preliminary report. The committee has received reports of forty-two deaths following the use of local anesthetics occurring within the last few years. These accidents have not been reported on by former committees of the Association. The deaths reported are:

Anesthetic	Number
Stovain	1
Alypin	1
Procain	3
Apothesin	4
Butyn	4
Butyn and cocain	1
Procain and cocain	10
Cocain	18
Total	42

Under the headings Procain, and Procain and Cocain, novocain is included: one is reported as procain and the other twelve as novocain.

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ORIGINAL ARTICLES

MILWAUKEE MEDICAL SOCIETIES; AN EIGHTY-FIVE YEAR RETROSPECT.

BY CURTIS A. EVANS, M. D.,

MILWAUKEE.

Editor's Note—This Journal deems itself indeed fortunate to secure this contribution prepared from the actual records of the old society meetings. It was read as Dr. Evans' presidential address before the Milwaukee Academy of Medicine in the spring of 1922.

During the past eighteen years, I have attended quite regularly the meetings of this society. For sometime I have felt that I would like to know more about the history of the society and especially was I anxious to know what the older men in our society had to do with medical matters when they were much younger than they now are. I was surprised to find in our medical library records of medical societies dating back eighty-five years. I was so interested in these records that I could not help but feel that they would also be of interest to you. My remarks will be limited almost entirely to quotations from the minutes of the meetings.

The earliest record found was that of a meeting of the Medico-Chirurgical Club held in January, 1837, over 85 years ago. Present were Drs. Spencer, Dousman, Brown, Johnson, Gaener, Selby, and Bartlett. Up to February, 1853, there were records of five meetings—an average of one meeting in about three years. The earliest mention made of any medical discussion was that of a case of lumbago and "the examination of a prescription for a case that presented itself. He was a short, thick, apoplectic looking gentleman who had been for sometime under homeopathic treatment without benefit." At the meeting in January, 1851, "some trials were made as to the amount of gas contained in the chests of all the individual members present." The palm was awarded to Dr. Brown and "from the height to which he raised the spirometer some hints were thrown out of a connection between the chest and some other empty cavities of the body." The society received from the

county \$600.00 a year to take care of the poor. Practically all of the minutes were in regard to the division of this work. The Germans demanded a German physician to care for the Germans. No German physician was a member so they elected one to membership, but he declined the honor. In the minutes of 1853 it is stated that Dr. Fessel was to take the first ward, all except the Irish and English, and also the Germans of the third ward. Dr. Johnson took the Irish and English of the first ward and all the third ward except the Germans.

The constitution of the Milwaukee City Medical Association was adopted December 9, 1847. It was resolved "that to sustain medical science and check the spread of quackery among us we owe it to ourselves as members of our profession not to consult or hold professional intercourse in the City with any other than a member of this association." A fee list was adopted. Office prescription \$0.50, opening abscess \$0.50, ordinary visit \$1.00—night visit \$2.00, contagious disease visit \$3.00, obstetrical case (not exceeding 24 hours) \$10.00, excision tonsils \$5.00, operation hare lip \$10.00, hernia operation \$50.00, trephining \$30.00, removal of eye \$100.00, club foot \$50.00, fracture thigh \$20.00. Two or three members were expelled for associating with men not members of the association. It was a serious offense to associate with a homeopath. On July 21, 1848, Dr. Van Dusen offered the following resolutions: "Whereas the object of this association is to check in some degree the spread of quackery among us and whereas in the opinion of this association Homeopathy whether viewed in theory or practice, in its sixth or sixth thousandth dilution, in its similia similibus curantur, is but another evidence of the susceptibility of a portion of mankind to be pleased with a rattle and tickled with a straw, embracing the shadow at the expense of truth and substance, entertaining and being entertained with the gilded glitter of mere moonshine, while conscience, honor, dignity, and delicacy are all sacrificed at the shrine of mammon and whereas Dr. J. S. Hewitt by becoming an advocate and counselor among the initiated one idea imposters of this city has forfeited the confidence as a physician of this Association and deserves to be expelled. Therefore resolved

that he be expelled." He was expelled by a vote of ten to three.

On December 14, 1848, Dr. Spaulding reported a case of a man who was suffering under two fistulous openings situated on either side of the epigastrium and extending several inches beneath the skin and cellular tissues. The patient was a laboring man and the case was of six months' standing. Various remedies, such as injections of silver nitrate, packing, hot fomentations of bread and milk, warm fresh beef and warm liver of a recently killed lamb, incisions with the knife, etc., were resorted to but in vain. The patient continued to get worse, suffering at times the most excruciating pains. He became emaciated. At length Dr. Spaulding was induced to try, "at the suggestion of a learned Doctor of the Emerald Isle, the application of warm puppy. The animal was first beheaded and then split through the spine and applied at blood heat. This application was soon followed by the most intense pain and when it was removed 40 worms, varying in length from half an inch to three inches, perfectly white and round, were found adhering to and greedily devouring the canine morsel. The second, third and fourth applications of this dry poultice were followed by similar results so that 83 worms in all were removed. This treatment alike novel and curious was followed by immediate relief and the patient was quite restored to health."

On January 2, 1849, the question of Asiatic Cholera was discussed and the following resolution was adopted: "That no fact in medicine, in the opinion of this association, is more clearly determined than that the Asiatic Cholera is not contagious, and any action on the part of the authorities which is based upon the supposition that it is so, and subjects the sick to any inconvenience, is clearly unwarrantable and inhuman, and will not receive the sanction of any of its members." Affirmative—Dousman, Hard, Whitney, Dow, Spaulding, Marsh, Johnson, Gainer, Blanchard, Barlow, Bartlett, G. Wolcott, and E. B. Wolcott. Negative—none. This resolution was sent to the authorities at New Orleans.

There are no minutes from April, 1849, to March, 1855, when a new constitution of The Milwaukee City Medical Association was adopted. A new fee bill was adopted. Most charges were increased over those of 1847. The charge for a letter of advice was \$5.00, the same as for a consultation.

A resolution was adopted that any member associating with any other than a regular physician shall forfeit his membership. In 1856 the question of buying medical journals, editing a medical journal, and establishing a general hospital were all discussed and not approved. March, 1856, Dr. Cameron introduced a bill to legalize dissecting. It was acted upon favorably by the committee and reported back to the house with the recommendation that it be passed. On June 18, 1856, on motion, a tax was levied on the members to pay the expenses of a delegate to Detroit. "Many members having paid in, some one suggested a drink." Minutes read: "Lager flowed much to the gratification of all." On motion of Dr. Wolcott, it was resolved that hereafter we do away with the present custom as regards refreshments by meeting at the respective offices and thence adjourn to a "Lager bier halle." Minutes July 2, 1856, read: "Adjourned to lager bier halle." On February 18, 1857, Dr. Stadler's name was offered for membership. His papers being in German and none of the German members being present it was "ordered that his papers be put into hands competent to decipher and report upon them at next meeting." The papers were handed over to Dr. Ortalli, who reported that Dr. Stadler's papers were mere passports instead of proper credentials. The papers were ordered returned to Dr. Stadler and a vote of thanks was given to Dr. Ortalli. There were no meetings from March, 1857, to December, 1858. At this meeting Strichnia poisoning was taken up and several reported wonderful results from the use of camphor as an antidote. In 1859 the question of publishing a journal was again brought up but the committee reported adversely. The application of Dr. Lake, a druggist, as a member of the association, was laid upon the table because as a druggist he sold patent medicine. From May, 1859, to October, 1864, there were no meetings. No reason was given but no doubt "C'est la Guerre." In 1864 a new fee bill was introduced. A letter of advice jumped from \$5.00 to \$25.00. Reducing an incarcerated hernia was fixed at from \$25.00 to \$100.00. Operation for hernia \$100.00. Night visits after 10 P. M. was fixed at \$5.00 as a minimum.

There are no records of meeting until November 19, 1868. The constitution of The Milwaukee Medical Society was adopted November 25, 1868. On December 17, 1868, it was reported that the

mayor had kindly allowed the use of his rooms for the semi-monthly meetings of the Association. On June 20, 1868, a meeting was called by the president to confer with the Hon. Edward Salomon, regent of the University of Wisconsin, in reference to the establishment in Milwaukee of a medical college whose degrees should be conferred by the University. Hon. Salomon stated that it was the desire of the regents that the subject should be taken into consideration by the medical men of the city. After some discussion a committee of five, Doctors Johnson, Wolcott, Garner, Naumann, and Marks, was appointed with a request to report at the next meeting of the board of regents. On January 21, 1869, the name of Laura J. Rose was proposed for membership. After some expression of opinion for and against the admission of a female physician a ballot was called for and resulted in her election. At this meeting, Dr. Wolcott reported a case of "osteocancer" of the scapula and exhibited the specimen. The scapula, outer third of clavicle, and entire arm were removed together. He described the steps of the operation. The ligature of the subclavian was left until the last. There was profuse hemorrhage and many ligatures were applied. The patient died on the 15th day. At the meeting of February 4, 1869, Dr. Huebschman read a paper descriptive of a case of prolapse of the uterus and vagina of several years' standing. The Doctor contrived an instrument described as follows, and which he demonstrated to the association—"A box wood cylinder, $3\frac{1}{4}$ inches in length, enclosing a spiral spring attached to a wire frame of figure of eight shape. Through the cylinder and spring passed a tube of an ordinary bag pessary. The cylinder introduced into the vagina and supported by the wire frame, attached to anterior and posterior straps, kept the inflated rubber bag in close contact with the os uteri. The patient became pregnant in five months and as soon as the uterus began to rise from the pelvic cavity the apparatus was removed. The prolapse has never returned." In February, 1869, it was resolved, "That we consider it the duty of our municipal authorities to enact and enforce laws requiring the vaccination of every infant, at some time between the ages of three and seven months, by some respectable physician, and further that every child over the age of twelve, who is an applicant for admission to any of our public schools, should be required to produce a certificate

of successful vaccination from some respectable physician." These resolutions were published in a Milwaukee paper, a clipping of which was attached to the minutes. On the back of this clipping was an advertisement as follows: H. Xelowski, Physician, 263 Third Street, Milwaukee, Wisconsin. Consultation in French, German, and English. Special attention paid to Epilepsy, Nervous debility, and Tape Worms." At a meeting in March, 1869, a committee was appointed to consider the subject of the formation of a medical library. At the next meeting this committee was instructed to confer with the Y. M. C. A. and ascertain what arrangements could be made for the mutual benefit of the two societies. In May, 1869, Dr. Marks read a paper on the treatment of fractures of the femur. He advocated the use of extension by weights as applicable to almost all cases. Where the fracture was above the middle of the bone a sand bag was sometimes necessary to keep the upper fragment from tilting upwards. Long splints of pasteboard moulded to the limb were in many cases a valuable dressing. From December, 1869, to February, 1871, there were apparently two societies. The Milwaukee City Medical Association continued on with Dr. E. B. Wolcott as President. The last recorded minutes of this society were on February 1, 1872. On December 11, 1869, there was a meeting at the home of Dr. Bartlett. Present—Doctors Bartlett, Gorman, Johnson, Mac Arthur, Marks, Meachem, and Thorndike. A committee of three was appointed to present a draft of a constitution and by-laws. The society was called The Milwaukee Medical and Surgical Club. Four members constituted a quorum. January 6, 1870, Dr. Marks read a paper on Dislocations of the shoulder joint, giving in detail the muscles involved. He protested against powerful traction usually used and stated that no more force is necessary than can be applied with one hand. At this meeting a resolution was passed to petition the legislature, through the State Medical Society, for the repeal of an act incorporating the "so-called Milwaukee Medical and Surgical Institute." In January 1870 Dr. Wight of Oconomowoc placed before the Club a bill which he designed to bring before the state legislature entitled "An act to protect the people of the State against pretenders to medical knowledge and surgical skill." A committee was appointed to lobby in behalf of this bill. In February, 1870, Dr. Bartlett read a paper on

sciatica and reported his good results from the use of a combination of morphia $\frac{1}{4}$ grain and atropin $\frac{1}{6}$ grain. Attention was called to the large dose of atropin—"four times as great as the maximum allowed by writers." In the discussion a case of sciatica was reported which was caused by carious teeth. In October, 1870, Dr. Marks suggested that in addition to the literary exercises the Club obtain rooms where practical demonstrations of anatomy, general and surgical pathology, etc., could be given. It was also suggested at this meeting that a nucleus of an academy of medicine could well be formed "now and by us." It was also suggested that an act of incorporation be obtained during the coming winter. In January, 1871, a resolution was offered by Dr. E. W. Bartlett that the name of the society be changed to "The Milwaukee Medical Society." An assessment of one dollar was made for the benefit of the secretary. In February, 1871, Dr. Bartlett read an article, translated from the "Herold" written by Dr. E. Kramer, secretary of the Milwaukee City Medical Association, which charged him, Dr. Bartlett, "with advertising the new dispensary and himself, as one of the attending physicians, as being under the auspices of the Medical Society (Verein) when he, Dr. Bartlett, was not even a member of that body." "The dispensary committee was empowered to issue a counter statement that two societies existed and that the Milwaukee Medical Society is in attendance upon the dispensary." This dispensary was started in January, 1871, at the suggestion of Chief of Police Beck, who provided the room and equipment. In May, 1871, Dr. Liljencrantz discussed croup, describing it as a laryngitis with membranous exudation. He stated that its cause "was exposure to cold and dampness and the presence of oxone in the air."

In April, 1871, Dr. Bartlett demonstrated the ophthalmoscope, one of his own contriving. By means of this instrument the members were enabled to examine the fundus of a kitten's eye and the eye of one of their members. At the next meeting Dr. Nichols was invited to demonstrate the use of the laryngoscope. There was no meeting from February 15, 1872 to April 3, 1876. No reason was given. In November, 1876, Dr. Senn's name was mentioned for first time, being invited to prepare a paper of his own selection. At the next meeting Senn excused himself for being unprepared by pressure of professional business and was

given further time. At the next meeting, December, 1876, Senn read a paper on "Thrombosis." The paper was listened to "with marked attention." The average attendance at this time was seven, usually Doctors Marks, Bartlett, Graettinger, Johnson, Ladd, and Senn. In January, 1877, "Dr. Graettinger set up a small portable table and placed upon it a tumor about the size of a common water pail and then reported the history of the case from which it came." Operation was in November, 1876, "after $\frac{1}{2}$ grain of morphia she was given chloroform and the tumor was removed." The Doctor pronounced the tumor to be a "sarcomatous medullary malignant tumor." The patient died shortly after the operation.

On December 20, 1877, the constitution was changed again. At this time there were eleven members. In January, 1878, Dr. Taylor, V.S., was made a visiting member. There were about fourteen visiting members. In January, 1879, it was resolved "That the members of The Milwaukee Medical Society and others interested, or whom it may concern, meet in convention at Milwaukee County Court House on—date, 1879, for the purpose of organizing a County Medical Society, conformably to the Revised Statutes, Laws of 1878, State of Wisconsin." A committee was appointed and the next meeting this committee reported—"It is the unanimous sense of the committee that this Society be changed into a legal County Medical Society in accordance with the Revised Statutes of the State of Wisconsin, at the earliest possible moment." A committee of five was appointed to take steps for this organization. "At next meeting articles of Corporation, a Constitution and By-Laws were adopted." The minutes of next meeting, February 27, 1879, read "Regular meeting of Medical Society of Milwaukee County." The next meeting, March 13, 1879, again read "Regular meeting of Milwaukee Medical Society." Dr. Williamson reported in reference to the old County Society organized in 1846. Senn moved the report be accepted and motion was made "that the Constitution be so amended as to take back the old name." At the next meeting the name was again changed to the Milwaukee Medical Society. And it was moved and carried that no further action be taken towards changing this society. On February 10, 1880, a special meeting was called by the president. Present were Graettinger, Bartlett, Mason, Senn, and Bading. Motion was made and seconded

that the Society permanently discontinue its meetings. Carried by unanimous vote.

Six years later, January 12, 1886, a meeting was called. Present were Doctors French, Dorland, Ogden, Schiller, Walbridge, Washburn, and Farnham. J. K. Bartlett, Frank, and Hawley were to have been present. An organization was formed under the name of the Clinical Club. This was the beginning of the present Milwaukee Academy of Medicine. At this meeting an ovariectomy was reported—time of operation $3\frac{1}{2}$ hours. The income of this Club was to depend on monthly contributions of from one to five dollars. Meetings were first held at 313 Grand Ave. A dinner preceded each meeting and beautifully gotten up menu cards were incorporated in the minutes. On March 9, 1886 the dinner was at 301 Grand Ave. The following was served: 1. Puree of Tomato, 2. Red Snapper, 3. Sweet breads and peas, 4. Fillet of beef and pancakes, 5. Charlotte Russe, 6. Coffee, Roquefort cheese and crackers. A note below stated that individuals furnished one quart claret, two quarts Rhine wine, and one quart of champagne. There were only nine present. April 13 dinner consisted of 1. Clams, 2. Baked Halibut, 3. Chicken croquettes and peas, 4. Wild duck, 5. Spinach, 6. Roman punch, 7. Roquefort cheese, crackers, coffee, three quart bottles of wine, two quarts of champagne, one quart of sherry and benedictine. The above are typical dinners. In September, 1886, question of private dissecting room was brought up and Doctors Schiller and Bach were appointed to consider the matter and report. In November, 1886, the name was changed to the Bartlett Clinical Club in honor of Dr. John K. Bartlett who first suggested the formation of the Clinical Club. In December, 1886, the dissecting room committee reported "that rooms on Chestnut Street, near the bridge, north side of the street, would make a favorable place." In January, 1887, the Club met for the first time in room No. 12, 416 Milwaukee St. Dr. French reported "a case of cavity of left apex of lung where he injected, first five min of carbolized-iodine and again ten min." In February, 1887, Dr. H. M. Brown was elected a member of the Club. In March, 1887, Dr. Ogden graphically detailed a case of hysterical movements of the abdominal muscles, also another of left psoas and iliacus, of 15 years' standing, cured by "mind cure." In May, 1887, Dr. Copeland and Batchelor elected to membership. Dr. French reported fur-

ther on his injection of carbolized-iodine "after 25 injections alarming hemorrhage set in and the injections were abandoned." Dr. Brown reported a case of fracture of the humerus. Dr. Dorland in discussion reported case where muscle tissue was found between the fragments—the fracture was wired. Wiring was generally advised in such cases. In July, 1887, Dr. Brown brought up the question of "the alleged causation of pyosalpinx by the gonococcus." In Oct., 1887, Dr. Ogden proposed a new by-law "that smoking be prohibited during the regular business and clinical meeting." November, 1887, Dr. Brown reported a case of "gonorrhoea in child 18 months old caused by a slate pencil." Dr. Copeland reported "a case of persistent crying in a new born child quieted after five weeks, instantly, by a pickle for which the mother had had a longing during pregnancy." In April, 1888, it was resolved that the board of directors inquire into and report at next meeting on the desirability of purchasing a site for a future club house. Passed. In October, 1888, Dr. Hawley moved that \$100.00, at least, or half of the sum remaining in the treasury at the end of the year, be set aside at interest, as a nucleus for a building fund. Motion lost. Dr. Brown then moved that one half of the sum remaining in treasury at end of year be set aside as nucleus for building fund. Motion lost. A motion setting aside \$25.00 of amount remaining at end of year be set aside. Motion lost. Dr. Copeland presented two ovaries removed from a woman, age 45, for hemorrhage from a fibroid tumor filling the whole cavity of the uterus, with hydro-salpinx, and cystic ovaries. No hemorrhage since operation and gain of 17 pounds in weight. Both Dr. Copeland and Puls had reported several successful hysterectomies for fibroid of the uterus during the past year. March, 1889, Dr. McDill presented an amendment to articles of association changing the name to the Milwaukee Medical Society. April, 1889, it was moved that \$200.00 be offered to Dr. Bartlett for his library. In May, 1889, Dr. Frank showed a patient with goitre reduced by one application of electricity. Dr. Brown reported a case of exophthalmic goitre. This is first time goitre had been mentioned at any meeting. Dr. Bartlett accepted \$200.00 for his library. In June, 1889, Dr. Wingate, "after quoting many authorities to the contrary, asked if all present were in favor of immediate operation in early cases of malignant disease." He was unanimously an-

swered 'yes.' Dr. Brown retracted a former statement that 90% of cases of diphtheria died. He now thought that a much smaller percentage was cured. In September, 1889, Dr. Farnham stated that the committee appointed in April last was of the opinion that the Club should, if possible, purchase a building site. He then moved that an enlarged committee be appointed and authorized to obtain an option on any desirable piece of property they may find. Motion carried. Dr. Wingate brought up the question of peritonitis. He favored operative interference. Copeland favored exploratory incision in all cases that threatened life. Puls thought that exploratory incision in all cases was going too far and many severe cases, both local and general, recovered. Washburn could see no advantage to be gained by operation in idiopathic peritonitis. Copeland thought idiopathic peritonitis very rare and impossible to diagnose. In October, 1889, empyema was up for discussion. Chandler reported a case cured by rupture externally. Bach reported a case cured by incision without drainage and advocated irrigation with salicylic acid. Wingate advocated incision with two tubes inserted between the ribs. He preferred local anesthesia. He had never seen a case where rib resection was necessary and did not advocate irrigation. Brown remarked on collapse of the lung after operation. He cited such a case and stated that the cause of this accident was undetermined. He also cited a case where the focus of infection was an abscessed tooth and the pus had the odor of decayed teeth. McDill advocated resection of a rib and that there was no danger in irrigation. He suggested "rupture of the lung as an explanation of Dr. Brown's case of collapse of the lung." Wahl reported an echinococcus cyst of the lung. Washburn thought excision of a rib unnecessary. Ogden thought that a small proportion of cases ended in fatal collapse after irrigation even with warm solution and, since recovery was as good without irrigation as with, the latter should never be used. He stated that a fetid discharge pointed only to a mixed infection and not to a graver form of the disease.

At a special meeting in October, 1889, Dr. Farnham reported for the majority of the committee and advocated the house and property situated at 466 Marshall St., be purchased by the society. A ballot resulted in a tie vote—six for and six against. At the next special meeting Dr. French stated that if the Club purchased the property he would guar-

antee to pay all expenses over the current income, from dues of the same amount as at present; he also offered to assume \$500.00 of the debt incurred, principal and interest. Dr. Farnham made a similar offer. Vote was nine for and eight against purchasing the property. A motion to reconsider was made. An informal ballot was taken resulting in 4 ayes and 8 noes. A formal ballot resulted in 1 aye and 11 noes. In December, 1889, Dr. Puls read a paper on puerperal sepsis. Dr. French reported a case where he curetted, resulting promptly in death. Dr. Wingate reported a case of death. In the lochia a peculiar micro-organism was found. After her death a similar organism was found in the drain pipes. He said the nurses, bedding, and surroundings should all be looked after very carefully. Puls stated that there was no such thing as auto-intoxication and infection was always introduced from without. Frank stated that few examinations should be made before delivery. Washburn stated that he had attended 450 cases of confinement and at same time carried on an active medical and surgical practice. The only precaution he had used was careful washing of the hands. Nolte thought it a good plan to have a special suit of clothes for obstetrics. Copeland said it was often impossible to obtain asepsis owing to the habit of many nurses and some patients, of making frequent vaginal examinations. He said he used soap and water on his hands, nothing else. Batehlor said he had a case of puerperal sepsis in a house where there were two cases of scarlet fever. Brown reported a death from sepsis in a woman who was confined on the same mattress on which another woman had died of the disease two years before. He also told of two cases where on the 8th and 9th day evidence of decomposition of intra-uterine clots was afforded by chills, fever, etc. He asked for the cause of infection in these cases. Puls replied that probably air had entered the vagina sometime subsequent to delivery. Dr. McDill advised against examinations.

In January, 1890, Dr. Ogden was instructed to have the extension bell from his office to the club rooms removed, and to hire a boy for the Club, at wages not exceeding \$0.50 a night, to answer the phone in Dr. Ogden's office on Club meeting nights. The janitor's wages were increased to \$7.00 a month, this to include washing the Club's dishes. Moved that the annual dues be continued at \$40.00 a year. Carried. Dr. Brown moved that the

board of directors consider the matter of changing the name of the Club. Carried. February 8, 1890, Dr. Farnham moved to recommend the name "Bartlett Clinical Club" be changed to "The Milwaukee Clinical Club" and that the name "Bartlett" be retained as designating the Library." On February 11, 1890 the name was changed to "The Milwaukee Clinical Society." At this meeting the question of fracture of the patella was up for discussion. Dr. Chandler reported a case where he had wired the fragments. Dr. French thought danger to life was too great to warrant such treatment. Wingate stated that he could not see why there should be any more danger in opening the knee joint under aseptic conditions than in opening any cavity of the body. (An advanced view—not agreed to until the late World War). Dr. Brown showed by black board drawing a new method of treatment which had occurred to him but he had not as yet used the method. "It consisted in cutting down on the fragments, tipping the broken edges upwards, drilling a hole in each fragment and inserting a pin of bone—thus holding the fragments together." In March, 1890, Farnham reported that he had in view a large sum of money which he believed, in time, would be given to the Society. At a special meeting in June, 1890, Farnham reported that there was a piece of property located on Cass St. north of Biddle, which he considered a desirable place for a club house. Frank reported a site on 6th St. Brown referred to a site on Jackson St. Batchelor moved that the whole matter be laid on the table until the Society had \$1,000.00. Motion not seconded. Ogden moved that it was inexpedient to attempt to purchase any property at present. Motion lost 7 to 6. Farnham moved that the matter be referred to the present committee to report later. Farnham, French, and Brown offered a loan of \$500.00 each to the Society for the purpose of purchasing a site for a club house. At next meeting Dr. Stillman read a paper on "Stretching the spine in the treatment of locomotor ataxia." In March, 1891, committee on sites was discharged. In April, 1891, Brown reported the use of an electric cystoscope to diagnose stone in bladder. Also reported case of bilateral synovitis of hip joint "treated by extension, small pills, and faith." Patient had improved. In June, 1891, French read a paper on pyrexia. He did not believe that it was of any particular diagnostic value and he believed that we

would do better to throw away our thermometers and trust more to common sense. The registration of temperature kept the minds of patient and friends upset and was a constant source of discomfort to the physician. He referred to a reported case of temperature of 150 F. with recovery. All members who discussed the paper defended the thermometer and thought it a valuable instrument. Dr. Brown said that "he was growing to be an old man, and that he was fast seeing the legs of so-called medical science giving way and he thought it high time for Doctors to stop their talk about the great work of the medical profession." This was 31 years ago. On December 22, 1891, Dr. Wahl read a paper on "Diphtheria, its treatment." He reported 16 deaths out of 78 cases. Batchelor in discussing this paper did so in his usual common sense way. No discussions in the minutes of these meetings excelled those of Dr. Batchelor's. Batchelor said, "It would be an unfortunate kind of a day when I did not have something to say about diphtheria. There are a few of us here who see very little of diphtheria, but I certainly see very much of it, and I am not egotistical enough to say that I feel satisfied with my treatment. I have used bichloride treatment and I have used calomel and lately I am using more bichloride. But children are still dying and I have sometimes thought that it would be very interesting if we could get at the natural history of the disease. How many children die under the treatment of peppermint water and how many on whiskey? Naturally we have an unwillingness to give children a medicine like corrosive sublimate. As Oliver Wendell Holmes says, you hardly expect to see a plant grow when you water it with Fowler's solution or corrosive sublimate. I have used bichloride pretty freely, and I have seen some very bad cases get well, and I have seen some very bad cases get well under other treatment. I sometimes think that a diphtheria that is not accompanied by or complicated with croup does pretty well on almost any treatment. Some say they die from general sepsis. Where I see one die from general sepsis, I should venture to say that I see a half a dozen die with croup, and I am still in the dark as to how much benefit in those cases is to be derived from corrosive sublimate." He then discussed the use of turpentine and said "but they go on and die just the same." He said he did not believe much in local treatment. He summarized by saying, "I give

them medicine and trust to Providence." Washburn suggested a spray of bichloride, in strength of one to 480. Washburn stated that what we are after in this disease is "something which will act as an antitoxin for it is in that way that infectious diseases are cured by nature." Wahl stated that up to the time that he began to use bichloride his mortality was 50%. He said that he had just seen a case in consultation with Dr. Kellog where he had prescribed two grains of bichloride to 4 oz. of water. After two days the child vomited every time the medicine was given. The bichloride was then given in pepsin and the vomiting ceased, and child recovered. These large doses without death were mentioned to prove that there was something specific in the action of the drug. Wahl reported a case where for a child four years old, one half grain of bichloride was given every half hour for six doses, then for next 24 hours, a half grain every hour, and after that a half grain every two hours until the child was better. The child recovered. Child received 15 grains of bichloride in 27 hours.

In January, 1892, Washburn undertook the task of combating the marked antivaccination feeling in the city by writing a series of articles on vaccination. In discussing this subject Dr. Brown said "The opposition to vaccination comes generally from long-haired men and short haired women and people who wear cloth gaiters and from Harry Danforth and other small boys in the papers." On May 29, 1892, French in a long talk introduced a resolution that the society appoint a committee to work out the best plan for raising funds to start an academy of medicine. He advocated a large building, large enough for all time. He called attention to the fact that the Emergency Hospital, The Elms Hospital, and The Wisconsin General Hospital all originated in this society and that the society could put across this large building which would take care of the medical profession of Milwaukee for all time. Doctors French, Wurdeman, Wallbridge, Farnham and Copeland were chosen on this committee.

May 24, 1892, a paper was read stating that the Klebs-Loeffler bacillus was the cause of diphtheria. Some members doubted that this bacillus was proven to be the cause. The method of staining and identifying the bacillus was given. The health commissioner reported that there had been 400 deaths from diphtheria in the city in 1891. In August, 1892, the building committee reported

that this building where we are holding our meeting tonight could be purchased for from \$30,000 to \$35,000. Upon motion it was unanimously decided that the property be purchased. At the next meeting it was voted to lease all the building except the second floor, the gallery, and unfinished rooms in the basement of the Elms Hospital for \$1000 a year. The first meeting was held in this building in October, 1892. In November, 1892, Nolte reported the method of Sabine of New York to determine which kidney was involved. He passed the hand into the rectum to the sigmoid and compressed the ureter obtaining the urine from the bladder. We would then compress the opposite ureter and obtain the urine from the opposite kidney. At this meeting it was stated that the "cystoscope, commonly used years ago for diagnosis, was now being discarded as unreliable." In December, 1892, Farnham suggested that a subscription committee be appointed to raise \$150,000 to pay off Society's indebtedness and to provide an endowment fund. Wingate in his president's address in January, 1893, stated "that in 1885 Milwaukee with a population of 165,000, containing, at least, 170 physicians, had no medical society, organization, or public medical library. The County Society had fallen asleep and at this date still slumbers." In February, 1893, Levings reported two cases of thyroidectomy. Brown in his discussion gave the history of thyroidectomy and stated that last summer he had seen six operations for thyroidectomy. He said "the hemorrhage was simply overwhelming and is treated by tamponing as fast as the tampon can be pushed in. After the greater part of the tumor is torn out, it is pulled forwards with great force and tipped downward towards the sternum. This straightens the deep vessels (thyroid) and then bends them into a sharp angle, thus causing sufficient interruption of the blood stream to permit for a short time a little vision into the bleeding cavity and the introduction of large numbers of pressure forceps, thrust in as rapidly as possible, keeping away from the median line, grasping in the dark at bleeding points. You can not see what you are doing because of the hemorrhage, the blood pouring out like water from a tea kettle. In 1893, Brown reported a case in which he said "the friends of the patient objected very much to any post mortem examination therefore I did not make any, but these are the specimens." He then went on to show the liver, gall bladder,

pancreas, etc. Thirty years ago there were more post mortem reports than there are today.

In January, 1894, the special subscription committee reported. In discussion Dr. Brown pointed out the absurdity of attempting to remain in this building. The question of reducing the annual dues to \$20.00 was brought up. At that time the annual dues were \$50.00 for first year and \$40.00 thereafter. On March 13, 1894, motion was made and carried that the property of the Society be moved from present quarters to the Goldsmith Building. In March, 1895, Sifton reported a case of typhoid fever perforation with recovery after operation, with closure of the perforation and drainage. This was the 6th successful operation ever done for typhoid fever perforation. In April, 1895, Ladd reported a case of gangrenous appendicitis in a boy of 14. He advocated early operation, saline purgatives, and objected to the use of morphia. In the discussion Dr. McGovern mentioned Murphy's method of administering Epsom salts immediately and continuously after operation until movement of the bowel had occurred and stated that he would himself use this in every similar case. Dr. Hay recommended magnesium sulphate be given hypodermically. This discussion is mentioned at this time only to show the change that has taken place in the last 25 years in the treatment of peritonitis. In December, 1895, Dr. Philler read a paper on antitoxin which "freely elucidated the author's views of the present antitoxin craze, he taking the view that it would follow in the wake of Brown-Sequard's Elixir of Life, Koch's Serum, etc."

In January, 1896, the dues were reduced to \$20.00 a year. In November, 1898, the annual dues were reduced to \$10.00.

We have now traced Milwaukee medical societies dating back over 85 years to 24 years ago. Since 1898, it is practically impossible to decipher the writing of the secretaries and it is time to stop for other reasons. The first time I attended a meeting of this society was 18 years ago. I remember those early meetings much better than those of last year because I was just starting in the game, was more eager to learn, and I early came to have a great regard for the opinions of the older men in the profession. All of us have genuine devotion to our early teachers. In all our technique of teaching, medical or other, the fact remains that no man was ever made in college without the impact of

some personality. The same applies to a young man beginning the practice of medicine. I still have the old idea of medical training, of a Mackie on one end of the log and a Batchelor on the other. I mention these two men because they were great personalities and have joined the countless hosts that have gone before. I mention them because, in my early training, I came in close personal contact with them at Milwaukee Hospital. We knew them in the prime of their physical and intellectual vigor. We cherish their memory with grateful pride. To you older men of the society, who are still with us, I want to say that we younger men have felt the impact of your personalities and we have been inspired by your large manhood, your charity towards the younger men in the profession, and your intellectual power.

I think that I represent this society when I say to you tonight, who were its charter members, that we have a passionate loyalty and affection for this society. This was a small society at its beginning but it was a good one. To be convinced of this fact, it is only necessary to read the discussions which took place at these meetings 35 years ago. Of the charter members, Ogden, Washburn, Bach, and Schiller are still with us. Many others are with us and still active, who joined the society a year or two after its organization. Not only are they with us but for the most part are making us hustle to keep up with them. To appreciate the calibre of these youngsters in their younger days I would suggest that you obtain the minutes of 35 years ago and read the discussions by Ogden, Washburn, Schiller, Puls, Brown, Copeland, Bach, Shimonek, Hayes, Boorse, Batchelor, and others. Those are the days of real discussions. Occasionally we have some good discussions even now.

In 1870, Dr. Marks stated that "a nucleus of an Academy of Medicine could well be formed, now and by us." This was 52 years ago. This year we changed our name to The Milwaukee Academy of Medicine but it is not an academy such as Marks dreamed of. With our medical school, our many hospitals, our private and hospital laboratories, our hospital staff meetings, etc., there is no need for such an academy of medicine as Dr. Marks had in mind. An academy of medicine is an association of medical men combined for the promotion of medical science and as such we can rightfully call ourselves an Academy of Medicine. My review of the minutes of the society since its birth in 1886

makes me feel that we have not kept pace with the standard set by our founders. But they had the easier task for they were not handicapped by the presence of numbers. I am convinced that there are inevitable defects that come with a large membership and that makes the proper handling of a medical meeting extremely difficult. But at the same time, I am convinced that this society, to fulfill its purpose, must be a rather large one. I have no definite suggestions to offer which might raise the standard of this Academy of Medicine but I feel that our secretary said something last meeting when he said that there should be "a more widespread spirit of Give and Take—not all Take." Let us remember that "He profits most who serves best."

MISTAKEN KINDNESS IN THE SANATORIUM TREATMENT OF TUBERCULOSIS.*

BY E. G. BELLIS, M. D.,

SUPERINTENDENT AND MEDICAL DIRECTOR,
MUIRDALE SANATORIUM,

WAUWATOSA.

John Jones was suffering from appendicitis. The family and neighbors believed it to be just an ordinary case of eolic and the usual home remedies were applied. A few days later the patient had not improved and a physician was called. The correct diagnosis was made: the surgeon operated, pus was found and drainage established. Absolute rest was the surgeon's orders. There was every indication for an eventual recovery. Coming out from under the anaesthetic an intense thirst developed, the patient begged for water. In spite of an old established policy, "No water for six hours" the kind and sympathetic doctor and nurse were persuaded that just a little would do no harm. The water was given. How grateful the patient was. He could not thank them enough, yet within 15 minutes vomiting began; Nature's wall of protection against the infection was broken; general peritonitis developed and John Jones passed into the Great Beyond.

Jim Smith was suffering from pulmonary tuberculosis, a disease fully as serious as appendicitis and differing materially only in point of location and course of development. The family and

neighbors believed it to be just an ordinary case of cold and stomach trouble and the usual home remedies were applied. Months later the patient had not improved and a physician was called. The correct diagnosis was made and the patient sent to the sanatorium. "Prolonged and continuous rest in the open air with nourishing food" was the doctor's orders. Jim Smith was put to bed, taught how to drain and rest his lungs, and in three weeks temperature was gone, pulse rate subsiding, appetite good, marked gain in weight, and Jim felt that he could "liek his increased weight in wild cats." Relatives and friends were highly pleased with the progress made. There was every indication for an ultimate recovery, but Jim Smith began to develop an awful thirst. He wanted a drink from the old well of Social Life; not very much, but just a little; surely a trip to town, an automobile ride, a holiday at home, one night at the theatre, an afternoon at the base ball game, one little dance, or any other one little departure from the definite program of cure taking could do no harm. Jim makes the request and accompanies it with every persuasive argument at his command. The kind hearted and sympathetic doctor and nurse do not refuse and Jim enjoys a change from the business of getting well. How grateful Jim was; he could not thank them enough. He returns to the Sanatorium "fit as a fiddle." The reaction does not occur in 15 minutes but fifteen days. Nature's wall of protection was broken down, new lung tissue was invaded and the constitutional symptoms of the disease show themselves again. Jim buckles down to intensive treatment once more; his disease subsides; and the thirst begins. It seems more intense this time and he just must be permitted to get away. Jim's mind gets busy. Sister's birthday is day after tomorrow, Thanksgiving comes next week, Easter Sunday with special religious services and a big dinner is at hand, baby brother is to be christened, Jim needs a new suit of clothes, the excuse must be a good one to get by, and the kind hearted and sympathetic doctor and nurse let Jim get away with the same result as before.

Jim Smith in his bed is beginning to realize now that he has got to settle down to business and engage in continuous cure taking. He does so. Weeks later Jim is on his feet and while a little weak cannot help but recognize the same old thirst. His conscience tells him it must be subdued but

*Read before Annual Meeting, Wisconsin Anti-Tuberculosis Association at Milwaukee, October 26, 1923.

Mother comes to visit this afternoon and Jim tells her of his longing to be at home just for a day or two. Between them a family reunion is arranged for the next week and Mother calls at the doctor's office incidentally to inquire after Jim's condition and actually to plead for the Doctor's permission to let Jim come home just for the day. "No, Jim's condition is not good, he should not leave," the Doctor says, but mother's love will not be denied. With tears welling in her eyes Mother tells of the good care she will take of Jim, an auto will come for him and bring him back and with suppressed emotion the kind hearted and sympathetic doctor reluctantly gives consent. Jim *will* be careful.

Father, mother, brother and sisters all were there. It seemed mighty nice for Jim to get his feet under mother's table once again. How Jim did eat. The afternoon passed and Jim must have a little more of Mother's food before he leaves. When Mother insists Jim must not refuse.

Jim Smith arrives at the sanatorium and reports a "bully time." How wonderfully kind everyone was. The flushed cheek, the bounding pulse only exaggerate the feeling of gratitude that Jim feels. The bed time whistle blows and Jim tries to sleep, but the Sand Man will not come. A restless hour and following a sudden turn in bed Jim notes a filling in his throat. It is warm and sweet. The switch is turned and the light discloses the scarlet color of the flow. The nurse is quickly summoned, the doctor called and treatment given. The hemorrhage is profuse but finally checked. But alas! symptoms of pneumonia develop the following day and in less than a week Jim Smith passes into the Great Beyond.

Tragic, yet true, for both cases occurred in the personal experience of the writer and he was the kind hearted and sympathetic doctor. Mistakes, akin to these, are multiplied at Muirdale and at every other sanatorium month by month and are responsible, I firmly believe, for the difference between success and failure in a great many cases of pulmonary tuberculosis. What is the answer? The entire anti-tuberculosis organization, the public the immediate family, the relatives, and friends of patients, kind hearted doctors and nurses need a broader perspective in the matter of handling the tuberculous. Kindness and sympathy, yes, but tempered with more judgment.

The time used to be that physicians advised the

patient that he had weak lungs and whispered in the ear of the family the true nature of the disease. We all know now that this was a case of mistaken kindness. We now tell the patient that he has tuberculosis and that sanatorium treatment gives him his best chance for recovery. The visiting nurse or social worker calls. Eager to solve the social problem, eager to obtain the patient's and family's consent the picture of sanatorium life is too often painted in glowing colors of mistaken kindness. The prospective patient is too often led to believe that if he will go to the sanatorium for just a few short weeks, he will get well; that while he is gone his family will be generously cared for, that he will be allowed to come home whenever he feels homesick; that the doctors and nurses do everything possible to please the patients, milk and eggs, steaks and chops, X-ray and radium, picnics and movies, and if he doesn't like it he can leave at any time. In consequence the patient enters the sanatorium with fixed grandiose ideas only to learn later on (if he remains longer than a week) what the right kind of sanatorium treatment means. A more potent reason for discontent and consequent short stay does not exist than the fact of failure to appraise the prospective patient of the truth. Tuberculosis is a serious disease; patients do not recover in weeks but in months and sometimes years and sometimes not at all. Let us protect the patient from disillusionment and accompanying disappointment by laying *our* cards and *his* cards face up on the table right at the beginning of the game. Let's tell him that for his own sake and for the sake of his family the best place for him is at the sanatorium, first because it will give him his best chance for recovery; and second, because his absence from home will be a protection for his family against "catching his disease;" that, when he enters the sanatorium, he will be required to change his entire mode of life; that the nature of the disease makes it absolutely necessary that the strictest program of cure taking be religiously followed and that success in his particular case means engaging in the business, heart and soul, of getting well.

"If you tell them *that*, you can't get them to come," is the reply. "If you don't tell them *that*, you can't get them to stay," applies with equal advantage. The writer contends that every patient has within him the "makins" of a successful cure taker, but he needs your help and my help right at

the start to bring the "makins" out. When he lines up his forces "I can" and "I will" early in the game the battle is half won. Give him a true inventory of the job before he signs on the "dotted line" and sanatorium beds will be filled because patients get well.

There are other agencies drifting about on the sea of mistaken kindness. Included among these may be mentioned organizations and groups of kind hearted and well meaning ladies, and gentlemen too, who at times almost insist upon introducing into the sanatorium life of patients various laudable innovations, side stepping in varying degrees, the real purpose for which patients are received. Reference might also be made to a rather common practice by members of families or friends sending foodstuffs, medicines, etc., and sometimes a little liquor just to "cheer up" the patient undergoing treatment. Such acts belong in the same category of mistaken kindness as the drink of water to Johnny Jones, the ill advised permission to Jim Smith, the failure to correctly advise for fear to offend, and every other departure that springs from the fount of human sympathy and kindness that makes impossible or more difficult the actual saving of human lives.

UNCOMPENSATED ALKALOSIS IN ENCEPHALITIS.

George A. Harrop and Robert F. Loeb, New York (*Journal A. M. A.*, Aug. 11, 1923), report a case of epidemic (lethargic) encephalitis with a disturbance of the respiratory mechanism producing a prolonged, extremely rapid, shallow type of breathing. The condition of the acid-base equilibrium which was found apparently has not previously been described as occurring in this condition. Analysis of the arterial blood shows: Arterial oxygen content, 21.29 per cent by volume; arterial oxygen capacity, 26.8; arterial oxygen saturation, 79.6; arterial carbon dioxide content, 24.8, and arterial carbon dioxide capacity (whole blood), 39.6 per cent by volume (equilibrated at 40 mm. CO₂ tension). The arterial carbon dioxide capacity (serum) is 40.9 per cent by volume (equilibrated at 40 mm. CO₂ tension). The arterial blood pH is 7.59. Calcium is 9.8 mg. per hundred cubic centimeters; sodium, 404 mg.; potassium, 16.9 mg., and chlorid, 3.66 gm. per liter (estimated as Cl₂). The analyses of the arterial blood thus reveal the presence of an abnormally high pH associated with a low arterial carbon dioxide content proportionately much lower than the plasma bicarbonate capacity (Van Slyke), which itself is lower than normal. It is evident that the condition is one of "uncompensated carbon dioxide deficit," due to the rapid, shallow breathing, which has produced an abnormally great pulmonary carbon dioxide excretion, with an increase in the ratio BHCO₃:H₂CO₃, and therefore in the pH.

THE DIAGNOSIS AND TREATMENT OF STERILITY.*

BY C. HENRY DAVIS, M.D., F.A.C.S.,

MILWAUKEE.

A childless marriage may be more satisfactory than living alone, but it takes children to make a real home. As physicians, we know of the great desire for children on the part of many childless couples. It is probable that some form of sterility is responsible for most childless marriages of five or more years. There is also reason to believe that sterility is becoming a medical problem of considerable importance.

Sterility dates back to our primitive forefathers. It played an important part in the lives of several people who lived in early biblical times before the days of organized birth control. Both the man and the woman may be sterile, but owing to her highly specialized organs it is more apt to be the woman. Not infrequently an uncured Neisserian of one member of the family leads to infection and eventual sterility of the other. In past years the "wild oats" of the husband were to blame in many cases. It is hoped that better treatment will reduce this danger in the future.

Male sterility may result from congenital defects, trauma, X-ray, radium, operation, or infection. Mumps may result in permanent sterility. Gonorrhoea is one of the most common causes, and infantile paralysis one of the least common. In every case studied the possibility of male sterility must be eliminated. The treatment of male sterility is without the field of the gynecologist and therefore not discussed in this paper.

Sterility in women may be absolute or apparent. Absolute sterility may be congenital or acquired. Congenital causes are the absence or underdevelopment of vagina, uterus, tubes or ovaries. Acquired sterility may have resulted from inflammation, trauma, new growth, radium, X-ray, or operation. Apparent sterility may be functional due to a deficiency in diet or internal secretions, but more often results from some abnormal factor in sex life such as contraceptives. Some of these cases prove eventually to have an absolute sterility. Each case is a problem unto itself.

The following plan of study is suggested:

1. A carefully taken history is important.

*Read before the Milwaukee Surgical Society, October 1, 1923.

2. General physical examination with special attention to the pelvic condition.

3. If the woman appears to be normal, seminal fluid may be obtained for examination by having her report to the office within thirty minutes after intercourse. With a pipette fluid may be obtained from the vault of the vagina and the cervical canal for microscopic examination. If this is unsatisfactory a condom may be used for a subsequent test.

4. If active spermatozoa are found the man is assumed to be fertile and the woman is studied further.

5. Tests to determine the blood group may prove interesting but thus far no definite information is available.

In the study of sterile women many difficult conditions may be found. These may best be considered by listing them under the three general groups of causes. Statements will be limited to personal observations and experience and no attempt will be made to give a review of the literature.

It would seem that congenital defects other than moderate degrees of underdevelopment, are the least common of causes. However the following have been encountered:

1. Very thick hymen with an opening only large enough to permit the escape of menstrual blood. It was removed by dissection and a few months later the woman became pregnant.

2. A shallow vagina without connection to a uterus was found in two cases. One had an apparent absence of the uterus. Dr. Webster found on operation that the other had chronic pelvic disease and conservative surgery was impossible. Dr. Rosenow and I grew the streptococcus viridans from one of her ovaries.

3. Several patients have had a normal vagina but a rudimentary uterus and very small ovaries. Glandular therapy is beneficial in such cases but not curative. The best results might be expected from its use during the period of development and it is suggested that ovarian extract be given all girls who do not begin to menstruate by the age of fourteen.

4. Patients with normal pelvic organs other than a uterus which is a little small and a cervix which is long and pointed may be cured by the use of ovarian extract. Small doses of thyroid extract may be added if there is evidence of thyroid deficiency.

5. Uterine retrodisplacements, frequently asso-

ciated with a long pointed cervix are often found. In many of the congenital cases there is a short anterior vaginal wall, and a deep posterior fornix. The use of stem pessaries is condemned, and operations on the cervix rarely advised. Should associated pathology indicate surgery the displacement is corrected as part of the operation.

Acquired sterility is far more common. Infection of some type is the usual cause. Gonorrhoea, whether acute or the chronic resulting from latent gonorrhoea of the male, may be the usual cause of closed tubes, but any of the pathogenic organisms may be responsible. It is possible that blood stream infections of the tubes and ovaries are more common than is generally believed. The infectious diseases of childhood undoubtedly cause pelvic disease which may result in sterility. Septic sore throats and rheumatic fever are not infrequent causes of diseased tubes and ovaries. Puerperal sepsis and criminal abortion often result in closure of the tubes. The ovaries may be destroyed by infection. Cystic degeneration following infection is fairly common. Fibromyomata are the most important of the new growths. In a mechanical way they may prevent pregnancy, or lead to an early abortion if it does occur. Birth injuries and resulting changes, subinvolution and superinvolution may result in sterility. Small doses of X-ray or radium may result in temporary sterility and it is permanent after large doses. This applies to both men and women. Careful screening of the generative organs is therefore indicated when other parts of the body are exposed to these rays.

Apparent or functional sterility presents a very interesting problem since it occurs so frequently in women who have apparently normal generative organs and nothing in their histories to suggest an acquired sterility. Many of these women have used some method to prevent conception for one or more years. They are surprised to find that pregnancy does not result immediately after precautions are stopped, and eventually consult a physician. In the study of such cases it has been noted that cervicitis and endocervicitis is the rule, and many have cystic ovaries. It suggests that contraceptive methods may play an important part in the production of acquired sterility. Coitus interruptus, stem pessaries and strong douches are especially pernicious.

Endocrine disturbances and an improper diet must always be thought of in studying cases of

functional sterility. The use of glandular therapy has seemed to give the desired result in a number of cases. But too much credit must not be given any medical treatment since there are women who become pregnant without treatment years after they had given up hopes of children. There have been several such cases in my practice, the most recent having had an apparent sterility for fifteen years. Another had been married twenty years and became pregnant just after adopting the third child.

Women with apparent sterility are given whole ovary after each meal. If there is any evidence of thyroid or pituitary deficiency, thyroid extract is added.

Reynolds and McComber showed in some very interesting experiments that by varying the calcium intake of rats known to be fertile they could be made to abort and then remain sterile until calcium was added to the diet. Reynolds also gives clinical evidence to support their experiments. On the basis of these experiments the diet is investigated and corrected if necessary. Calcium lactate is usually administered with the glandular therapy.

In addition to the internal medication women with apparent sterility are instructed to take a mild alkaline douche just before intercourse. Intercourse is limited to the last two or three days before and the first two weeks after a period, and should not exceed five times during the month. Good results have at times followed a vacation and abstinence from intercourse in cases with little motility of the spermatozoa. Chronic cervicitis and endocervicitis are treated with the electric cauter. It has seemed that the excessive discharge may form a barrier to the passage of the spermatozoa. This discharge is stopped by destroying or removing the inflamed cervical glands. In very severe cases surgery may be indicated. The Strumdorf operation is difficult but the ultimate results should be better than an amputation. Radium will destroy the glands but may at the same time interfere with future childbearing. The electric cauter has all the advantages of radium without its disadvantages. Its use should be limited to chronic cases.

Major surgery is rarely advised unless the pathology present would justify an operation without consideration of the sterility. When it is evident that a retroflexion is responsible for early abortions good results may follow a surgical correc-

tion. Several of my patients with histories of two or more abortions during the first four months have gone to term after shortening the round and utero-sacral ligaments. While in the past plastic surgery on the tubes has been disappointing, it is hoped that trans-uterine inflation subsequent to the operation will lead to better end results.

Uterine retrodisplacements may in a mechanical way play a part in causing a functional sterility. Whenever possible the uterus is replaced and supported with a suitable pessary. This undoubtedly lessens the danger of abortion when pregnancy does occur but except in case of a boggy uterus one may well question whether it enhances to an appreciable degree the possibility of pregnancy.

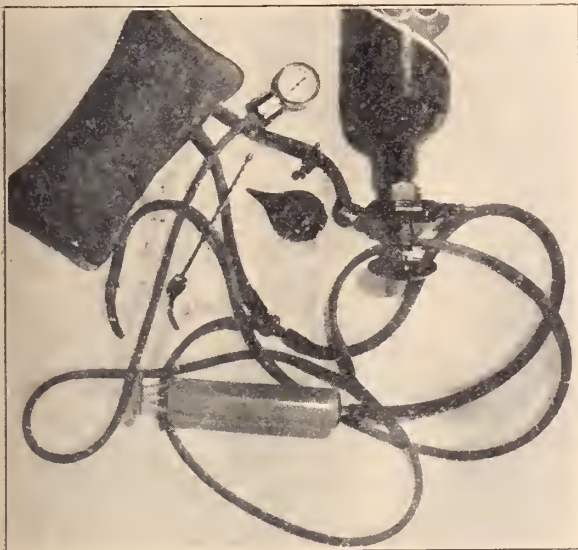
Rubin by showing that gas may be passed through the non-inflamed uterus without evident harm to the patient has given us a new method which is both diagnostic and therapeutic. But all intra-uterine manipulations carry an element of danger and it would seem advisable to limit this test to cases where the simpler procedures have failed. It would also seem best to restrict it further by requiring that the patient go to the hospital. In the majority of cases she may leave within thirty minutes after it is completed. It is rarely suggested until the following requirements have been met:

1. The husband must have active spermatozoa.
2. The cervix must be free from inflammation, acute or subacute.
3. There must be no history of recent pelvic inflammation.
4. No precautions for at least six months and a recent period.
5. There must be no contraindication to pregnancy such as mitral stenosis, nephritis; tuberculosis or syphilis.

Fourteen of the sterility cases which I have had under treatment during the past two years have been given a modified Rubin test. One had patent tubes and the sterility is evidently due to some functional cause. The remaining thirteen had closed tubes. In eight cases it was possible to open the tubes under pressure and three of these patients are now pregnant. Two had only one period after the inflation and one had two. Two of the patients with closed tubes submitted to operation. One had an old tubercular salpingitis which became active six months after the inflation. The other wished to exhaust every possibility before

giving up hopes of pregnancy. Her tubes were found to be closed at the isthmus and it was not possible to open them with high pressure exerted through the ostium. The tubes were transplanted but with little hope of success unless there is a later chance to reopen them from above.

The apparatus used in these tests consists of a 100 c.c. Luer syringe, Y-tube, cervical canula, manometer and rubber tubing. All connections must stand a pressure of over 200 m.m. without leaking. By using a three way valve and a rubber bag we may also introduce carbon dioxide for pneumo-peritoneum. With moderate distention the Tyco's rubber bag will hold 1000 c.c. of gas. The amount passed may be measured by the syringe. After surgical cleansing with green soap and lysol solution a bivalve speculum is inserted and the cervix grasped with a tenaculum. The cervical canal is then cleansed with alcohol on an applicator.



After the cervical canula has been inserted until it fits tightly the head of the table is lowered and the vagina filled with sterile water. The assistant next inserts the plunger in the syringe and gradually pushes it down. If the tubes are both open the air will pass through easily at a pressure of 80 to 100 m.m. If there is some constriction or one tube is closed the pressure will be higher but should not exceed 120 to 150 m.m. In no case should the pressure go much if any above 200 m.m. unless the test is being made with the abdomen open. When operating on women if there is any question regarding the patency of the tubes it may be determined best by inflating through the ostium. An ear

syringe may be used for this purpose. Either air or some non-irritating liquid may be passed through the tubes in this way and the pressure may be above 200 m.m. since one is not working in the dark.

The possibility of tubal inflation through the ostium may be illustrated by a case recently treated with Dr. Puls. Trans-uterine inflation showed that the tubes were closed. But with the abdomen open we were able to force air and later more than an ounce of colloidal silver through each tube after freeing some of the adhesions.

Sterility is a relatively common condition. Apparent sterility is probably due in part to social demands and the high costs of raising a family. Late marriage, nervous tension, and lack of physical exercise all tend to reduce fertility. Reproduction of the unfit is undesirable but nothing short of actual sterilization will prevent it. Some of the contraceptive methods tend to cause sterility of a more or less permanent form. Voluntary parenthood is theoretically possible, but the chances of acquired sterility are so great that those who would have children had better take them when they come.

Present methods of diagnosis and treatment make it possible to overcome the cause of sterility in many of the childless marriages. Each case should have a thorough examination before an unfavorable prognosis is given.

THE FAVORABLE PROGNOSIS OF AURICULAR FIBRILLATION.

In a group of thirty-seven patients with auricular fibrillation, whose cases are reported briefly by T. Homer Coffen, Portland, Ore. (*Journal A. M. A.*, Aug. 11, 1923), about three-fourths are ambulatory, while one-fourth have died. Half of the entire number are comfortable and able to carry on their daily activities without cardiac symptoms. Some of these have decreased reserve on unusual effort. About one-fifth of the entire number have marked limitation of cardiac reserve, and while ambulatory, are more or less incapacitated. Most of these have needed digitalis at one time or another, or have learned how to use it to safeguard the heart. The heart is able to adjust itself to auricular fibrillation, and to compensate as it does in valvular lesions. When both fibrillation and valvular lesions (or cardiosclerosis) are present it may still compensate well for months or years, the prognosis depending on the sum total of symptoms and signs which indicate cardiac function. Evidences of myocardial weakness are largely clinical, but changes in the Q-R-S-T complexes, in repeated electrocardiograms, aid in measuring the progress of degenerative changes.

RETROPERITONEAL TUMORS: A REPORT OF TWO CASES.*

BY F. A. STRATTON, M.D.,

MILWAUKEE.

The comparative infrequency of true retroperitoneal tumors has prompted me to report two cases which I have observed since 1919 and to review briefly the literature on this subject.

These tumors originate in the loose areolar post-peritoneal tissue, the adipose tissue surrounding the kidney, the periosteum of the vertebra or from any type of tissue in the retroperitoneal space, therefore they may resemble histologically any of these tissues. Maucclair in 1910 described the following tumors as having occurred in this region: lipoma, fibroma, myxoma, chondroma, lymphadenoma, neuroma, sarcoma, and many varieties of cysts. The most common are sarcoma, lipoma, and fibro myxoma. They may attain an enormous size, Hirsh and Wells having reported in 1920 a case of Lipo-sarcoma weighing 69 lbs.

Metastatic tumors of course occur retroperitoneally usually secondary to tumors of the testicle and ovary, but are not included within the scope of this paper, which is intended to deal only with the retroperitoneal tumor defined by Lockwood as a "solid or cystic neoplasm growing behind the peritoneum into its fold and not connected with any of the great retroperitoneal organs." From a review of the literature it would appear that the sarcoma is the most frequent in occurrence and that it occurs much more frequently in the male than in the female. Lipoma is the next in order of frequency while pure fibroma or fibro-myoma is extremely rare. The benign forms occur about equally in both sexes.

Steele in 1900 reviewed the literature and reported 96 cases of retroperitoneal sarcoma including five of his own. Trout and Meekins in 1920 reported 12 additional cases including two of their own, and in 1922 Andrews reported 28 proved cases observed in the Mayo Clinic, a total of 142 cases. In 1919 Magoun reported two cases of Myo-fibroma from the Mayo Clinic and in his paper gave a review of all cases of retroperitoneal tumor on record in that institution since 1907 which included 73, 53 of which were operated

upon, 29 were sarcomatous, 18 benign, and 6 undetermined. Those not operated upon were diagnosed as inoperable malignant growths. In 1921 Masson and Horgan reported twelve cases of retroperitoneal lipoma from the Mayo Clinic.

Nothing has been advanced in the way of a satisfactory explanation of the cause of these tumors and so far it is a matter of speculation. The symptoms as described by different observers are various and indefinite. As would be supposed, in the malignant type they are more severe and of shorter duration. In the main, especially in the larger tumors they are the symptoms due to pressure upon other organs.

Dull aching pain, dragging sensation, backache, colic, constipation, diarrhoea, disturbances of digestion, parasthesias, abdominal enlargement, urinary frequency and loss of weight and strength, especially in the malignant variety, have all been described by various authors as accompanying these tumors. Lipomas undergoing degeneration and necrosis may give rise to fever, malaise and other toxic symptoms.

Magoun relates one interesting case of left sided tumor in the upper abdomen in which melena and hematuria were prominent symptoms. The hemorrhage together with secondary anemia lead to a diagnosis of splenic anemia. Many cases complain of no symptoms except the slight inconvenience due to the presence of the tumor, especially when large. Retroperitoneal tumors may be located on either side, the left being the most common. They may be high up in the kidney region or low in the pelvis. They may be attached in the mid line and may fill almost the entire abdomen; they usually have a broad sessile base although some, particularly lipomas, may grow forward and through gravity develop a long and somewhat slender attachment with a marked degree of mobility. The character of the tissue from which they spring may also be a factor in determining their mobility. Fibrous tumors and sarcoma are usually quite firmly fixed; those developing from areolar and adipose tissue are movable.

Of the types of tumor found the lymphosarcoma is the most frequent and is usually most malignant. The large and small spindle cell with a greater or less degree of fibrous tissue are next common, while the large round cell and giant cell are very rare, only a few cases having been reported. Any of the benign forms appear to be

*Read before the Wisconsin Surgical Society, La Crosse, May 23-24, 1923.

capable of undergoing sarcomatous change. The benign forms may be pure lipomas or fibromas, fibromyomas, or mixed fibrolipomas and all of them may contain myxomatous areas.

Diagnosis: Many of these tumors are not diagnosed except at operation or autopsy: in the female they are frequently mistaken for ovarian cysts or uterine tumors especially if attached low in the pelvis. They may be diagnosed as kidney tumors, hyper-neoplasia, pyonephrosis, or perinephritic abscesses. Splenic enlargement, pancreatic cysts, tuberculous lymph glands and sometimes pregnancy are some of the conditions from which they must be differentiated. Urological examination will usually exclude kidney lesions: absence of other characteristic symptoms will make it possible to rule out tumors of other abdominal organs. In many cases positive diagnosis is impossible and can only be made after exploratory incision.

The surgical removal of the malignant type of these tumors is often impossible and even some of the benign, on account of their broad attachment, often very vascular, cannot be removed successfully. On the other hand some of the lipomas shell out with considerable ease.

My first case was admitted to St. Joseph's Hospital in October, 1919. Patient was a female, 39



CASE No. 1

years of age and at the time was in the beginning of the ninth month of pregnancy. She was suffering from headache, mental dullness, and had a diminished urinary output. She had a large semifluctuating tumor filling the left loin and abdomen pushed back by the gravid uterus causing enormous bulging in the back and loin. She complained of a dull aching pain in the left back.

She also complained of attacks of colic in the upper abdomen resembling gall bladder colic.

Past history: At the age of nineteen she had an attack of left hemiplegia, later she became paralyzed on the right side. She was confined to bed for eight months. She had borne six children, no miscarriages, labors were normal but slow. A small lipoma was removed from her left shoulder one year previously. Her urine contained a small trace of albumen, no casts, pus or blood. Com-



CASE No 1

bined renal function test first hour 25%, quantity 450 c.c.. Second hour 35%, quantity 360 c.c. total quantity for 24 hours 1620 c.c.. Blood count 3,960,000 reds, 11,000 whites, 75% hemoglobin. Differential count normal. Blood Wassermann negative. Physical examination otherwise normal.

Impression at the time without further urological examination was that she was suffering from a dead pyonephrotic left kidney with fairly good function in her right kidney. She was referred to the obstetrical division and ten days after entrance was delivered of a normal male child, weight 8 lbs.; convalescence was uneventful and two weeks after delivery she left the hospital with instructions to return later for further examination. She was readmitted to the hospital in January, 1920, three months later; examination then revealed a large, smooth, semifluctuating tumor filling almost the entire left loin and abdomen. The upper margin was well up beneath the ribs anteriorly, the tumor projected backwards causing a bulging below the 12th rib posteriorly. She was cystoscoped and both kidneys catheterized. Divided function gave thirty per cent pthalein in one half hour on either side. Pthalein was given intravenously. Pelvic examination showed a normal size freely movable uterus. Her blood count was normal. It was thought that we could exclude the kidney and spleen. On account of the high position of the tumor, ovarian cyst was also excluded. Diagnosis was finally made of probable retroperitoneal tumor and she was submitted to operation. Incision was

found that the tumor was retroperitoneal. Incision was then carried back over the kidney region up to the 12th rib. Peritoneum was pushed forward, fascia divided and the tumor was shelled out with great ease except for its posterior surface which was strongly attached with fibrous tissue to the muscle near the spine. Fibrous tissue was divided without hemorrhage and the tumor easily begun at the outer border of the left rectus and small opening made in the peritoneum. It was



CASE No. 2

removed. A small normal kidney was found crowded to the outer upper side of the tumor. The wound was closed without drainage. She made an uneventful recovery and left the hospital fifteen days later. She has since remained well.

The tumor was smooth, ovoid, somewhat lobulated and weighed about 9¾ pounds. When cut it gave the appearance of being made up of fatty tissue of an extremely pale color. The pathologists reported it a fibromyxoma lipoma.

N. H., male, age 61, watchmaker, admitted to hospital April 5, 1921. Family history not important. Chief complaint: about six years previously he had noticed a lump, the size of an orange, deeply seated in the left abdomen; this gradually increased in size and at the time of entrance occupied most of the abdomen. He complained of severe pain and a feeling of pressure in the region of the bladder with frequency of urination and burning. He also had pain in the left testicle and left leg. His appetite and digestion were good, but he suffered from constipation. His past history had no bearing upon his case. Upon entrance his temperature and pulse were normal, blood pressure 120-80. Nutrition: well developed and nourished with a good color. His reflexes were normal. Chest: his expansion was fair, percussion note hyperresonant, breath sounds normal, no rales or friction rubs. Outline of heart appar-

ently normal, sounds normal, rate and rhythm normal. Abdomen: large, hard, somewhat movable mass occupying most of the abdomen, more nodular on the left side. It appeared to be jammed into the pelvis where it was quite firmly fixed. His urine was normal upon repeated examination except for a faint trace of albumen. Blood count, 5,695,000 reds, 6,500 whites, 75% hemoglobin. Wassermann negative. It was decided that he had retroperitoneal tumor which on account of its slow growth was probably benign in character. He was submitted to operation. Incision was made in the mid line and a large nodular firm tumor disclosed filling a good share of the abdomen. The peritoneum was split over its surface and it was possible to shell out most of the tumor without difficulty. It had a broad, firm and very vascular attachment posteriorly which when divided was accompanied by considerable hemorrhage. The lower part of the tumor was crowded tightly into the pelvis and in this region was somewhat necrotic. The wound was closed without drainage. Patient did well for the first three days when his abdomen became distended, his urinary output became small in amount and contained considerable albumen and casts (blood and granular). He finally devel-



CASE No. 2

oped coma and died on the sixth day. Autopsy was refused.

The tumor was firm and nodular and in the area of pressure from the pelvis was somewhat necrotic.

The pathological report was fibro myxoma becoming sarcomatous with areas of necrosis.

Summary: Retroperitoneal tumors are rare but they occur with sufficient frequency so that they must be kept in mind as a possibility whenever abdominal tumors are encountered.

Early removal is important because of the fact that many of the primarily benign tumors later become malignant.

SUB-ACUTE BACTERIAL ENDOCARDITIS.*

BY WALTER L. BIERRING, M.D.,

DES MOINES, IOWA.

This paper is based on a study of eleven cases of sub-acute bacterial endocarditis observed during the past two years, and a comparison with that of other writers on the same subject.

The first writer to present the subject of chronic endocarditis in comprehensive form was Osler in his Goulstonian lectures in 1885, but in a later contribution in 1908 he gave a classic clinical description of ten cases seen in the preceding twenty years, of chronic character, not especially marked by chills but with a protracted fever, often not high, of four to twelve months' duration, and remarked that he had not noted cases of this particular type at the time of his Goulstonian lectures in 1885.

In 1909 Thos. J. Horder published an extensive resume of microbic infective endocarditis with an analysis of 150 cases observed during the preceding eight years, and in this collection there were eighteen examples of the description regarded as typical of the subacute bacterial form.

H. Schottmueller published five cases of so-called endocarditis lenta in 1910, which corresponds to the type under consideration. In recent years a number of French writers have added further contributions, notably Roger, Vaques, Debre, Fiessinger and Janet, usually under the title "endocarditis lenta."

In American literature the names of Billings, Rosenow, and Libman are most familiar in connection with the subject, and of these Libman has probably made as extensive contributions as are recorded anywhere.

*Read before the annual assembly of the Tri-State District Medical Association at Peoria, Ill., Oct. 30, 31, Nov. 1 and 2, 1922.

Libman and Celler in 1910 published a study of 43 cases seen in eight years, with a duration of four to eighteen months; in March, 1917, he, Libman, referred to a study of 182 cases with 65 autopsies, and in 1920 he stated that he had seen 300 cases of this supposedly unusual malady.

At the meeting of the British Medical Association in 1920 the Medical Section devoted an entire session to the consideration of sub-acute bacterial endocarditis, and the discussions as published in the British Medical Journal, Aug. 28, 1920, constitute a comprehensive estimate of present knowledge of the subject.

In defining the term sub-acute bacterial endocarditis it should be stated that it does not concern that form of endocarditis which accompanies acute and sub-acute rheumatism. Whatever the causative micro-organism of acute rheumatism may prove to be, it is generally agreed that the vegetations of rheumatic endocarditis and the blood stream are bacteria free, which is quite different from the group of cases under discussion.

Differentiation must also be made from that form of endocarditis often termed acute ulcerative or acute malignant, which is but one part of an acute pyemia, where the heart affection is secondary to, rather than responsible for, the systemic septicaemia. The clinical course is quite different, the duration of the disease varying from a few days (fulminating type) to a few weeks, and the infective micro-organism is much more virulent.

This form of endocarditis is also not to be confused with that type occurring as a terminal event in chronic disease, which is more often latent and only recognized at autopsy.

After excluding these three forms there remains a group of cases that have been described under the various terms of chronic infections, chronic ulcerative, chronic malignant, and chronic septic endocarditis, as well as endocarditis lenta, and for which now the term subacute bacterial endocarditis has been generally accepted.

The discussion of the subject will be considered under the following four headings—

1. Etiologic significance of a pre-existing valve lesion.
2. Types of infection and infective foci.
3. Characteristic clinical picture.
4. Prognosis and treatment.

1. That a pre-existing valvular lesion is essential for the production of this form of endocarditis

is evident from the history of all recorded cases. The chronically damaged valve constitutes a predisposing site upon which the new infection is engrafted.

In one-half of the recorded cases a history of acute or subacute rheumatism is noted as the cause of the previous valve lesion. Syphilis and other infections are much less frequent. Arterio sclerotic valves have been observed as the basic lesion, and in a limited number of cases (as in one of ours) the primary valvular defect has been of congenital origin.

Of the eleven cases concerned in this report, the aortic valve was involved in four instances, the mitral valve in six, and in one case the pre-existing lesion was a patent ductus arteriosus of congenital origin.

2. In 90 to 95% of the reported cases distinctive bacteria have been isolated from the blood stream, which in most instances have been classed as some type of anhemolytic streptococcus. This was the micro-organism associated with nine of the eleven cases in our series.

Libman reports an anhemolytic streptococcus mitis as occurring in 95% of his cases, and the influenza bacillus in the remaining five per cent. Because of this constant occurrence Libman is inclined to substitute the term "subacute streptococcus and influenzal endocarditis" for the disease instead of "sub-acute bacterial."

In the earlier writings like that of Lenhartz in 1901 when blood cultures were first being made, some type of streptococcus was usually found to predominate.

That other micro-organisms as the staphylococcus, pneumococcus and gonococcus may also be causative agents has been clearly demonstrated. Recently Thayer reported 22 cases of prolonged endocarditis due to the gonococcus. Whatever the type of causative micro-organism may be, it has the common characteristic of being of low virulence, with no tendency even in its embolic manifestations to pyogenic effects.

All ages are liable to the disease, but it is rare in childhood and in old age, one-half of the cases reported occurred in the second and third decade, with a somewhat greater frequency in males than in females.

Between the production of the original valve affection and the later re-infection there is often an interval of several or many years of good

health. To what extent the rheumatic history, or the pre-existing valve lesion itself, produces a predisposition to subsequent infection is not easily determined.

In the eleven cases of this series, the following infections were connected with the onset of the subacute endocarditis: acute respiratory resembling influenza—seven, acute cystitis and pyelitis accompanying hypertrophy of prostate—one, infective endometritis and salpingitis—one, acute cholecystitis—one, and acute enteritis in one case.

3. The clinical course of subacute bacterial endocarditis is so distinctive as to permit its easy recognition and justifies its classification as a definite type of endocarditis.

Of the eleven cases referred to in this paper, the shortest course was 14 weeks, and the longest eight months, the last named patient going to bed on Christmas day, 1921, and dying Aug. 26, 1922.

The onset is usually insidious and it is often difficult to determine just when the disease begins, this being equally true of the hospital patient who often does not come under observation until late, as well as the private patient who is in close contact with his physician.

The onset symptoms noted are a feeling of lassitude, vague pains, loss of appetite, chilliness, vertigo, headache, cough, and less often symptoms pertaining to the heart affection.

The distinctive feature of all cases is the fever, which is a constant accompaniment. Because of the insidious onset it is not improbable that patients go about during the early stage attending to their regular duties and not realizing that they are sick.

It is during this early stage that the thought of tuberculosis, subacute rheumatism, mild sepsis, malaria, or typhoid infection is often considered.

In explanation of the clinical symptoms the following is suggested—

1. Those due to the infection and resulting toxemia producing fever, anemia, exhaustion and enlarged spleen.

2. Those due to the endocarditic changes such as the breaking off of particles from the affected valves and endocardium, leading to petechiae, tender cutaneous nodules, clubbing of fingers, embolism, purpura, later renal phenomena, while definite cardiac symptoms are singularly rare.

Although fever is a constant phenomena it is very variable, being often irregularly intermittent,

again intermittent, some cases have little or no fever, again appearing in waves remaining at 103-104 for weeks, and towards the end of the disease it may be absent for several weeks. Sweating is frequently noted during the early period of the disease.

As clinical signs of renal disease appear a rise in temperature results, complications such as embolic phenomena cause a sharp rise, chills also occur with embolism, and again with splenic infarctions.

Certain forms of therapy influence the fever curve as intravenous injections of salt water, drugs like cacodylate of sodium, blood transfusions, all of which may produce a sharp rise, and again cause a drop to normal for several days, the latter often arousing false hopes as to the efficiency of the therapeutic remedy.

Splenic enlargement is a common symptom and the palpable spleen is an early distinctive clinical sign of this septicaemic condition.

As embolic infarctions occur in the spleen, chills and sudden rises of temperature develop and this occurrence also explains the acute pains frequently noted in the left side of the chest and abdomen. With the development of infarcts the spleen usually undergoes some increase in size and its palpation becomes more painful.

Blood changes are a constant feature but vary greatly in nature; although anemia is a distinct characteristic of this disease, and the reduction in hemoglobin and red cells is often very marked, yet the true blood picture of pernicious anemia rarely develops. The leucocytes may be normal in numbers, again increased, or below normal. In the subnormal counts the lymphocytes are proportionately increased, while in the cases with leucocytosis the polymorphonuclears usually predominate.

The anemia is probably due to the destruction of the red cells by the circulating streptococci even though they are presumably anhemolytic in nature, and it is also likely that the systemic infection and toxemia affect changes in the bone marrow and thus tend to lower the functional capacity of the blood making structures.

The cutaneous phenomena are particularly characteristic and easily of greatest diagnostic import. They may be presented as changes in color, the appearance of petechiae, erythematous eruptions, purpura, and painful cutaneous nodules.

The pallor of the face is a striking feature, to which is added a tired look, and as later a pigmen-

tation is manifest it gives to the face a brownish tinge usually referred to as "café au lait" color.

Purpura so frequently seen in severer types of septicaemia is comparatively rare in this disease. Erythematous rashes are likewise rather infrequent. Petechiae on the other hand are a more important symptom and are present in 80% of the recorded cases. They are usually discreetly distributed and only during the terminal stage of the illness do they become more extensive, resembling the petechial eruption peculiar to other severe systemic infections and intoxications. These petechiae are usually of short duration and as they fade leave a yellowish brown stain.

By far the most interesting of the skin phenomena are the tender or painful nodes first described by Osler, and often referred to as "Osler's nodes" which are seen in 50% of the cases. According to Osler's first description these nodes appear at intervals, more frequently on the tips of a finger, also on the pads of fingers and toes, consisting of slightly swollen areas varying in size from that of petechiae to 1½ cm. in diameter, of vivid pink hue, with slightly opaque centers. They are distinctly painful, particularly to the touch.

They are not hemorrhagic and the area is not pigmented after they disappear. The best explanation offered is that they are caused by the lodgement of minute emboli near the skin.

It is a common remark of the patient at the morning visit: "Doctor there is a new tender red spot on the finger or toe (as the case might be) this morning."

These principal cutaneous phenomena are to be distinguished from the lesions on the palms of the hands, inner sides of wrists and soles of the feet found in more acute forms of endocarditis.

Another interesting symptom is clubbing of the fingers which is probably frequently misinterpreted. The sign is commonly believed to be a part of chronic valvular disease or congestion. While this is often true of congenital heart disease, in the adult affected with a chronic valvular lesion, the development of clubbed fingers is more likely to indicate an infection.

Aside from the embolic phenomena associated with certain skin lesions, vascular embolism constitutes one of the main clinical features of the disease. It occurs either as pure embolism or embolic aneurisms.

The splenic infarctions so frequent in this dis-

ease as well as the terminal glomerular nephritis are further expressions of embolism.

Pain as a symptom occurs in various forms. Of these tenderness over the lower end of the sternum, first noted by Libman in 1910, is distinctive of this disease. It is not necessarily a part of the attending anemia, because it is noted before anemia is manifest.

Pains may be felt in other bones, as the sacrum and ischium. These are often indefinite and only occasionally localized in a particular bone, joint or muscle area.

Headache is a frequent symptom. Add to these the painful cutaneous nodes and we have a series of painful symptoms that readily direct the diagnosis in various channels.

Except for the fundamental significance, the cardiac symptoms are among the least prominent of all. The presence of an existing valve lesion is very helpful in determining the diagnosis of the disease under discussion, but it is unusual for any new murmurs to develop in the course of the disease. Often they become louder, again they undergo variations during the illness, being louder at one time than another; tachycardia may occur with the increase in fever and general toxemia, but other pulse changes as arrhythmia are rare. Electro-cardiogram changes have not been noted. Pericarditis is rare. The usual signs of myocardial insufficiency are not manifest as a rule until the later stages of the illness.

Renal symptoms become manifest through changes observed in the urine. Soon after the fever is well established an albuminuria is frequently noted, which is often transient, later in the disease red blood cells appear in the sediment, and with their appearance the albuminuria becomes more marked and hyaline and granular casts are present.

The studies of Gaskell and Baehr suggest that acute glomerular nephritis is characteristic of sub-acute bacterial endocarditis, and as such is usually a part of the later period of the disease and of unfavorable prognostic significance.

The patient usually succumbs as a result of the progressive anemia and exhaustion, incident to the continued septiciemia, plus the development of such complications as embolism, particularly inter-cerebral with cardiac failure and disturbed renal function, so that pulmonary and visceral congestion with uremia and coma frequently closes the scene.

In summarizing the clinical picture, it is clearly evident that in this group of cases, the symptom complex is of such constancy as to justify the classification as a separate disease.

The insidious onset, long continued fever, during which time, except in the terminal stage, the patient does not seem critically ill, a pre-existing valve lesion, enlarged spleen, anemia, clubbed fingers, characteristic cutaneous phenomena as the painful nodes, and finally the further symptoms of embolism and acute glomerular nephritis, with the demonstration of anhemolytic streptococci or similar micro-organisms in the blood stream constitutes a picture that should be readily recognized by simple bedside observation.

The pathological anatomic changes noted at autopsy are a further criterion that we are dealing with a disease process different from other forms of endocarditis. Aside from the changes incident to the pre-existing valve lesion there is a tendency for the process to extend downward and involve the wall of the ventricle in the case of aortic lesions and extension on the wall of the auricle, with involvement of the chorda tendinae in connection with mitral lesions.

The mural endocarditis is often more extensive than that affecting the valve surfaces, which probably accounts for the fact that auscultatory phenomena change so little during the course of the disease.

This is a distinctly fatal disease, and but a comparatively small number of recoveries have been reported. Libman reports four recoveries, and T. J. Horder about the same number. In our series of eleven, there is one patient who has been fever and bacteria free for seven months, so that a recovery may be considered.

Cases have been reported that succumbed to exhaustion and embolic complications after the fever had subsided, and the blood was bacteria free.

Libman has reported definite healing changes observed postmortem in affected valves, and the mural endocardium, so that evidence prevails that healing of the diseased area does exist.

In one of our cases the autopsy revealed a distinctly healed area on the mural endocardium, and could be related to a seven weeks' course of fever experiences three years before the last illness.

Since this is distinctly an infective process and in many instances due to a particular micro-organism, it is but natural that some form of immunal

therapy should be considered. Unfortunately all forms of vaccine treatment have not been attended by any appreciable results. It has been proposed that the transfusion donor be primarily immunized with the causative streptococcus before the blood transfusion is made, but of this method no extensive results have as yet been published.

Capps has recently reported four recoveries in a series of eight cases to the extent that the four patients were bacteria and fever free for periods varying from six months to two and a half years, as the result of the long continued use of arsenic in the form of cacodylate of sodium. In the one case of apparent recovery in our series, we are inclined to attribute the result to this remedy which was used intravenously in rather large doses.

Two reasons are given for the use of arsenic in this form of septicemia: first, it is known that arsenic is retained for a long period in the sera and other body fluids, and second, laboratory demonstrations indicate that the growth of low virulent streptococci are rapidly inhibited by weak arsenical solutions. It is therefore a form of therapy that deserves a good trial in every instance.

Considering the great mortality of the disease, the question of preventive measures for which Horder made a strong plea in his early paper of 1909, should receive prominent consideration. If there was a way to prevent acute rheumatism, most of these cases would not occur. Libman states that three-tenths of the deaths in cases of valvular disease, as shown by the records of Mt. Sinai Hospital, New York City, were due to the superimposed streptococcus and influenzal endocarditis. Noting further the tendency to attack principally young adults and mainly the individual with heart disease, who as yet has shown no signs of cardiac failure, we recognize the great role of prophylactic measures in this condition. It clearly indicates that every young adult with valvular disease should be rid of all ascertainable focal infections as contained in teeth, tonsils, sinuses, gall bladder, appendix, uterus and adnexa, and urinary tract. Furthermore the need of keeping vitality at its best, developing immunity in every possible way and the prevention of any acute infections should always be borne in mind.

Careful attention to these facts in cardiac clinics, dispensaries, and in daily practice, will do much to control this disease.

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SOME CHEMICAL BLOOD CHANGES IN CHRONIC ALCOHOLISM.

Animals were used exclusively in the studies made by Franklin R. Nuzum, Santa Barbara, Calif., and George D. Maner, Los Angeles (*Journal A. M. A.*, Aug. 11, 1923). A definite acidosis was constantly present in those animals in which chronic alcoholism developed. At the same time there was an increase in the non-protein nitrogen and urea nitrogen of the blood. This increase averaged approximately twice the normal amount of these substances. Animals that developed a marked acidosis at the outset of the experiment, and which continued, developed chronic alcoholism more quickly and often died much more quickly than animals in whom the acidosis was not so marked. The latter group evidently had a greater tolerance for the alcohol intoxication, and the experiment could be carried on for a considerably longer time. The acidosis may have interfered to some extent with the ability of the kidney to excrete the nonprotein nitrogen and the urea nitrogen, or, as a result of a continued feeding of alcohol, the metabolism of the animal may have been so altered as to cause an increased amount of these substances in the blood. Histologic study of the kidneys demonstrated little deviation from the normal. The phenolsulphonephthalein output was practically unaltered in every instance. It would seem that the factor of acidosis is especially important in cases of both acute and chronic alcoholism, and it must have an important etiologic role in the gross tissue changes and in the edema of delirium tremens.

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"LET GEORGE DO IT."

Under this head we list each month definite offers of service available to our readers—the members of the State Medical Society of Wisconsin. Additions will be made from month to month but if you have a need not covered here your Secretary-Managing Editor will do his best to fill your order. Address J. G. Crownhart, 558 Jefferson St., Milwaukee.

1. PACKAGE LIBRARIES are now available on Cancer, Schick Test, Vaccination, Periodical Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, and Control of Communicable Diseases. Address Package Library Dep't., Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. MEDICAL BOOKS will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. MAGAZINES—See price list sent by mail.

4. PHYSICIANS' EXCHANGE COLUMN is open to all members without charge.

5. A NEW SERVICE will be listed here in December.

EDITORIALS

CANCER CAMPAIGN.

In years past we have seen a week's nation-wide campaign to give the laity vital information concerning Cancer. This year the American Society for the Control of Cancer has decided to make the

campaign by districts, thus making possible more intensive work.

The Society announces that the 1924 campaign in the Lake district, including Wisconsin, will be made from February 15th to March 14th next. We call these dates to the early attention of our members for such a work needs and is entitled to have the support of every physician in Wisconsin.

WORKS WHILE YOU SLEEP.

Through the kindness of a layman we have just been informed of a so-called "cure" by one who has been too modest to make his efforts known to his fellow practitioners.

Dr. F. C. Werner, Rush '89, Ph. B., Watertown, Wisconsin, is the "Patentee of the Galvano-Necklace." This is sold for use in the treatment of goitre by the Cosmas Pharmacal Company, also of Watertown, of which concern Doctor Werner is "Consulting Physician" and "President."

"The Galvano-Necklace is the result of constant efforts on the part of the inventor (Dr. F. C. Werner, patentee) to find a treatment which would retain all the beneficial effects of the commonly employed galvanic battery, but without any of the undesirable features.

"It consists of a necklace having between the beads small copper and zinc discs connected metallically in a loop to surround the goitre; the cerate to serve as an electrolyte.

"Worn while you sleep. * * * So, every morning when you awake you will know that you

are in better health than when you retired the night before."

Isn't it great to be able to assure your patients, by mail, that every morning, day by day, they will be better in every way than the night before?

JUST A SUGGESTION.

Wisconsin stands twentieth among her sister states in the number of subscribers to *Hygeia*. It should be first.

We need only point to the "Health Repeal" bills brought before the last legislature to justify the statement that there is urgent need for thousands of subscribers to *Hygeia* in our state. If lay education is the ultimate solution to the problem of securing and maintaining adequate laws for public health protection, (and we believe that to be a fact) then we can suggest no better medium than *Hygeia* for giving the people information about health and disease to which they are entitled.

There is probably no subject in which the laity have a greater interest than health. And we venture that there is no subject concerning which more erroneous and sensational material is printed. In *Hygeia* we have a publication consecrated to the project of placing before the laity vital and accurate information regarding health and disease.

As a "Journal of Individual and Community Health" *Hygeia* has hit its stride with the November number. Its articles are well written, well illustrated, and the subjects are well selected. The reading of this magazine by the laity can not help but give them a better understanding of the field and progress of medical science.

Hygeia will largely be read only as it is brought to public attention by physicians—the public's health advisors. And incidentally we know of no more suitable holiday gift than a subscription to *Hygeia*—a gift extending over twelve months for three dollars. Send in your gift list today and your secretary will see that the first number reaches the recipients at Christmas time with a gift letter.

AS OTHERS SEE US

MEDICAL AND SURGICAL CURES.

A curious thing is happening in Chicago. Three thousand surgeons are in convention, to speak soberly to one another of what they have learned lately; but when the new truth reaches the public, its guise is not sober.

Here is a surgeon who has traveled two thousand miles to attend the congress. He visits those clinics where he may learn of the latest developments in his specialty. Watching another surgeon operate, he knows that the man is not doing a thing which is entirely new. He knows that other men have been doing this sort of thing for years, and that this man who is now at work has added an inch of truth to the miles of truth which his predecessors have explored.

But the public is incapable of such judiciousness. In the public's eyes, the last discoverer eclipses all who have gone before him. The public hears of cures, but the public is incapable of comprehending the careful language the discoverer uses when he explains the nature and extent of his cure.

Most cures are only partial. A judicious man should regard them with the same deliberation which a physician displays. Rightly enough, the burden of proof devolves upon the man who announces a new cure.

The sick man should not rush off for the latest cure as soon as it is announced. He should seek competent advice. Perhaps he will find that the cure does not strike at the cause of the disease, but that it relieves the symptoms. Even so it may prove of immense benefit.

The sick man should also note that there are often many causes for a single disease. Perhaps he will find that the latest cure removes one cause but not the others. It may not cure the cause which is present in his case. In that event, if he took the cure he might soon be listed among the persons who were denouncing the cure up and down as a miserable fraud.

Here are three thousand surgeons who are doing their best. They do not speak glittering words, with the ease of charlatans. They speak soberly. Let us hear them soberly, as we would hear a man on any other business.—*Chicago Journal of Commerce*.

CONGENITAL OBSTRUCTION OF THE LARYNX AND PHARYNX.

Six cases are reported by Gordon B. New, Rochester, Minn. (*Journal A. M. A.*, Aug. 4, 1923), which illustrate different types of congenital obstruction of the larynx and pharynx, a rare condition, which may be due to various causes. Although the causes lack similarity, one common symptom, respiratory obstruction in the new-born infant, was present in all of them and has formed the basis for the present study.

THE JOURNAL CLINIC

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The University of Wisconsin.

UNIVERSITY OF WISCONSIN MEDICAL SOCIETY.

Regular Meeting of October 16, 1923.

I. ABSTRACTS FROM EUROPEAN DIARY.

BY P. F. CLARK, M. D.

Dr. Clark gave a most interesting and entertaining discussion of his six months sojourn in Europe. His stay in Italy was, in the main, cultural in intent but he did find time to comment on the poor sanitation of Italy at large, and the poverty in her laboratories. A stay of some length in Lausaunc enabled Dr. Clark to establish close connection with the laboratories of Professor Galli-Valerio. The later's belief in an infectious water-borne agent as the cause for goitre was most interesting. A series of hospitals in this neighborhood were especially equipped for heliotherapy, for the treatment of surgical tuberculosis and their results were reported as most promising.

Particular stress was laid on the efforts of the League of Nations at Geneva, Switzerland, in controlling health methods of international importance and America's active part in these efforts. Not only are such private interests as the Rockefeller Foundation concerned in this effort, but representatives of the United States Public Health Service are leaders in this movement of world wide interest. Control of endemic foci, standardization of biologic products and the interchange of vital statistics as well as health officers, are some of the projects of this central commission.

Arriving in Paris at the time of the Pasteur centenary given under the auspices of the University of Strassburg, Dr. Clark had a most delightful experience as a guest of the French Government. The ceremonies in the Sorbonne, at the Ecole Normale, and at the Pasteur Institute were especially impressive. The first named was particularly dramatic since representatives from practically all nations, except Germany, gave tribute to Pasteur. Doctor William Welch of the Johns Hopkins University was the American speaker. At the Pasteur Institute the museum devoted to Pasteur's apparatus and other items of interest was

viewed. At the American University Union of Paris a notable group of individuals were gathered, and Dr. William Thayer of Baltimore gave an address on the influence of Pasteur on medicine.

Dr. Clark discussed, at some length, the medical work in Paris, commenting particularly on the absence of full time teaching, indeed on the rather cursory attention paid by the medical leaders there to their laboratory work. He was particularly interested in the use of an antiserum for poliomyelitis, consisting of an emulsion of the cords of affected animals. The fact that this emulsion neutralizes the virus in vitro had lead Pettit at the Institute to use it in human subjects. The work of Calmette on a vaccine of tubercle bacilli was related, the virulence of the bacilli having been attenuated by a period of three years culture on bile medium. In vaccinated animals experimental tuberculosis shows slower development than in controls.

In Brussels, Dr. Clark was charmed by the attention and consideration shown him by Bordet of the Pasteur Institute. The perseverance and tenacity of Bordet especially impressed him. The friendly attitude in the laboratories was in strange contrast to the lack of physical organization. However, there was a tendency in all points to correlate the laboratory and practical functions of the attending men. While here, Dr. Clark worked on the precipitation method of titrating diphtheria antitoxin.

Leaving the Continent Dr. Clark spent some time in Cambridge, Oxford and London. He was especially impressed by the hospitals of London and their out-patient departments—St. Bartholomew's, St. Mary's, Guy's, and the London Hospital. The Wellcome Institute of Tropical Medicine and the College of Surgeons were visited. Delightful association with Sir Almoth Wright repaid Dr. Clark for his visit to St. Mary's Hospital. Of his charm of manner and brilliant approach to his problems, Dr. Clark was most appreciative. It was also interesting to learn that the late Sir William Osler's library of 8,000 volumes had been bequeathed to McGill University. In Liverpool Dr. Clark attended the session of the British Medical Association.

II. ROENTGENOLOGY IN CHINA.

BY P. C. HODGES, M.D.

Dr. Hodges introduced his discussion by quoting from Hume the cause of the flooding of China with ill-fitted physicians. It appears that for centuries

if the male members of the family were not qualified for the position of mandarin, that of physician was next in line. Dr. Hodges stated that mention of dissection of the human body in China was found 250 B. C. Since none has been legalized by law until three years past from that early period, an obvious cause for the decline in medicine in China is seen, and in the main a retrogression and recourse to sorcery is the rule. However, official China encourages the introduction of Western medicine but the real solution for their problem in medical education is the training of Chinese instructors to teach Chinese students in China. Dr. Hodges gave some appalling figures contrasting the advantages of medical education here as compared with China. He outlined the advantages of medical education now offered by American Colleges in China.

Dr. Hodges is most interested in the Pekin Medical College where he is in charge of the roentgenology department. The staff is completely full time, and their plan of following up instruction by post graduate courses and by sending material assistance to more remote hospital centers is very far reaching in its possibilities.

Dr. Hodges outlined some of the difficulties entailed by variation in currents and by inability to obtain unbroken parts of X-ray apparatus in China. He stated that there had been but two or three adequate X-ray plants in China prior to three years ago, but through his personal efforts fourteen new plants were established at various points in Northern China in the past year. An apparatus with a wide range of utility as to available current was developed by him. The military activities of the Chinese in the past few years had lent some variety to his experiences in Pekin, and he told of one particular campaign in which a field apparatus had been devised by him after mobilizing his stationary apparatus and supplying the current from the old type United States Army Delco gas engine.

Returning to America by way of Europe, an interesting course in deep therapy was provided by Dr. Friedrach. In addition he told of an interesting experience in visiting Roentgen's old laboratory at Wurzburg, where every courtesy was extended to him by Professor Wagner, the successor of Roentgen.

Dr. Hodges' talk was illustrated by a series of interesting slides, not the least impressive were those of Roentgen's laboratory; and the famous episode of the door through which the rays pene-

trated, leaving the lines accounted for by the white lead behind the moulding was related.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

THE DECLINE IN CEREBROSPINAL MENINGITIS.

BY H. M. GUILFORD, M.D.,

STATE BOARD OF HEALTH.

A tabulation of death rates from cerebrospinal meningitis (all forms) in Wisconsin and in the registration area of the United States for the last fifteen years shows a marked drop. This fact seems to have been given little or no notice in medical or public health literature although a glance at the tables gives evidences that the decline is a conspicuous one.

CEREBROSPINAL MENINGITIS.

(All forms).

Year	Wisconsin		Registration Area U. S.	
	No. of Deaths	Rate per 100,000	Rate per 100,000	Rate per 100,000
1908	465	19.7	19.4	19.4
1909	382	16.2	14.2	14.2
1910	478	20.5	14.2	14.2
1911	437	18.5	12.3	12.3
1912	280	11.7	11.5	11.5
1913	290	12.0	10.4	10.4
1914	209	8.6	8.8	8.8
1915	197	8.0	7.4	7.4
1916	213	8.6	7.1	7.1
1917	176	7.0	9.2	9.2
1918	259	10.2	9.9	9.9
1919	153	6.0	6.5	6.5
1920	151	5.7	6.0	6.0
1921	123	4.6		
1922	227	8.1		

We have begun these tabulations in 1908 because in that year Wisconsin improved its methods of recording death certificates and thereby the Census Bureau permitted it to be classed as belonging to the registration area of the United States. All forms of meningitis are included in the classification except tubercular meningitis which has a separate classification.

The cause of so gratifying a drop in so dreaded a malady requires explanation and we may speculate upon it with reasonable accuracy. The Census Bureau of the Commerce Department of the United States has made a more definite classification than Wisconsin. It has further divided its totals on all forms of the disease into simple meningitis and cerebrospinal meningitis (undefined) and since 1912 it has re-divided the latter classification into cerebrospinal meningitis (undefined) and cerebrospinal fever. This tabulation shows that from 1912 to 1920, inclusive, there have been no very marked declines in the cerebrospinal fever, or what is the same thing, the epidemic meningeal form. In fact in 1917 this form almost doubled its totals, due, of course, to the mobilization of soldiers and the camp epidemics. It also continued high during 1918. In this same Census Bureau tabulation the classification of cerebrospinal meningitis (undefined) shows a progressive drop from 1912 to 1918, and then in the latter year nearly doubles itself only to drop back towards the former level. The presence of the influenza epidemic is the plausible reason for the increase. The most marked decrease, according to the Census tabulation has been in simple meningitis, which declined from a total of 6,304 deaths in the registration area in the year 1908 to 2,654 deaths in the year 1920. We may, with consistency, apply these same facts to the decline of meningitis in Wisconsin, an exception being that there was no increase in the totals of meningitis in 1917, which indicates we were not hit by the epidemic involving the military camps. Wisconsin was, however, subject to a marked rise in 1918 when the influenza appeared and again in 1922, a year which shows 450 deaths from influenza. In seeking for the reasons of this great decline in simple meningitis we may consider other diseases whose mortality has markedly dropped during the same period covered by the table. We are confronted by the downward progress of typhoid fever during these same years. As the early symptoms of typhoid fever, especially in children, often simulate a meningitis and a true meningitis may complicate this disease, a part of the decline in meningitis may be in reality a result of the lessening of typhoid fever. Infantile enteritis is also another disease that has conspicuously declined. In the registration area from 1910 to 1920 the enteritis mortality in children under two years of age

fell from 77.5 per 100,000 population to 44 per 100,000 population. As the total meningeal complications would be expected to keep pace with the downward progress of the disease, we have here another reason why meningitis may have declined. Also during the same ten years the general death rate in children under five years of age in the registration area fell from 27 deaths per 100,000 population to 21.7 in 1920, factors in this being a lessening in the deaths from acute bronchitis, diphtheria and some other diseases. The fact that epidemic meningitis is curable by a serum is evidently a small factor as total deaths from this form of the disease are relatively light.

To sum it up we take it for granted that the improvement in the death rate from meningitis (all forms) is a part of the general lessening in the deaths from a number of preventable diseases and also from the decline in the infant death rate. We may likewise assume that the prevalence of meningitis outside of the epidemic form is only a reflection of the prevalence of other bacterial diseases.

WHAT HAS REDUCED MORTALITY FROM ACUTE RHEUMATISM?

The following is an extract of an article appearing in a recent bulletin of the Metropolitan Life Insurance Co.

There has been a very marked decline in the mortality from acute rheumatism during the last ten years. This is as marked among the wage earners insured in this Company as in the general population. In both groups, the drop in the death rate in ten years has been about 40 per cent. This decline is not due to changes in nomenclature. During this ten-year period, there has been no corresponding increase in the reporting of septicemia, pyemia, blood poisoning or acute endocarditis as causes of death. These are the conditions which often cause or are associated with rheumatism, and it seemed at first that possibly the decline in the rate of rheumatism might be the result of a transfer of certification from rheumatism to these other causes. But, this is not true.

The undoubted decline in the death rate from acute rheumatism has attracted the attention of some of the most noted clinicians of the country and with whom we have been in correspondence. In general, it is their opinion that this decline is

associated with and probably the consequence of the increased practice of tonsillar operations during the past decade. One of our correspondents says it is his belief, "that the chief causative factor of acute rheumatism is a focus of infection within the body and usually within the head, chiefly within the mouth and throat," and, also, "that the chief factor in the reduction of the death rate in acute rheumatism for the last ten years is due to the removal of foci about the head." The tonsils are the chief sites of infection within the head which are accessible for easy removal. Some of our other correspondents stress the importance of tooth infections as possible causes of acute rheumatism and point out that the last decade has been one of marked progress in mouth and tooth hygiene on the part of the public. Reference has also been made to the probable influence of the improvement of milk supplies of cities. Large cities now almost uniformly require the efficient pasteurization of milk and this removes, in large measure, the possibility of epidemics of septic sore throat and other focal infections. We must also give due weight to the undoubted improvement in the diagnosis and treatment of cases of acute rheumatism. Doctors are rapidly becoming more familiar with the difficult symptomatology of the acute rheumatic infections and are treating their cases more successfully because they are identifying them earlier in the course of the disease before severe heart impairments are produced.

If these several factors are true causes, we may expect as time proceeds to get the accumulated result of their influence. It usually takes years for chronic focal infections to produce fatal cases of acute articular rheumatism, and, if the several activities which are reducing focal infections are, in fact, beginning to show results, it may well be that we have passed the peak in the number of newly damaged hearts and other organs and will, from now on, see fewer and fewer cases of and deaths from acute rheumatism. This is actually confirmed by one correspondent who calls our attention to the marked decline both in the number and in the severity of cases admitted to one of the largest hospitals in New York City.

Yet, much research remains to be carried out to clear up this difficult problem of the relationship between focal infection and the incidence of acute rheumatism. Newsholme's early observations, if confirmed, are important in this connection. He

showed that in England, the disease apparently occurred in epidemic-like waves. We should, therefore, continue to be guarded in drawing final conclusions from the data now at hand. It is possible that the recent decline may be a reflex of the epidemiological characteristics of the disease and that only a part of it may be due to the surgical and hygienic treatment of the focal infections.

In any case, the facts at hand give much reason for continuing the education of the public as to the danger of focal infections and the necessity for early removal of infected tonsils and give justification to the work that is being done for mouth hygiene.

PUBLIC HEALTH NEWS.

Marriages between first cousins are illegal. It is also illegal for persons who, prohibited from marrying in Wisconsin, go to some other state for the purpose of evading the Wisconsin law.

Miss Pearl Dudley, a native of Merrill, but of Illinois training, was named county nurse for Lincoln county to succeed Miss Emma Evjue, who resigned to become superintendent of Lincoln hospital, Merrill.

All appointive and elective officers, including health officers, must take the oath of office before their acts are valid and enforceable. The oath can be taken before a justice of the peace, judge, court commissioner, notary public, county clerk, town clerk, etc.

Inquiries on birth control are answered with the statement that, in accordance with the official stand of the Board through resolutions adopted, the State Board of Health extends no information on the subject nor participates in any propaganda one way or the other.

The State Board of Health has no jurisdiction in the enforcement of the medical practice laws. In answer to an inquiry, however, the opinion was given that since chiropractors are not licensed as physicians, or even as chiropractors, in this state, they cannot fill out medical certificates in the case of fraternal sick insurance or similar exigencies.

Appointment of Miss Marie U. Puls, New York, a native of Dodge county, Wisconsin, and graduate of Columbia university, as field advisory nurse

in the bureau of child welfare and public health nursing, was announced. She succeeds Miss Mary Dunwiddie, resigned.

Plans were approved for developing a new source of water supply for the city of Phillips and improving the distribution system of the present waterworks. The lake supply will be abandoned and connection made with Chase Spring, two miles away.

A citizen making inquiry as to the legality of the state charge of 50 cents for certified copies of birth certificates, or of other vital records, was informed that the fee is fixed by law, but that when intended for obtaining labor permits, school attendance purposes, or certain other uses, the charge is usually remitted.

Replying to the surgeon-general of the army concerning anti-rabic treatment in this state, the State Board of Health explained that packages containing ten treatments for rabies are sent to any physician at a special price of \$12 per treatment, and that the company supplying these products to Wisconsin will furnish any army post with the treatments at the same price.

A report was made on conditions found in an investigation of water supply conditions and an outbreak of typhoid fever at a manufacturing plant at Wausau. Contaminated drinking water was found but the drinking supply was reported safe following the divorce of the contaminated river water from the plant's piping system. Recommendations were made looking to complete separation of the river water from the city supply, that the city water be examined monthly, and other precautions taken to protect the drinking supply from dangerous pollution.

Inquiry was made from Manitowoc as to the excessively high infant mortality rate in that city, as reported by the American Child Hygiene association. Incomplete reporting of births, which tends to raise the infant death rate, and accordingly does not represent actual mortality conditions, was one probable explanation given in answer. The Board stated it is planning to make a study of birth registration in some 28 Wisconsin cities and villages to determine the accuracy of birth registration as asked by the Census bureau.

The resignation of Dr. Blanche Horner-Rivers, for two years past physician with the Child Welfare Special, was tendered to the State Board of Health.

A county official was informed the law does not require the transfer of a prisoner with syphilis to another institution, and that if kept in a room separate from others and given approved treatment, he may be kept without danger to others.

This Board has no authority to compel a railroad company to install a drinking fountain for its shop employes, a complainant was informed. The state health rules against the common drinking cup apply to railroad trains, stations, schools, hotels, theaters, and similar buildings patronized by the general public. The Industrial Commission has promulgated and enforces individual drinking cup rules for places of employment.

There is no law nor regulation prohibiting building a barn near a private residence, but if nuisances therefrom are created they can be abated under penalty.

The two cultures taken by health officers for release of diphtheria patients from quarantine must be consecutive negative findings, a health officer was informed.

The department after a full investigation into the sanitary conditions of a maternity home in a Wisconsin city, and of the competency of the owner, notified her that her license to operate such place will not be renewed after Dec. 31.

Rules for control of "scarlatina" are the same as for scarlet fever. There is no justification for handling scarlatina (mild cases of scarlet fever) in any way other than provided for scarlet fever. Quarantine for 28 days is called for.

Should a family where a tuberculosis patient is careless and no precautions are taken against infecting others be allowed to draw books from the public library? The inquiry was answered by the statement that unless the common safeguards against T. B. infection are followed constantly, such a family should be denied library privileges.



The Business Side of the Physician's Life—

The editor of this column declared that he was too busy even to write "The Business Side" this month. At least so he said, and then like the good business executive that he is, he pinned me to the wall until I promised to do it.

Now, I am a modest man whose experience in writing ended when I graduated from school with a "Poor" in English. I am frank to confess that I am totally lacking in ability to use such awe inspiring phrases as "wrapping a Rolls-Royce around himself" or "proliferate as a family of jack rabbits," and the reader's indulgence is asked for this issue.

Many a time and oft have I sat in my doctor's office perusing a magazine of the vintage of '10. Last week I read a "System," date unknown because the cover and sundry other pages were gone. And there I saw a column that had little suggestions under such heads as "If I were a Pawnbroker," "If I were a Tailor," or "If I were a Banker" wherein some contributor picked up two dollars per each by giving some sound advice he was not in position to apply.

Now, if I were a Doctor there is one thing I would do besides having an occasional new magazine on the table—not over a year old I mean. As I was saying, if I were a Doctor, I would much prefer to receive an occasional payment for services rendered on the first of the first month instead of the tenth of the tenth month. Because I have been told that many receive only bills the first of the month, I am going to say, without fear of my many physician friends, just why some of them have to resort to collection agencies to collect their statements.

I am not endangering the life of any pedestrian with a Pierce-Arrow nor even a Ford. I am a man of modest means. When the first of the month rolls around my wife begins to open the bills. By the fourth of the month I have collected all the bills I can pay and still have enough of my salary check left to provide for the necessities of

life such as cigarettes, the weekly movie and car chips. I have never yet received my doctor's bill before the tenth of the month and, believe me, that is too late. Of course after it has run six months or so I remember it and save enough to meet it next time.

And now I wonder if that is not the way a good many of our good old family physicians send out their bills. I admit that I should pay the bill whenever it comes but somehow the early birds get all my change. And so, as I was saying, if I were a Doctor I would prepare my statements so that they would be put into the mails on the last day of the month and received on the first. I'll bet the increase in receipts would be an even hundred per cent. I am just as sure of that as I am that I am just an average man—and this article should be proof of that to all the world. I thank you.

THE PLACE OF MEDICINE IN PUBLIC HEALTH

According to Walter M. Dickie, Sacramento, Calif., (*Journal A. M. A.*, Oct. 13, 1923), the physician of tomorrow must live and work as much for his community as he does for his individual patient, and each individual patient must be considered with relation to the community as a whole. He must know that he is not merely an alleviator of suffering. He is a citizen, teacher, philosopher, counselor, and leader in community life. He must be possessed of scientific knowledge, and he must use this knowledge for the benefit of his fellow men. He must take his place in the forefront when projects for the advancement of community life are considered. The future prestige of the medical profession in America depends on whether practitioners of medicine in the future shall practice their profession entirely for the benefit of individuals or partly for the benefit of the community as a whole. The answer lies in the teaching methods of our schools of medicine throughout the country. If they fulfill this demand, it will enhance not only the prestige of medicine, but it will bring healthier, happier lives to the people of the commonwealth. The time has come when every practitioner of medicine must take his place primarily as a leader in his community. No professional man can be under greater obligation to give freely of his skill in advancing the best interests of humanity than the practitioner of medicine. He is vastly more than a mere alleviator of physical suffering. His long years of schooling and his intimate contact with his fellow men should fit him for the very highest and most consecrated, constructive work in safeguarding the health of all the people. He must give full cooperation to organized health departments. He must consider every case of communicable disease as the property of the state, and therefore subject to the control authorized by the whole people. He must do, not only more for his individual patients, but also for the community in which he lives.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1923

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J. L. YATES, Milwaukee, 2nd Vice President
E. E. TUPPER, Eau Claire, 3rd Vice President
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TERM EXPIRES 1925
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Edward Evans - LaCrosse
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EYE, EAR, NOSE, THROAT SECTION

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LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists 90 counties and their respective officers.

SOCIETY PROCEEDINGS

ACADEMY OF MEDICINE

The Milwaukee Academy of Medicine held a meeting at the Health Service Building Tuesday, October 23rd. The following papers were presented: "Presentation of a Case of Hirschsprung's disease following operation" by Dr. C. A. Evans; "Presentation of a Dermatological Case" by Dr. Harry Foerster; "Papilloma of the Gall Bladder" by Dr. F. B. McMahon; "Relation of Physical Findings to X-ray densities in the Diagnosis of Chest conditions" (with Lantern Slides) by Dr. Charles E. Ide; Discussion by Drs. Stevens, Ogden, Smith and Stoddard.

BROWN-KEWAUNEE COUNTY

The annual fall meeting of the Brown-Kewaunee Medical Society was held at Hickory Grove Sanitarium on October 9th. Twenty-one members were present at the meeting.

Following the dinner papers were read by Dr. Robert L. Cowles and by Dr. John Minahan.

FOND DU LAC COUNTY

Members of the Fond du Lac County Medical Society held at a dinner meeting at Fond du Lac on October 10th. A general discussion followed a dinner-meeting.

GREEN LAKE-WAUSHARA-ADAMS COUNTY

Twenty members of the Green Lake-Waushara-Adams County Medical Society met at Ripon Friday afternoon and evening, November 2nd, for the annual meeting of the society and to attend the last of a series of post-graduate courses. Dr. Karl Henry Davis, Milwaukee, presented an informal discussion in the afternoon on subjects in the field of gynecology and in the evening a lecture on "Medical versus Surgical Treatment in Gynecology."

Following the afternoon discussion the members were entertained at the home of Dr. J. S. Foat at a dinner.

Special entertainment was provided after the dinner following which the business meeting was held. Dr. B. E. Scott, Berlin, was elected president; Dr. J. S. Foat, Ripon, vice president; Dr. A. J. Wiesender, Berlin, re-elected secretary-treasurer; Dr. W. H. Fortner, Princeton, censor; Dr. W. E. Buckley, Redgranite, delegate and Dr. S. S. Hall, Ripon, alternate. Guests included Maj. Thomas L. Gore, Ripon and Mr. J. G. Crownhart, Milwaukee.

LANGLADE COUNTY

The Langlade County Medical Society met in the Fern Room of the Butterfield Hotel, Antigo, on Thursday afternoon, November 1st. A chicken supper and smoker followed the business meeting.

LINCOLN COUNTY

At a meeting of the Lincoln County Medical Society on October 29th, Dr. L. M. Pearson, Tomahawk, was elected president and Dr. W. H. Bayer, Merrill, secretary. Dr. Joseph F. Smith, Wausau, counselor of the district, read a paper on "Fractures."

MARINETTE-FLORENCE COUNTY

Members of the Marinette-Florence County Medical Society held a joint meeting with members of the Delta and Menominee County, Michigan, Medical Societies on October 16th. Papers were read by Dr. F. Gregory

Connell, president of the State Medical Society of Wisconsin, and by Dr. Hopkins, chief surgeon of the Northwestern Railroad. The meeting was held at the Tuberculosis Sanitorium at Powers, Mich.

MILWAUKEE COUNTY

The Milwaukee County Medical Society recorded itself as favoring the request of the city health department for general increases in salary, at a meeting held October 12th. Papers were read by Drs. L. F. Jermain, James Sargent and F. Gaunt.

OUTAGAMIE COUNTY

At a meeting of the Outagamie County Medical Society at Appleton, October 12th, Dr. Maude Slye gave a semi-public address on "Cancer and Heredity." Lay friends of the profession were present at the meeting.

RACINE COUNTY

A reunion banquet meeting was the program for the Racine County Medical Society on Thursday evening, October 25th. Dr. William W. Bauer, health officer of Racine, gave the main address at the banquet.

TENTH DISTRICT MEDICAL SOCIETY

The 20th annual meeting of the Tenth District Medical Society was held in Eau Claire on October 11th. The meeting opened with a morning clinic at Luther Hospital with 70 members registered.

Dr. Chas. Louis Mix of Chicago gave a very interesting medical clinic; he was in particularly good form and made the clinical material of unusual interest. Dr. Tobias L. Birnberg of St. Paul likewise gave a very interesting pediatric clinic and kept his group on the qui vive both while discussing cases and later while going over some of the newer feeding principles of both normal and sick child.

A lunch was served at noon. President Midelfart opened the afternoon session at the Public Library at two o'clock and the following papers were read:

Treatment of Syphilis of the Central Nervous System,
Dr. W. F. Lorenz, Madison, Director Wis. Psychiatric Institute.

Discussion—Dr. Chas. L. Mix, Dr. J. E. B. Ziegler.
Convulsions in Childhood,

Dr. Tobias L. Birnberg, St. Paul.

Discussion—Dr. E. P. Hayes, Dr. Finn Anderson.
Diagnosis of Lesions of the Brain and Spinal Cord,

Dr. Chas. Louis Mix, Chicago, Professor of Medicine,
Northwestern University.

Discussion—Dr. E. E. Tupper, Dr. G. H. Hoyme.
Cancer of the Breast.

Dr. Jos. C. Baird, Eau Claire.

Discussion—Dr. Carl F. Doege, Dr. J. V. R. Lyman.
European Travel Experiences,

Dr. Carl F. Doege, Marshfield.

Election of Officers.

Following the society session the officers for the ensuing year were elected. President, R. E. Mitchell, Eau Claire, Wis.; Secretary, R. F. Werner, Eau Claire, Wis.

Dinner was served at the Hotel Eau Claire which proved quite an enjoyable occasion. Some community and some near community singing was indulged in and various impromptu remarks helped to add to the festivities of the party.

At the conclusion of the dinner Dr. Carl F. Doege of

Marshfield gave a very interesting talk on his year in Europe; the visits to the various clinics and the social and economic conditions that he found when going about.

Following the dinner the members of the society were entertained by the Eau Claire physicians at the Werrenrath recital at the Auditorium.—R. E. Mitchell, Secretary.

WAUPACA COUNTY

The Waupaca County Medical Society met at the Waupaca Public Library on October 10th. Dr. Joseph Smith, councilor of the district, gave an illustrated paper on "Fractures." A business meeting followed with a good attendance.

WISCONSIN ANTI-TUBERCULOSIS ASSN. HOLDS ANNUAL MEETING

One hundred forty-one attended the three day session of the Wisconsin Anti-Tuberculosis Association held at its headquarters in the Health Service Building, Milwaukee, October 25th-27th. Dr. H. E. Dearholt, executive secretary of the association, struck the key-note of the meeting when he declared that there can be no letup in the fight against this disease.

"In fifteen years," said Doctor Dearholt, "greater gains against tuberculosis have been made than we, who were in at the beginning, dared to hope for in a century. But in face of the fact that upwards of 1,600 Wisconsin people will have died from tuberculosis by the end of this year, there can be no letup in our fight to save lives."

Twelve new directors were elected at the meeting this year.

New directors named were: John Kuypers, De Pere; Paul Schulze, Portage; Mrs. A. H. Shoemaker, Eau Claire, whose term expires in 1923; Judge D. W. Agnew, Waukesha; Mrs. I. P. Witter, Wisconsin Rapids, whose term expires in 1925; Dr. Frank Brockway, Oshkosh; Dr. C. A. Harper, Madison; Herman A. Wagner, Milwaukee; Harold H. Seaman, Milwaukee; M. J. Cleary, Milwaukee; F. S. Hyer, Whitewater; Judge J. C. Karel, Milwaukee; with terms expiring in 1926.

H. H. Jacobs, Milwaukee, was re-elected president of the association at a dinner meeting of the directors held in the University Club, October 25th.

Other officers elected were: Robert L. Cooley, Milwaukee, first vice president; Mrs. Joshua Hodgins, Marinette, second vice president; Dr. Guernsey Taylor, Milwaukee, secretary; Maj. Howard Greene, Milwaukee, treasurer.

The executive committee named is: Dr. J. W. Windenheim, Kenosha; H. H. Wagner, Milwaukee; Harold H. Seaman, Milwaukee; Maj. Howard Greene, Milwaukee; Dean Louis Reber, Madison. Dean Reber replaces Will Ross, Milwaukee, who becomes a member of the staff as state manager of the Christmas seal campaign.

The program of the meeting included the following speakers: Dr. L. W. Dudley, Wales; Dr. G. L. Bellis, Milwaukee; Dr. Rolla Cairns, River Falls; Dr. J. H. Hogan, Racine; Maj. Myron W. Snell, Milwaukee; Dr. J. D. Wiltrout, Downing; Dr. William Reasner, Minneapolis; Dr. H. E. Kleinschmidt, Toledo; Dr. A. C. Bachmeyer, Cincinnati; and Dr. R. E. Mitchell, Eau Claire.

The following members of the medical staff of the association were also on the program:

Dr. Hoyt E. Dearholt, executive secretary; Dr. Oscar Lotz, Dr. T. L. Harrington and Dr. A. A. Pleyte.

NEWS ITEMS AND PERSONALS

Announcement was made this month of the resignation of Dr. J. M. Conroy as superintendent of Pureair Sanatorium at Bayfield. Dr. Conroy is now associated at Riverside Sanatorium, Milwaukee. Dr. W. E. Fawcett, Pittsburgh, Penn., has succeeded Dr. Conroy at Pureair Sanatorium.

Dr. and Mrs. Arthur J. Patek, Milwaukee, abroad since July, returned early in November.

Three additions to the faculty of Marquette University College of Medicine have been announced by Dean L. F. Jermain. The new faculty members are: Dr. Frederick Eigenberger, Sheboygan, pathologist; Dr. Joseph P. Hettwer, London, (Eng.); and Dr. Harry Beckman, New York.

That chiropractors are not permitted to make eugenic examinations was the opinion of attorney general Herman A. Eckern on November 1st. Mr. Eckern declares that chiropractors are not included under the title of physicians.

Dr. and Mrs. J. W. Helz, Fond du Lac, have returned to that city following a month visit on the Pacific coast.

Senior medical students at Marquette University have elected the following class officers: Millard Tufts, Sturgeon Bay, president; F. J. O'Connell, Milwaukee, vice president, and F. X. McCormick, Milwaukee, secretary-treasurer.

Dr. L. A. Copps, Marshfield, was given membership in the American College of surgeons at its recent annual meeting in Chicago.

Two new nurses have just been retained by the city of Manitowoc. Mrs. M. C. Cheekie, city nurse, is a graduate of the Municipal Hospital, the Hague, Holland, and served four years in the British Red Cross. Miss Ruth Pfeil, school nurse, was previously county nurse of Rusk County. Miss Marie Gerhardt is the county nurse.

A new chemical formula which will greatly extend the time limit for making of blood tests following the taking of the blood, was announced late in October by Dr. W. F. Lorenz of the Wisconsin Psychiatric Institute.

Dr. Joseph S. Evans, Madison, declares that this formula will have the effect of bringing expert laboratories within the reach of the general practitioner.

Dr. J. W. Tooley, formerly of Peshtigo, is now located at Appleton.

Dr. Eleanore Cushing-Lippitt, Milwaukee, was elected president of the Wisconsin Women's Medical Society at

its annual meeting in October during the convention of the State Medical Society.

Other officers elected are: Dr. Irene Stemper, Oconomowoc, first vice president; Dr. Ella Chafee Fay, White-water, second vice president; Dr. Rose Kriz, Milwaukee, Secretary-treasurer.

Close to 300 morphine tablets were stolen from the office of Dr. A. G. Brah, Milwaukee on October 18th. A pass key was used to gain entrance to the office.

Dr. Joseph Sanders, formerly of Beaver Dam has now located at Rice Lake. Dr. Sanders has been out of practice a year due to ill health.

Four police surgeons for Milwaukee were appointed the last of October. The new surgeons are: Drs. Ralph Kaysen, Morrell M. Bunch, Arthur Cohn and Urban A. Schleuter.

Upwards of fifty Wisconsin physicians have now completed the week courses in diabetes at the University of Wisconsin. The training is given at Bradley Memorial Hospital and is without charge.

Wisconsin physicians were notified this month that a state license to prescribe liquor is required in addition to the federal permit. State Prohibition Commissioner Herman Sachtjen also called attention to the fact that no permits are required after January 1, 1924, for the use of alcohol for sterilizing purposes only. The \$10.00 fee for this use was repealed by the 1923 legislature effective next year.

Declaring that the State Board of Control's methods for directing affairs at the Union Grove Feeble-Minded Institute are responsible "for the lack of progress in its development," Dr. H. C. Werner, superintendent, has presented his resignation, effective December 1st next.

Dr. Werner's letter of resignation follows:

Union Grove, Wis.
Oct. 20th.

"State Board of Control,
Madison, Wis.

"Gentlemen:

Your methods of directing the affairs of this institution are responsible for the lack of progress in its development.

"Your method of visiting and inspecting the institution has seriously hampered me in the management thereof by interfering with the morals of the employees.

"The harmony which should exist between members of the board and the superintendent of our institution being entirely wanting, I am compelled to tender my resignation at this time, to take effect December 1, 1923.

"Respectfully yours,

H. C. WERNER, M. D.,
Superintendent."

MARRIAGES

Dr. Malcom Rogers, Milwaukee, to Miss Vlasta Zlatnik, Two Rivers, at Adams on September 8th.

DEATHS

Dr. Ralph E. Rugh, Racine, died at his home Sunday morning, October 23rd, from Cerebral Hemorrhage, at the age of forty-eight. Dr. Rugh graduated from Rush in 1903 and took his internship at Cook County Hospital, Chicago. He then began practice in Lake Geneva, moving to Racine in 1910.

At Racine he was a local surgeon for the Northwestern Railroad. Dr. Rugh was a member of the Racine County Medical Society, State Medical Society and the American Medical Association.

Dr. Charles A. Hayes, Chippewa Falls, died at his residence Friday evening, October 12th. He had been in failing health for several years. Dr. Hayes was born in Maine November 6, 1851 and was a graduate of Rush. Following graduation he did post-graduate work in Germany and then became assistant superintendent of the Kansas State Hospital.

Dr. Hayes first settled in Wisconsin at Eau Claire and later moved to Chippewa Falls. He was several times county and city physician and at the time of his death was president of the local Red Cross chapter. He was a member of the Chippewa County Medical Society, State Medical Society and the American Medical Association.

Dr. C. E. Nystrum, Medford, died at his home on Friday, October 5th. Dr. Nystrum was born at Wau-paca June 4, 1869 and graduated from Hahnemann Medical College.

He settled at Medford in 1892 and later founded the Medford Clinic Hospital. He was a member of the Price-Taylor Medical Society, State Medical Society and the American Medical Association.

Dr. J. P. Stoye, Theresa, died at his office while administering to a patient on October 25th. He was born in Germany August 6, 1858 and graduated from Rush in 1897. Following graduation he moved to Theresa where he has been in active practice for the last twenty-six years. He was a member of the Fond du Lac County Medical Society, State Medical Society and the American Medical Association.

Dr. Edwin R. Mulford, La Crosse, died in Chicago October 13th after a long illness.

Dr. Paul Valtinke, Big Cedar Lake, died at Chicago September 27th. Dr. Valtinke was born in Germany August 20, 1877 and came to America in 1903.

CORRESPONDENCE.

Mr. J. G. Crownhart, Exec. Sec'y.,
Wisconsin State Medical Society,
558 Jefferson St., Milwaukee, Wis.
Dear Mr. Crownhart:

Allow me, in the name of the Tri-State District Medical Association, to thank the editorial and managerial board of the Wisconsin Medical Journal, for all courtesies that have been extended to our Association, in the columns of the Wisconsin State Medical Journal.

Yours very sincerely,

EDWIN HENES, JR., M.D.,

EH/sz

Secretary.

Shall We Blaze The Trail or Follow The Trail That Others Blaze?

BY ALFRED W. GRAY M.D.,
MILWAUKEE.

At the annual dinner of the Wisconsin Anti-Tuberculosis Association in October three speakers especially held our attention. They were business men—a banker, a vice president of an insurance company, and a former executive secretary of a commercial organization. They were not there by chance. They were known to have something to say to that group of health enthusiasts that would hearten them in their work. They said it simply because they knew what they were talking about and they were eloquent because they were sincere. They made it clear that, as representatives of the public, they understood and appreciated the humanitarian work of the W. A. T. A. but, of even greater import, that as business men they were able, hard headedly, to count the cost of the work and to figure profits in the production of health and community prosperity.

That the work was paying big they emphasized again and again and on this ground asked the people of Wisconsin, under the leadership of their physicians, to back up this coordinating organization, the W. A. T. A., in an even more rapid fulfillment of its program. Greater wealth measured in dollars and cents, on the basis of sounder health, was the idea they were getting across. They called it an ideal as it is. Material prosperity is the measure of dynamic health.

Of course there was little in this that physicians do not know. But do they know it practically? Do they sense the import of it and act accordingly? Are they really leaders? A glance about that meeting, when the speakers were giving voice to the quite natural assumption that physicians were the leaders in this health movement, showed a scant half dozen of our profession among the two hundred laymen present. There were many county supervisors, town board members, and business men; each group greatly out-numbering the few physicians. There were sanatorium superintendents, health nurses and social workers; all of them—to be sure—physicians' helpers and representatives, but the natural leaders were not there in person. It is not contended that this indicated with any degree of accuracy an actual lack of sup-

port, either moral or financial, but it seemed to give food for thought. Their presence in greater number would have proven also that the rank and file of the physicians are really backing better health movements instead of the evident fact that the few are initiating what laymen have largely to carry on.

Why is there this apparent lack of interest? There was a time when it seemed possible that physicians resented what seemed like usurpation of their functions, but the farseeing did not feel that way and few do now. We prided ourselves that prevention of disease was our ideal and that we were striving to take away our own livelihoods. But our pride has had to take a tumble in the realization that health propaganda has increased our activities and made us more necessary to our communities. School inspection has brought to light the neglected cases. Real health knowledge sends patients to physicians. Free chest clinics unearth unsuspected diseases in many phases and so on through the list of activities initiated, encouraged and carried on by the W. A. T. A. There is no community in which a free clinic has not given greater opportunity to physicians for service.

We should not be ashamed to take advantage frankly of the health propaganda of such organizations as the W. A. T. A., and we should encourage them to greater effort. We can not advertise as individuals for obvious reasons, but we stand ready to serve when the need presents. The educational advertising methods of all properly organized health movements make the need for medical service apparent to the ignorant and the unseeing. There are in the state of Wisconsin so many neglected cases of sickness in all walks of life that there would not be one tenth of the physicians needed to care for them could they all be brought to light. Why is it not our duty to help find these cases? We would be false to our duty not to render medical help when asked. Why not, if we do not help in finding the cases that need medical aid?

Shall it be said that W. A. T. A. does more for the physicians of Wisconsin than the physicians of Wisconsin do for the W. A. T. A.?

Ashland Physicians Take Initiative in Educational Program With Newspaper Cooperation

Editor's Note—Unsigned articles by local physicians, dealing with the symptoms and treatment of disease, is the basis for a weekly health article in The Ashland (Wis.) Press.

We reprint the article of October 23rd as an example of true cooperation between local physicians and the local press to enlighten the laity on health problems. We believe the series is valuable to the Ashland Press and we congratulate Mr. Chapple, its editor, on being the first in Wisconsin to secure such local contributions of vital interest to the readers. We congratulate Ashland physicians on their undertaking—but another demonstration of unselfish service to mankind.

EVERY MONDAY THE
SYMPTOMS AND TREAT-
MENT OF SOME DISEASE
IS CONSIDERED IN AN
ARTICLE BY SOME
ASHLAND DOCTOR

MEASLES

Measles is a highly communicable disease due to some form of infection as yet not determined, and to which very few are naturally immune.

The infection probably is not often in the expired air, but in the secretions of the mouth, nose and eyes. Very important it is to know that the disease is communicable before the skin eruption appears, and that a child with the preliminary catarrhal symptoms may be at school industriously spreading the infection even before it is known he has measles.

SYMPTOMS.

Some days before the rash appears there are present very characteristic symptoms of a coryza, redness of the eyes, nasal catarrh, lacrimation, and indications of an acute bronchitis. In short, the exaggerated symptoms of a cold involving the bronchial tubes.

During an epidemic of measles children showing these catarrhal symptoms should have the mouth examined, as usually for two or three days prior to the appearance of the skin rash, a distinctive eruption may be seen on the mucous membrane of the cheeks.

Measles is spread almost entirely by direct contact with the infected person, though to a limited extent it would sometimes seem the contagion is

carried in the air and clings to clothing, toys, etc., for a short time.

From ten days to two weeks after exposure appear the catarrhal symptoms, followed in from three to five days by the rash which shows first on the forehead in the form of minute red dots which soon run together into characteristic crescent shaped areas, spreading over the face, body and extremities, so that often we have the rash fading from the face before it is fully developed on the legs.

In some cases, the rash feels like small shot under the skin, and this may be mistaken for the early stage of small-pox.

Keeping the patient warm in bed hastens the appearance of the eruption, while exposure to cold retards it.

The eyes become sensitive to light, and unless protected, permanent injury may follow. Nose bleed at this time is a common symptom.

The complications of measles are numerous, the most important being broncho-pneumonia, which is present in nearly every fatal case. The throat is more or less inflamed, which inflammation may extend to the larynx and to the middle-ear giving us the discharging ear of childhood with its possibilities of mastoid involvement.

The more crowded the living conditions, the more severe becomes the epidemic and the highest mortality occurs in the most congested quarters.

CONCLUSIONS.

1. Measles spread by actual contact with the source of infection.
2. Measles may be communicated by a person before the rash appears.
3. It probably in very few cases spreads through the atmosphere.
4. Strict quarantine will prevent its spread.
5. Death from measles under favorable conditions is rare in children over four years of age.
6. The average mortality of the disease is from four to six per cent, but in children under two years, it is often twenty per cent or more.
7. Regard measles as a serious disease and keep the patient in bed through its whole course and observe the quarantine as religiously as if you had confluent small-pox.

Wisconsin Sanatoria offer Excellent Facilities; Statesan has 185 Capacity

Editor's Note—This is the first of a series of articles on Wisconsin tuberculosis sanatoria contributed by Mrs. Ruth MacMillin of the Wisconsin Anti-Tuberculosis Association. The series is being published in this Journal because it is felt by medical men in close touch with the tuberculosis situation, that the average physician is not familiar with sanatorium facilities in Wisconsin. This is probably one of the factors responsible for the vacancies that persist in some of the state and county institutions. Wisconsin has 16 public sanatoria with a total bed capacity of 1,214, and despite the fact that there are known to be nearly 17,000 living cases of tuberculosis in this state, not even the 1,214 beds for these cases are occupied.

A beautiful summer resort! That was my first impression of Statesan, the state sanatorium for the tuberculous, situated two miles north of Wales, Waukesha county, at the foot of a great, wooded hill. Built on sloping lawns, studded with trees and flower gardens, with its attractive, home-like administration buildings, the quaint infirmary, and the eight patient's cottages, their deep porches closely screened against fly and mosquito, the institution brings to ones senses that feeling of rest, comfort and security which is one of the essentials in the treatment of tuberculosis.

Statesan was established in 1907 for the treatment of incipient and moderately advanced cases of pulmonary and laryngeal tuberculosis. It has a capacity of 185 beds, of which about 95 are for men and 90 for women, four of the cottages being used for one sex, four for the other, and the infirmary for them both.

Since the establishment of the institution, its chief difficulty has been its lack of facilities to care for the advanced type of patient, the infirmary having but a maximum capacity of 28 beds. This situation is especially unfortunate because it is still true that a large percentage of persons who enter sanatoria are in need of bedside care, hardly possible in the lean-to cottage. Many physicians, failing to realize this, have been sending their advanced cases to Statesan only to be met with a refusal to admit them.

"We'd like to take them all, but we can't do it," Dr. Lewis W. Dudley, superintendent of the institution, told me in a recent conversation. "We'd like to get incipient cases enough to fill the institution but we can't handle the advanced types here."

There are two main obstacles at Statesan in the way of providing adequate care for a larger number of advanced cases than can be accommodated in the infirmary, especially during the fall, winter and



View at Statesan

spring months. The first obstacle is the fact that a cottage consists only of a wide porch, open in the front and on one end, on which the beds are placed. A corridor behind the porch is divided into tiny, heated dressing rooms. Such an arrangement does not provide sufficient protection for an advanced type patient in inclement weather.

The second obstacle is that the institution has only one kitchen, located in a building with the main dining room. Every bit of food, with the exception of special diet prepared in a small diet kitchen in the infirmary, must be carried to the bed patients. This must be done over the hilly lawns to the two receiving cottages where all new patients are detained for two weeks under close observation, and the moderately advanced cases are housed. These two cottages have tiny dining rooms where the bed patients eat, but no kitchen facilities. Food is also carried to the infirmary, where it can be kept warm in the diet kitchen.

The type of patient that should be sent to Statesan is obviously the incipient type and the early moderately advanced; the patient who is able, as a rule, to go to meals and who needs no special protection, beyond that of warm covering, during the cold months. During the past few years there has never, according to Dr. Dudley's records, been a real vacancy over any considerable period in the infirmary. An attempt is made to keep one bed there vacant for emergency hemorrhage cases within the institution, but even this cannot always be done.

For early cases, however, there is plenty of room. During 1922 the sanatorium averaged 158 patients, and at the present time it has exactly that number, 27 beds being vacant. Most of the vacancies are in the men's cottage.

The medical staff of Statesan consists of Dr. Dudley and two assistant physicians trained in tuberculosis work. This gives the usual proportion

of doctors to nurses, one to about 50 patients. The institution also has a laboratory technician in charge of the laboratory. The laboratory is equipped with a modern X-ray machine. Twelve nurses, under the direction of a head nurse, and several orderlies comprise the nursing staff.

Patients may be admitted to Statesan under four classifications:

First—Any person who has been a legal resident of Wisconsin for one year may be admitted free of charge if he is able to show the state board of control that he is unable to pay for sanatorium care. Except in emergency cases, the board must grant this privilege before the patient can be admitted.

Second—Any resident of the state may enter the sanatorium upon payment of the full charge of \$15 a week. This includes room and board, medical care and laundry.

Third—Patients may be admitted upon payment of half the rate, \$7.50 a week, by obtaining special permission from the board of control.

Fourth—A patient may be admitted as a county charge from the county in which he is a legal resident. Such a case will be handled by the county judge in that county.

LEGAL NOTES

That the State Industrial Commission need not be bound by medical testimony in determining extent of injuries when they in person see the injured man, was the decision of Circuit Judge, E. A. Stevens of Dane County this month. In the case before the commission, medical testimony fixed the disability at less than 50%. The commission saw the injured man and raised the percentage of disability to 50%. This was sustained by the circuit court.

"The commission was not bound by his (the physician's) testimony," said Judge Stevens. "The applicant appeared at the hearing and the commission would base its findings upon the appearance of the hand and its apparent disability, as well as upon medical testimony."

CHIROPRACTOR CANNOT ADVERTISE AS "DOCTOR."

Attorney General Herman L. Eckern in October re-affirmed a former opinion that chiropractors may not use the letters "D.C." meaning "Doctor of Chiropractic" nor may they use an abbreviation standing for "Doctor."

"A chiropractor not being licensed to practice either medicine, surgery or osteopathy is expressly

prohibited from appending to his name the word "doctor" or the letters "Dr." A chiropractor is therefore prohibited from making use of the letters "Dr." as they stand for "doctor" and this is expressly prohibited. The letter "D" in the abbreviation "D.C." is intended to abbreviate the word doctor and the abbreviation "D.C.", as I understand it, stands for "Doctor practicing as a chiropractor." I am therefore of the opinion that the use by a chiropractor of the abbreviations "D.C." and "Dr." is unlawful and in violation of said sec.1435h."

THIRTY HOSPITALS APPROVED.

Thirty Wisconsin Hospitals are on the approved list as result of the annual meeting of the American College of Surgeons at Chicago in October. The approved list was announced after the hospital conference of the clinical congress of which Dr. Franklin H. Martin was director-general. The report is based on a survey made by experts through personal investigation. This is the fifth annual announcement of recognized hospitals.

The approved Milwaukee hospitals are: Milwaukee County, Milwaukee, Mt. Sinai, St. Joseph's, St. Mary's, Trinity, Columbia, Evangelical Deaconess, Hanover General, Milwaukee Children's, Milwaukee Maternity and General, and Misericordia.

The Wisconsin hospitals on the list are: La Crosse Lutheran, La Crosse; Luther, Eau Claire; Madison General, Madison; Mercy, Janesville; St. Agnes', Fond du Lac; St. Elizabeth's, Appleton; St. Francis, La Crosse; St. Joseph's, Marshfield; St. Mary's, Green Bay; St. Mary's and Mercy, Oshkosh; St. Mary's Superior; Grandview, La Crosse; Holy Family, Manitowoc; La Crosse Public, La Crosse; St. Joseph's, Dodgeville; St. Luke's, Racine; St. Mary's, Madison; St. Mary's Racine.

CANCER SOCIETY ORGANIZED.

On October 12th there was organized in the New York Academy of Medicine "The American Association for the Study and Cure of Cancer." There were over 60 enrolled from eighteen different States of the Union and some from outside countries, as charter members.

Dr. L. Duncan Bulkley was elected President; Dr. Curtis Frank Claassen of Brooklyn, Vice-President; Dr. A. Hirst Appel, Colonel in the Medical Corps, U. S. (retired), Secretary and Treasurer; with an Executive Committee of five.

The next Annual Meeting will be held in Chicago, in May, during the meeting of the American Medical Association.

Army Medical Department Offers Training and Commission to Medical Students and Graduates

EDITOR'S NOTE: The following article is printed at the request of the Surgeon-General of the Army who is desirous that fourth year medical students be fully informed concerning the opportunities offered through the Service for the fifth year in internship work. He is also desirous that information reach the graduates of the past two years as to their opportunity to pursue the career of medicine in the Army. It is to the end that this information may be given to the great majority of physicians in Wisconsin that we gladly open our columns to the Surgeon-General.

The city of Milwaukee is now the Headquarters of an organization which is being perfected as an Army Medical Department Bureau of Information in charge of Major William Roberts, U. S. Army Recruiting Office, Metropolitan Building, 290 3rd Street, Milwaukee; branch established under Major Herbert B. Hanson, U. S. A., 315 Pereles Building, Milwaukee, and Major Thomas L. Gore, Ripon.

At these various stations inquiries will be received and information furnished to prospective candidates who may be interested in securing commissions in the Medical Department

Under this system the Medical Department of the Army will complete the student's medical education, (fifth year) allowing him \$720 for the year with everything found, and he will receive his training in hospitals having from 200 to 1000 beds with the latest diagnostic equipment, with laboratories, both chemical and bacteriological and in the use of the more recent and modern instruments of precision.

Aside from the various duties of the ordinary doctor he has the opportunity of becoming an expert in preventive medicine. Members of the Medical Corps who have left their mark in the progress of this branch of medicine include Drs. Walter Reed and James Carroll in the prevention of yellow fever, and Dr. F. F. Russel in the perfection of methods which have resulted in the practical abolishment of the typhoid fevers from the army of the United States. The money saved the nation as a result of this work far exceeds the cost of maintenance of the entire Army Medical force since the Civil War.

In addition to the Army's special facilities, selected men are sent to the great medical centers, like the Mayo Clinic, to pursue chosen courses in the various specialties, all expenses paid by the

government. It is safe to assert that such opportunities as are now offered to the young medical students of this State have never been equaled by any other government bureau.

Again he has the advantages of travel, seeing the various countries. Young doctors entering the practice must devote long years of hard work and be successful before he can attain such environments and professional help as he is assured on entering the Medical Corps of the Army. Following are the requirements as recently published in orders from the War Department:

PAY AND EMOLUMENTS.

For the purpose of computing the annual pay of officers of the Medical Corps, hereafter appointed, pay periods are prescribed, and the base pay for each period is fixed as follows: The second period, \$2,000; the third period, \$2,400; the fourth period, \$3,000; the fifth period, \$3,500; and the sixth period, \$4,000.

The pay of the second period is paid to first lieutenants; that of the third period, to captains who have completed 3 and less than 12 years' service; that of the fourth period, to majors who have completed 12 and less than 20 years' service; that of the fifth period, to lieutenant colonels who have completed 20 and less than 26 years' service; and that of the sixth period to colonels.

Appointment in the Medical Corps is not made in a grade lower than that of first lieutenant and, therefore, the pay of the first period has no application to that corps.

Each officer receives an increase of 5 per cent of the base pay of his period for each 3 years' of service up to 30 years, provided that the base pay plus pay for length of service of no officer below the grade of colonel does not exceed \$5,750; and each officer is further entitled, in addition to his pay, to a monthly allowance for subsistence, as follows; to each officer receiving the base pay of the second, third or sixth period the amount of this allowance is equal to two subsistence allowances, and to each officer receiving the base pay of the fourth or fifth period, the amount is equal to three subsistence allowances, but an officer with no dependents receives one subsistence allowance in lieu of the above allowances. The maximum value of one allowance is fixed at 60 cents per day.

Quarters, heat, and light are furnished by the Government without cost to the officer, and, while suitable quarters are available at practically all Army posts and stations, where such is not the case the officer is entitled to a money allowance for rental of quarters not to exceed \$20 per month for one room, as follows: To each officer receiving the base pay of the second period the amount of this allowance is equal to that for three rooms; of the third period, four rooms; of the fourth period, five rooms; and of the fifth and sixth periods,

six rooms. In lieu of the above allowances, officers with no dependents receiving the base pay of the second period receive the allowance for two rooms; of the third and fourth periods, three rooms; and of the fifth and sixth periods, four rooms.

The term "dependent" includes a lawful wife and unmarried children under 21 years of age, and also the mother of the officer, provided she is in fact dependent on him for her chief support.

The total base pay, the pay for length of service, and allowances for subsistence and rental of quarters can not, however, exceed \$7,200 a year.

An officer of the Medical Corps is entitled to mileage at the rate of 8 cents a mile for travel from his home to first station, and transportation of baggage and household goods within the weights authorized by Army Regulations. He is entitled to mileage at the above rate for all travel performed in compliance with official orders, and also, on permanent change of station, transportation is furnished his wife and dependent children, and household goods within the authorized weights are transported at Government expense.

PROMOTION.

The present law provides for promotion in the Medical Corps, subject to examination, as follows: To the grade of captain after 3 years' service; to the grade of major after 12 years' service; to the grade of lieutenant colonel after 20 years' service; and to the grade of colonel after 26 years' service. For purposes of promotion there is credited all active commissioned service in the Regular Army whenever rendered, and also all active commissioned service rendered since April 6, 1917, in the Army or in the National Guard when in active service under a call by the President, except service under a reserve commission while in attendance at a school or camp for the training of candidates for commission.

LEAVES OF ABSENCE.

Leave of absence on full pay may be allowed at the discretion of the proper authority at the rate of one month per year, which may accumulate to a maximum of four months, and at the end of four years is then available as one continuous leave. Beyond this an officer may still be absent, with permission, with half pay. Absence from duty on account of sickness involves no loss of pay.

RETIREMENT.

Officers of the Medical Corps are entitled to the privilege of retirement after 40 years' service, or at any time for incapacitating disability incurred in the line of duty. On attaining the age of 64 years they are placed on the retired list by operation of law. Officers retired as above receive three-fourths of the pay of their period (salary and longevity increase) at the time of retirement.

ADVANTAGES OF SERVICE IN THE MEDICAL CORPS.

In civil life the practitioner, unless possessing ample means, specializes only after some years of general practice. In the Army he begins to specialize while a student candidate for commission, for it is at the Army Medical School at Washington, D. C., and the Medical Department Field Service School, Carlisle, Pa., that the

special duties of the medical officer, as differing from practice in civil life, are taught. Later, after being commissioned, the medical officer is encouraged to specialize in one of the several branches of the profession, just as does the practitioner in civil life. The candidate has the advantage of working for eight months in laboratories equipped with the best and most modern apparatus, under instructors who are themselves specialists in the various branches of their profession. No similar course is offered elsewhere except in the post-graduate schools to applicants for higher degrees.

The Medical Department takes a deep interest in its officers and encourages and aids them to the utmost extent in their study of a selected specialty. The operating rooms, X-ray, and research laboratories are faultlessly equipped. Adequate medical libraries are maintained at all military stations where hospitals are maintained.

Leaves for study are granted to officers when possible, and reciprocal arrangements have been made with certain medical schools and foundations for special privileges to medical officers on condition that they give instruction in military medicine, hygiene, and the duties of the medical officer. Officers selected for these assignments enjoy opportunities which come to few of the profession in civil life. Original work and the systematic study of all conditions affecting the health of the Army are encouraged, and, as in civil life, there is abundant opportunity to promote the progress of medicine and to achieve individual distinction.

Medical units of the Reserve Officers' Training Corps are maintained in the larger medical schools, and to these schools are detailed specially selected medical officers of the Army as professors of military science and tactics. While so serving they are members of the faculty of the school.

The medical officer is assured of travel in foreign lands, with its attendant opportunities to observe the peoples thereof and their customs. While on duty in the Philippine Islands leave of absence can readily be obtained, when service conditions permit, for the purpose of visiting Australia, the East Indies, China, or Japan, and at the end of his tour authority (in time of peace) to return to the United States via the Suez Canal or Siberia. If on duty in Porto Rico or the Canal Zone, similar privileges are available to visit South America, with which there is direct communication by steamship. On foreign service the routine duties are the same as at home, but each officer is required to make himself familiar, by observation and study, with the diseases peculiar to the locality.

In addition to the clinical advantages offered by general hospitals and the opportunities for use of the clinical material of civilian hospitals, laboratories, etc., in cities where attending surgeons' offices are maintained, the amendment of the national defense act, approved June 4, 1920, provides for the detail of not to exceed 2 per cent of the commissioned officers of the Regular Army in any fiscal year as students at hospitals and other places as shall be best suited to enable officers to

(Continued on page 288).

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

- Infant and Young Child.** Its care and feeding from birth until school age. A manual for Mothers. By John Lovett Morse, M.D., Edwin T. Wyman, M.D., and Louis Webb Hill, M.D., of Harvard Medical School and Children's Hospital, Boston, 12mo of 271 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$1.75, net.
- Practical Dietetics** by Alida Frances Pattee. Fourteenth Edition. 1923. Mt. Vernon, N. Y.: A. F. Pattee, Publisher. Price, \$2.60.
- International Clinics.** Volume II. Thirty-Third series. 1923. Philadelphia and London: J. B. Lippincott Co.
- Physiotherapy Technic.** A manual of applied physics by C. M. Sampson, M.D. St. Louis: C. V. Mosby Co., illustrated, 1923. Price, \$6.50.
- The Constitutional Factors in Dementia Precox,** by Nolan C. Lewis, M.D. New York and Washington: The Nervous & Mental Disease Publishing Co., 1923. Price, \$3.00.
- A Report on the Scientific Work of the Surgical Staff of the Woman's Hospital of New York, 1921-1922.** A volume of 300 pages representing the scientific work of this hospital. A valuable collection of papers on various surgical subjects.
- My Memories of Eighty Years,** by Chauncey M. Depew. New York: Charles Scribner's Sons, 1923. Price, \$4.00.
- Cerebro-Spinal Fluid in Health and Disease,** by Abraham Levinson, M.D., with 69 illustrations and 5 color plates, second edition. St. Louis: C. V. Mosby Company, 1923. Price, \$5.00.
- Textbook of Ophthalmology,** Paul Roemer, Prof. and Director of the eye clinic in the University of Bonn. Fourth revised edition. 500 pages with 306 illustrations in the text and 32 colored plates. Urban and Schwarzenberg, Berlin and Wien, 1923.
- Hydro and Thermo-Therapy of Internal and Nervous Diseases.** Eleven lectures with an appendix on diathermy. Ernst Tobias, Berlin. With a preface by Prof. Goldscheider, 280 pp. Berlin and Wien. Urban and Schwarzenberg 1923, 420 MK (Gold).
- Optical Methods in Control and Research Laboratories.** J. N. Goldsmith, S. J. Lewis and F. Twyman, Vol. I. Adam Hilger, Ltd., London.
- A Mind That Found Itself.** An autobiography by Clifford W. Beers. New York. Doubleday Page & Co., 1923. Price, \$2.00.
- Endocrine Diseases,** by Wilhelm Falta (Vienna). Translated by Milton K. Meyers, M.D. Third Edition. Illustrated. Philadelphia. P. Blakiston's Son & Co., 1923.
- Thirty Years of Psychical Research,** by Charles Richet Ph.D. New York: The Macmillan Co., 1923. Price, \$6.00.
- The Common Neuroses.** Their treatment by Psychotherapy by T. A. Ross, M.D. New York: Longmans, Green & Co., 1923. Price, \$4.00.
- Recovery Record for Use in Tuberculosis,** by Gerald B. Webb, M.D. New York: Paul B. Hoeber, Inc., 1923. Price, \$2.00.
- What is Psychology?** By Charles W. Hayward, M.D., M.R.C.S. New York: Alfred A. Knopf, 1923.
- Ductless and Other Glands.** By Fred E. Wynn, B.A. New York: Alfred A. Knopf, 1923. Price \$1.50.
- The Heart, Its Physiology, Pathology and Clinical Aspects.** By Selian Neuhoof, M.D., Visiting Physician, Central and Neurological Hospital, Consulting Cardiologist, Broad Street Hospital, New York City. Cloth, \$10.00. Svo, xii + 701 pages with 300 illustrations. P. Blakiston's Son & Co., Publishers, Philadelphia.
- The Hope of the Variant.** By John George Gehring, M.D., Sc.D. Price, \$2.00. Charles Scribner's Sons, New York. 1923.
- Chemistry for Nurses.** By Fredus N. Peters, A.M., Ph.D. Illustrated. Price, \$2.50. C. V. Mosby Co., St. Louis. 1923.
- Obstetrics for Nurses.** By Charles B. Reed, M.D. Price, \$3.50. 144 illustrations and 2 color plates. C. V. Mosby Co., 1923.
- Principles of Bacteriology.** By Arthur A. Eisenberg, M.D. Price, \$2.25. C. V. Mosby Co., St. Louis, 1923.
- The Doctor Looks at Literature.** By Joseph Collins, New York. Price, \$3.00. George H. Doran Co., 1923.
- Outlines of Medical Zoology.** By Robert W. Hegner, Wm. W. Cort and Francis M. Root. The Macmillan Company, New York. 1923.
- The Dominant Sex.** By Mathilde and Mathias Vaerting. The George H. Doran Co. 1923. Translated from the German. Price, \$3.00. New York.
- An Experimental Study of Psychopathic Delinquent Women.** By Edith R. Spaulding, M.D. Published for the Bureau of Social Hygiene by Rand McNally & Co., New York, 1923.
- The Medical Clinics of North America.** July, 1923. W. B. Saunders Co., Philadelphia. The Mayo Clinic number.
- The Surgical Clinics of North America.** August, 1923. W. B. Saunders Co., Philadelphia. The Chicago number.
- Heart Records, Their Interpretation and Preparation.** By S. Clavin Smith, M.S., M.D. First edition. Cloth. 313 pages with 128 illustrations. F. A. Davis Co., Philadelphia, 1923.
- Crime, Abnormal Minds and the Law.** By Ernest H. Williams, M.D., and Ernest Bryant Hoag, M.D., with introduction by Henry H. Goddard. The Bobbs-Merrill Co., 1923.
- The Medical Clinics of North America.** Chicago number. W. B. Saunders Co., Philadelphia and London. (Issued Serially, one number every other month.) Vol. VII, Number II, September, 1923. Octavo of 310 pages and 37 illustrations. Per clinic year (July, 1923, to May, 1924). Paper, \$12.00; cloth, \$16.00, net.

BOOK REVIEWS

The Surgical Clinics of North America (Issued serially, one number every other month). Volume III, Number V (Minneapolis-St. Paul Number — October, 1923,) 300 pages with 200 illustrations. Per Clinic

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INVESTMENT SECURITIES

EAST WATER AT MASON MILWAUKEE WIS

year (February, 1923, to December, 1923). Paper \$12.00; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

Rubber and Gutta Percha Injections. By Chas. C. Miller, M.D., Chicago. First edition. Cloth. 100 pages with illustrations. Price \$1.75 prepaid. Oak Printing and Publishing Co., Chicago.

This is a preliminary report by the author dealing with the use of rubber and gutta percha subcutaneously in its various forms for the filling in of various tissue deficiencies. By the use of numerous excellent illustrations and short descriptive chapters, the author describes the types of material used, manner of preparation, and the special syringes adapted for this work.

Exercise for Health and Correction. By Frank D. Dickson, M.D., and Rex L. Diveley, M.D. First edition. 1923. Cloth. 127 pages with 112 illustrations. Price \$2.00. J. B. Lippincott Co., Philadelphia.

This publication has been prepared by the authors to supply a need for a scientific, progressive series of exercises which may be applied effectively for health and correction. It deals with the subject under five groups; bed exercises, setting up exercises, postural exercises (recumbent position), postural exercises (standing), and foot exercises.

A short introduction to each group of exercises indicates their special value, following which the exercises are concisely explained with excellent illustrations. The volume should appeal to the physician as one which may be placed in the hands of the laymen, indicating the exercises that may be followed.

Bulletin of the National Research Council. By National Research Council, National Academy of Sciences, Washington, D. C.

The July, 1923, number of this bulletin contains a report of the division on medical sciences on the causes of geographical variations in the influenza epidemic of 1918 in the cities of the United States. The report is edited by Ellsworth Huntington, chairman. It deals successively with the problem, the data compiled and concludes with a short summary.

Test Letters and Pictographs for Measuring the Acuteness of Vision. Green, John, and Ewing, A. E., St. Louis. C. V. Mosby Co., St. Louis.

The test letters and pictographs are printed on both sides of 18 plates, 14 inches horizontal and 7½ inches vertical lengths, for distances of from 80 to 2 metres indicated by Arabic numerals. The Roman numerals represent the equivalents in feet. For convenience of the examiner the serial numbers are arranged on an additional chart in the same manner, the metres in type that can be read at 5 metres, below these the feet in smaller type and above the percentage of visual acuity for each letter. Two plates contain astigmatic tests in groups of 3 parallel lines placed in different directions. One chart is for near vision and one for the use of mutes, indicating the character seen upon the test cards. The plates are well executed.

C. Zimmerman.

ARMY MEDICAL SERVICE.

(Continued from page 285).

acquire a knowledge of or experience in the specialties. This provision of the law makes possible a further extension of the educational advantages which are offered to officers of the Medical Corps.

By the provisions of the act officers of the Medical Corps may be assigned each year to duty and station at medical centers throughout the United States in attendance at our foremost medical schools as students pursuing graduate or postgraduate courses of instruction. The law provides that officers so detailed will, in addition to the pay and allowances of their grade, have their tuition paid from government funds.

REQUIREMENTS FOR ELIGIBILITY.

Applicants are divided, generally, into two classes—first, fifth-year medical students and graduates in medicine who have not served their internship; second, graduates in medicine who have completed their internship in civil hospitals.

The general requirements for eligibility for appointment are the same for both classes, viz., that the candidate be a male citizen of the United States, between the ages of 23 and 32 years, and hold a commission in the Medical Reserve Corps of the Army. A rigid physical examination is required in the cases of applicants of both classes.

FIRST CLASS.

Other than the physical one, no examination is required. In addition, however, to the general requirements demanded of applicants of both classes, it is further required that an applicant of the first class have attained a high standing in his medical school studies, and he must receive the indorsement and recommendation of the school authorities for commission in the Regular Army.

Applicants who meet the foregoing requirements are, up to the limiting number authorized from time to time by the War Department, appointed hospital interns with the status of civilian employees.

The pay is \$60 per month, with rations, quarters, necessary traveling expenses, hospital treatment, medical attendance, and laundering of aprons and gowns. Appointment is made for the period of one year, subject to the right of the intern to resign and to his discharge for misconduct. Should an interne, while serving in an Army hospital, be unable to continue and complete his internship, through cause not due to his own misconduct, a certificate will be given him by the Surgeon General recording his service, and the Medical Department will endeavor to effect a just and equitable arrangement to facilitate the completion of his internship.

No pension rights accrue to the intern while on the status of civilian employee.

During his service the conduct and professional qualifications of the intern are carefully observed and made of record by the commanding officer of the hospital. Upon completion of the term the intern is given a thorough physical examination, the report of which and the records above referred to, together with recommendations of all officers under whom he has served, are re-

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For Information Address: F. C. STUDLEY, M. D., Superintendent
JNO. M. CONROY, M. D., Res. Physician

viewed by the Central Medical Department Board, and if approved by that board he is appointed, without further examination, first lieutenant in the Medical Reserve Corps previous to being commissioned in the Regular Army. As soon as practicable thereafter, if approved by the Surgeon General and the Secretary of War, he is appointed first lieutenant in the Medical Corps of the Regular Army, also without further examination. Appointment first in the Medical Reserve Corps is made necessary by the law which requires that all appointments be made from reserve medical officers.

The large general hospitals open to internship are located at Washington, D. C. (the Walter Reed General Hospital); Denver, Colo. (the Fitzsimons General Hospital); San Francisco, Calif. (the Letterman General Hospital); San Antonio, Tex. (Fort Sam Houston Station Hospital); El Paso, Tex. (The William Beaumont General Hospital); and Honolulu, Hawaii (the Tripler General Hospital).

Each of these hospitals is a "general" hospital in that it admits all classes of patients and serves a wide territorial area. Many of these cases are transferred; that is, have been sent to the general hospitals for special treatment. These hospitals are organized into three services, viz:

Medical, including neuro-psychiatric, pediatric, and contagious diseases.

Surgical, including eye, ear, nose, and throat, urological, gynecological, obstetrical, the X-ray, and orthopedic.

Laboratory, including clinical microscopy, pathology, serology, bacteriology, and chemistry.

While Fitzsimons General Hospital is a highly specialized institution maintained essentially for the care and treatment of patients suffering with tuberculosis, it also carries all the services mentioned above.

All general hospitals maintain an obstetrical service which varies according to the geographic location of the hospital. Obstetrical cases from the families of officers and enlisted men, and in exceptional instances those of civilian employees, are legitimate clientele of the Army Medical service. Whenever practicable these cases are treated in the hospital.

The special training in laboratory methods available for interns, particularly in the laboratories in the large general hospitals, is superior to that available at civil hospitals. In addition to routine clinical pathological examinations of blood, urine, stools, sputum, spinal fluid, venereal lesions, etc., these laboratories have the following special departments: pathology, anatomy, bacteriology, serology, and chemistry.

While applicants of the first class are not required to undergo the course of instruction at the Medical Field Service School as a condition of appointment, they are, after appointment, given advantage of that course, as well as the one at the Army Medical School.

Application for internship in a United States Army hospital should be made by letter to the Surgeon General of the Army, Washington, D. C., and must include the following: Full name, present address, home address, date and place of birth, whether or not a citizen

of the United States, education before entering medical school, statement of any physical defect which might disqualify in physical examination, name of medical school attended and date of graduation or of prospective graduation, statement that the internship is desired for the purpose of becoming a commissioned officer in the Medical Corps of the Regular Army.

The application must be accompanied by evidence of standing in the medical school attended, a recommendation of the medical-school authorities for commission in the Regular Army, and by evidence of naturalization, if the applicant is of foreign birth.

SECOND CLASS.

In addition to the general requirements demanded of applicants of both classes an applicant of the second class is required to undergo a preliminary professional examination. He must be a graduate of an acceptable medical school legally authorized to confer the degree of doctor of medicine, must have had at least one year's hospital training subsequent to the completion of a four years' course of instruction in such medical school, or in lieu thereof, have served one year as a medical officer of the United States Army between April 6, 1917, and July 1, 1919, and must be between the ages of 22½ and 31½ years at time of examination.

Examinations are held for a specified number of vacancies and no eligible list is maintained in the War Department.

The professional examination is a written one covering the subjects of anatomy, surgery, practice of medicine, physiology and histology, materia medica and therapeutics, and obstetrics and gynecology. A general average of not less than 80 per cent is required for the passing mark.

Licentiates of the National Board of Medical Examiners may be exempted from this examination. Such a licentiate must present to the examining board satisfactory written evidence of his status as such. He is not, however, required to take exemption; but may, if he so elects, take examinations in subjects in which entitled to exemption. An arbitrary grade of 85 per cent is awarded in any subject in which advantage or exemption is taken. If the candidate elects to be examined he must abide by the marks of his examination.

A candidate who is found qualified, if not already a member thereof, is commissioned first lieutenant in the Medical Reserve Corps, and ordered to report to the Medical Field Service School at Carlisle Barracks, Pa., or to such other place as the Surgeon General may recommend, for observation and instruction, for a period of approximately four months, at the expiration of which he is given a final examination. If, as a result of this examination, he is found qualified, he is appointed first lieutenant in the Medical Corps of the Regular Army. After the course of instruction at the Medical Field Service School, the officer is usually ordered to the Army Medical School at Washington, D. C., for a course of instruction entirely professional in its scope.

The subjects taught at these schools are bacteriology, pathology, hygiene and preventive medicine, Medical

(Continued on page XXVI.)

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ORIGINAL ARTICLES

PAIN IN ANGINA PECTORIS.*

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To begin with it is necessary to remember that angina pectoris is not a disease entity but a symptom complex, the result of a variety of morbid processes. Huchard collected the various opinions of writers of different periods in medical history and cites some sixty-four different views as to causation. Ischemia from coronary stenosis; ischemia from vaso-constrictor spasm; acute dilatation of the heart; cardiac neuritis or neuralgia; myocardial changes; aneurism; aortic insufficiency; adherent pericarditis; tobacco, tea and coffee; hyperthyroid states; all and many more have been assigned as causes of this syndrome.

Angina pectoris is therefore found to occur in patients with the most diverse forms of lesion and also in patients without any evidence of cardiac disease whatever.

Jenner first described the association of this disorder with disease of the coronary arteries. His view was quite generally accepted in spite of the fact that examination showed that the majority of patients with diseased or calcareous arteries did not suffer from angina pectoris.

Mackenzie reasons that identical symptoms produced from conditions so diverse cannot be directly due to the organic lesion but must be the result of a cause common to all these conditions.

Vasquez and Balfour, also Albrecht, have expressed the belief that the pain in angina pectoris was the result of pathological dilatation of the ventricular muscle and particularly the aorta producing a stretching and tension on their enveloping fibrous structures.

McKenzie believes that inasmuch as pain is the chief characteristic of extreme exhaustion of all muscles the pain in angina pectoris arises from certain conditions of the muscle substance of the heart when contraction meets with a resistance greater

than it can effectually overcome, whether a fairly strong muscle struggles against an increased resistance or whether a weak and degenerated muscle has opposed to its contraction a normal or even a lowered resistance. There is a relative increase in intraventricular tension.

It is this relative disproportion between the contractile power of the heart and the resistance to be overcome—the exhaustion of reserve power which constitutes the exhausted state. Other evidences of cardiac exhaustion such as cardiac dyspnoea, cardiac asthma, pulsus alternans, and Cheyne-Stokes respiration are frequently associated.

Cardiac exhaustion, however, is not the only factor. Identical lesions in the heart give rise to different phenomena in different individuals. Pain producing stimuli give rise to varying reactions in individuals depending upon their nervous susceptibility. For instance violent anger will in one individual cause extreme pallor and blanching of the skin while in another it will result in flushing. Pain, fright, extreme sorrow or joy often give rise to opposing reactions. Angina pectoris may therefore be the expression of a trivial cardiac lesion in some and a grave and fatal lesion in others, while in many pain may be entirely absent in the most advanced and serious heart lesions and heart failure.

Mackenzie thus regards angina pectoris from a twofold aspect—an expression of cardiac exhaustion and an expression of a susceptible poorly balanced nervous sensibility of the individual to peripheral stimuli and it is because of these abnormal reactions to these stimuli that we get such typical attacks of angina in neurotic individuals.

“It is well established that viscera are insensitive to pain. Such organs as the heart, stomach, bowels, liver and kidneys can be cut, torn, burned or bruised and no sensation elicited. It is equally well known that violent contraction of unstriped muscle fibre produces pain. This is true particularly in case of the hollow muscular organs such as the digestive tube, uterus, ureter, urinary bladder, gall bladder and the heart. While the hollow viscera themselves are insensitive to stimuli, violent contraction, the result of a stimulus, will produce pain, and morbid conditions involving them will

*Read before the Milwaukee County Medical Society.

give rise to important reflex or protective phenomena known as visceromotor and viscerosensory reflexes."

"The nerve supply of the body is represented by two great systems the autonomic and the cerebrospinal. The autonomic includes the entire sympathetic nervous system and certain cerebral nerves of which the vagus is the most important."

"When a nerve that terminates in a sense organ is stimulated in any part of its course from the periphery to the brain, a stimulus is conveyed to the brain of a kind similar to that induced when the peripheral end organ is stimulated. Thus optic or auditory stimulation gives rise to sensation of light or sound respectively. In like manner if a sensory nerve be stimulated in any part of its course through the brain, cord or trunk of the nerve the resultant sensation is referred to the peripheral distribution of the external body wall."

"In normal processes of life a stream of impulses is continually passing by the afferent nerves from the viscera to the spinal cord and along the efferent nerves to the muscles, blood vessels, etc. These normal impulses give rise to no appreciable sensation. If, however a morbid process in a viscus gives rise to an increased abnormal stimulus it affects neighboring sensory centers in the cord and the resulting sensation is referred by the brain, not to the viscus, but to the peripheral distribution of the sensory nerve. In like manner an abnormal stimulus from a diseased viscus may excite the cells of origin of the motor nerves and cause muscle spasm, hence the viscerosensory and visceromotor reflex."

Violent stimulation of a portion of the spinal cord by reason of a visceral affection produces for a considerable period a state of over-excitability of that portion of the cord so that all nerves arising therefrom are more easily stimulated, resulting in a hyperalgesic state of the skin and exaggerated motor reflexes.

Viscero-reflex, sensory, and motor phenomena occur frequently in situations remote from the organ giving rise to them. Thus the pain of biliary colic is often felt in the epigastrium or right shoulder; the pain of renal colic in the testicle, and the pain of heart affections in the shoulder and arm. The reason for this is that in the course of development the tissues that in a low scale of life covered the organ have been displaced and have carried with them twigs of the nerve supply of the

organ. Whatever theory we may accept it is evident that the pain of angina pectoris accompanies many morbid conditions which have as a pathologic basis varied lesions, the common factor in all cases being the involvement of the sensory fibres of the vegetative nervous system setting in motion the sensory reflex.

In order to appreciate the mechanism of pain in affections of the heart the distribution of the dorsal nerves must be borne in mind. In primitive vertebrates before the development of the limbs the spinal nerves are distributed segmentally around one half of the body. The upper dorsal nerves are therefore distributed over the body wall and to the tissues covering the heart. The upper limbs as they bud out from the trunk in their development drag with them portions of the cervical and upper dorsal nerves so that parts of the first and second dorsal nerves are distributed to the ulnar surface of the forearm and the inner surface of the upper arm. Thus a stimulus originating in the heart and affecting the area of the cord at the first and second dorsal levels would produce pain in the upper arm and forearm. In addition the cervical nerves from the second to the fourth supply the skin of the back of the head, the neck and shoulders; the fourth cervical also descends to the front of the chest, the fifth and sixth cervicals are distributed in the arm; the seventh to the hands and fingers; the eighth to the ring and little fingers and to the ulnar border of the hand overlapping with the first dorsal. The second and third dorsal are distributed to the inner half of the upper arm, axilla, and chest meeting and overlapping with the fourth cervical. The fourth and fifth dorsal are distributed to the chest and epigastrium.

Distribution of pain: Bearing in mind the foregoing description of the nerve supply, the wide and distant distribution of anginal pain is easily explained. The common location of the pain in angina pectoris is beneath the sternum or over the heart and radiating to the left shoulder and arm. The pain may be wholly in the arm or wrist or it may begin there and gradually approach the heart and finish there. At times the pain begins sub-sternally and spreads along the vessels of the neck and ends in an intense gripping pain in the pharynx or in the notch between the mastoid process and the jaw into the ear and side of the neck or it radiates into the face or jaw along the second and third branches of the fifth nerve. The

radiation and distribution of this pain is explained by the fact that the vagus nerve as it passes through the jugular foramen sends off an auricular branch to the drum, external auditory meatus, and auricle of the ear; this nerve is associated with the trigemini and explains the pain in the face, jaw, and teeth. The vagus proper is the sensory nerve to the pharynx, esophagus, stomach, and respiratory organs.

Osler and Huchard reported cases where the pain radiated to the testicle and was followed by swelling of this organ. This distribution is explained by the fact that a branch from the twelfth thoracic nerve enters frequently into the lumbar plexus. The genito femoral nerve is derived from this plexus and gives off an external spermatic branch. The pain may radiate to the right shoulder and arm. In children I have found the pain most commonly located in the epigastrium and abdomen. Bearing in mind the fact that the pain of angina pectoris may be very remote from the heart, in fact, almost anywhere from the top of the head to the testicle, and be limited at least for a time to these distant parts, a full realization of pain distribution is essential to avoid error in diagnosis.

Character of pain: The pain in angina pectoris is usually described as sharp, stabbing, tearing, or burning or as a dull, grinding pain that carries with it the feeling as though the chest were being held in a vice and crushed. At times the pain is a burning ache in the chest, along the inside of the arm, at the wrist or hand and fingers. Frequently there is a sensation of globus and of distention of the stomach with gas. Associated with the pain, especially when it occurs in the region of the heart or substernally, there is a sensation of oppression, compression or constriction; a feeling of strangling or a feeling "as though the sternum was forced back to the spine," as Hunter who, himself, was a victim expressed it. Or "a mountain upon my chest," as Matthew Arnold said.

If we accept the theory that the pain is a visceromotor reflex, we may well assert that the sensation of oppression, compression and constriction is a visceromotor reflex—a violent contraction of the intercostal and other muscles of the thorax, a protective phenomena as much as is spasm of the right rectus in appendicitis. With the sense of contraction comes an often indescribable mental anguish, a feeling of intense anxiety, a fear of impending death. It is my experience that the latter rarely

if ever occurs in the absence of the former. In other words there may be precordial, cardiac, or substernal pain; the pain may radiate in any direction, but unless the visceromotor reflex, as expressed in a sense of oppression or constriction, is pronounced, the mental anguish, the fear is absent. It is my conviction that the mental anguish, by many regarded as the most distressing feature of angina, is the result of violent muscular spasm, for the time being inhibiting all voluntary movement, and giving the sensation of arrested respiration, suffocation, and hence rapid and certain dissolution.

No sensation strikes with more terror into the heart and mind of the sufferer than the sensation that comes with difficult or arrested respiration and it is for this reason that in the large majority of cases absolute immobility is sustained during the attack.

Exciting factors: The most common exciting condition is muscular effort such as climbing up stairs, running for street cars, or walking up grade; atmospheric conditions intensify the influence of exertion. Walking against a cold or strong wind is especially liable to result in an attack. Walking with a full stomach predisposes to attacks, straining at stool and coitus are common exciting factors.

Emotional states such as anger, worry or intense excitement frequently bring on attacks. John Hunter was wont to say that his life was in the hands of any rascal who chose to annoy him. I know of several sufferers of angina pectoris who died in an attack brought on by a fit of temper. Taking a cold bath, distention of abdomen by flatus, and excessive use of tobacco, tea and coffee are exciting factors.

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HEALTH BOARD FILLS VACANCY.

Dr. Cora S. Allen, Faribault, Minn., has been appointed state health center physician for maternity and infant health service under the state board of health, and is at work. She succeeds Dr. Mildred Van Cleve, who resigned to enter private practice in Illinois. Dr. Allen filled a similar position in Wisconsin during the summer while on absent leave from her state position in Minnesota.

A PRELIMINARY NOTE ON THE USE OF
RED BONE MARROW AND SPLEEN
IN THE TREATMENT OF ANEMIA.*

BY C. D. LEAKE, PH.D., AND J. S. EVANS, M.D.,

MADISON.

Interest in a case of subacute combined spinal degeneration, which gave a characteristic blood picture indicating the development of a severe anemia, stimulated investigation of methods of treatment which might prove more reliable than the customary therapeutic measures involving the use of iron, arsenic, or blood transfusion. It has been shown by Whipple and Robscheit¹, in a series of carefully controlled experiments, that neither iron nor arsenic exert any significant influence on the rate of hemoglobin regeneration following simple anemias, while the expense of germanium dioxide² and the technical requirements of blood transfusion make the use of these methods unsatisfactory in general practice.

Attention was directed to the use of red bone marrow and spleen by a consideration of the theories of blood formation and destruction, and by the empirical use of these materials as hemopoietic agents during the last decade of the nineteenth century. The following line of reasoning was adopted as a working hypothesis for our experimentation:

“(a) The production of red blood cells is not constant and maximum for existing red bone marrow, but, more in accordance with the general economy of nature, is regulated by the rate or extent of erythrocyte destruction, and a margin of reserve remains for the functioning of existing red bone marrow, with extension of the erythrogenic centers occurring only when this margin of reserve is exhausted under conditions of extraordinary stress; (b) the spleen, usually accepted as the organ chiefly concerned with the removal of the older erythrocytes from the circulation, elaborates, in proportion to the number of red blood cells removed, and possibly from them, a hormone capable of stimulating erythrocyte production; (c) this splenic hormone, being carried by the blood, lodges in the erythrogenic centers of the red bone marrow, either by means of an affinity of its own for them, or through the agency of a receptive sub-

stance in them capable of binding it, and (d) under the influence of this combination, and possibly with the destruction of the hormone or hormones concerned in the process, the activity of the adult erythropoietic system is regulated.”³

On the basis of this hypothesis experiments were inaugurated on the effects of the administration of red bone marrow and spleen singly and in combination on the formed elements of blood in normal rabbits, dogs, and humans.

The conclusions reached in the preliminary study may be quoted from the original article.³ In speaking of the “combined extracts of red bone marrow and spleen,” it should be mentioned that the materials were mixed in equal proportions, by weight.

“Intravenous injections into rabbits on three consecutive days of 1 c.c. per kilogram of a 5 per cent filtered solution of fresh spleen in saline caused a fall in the number of circulating erythrocytes within twenty-four hours after the first injection of about 8 per cent below normal. The day following the third injection, however, the red blood cell count was 7 per cent above normal, on the average, from which it fell gradually to normal within five days after the administrations were stopped. The hemoglobin percentage showed little constant change.

“Similar injections of fresh red bone marrow caused a gradual increase in the erythrocytes to 15 per cent above normal on the average, twenty-four hours after the third injection. From this figure, return to normal was noted within two days after administration was discontinued. The hemoglobin did not increase in proportion to the rise in the red cells.

“Similar injections of combined extracts of fresh red bone marrow and spleen resulted in an increase of 19.5 per cent on the average, in the number of circulating red blood cells on the day after the third injection, with a return to normal five days after injections ceased. The hemoglobin did not rise in proportion to the increase in the erythrocytes. There was no significant changes in the urine output in any of these animals during the period of experimentation.

“Daily oral administration of 1 per cent filtered solution of desiccated spleen and powdered red bone marrow in rabbits gave parallel results, according as to whether the extracts were given singly or in combination.

*From the Departments of Pharmacology and Clinical Medicine of the University of Wisconsin.

"Oral administration of a 1 per cent filtered solution of combined powdered red bone marrow and desiccated spleen in dogs caused a marked rise in the number of circulating erythrocytes, with not so pronounced an increase in the hemoglobin percentage. The percentage of reticulocytes rose considerably during the period of administration, and the corpuscle volume increased. There were no significant changes in blood volume.

"It is concluded that splenic and red bone marrow extracts are more powerful erythropoietic agents in combination than separately, and it is indicated that they act first, by increasing the rate of production or delivery on existing erythrocytic centers; and, second, by causing an extension of functioning red marrow."

The essential points of this preliminary study are that (a) red bone marrow and spleen are effective in increasing the number of circulating red blood cells and hemoglobin, (b) red bone marrow and spleen are more effective erythropoietic agents in combination than alone, (c) they are capable of oral administration, and (d) the constancy of blood volume and the increase in the number of young cells shows that blood formation was stimulated in reality, and that the effect was not due to a mere blood concentration.

A later study of the effects of these agents on the white blood cells⁴ showed that they were effective in increasing the number of polymorphonuclear neutrophils, but that this action was not as striking as the increase in red blood cells.

A study of the action of the combined preparation in normal humans has shown that it markedly increases the number of erythrocytes, and that the hemoglobin rises, but not as rapidly as or in proportion to the increase in the red cells. However, the hemoglobin increase is better maintained after the administration has ceased. The increase in the number of white blood cells is less marked in humans than in the experimental animals. It was found possible to administer the preparation in powdered form, in 0.3 gram (five grain) capsules. Three of these were an active daily dose. They were administered before meals with plenty of water. It was interesting to find that there were no untoward accessory actions, although it had been expected that the inclusion of the splenic material might lead to increased intestinal activity since such an effect has been reported following the use of splenic extract.⁵

PRELIMINARY STATEMENT OF CLINICAL RESULTS.

The use of desiccated spleen and red bone marrow combined in equal proportions, in capsule form, in the treatment of various types of anemia has been followed in the hospitals and clinic of the University of Wisconsin, a comprehensive report of which work will soon be made. The preparation was administered in 0.3 gram (five grain) capsules, three times daily, before meals, with plenty of water. With improvement of the blood pictures dosage was diminished at first to two capsules and then to one capsule daily, the administration being withdrawn as soon as the erythrocytic and hemoglobin content of the blood remained constant.

It is the purpose of this preliminary communication to indicate the types of anemias in which the use of this preparation has been found valuable. These may be listed in the order in which the most marked response and improvement has been obtained.

1. Grave chronic secondary anemias of undetermined origin, having many of the characteristics of the progressive pernicious type (high color index, abnormal forms of erythrocytes, marked pallor, dyspnoea, and cardiac disturbances), and in which iron and arsenic, and in some cases transfusions, had failed to bring about a favorable response.

2. Grave active secondary anemias of acute septic infections.

3. Chronic anemias found as an accompaniment of chronic infections.

4. Dietary anemias of infants, in which if the patient is too small to take capsules, the preparation is administered in boiled and filtered aqueous solution as a broth.

5. Menorrhagic anemias.

6. Mild chloro-anemias of adults.

The value of this treatment in so-called primary progressive pernicious anemia is doubtful. In such cases the blood making organs are in such a state that response to any stimulus seems only temporary, and the reaction noted clinically indicates that stimulating these paralyzed hematopoietic centers is apt to be followed by a sudden drop in the erythrocytic production. The differential diagnosis between essential anemia of the progressive pernicious type and grave secondary anemia in which the blood making functions are

inhibited rather than permanently destroyed is difficult. The reaction of each type to bone marrow and spleen has been characteristic. In the progressive pernicious type there has been a drop in the cell content of the blood after a primary rise, while in the secondary anemia no such drop occurred. The type of reaction, therefore, has been considered of diagnostic value, the drug being discontinued whenever it fails to produce a positive response. Clinical and experimental observations indicate that the compound stimulates cell production and prevents excessive cell destruction, because of increasing cell resistance. If this assumption is correct, then it is indicated whenever the blood making function is crippled, or whenever there is increased red cell destruction as in acute or severe chronic infections.

It may be claimed that this preparation is only active because of its iron content. This has been experimentally determined by Wong's method⁶ and has been found to be between 2.5 and 3.0 milligrams of water-soluble iron per gram of combined material. Since the normal daily iron intake is between 15 and 30 milligrams, the iron received in the normal daily dosage of three 0.3 gram capsules would be about one-tenth of the iron ordinarily ingested on an average diet. It is doubtful whether such a small increase in the iron intake would so strikingly affect the number of erythrocytes and the hemoglobin.

Our material already prepared in capsule form has been secured through the courtesy of the Wilson Laboratories of Chicago.

SUMMARY.

Desiccated red bone marrow and spleen combined in equal proportions and administered in 0.3 gram capsules three times daily has been found beneficial in certain types of anemia. It is desirable that independent clinical studies be made of the value of this preparation in the types of anemias mentioned, in order that proper appraisal may be made of this therapeutic measure.

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LINITIS PLASTICA.*

BY FRANCIS B. McMAHON, B.S., M.D., M.S., F.A.C.S.

MILWAUKEE.

Linitis plastica has been described as a rare and distinct disease of the stomach, and the writings on the subject have been and still are confusing. A brief summary of the literature is of importance in showing the different opinions and theories as to its causes and the nature of the condition. Cruveilhier published a paper on this subject in 1835 under the title of "Innocent Hypertrophy of the Pylorus." William Brinton described it again in 1854 as a distinct and separate gastric inflammatory disease of benign nature with gross and microscopic pathological increase of connective tissues, involving primarily the submucosa and the muscularis, and later the other layers of the stomach wall to a greater or lesser degree, and gave it the name of "linitis plastica", which has been generally accepted or used by the profession since that time to designate the disease. Common synonyms for linitis plastica are "leatherbottle stomach", "fibromotosis of the stomach", "gastric fibrosis", "gastric sclerososis", "gastric cirrhosis", and "chronic proliferative gastritis". The lesion is found as a segmental or a diffuse process producing in the two later stages a great thickening and contraction of the gastric wall, and a diminution of the gastric lumen. It has no distinct or marked clinical characteristics to differentiate it accurately from certain other organic gastric lesions, save possibly that of the roentgen findings. It is slow and insidious in onset, tends to be continuously progressive in character, and if untreated, leads to a fatal termination from cachexia.

Alike many other diseases of the gastro-intestinal tract, there has been much difference of opinion regarding the etiology and pathology of linitis plastica. All of the earlier writers and most of the recent ones have followed the teachings of Brinton, and have placed it as a separate and distinct disease. Others have claimed that the lesion is a manifestation of a luetic disease of the stomach. Still others have claimed that it is invariably a lesion secondary to gastric ulcer.

*Presented before the Association of Residents and Ex-residents of the Mayo Clinic, Rochester, Minn., June 4, 1923.

Even in the earlier days, some surgeons and pathologists believed it to be a form of carcinoma probably from the fact that many of their cases later died of metastasis rather than from conclusive histological evidences of malignancy. MacCarty has been the first to show and to prove that linitis plastica is a type of gastric malignancy from a careful special microscopic study of a fairly large series of these cases. Lues does not play an etiological role in linitis plastica, although it may produce a gross pathological picture that resembles it very closely. Some authors claim that it is a benign process primarily with malignant degeneration occurring in certain cases. Chronic gastric ulcer or superficial gastric mucous erosions have been emphasized by Thompson and Graham as the underlying causes, and submit evidence in support of their theory that it is an inflammatory and infectious process secondary to a "breach of the surface", which latter serves as an avenue of entrance for infection. In seven of nine cases which they described of true linitis plastica, they found a deep punched-out chronic ulcer in the center of the disease, while in the other two cases, superficial ulcerations were found over the greater part of the diseased areas. They frankly admit though the discrepancy in the frequent occurrence of chronic gastric ulcer and the rare incidence of linitis plastica and its almost total absence in the duodenum where chronic ulcer is so very common. Brinton maintains that the involvement of the mucous membrane is inconsistent, late and incidental. Lyle has made a study of a large series of these cases, and his observations are of importance. The age incidence in 61 he collected show that 6 cases occurred between the ages of 20 and 30 years, 13 cases between the ages of 30 and 40 years, 17 cases between the ages of 40 and 50 years, 11 cases between the ages of 50 and 60 years, 12 cases between the ages of 60 and 70 years, and 2 cases beyond 70 years of age. It was found about twice as frequently in males as in females.

The pathological findings in linitis plastica as reported by various observers may be briefly summarized. There is a chronic proliferation of connective tissue involving chiefly, if not primarily, the submucosa and to some extent the muscularis of the area involved. In the advanced and long standing cases, the other layers of the gastric wall show marked changes of a connec-

tive tissue type. The process usually starts in the pyloric area of the stomach and is usually segmental extending uniformly on both the anterior and posterior walls. The diseased process shades gradually into the normal stomach tissue, but stops abruptly at the pyloric ring. In one case, it was reported as extending onto the wall of the duodenum. The tissue is rigid, hard, and of a uniform density and consistency producing a tumefaction. The wall is thickened and contracted with a corresponding diminution in the size of the lumen. The serosa may be roughened and hazy from thickening, induration and adhesions. There is a regional lymphadenitis. The diseased portion appears symmetrical rather than nodular. The lumen may be patent from rigidity and firmness. On section, the stomach wall cuts with a leathery and fibrous resistance, with the thickness especially marked in the submucosa and the muscularis, which have a whitish appearance from the dense connective tissue dipping down into the adjacent layers. The mucosa is usually corrugated and thrown into numerous supplementary folds. Gross ulcerations, acute or chronic, may be present secondary to erosions, infection, trauma, or circulatory changes. On microscopic examination extensive fibrosis, hyalinization, and connective tissue proliferation are described by all observers. In these dense connective tissue changes, MacCarty has been able to find and report cells, often isolated, that cytologically are malignant. It is evident that most careful microscopic examination is required to tell the presence of these malignant cells, and that invariably many sections must be studied before the malignant cell is identified. Cases are on record where an unsuccessful attempt has been made to find malignant cells in the gastric lesion, but on microscopic examination of the regional lymph glands, carcinoma metastases were found. Cases are also on record where the pathological diagnosis was one of benign tumor, and in which the patient later died of metastatic carcinoma. It would appear then that linitis plastica in an atypical form of gastric carcinoma in which there does not appear to be the usual lesion in the mucosa with or without secondary ulceration, and that the cases reported of true linitis plastica are, in fact, the slow growing atypical type of carcinoma with a pronounced connective tissue proliferation that almost

eclipses the histological picture of malignancy which is found only after most careful and extensive search with special microscopic magnification.

The symptomatology of linitis plastica may be very obscure and indefinite. Sailer states that a positive diagnosis cannot be made from clinical findings. The symptoms are usually those of mild but progressive chronic indigestion. Epigastric pain, coming on soon after meals, qualitative and quantitative food dyspepsia, sense of fullness and distress in the epigastrium and anorexia may be complained of. With the extension of the diseased process and with the interference of gastric motility, these symptoms become more aggravated. Vomiting may be present, but frequently is not a symptom until the disease is far advanced. Hemoptysis and melena are rare. Emaciation becomes more pronounced as the process becomes advanced. Dysphagia may be present, with compensatory dilatation of the oesophagus and the portion of the stomach not yet involved. Physical examination may elicit epigastric tenderness and muscular rigidity on pressure palpation. The presence of a palpable epigastric tumor may be detected, but many of these tumefactions cannot be palpated accurately. Many tumors of greater proportions than those found in linitis plastica when revealed at the operating table have not been correctly and accurately recognized through the thickness of the abdominal wall by some of the most expert, even when examined under the relaxation of an anaesthetic. The occurrence of metastases are probably very late as contrasted with the other types of malignancy.

The roentgen findings in a suspected gastric lesion will furnish the greatest aid. X-ray findings may be the first signs to attract attention to the presence of an organic lesion of the stomach. In the segmental type there may be a retention of the six hour barium carbohydrate motor meal or there may be an early gastric clearance of the motor meal due to a gaping rigid pylorus. Gastric retention or obstruction occurs more frequently, as the pyloric segment is the part that is usually first involved, leading to thickening and contracture of its wall and to corresponding narrowing of the gastric lumen as well as to diminution or absence of peristalsis in the diseased segment.

Fluoroscopic and roentgenographic examination of the barium-filled stomach will show a filling defect with slightly roughened or smooth margin shading into the uninvolved portion of the stomach. Canalization through the filling defect may or may not be present depending upon the pliability and elasticity of the diseased segment. There will be some dilatation of the stomach proximal to the site of obstruction. In this type of lesion, it is impossible to differentiate the roentgen findings found in linitis plastica from that found in other types of carcinoma and occasionally in gastric lues, except that the margin and the surface of the mucosa do not show the moth eaten appearance of a projecting tumor and ulcerations. In the diffuse type of linitis plastica where practically the entire stomach is involved, the roentgen examination will show a small contracted stomach with diminished gastric capacity and with altered gastric motility of the six hour motor meal. The outline of the barium shadow is smooth or only slightly irregular. The oesophagus may show a compensatory dilatation.

Gastric analysis usually shows a diminution or a total absence of free hydrochloric acid as in other gastric carcinomata. Blood examination shows a moderate to a marked degree of secondary anemia. Serological tests should always be made to exclude lues.

The diagnosis of linitis plastica is rarely made before operation and pathological examination. In our case, the margin of the filling defect



Fig. 1. Large filling defect in the pyloric portion of the stomach without a corresponding palpable mass. The margin is fairly smooth and sharply defined. Operable.

was somewhat smoother than that found in carcinoma (Figure 1). The contour was not moth eaten and irregular and the large extent of the filling defect was out of proportion to the balance of the clinical picture usually accompanying an ordinary carcinoma of this size as regards mild gastric distress, loss of appetite, loss of weight, anemia and cachexia.

The treatment of linitis plastica is surgical. The profession is in full agreement that there is no known medical treatment of any value in arresting the diseased process. The surgical treatment has long been recognized of distinct value. The type of operation will differ with the extent and area of the stomach involved. In 1885 the total gastrectomy was successfully performed in a case of linitis plastica with anastomosis of the duodenum to the cardia. Wide excision of the diseased segment with a gastro-jejunostomy of the Polya-Balfour type is the operation of choice in the segmental type of the disease, because of the subsequent uniform satisfactory results in gastric motility after this operation. This operation also increases the range of operability. Gastro-enterostomy in the advanced form with obstruction is the palliative procedure.

Case History—Female, age 49, examined in July, 1920. Previous history negative.

Chief Complaint—Pain in epigastrium and loss of weight.

Clinical History—For a year prior had dull pain in the epigastrium coming on one to two hours after meal, exaggerated by heavy meals, and accompanied by fullness and distress, but no vomiting. Her appetite was poor, had lost about 20 pounds in weight and considerable in strength. The symptoms had been continuous but more severe and progressive for six months. No history of gastric hemorrhage.

Physical Examination—Moderate palor, weight 108 pounds, pre-systolic heart murmur, well compensated. Moderate tenderness and rigidity in the epigastrium. Balance negative.

Laboratory Findings—Urinalysis negative; secondary anemia with 62% hemoglobin; gastric analysis showed total acidity of 17 with no free hydrochloric acid. Serological test was negative.

X-ray examination showed a number one retention of the six hour motor meal and a large filling defect in the pyloric region.

Diagnosis—Mitral regurgitation (compensated). Pyloric obstruction, lesion of the stomach, probably carcinoma, but cachexia and emaciation not in proportion to the extensive X-ray findings of the gastric lesion. No history of bleeding either way. Advised exploration—straight right rectus incision.

Operation—July 16, 1920, partial gastrectomy for a hard rounded pyloric tumor diffusely involving a segment of both the anterior and posterior walls and about five inches wide. Polya-Balfour anterior gastro-jejunostomy. One small superficial tube drain.

Pathological Examination—Grossly diffuse hard thickening of all the layers, especially the muscularis and the submucosa layers of the stomach segment without ulceration of the mucosa. Linitis plastica.

Microscopically diffuse chronic interstitial fibrosis and hyaline degeneration more marked in the muscularis and submucosa. Eosinophiles increased; no malignancy; no perivascular infiltration of lymphocytes; no endarteritis. Regional chronic lymphadenitis. Later histological examination by Dr. MacCarty of the Mayo Clinic revealed the presence of malignant cells in this chronic inflammatory process after an extensive and exhaustive search.

Post-Operative Record—Convalescence was uneventful except for a superficial wound infection which healed by secondary intention without causing a hernia.

Follow-up Record—Re-examination in August, 1921, showed the patient well nourished, having taught school since December 1, 1920. General and local condition good. X-ray examination showed the gastro-jejunostomy functioning well with normal contour and pliability of the gastric musculature. No retention. Roentgenography of the lungs was negative. August, 1923, thirty-seven months after operation, she reported in person to her physician, she was in very good health, and her physical and laboratory examinations were negative. Gastric contour and motility were normal.

Summary—

1. Linitis plastica is a rare type of gastric carcinoma characterized by extensive gross and microscopical pathological increase of connective tissue involving the layers of the stomach wall,

but more marked in the submucosa and in the muscularis with frequently only isolated cells that are histologically malignant.

2. It is difficult to distinguish it clinically from the other forms of gastric carcinoma and of gastric lues, except by its rather slow progress, late metastases, and serological tests.

3. Its treatment is surgical. Partial gastrectomy (Polya-Balfour type), gastro-enterostomy, or jejunostomy are the operations of choice, depending upon the location and the extent of the lesion.

4. The prognosis in this type of case should be more favorable, because cachexia is not necessarily as pronounced as in other forms of gastric carcinoma and metastases are probably a late manifestation and complication of the disease.

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THE PRE-OPERATIVE CARE OF INFANTS AND CHILDREN.*

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Careful pre-operative management of infants and children reduces the surgical risk and helps the patient towards a rapid and uneventful convalescence. The principles guiding us in this care are based upon studies of the physiology and pathology of infancy and childhood. I shall endeavor to discuss the application of these principles only in a general manner, for they can be applied in all types of cases. The topics for discussion may be conveniently grouped under eight headings, (1) nutrition, (2) water supply, (3) purgation, (4) food, (5) status lymphaticus, (6) respiratory infections, (7) heart, (8) coagulation of the blood.

Nutrition.

If the surgical procedure is not an urgent one, the patient's nutrition should be improved, if necessary, before the operation. This is especially important for infants. It is dangerous to operate on small infants while they are losing weight, or suffering from a digestive disturbance. Of course, if the failing nutrition is due to the condition for which the surgeon desires to operate, for example, pyloric stenosis, one must not delay, and the opera-

tion should be performed at once. It is a difficult matter, at times, to determine whether or not the nutritional disturbance can be relieved without surgery. For instance, infants with hare lip and cleft palate are very often the subjects of malnutrition. It was thought at one time that this was the result of their deformity. It has been my experience and that of others that these patients can be made to gain weight before operation, and at present we do not have them operated upon until they are in good nutritional condition, even though we realize that the earlier the deformity is corrected the better the end result will be.

Infants who are bottle fed should not be operated upon the day they enter the hospital. The reason for this delay is that babies are very susceptible to a change in environment. A baby usually loses weight during the first day or two of his hospital stay, even though his food is unchanged. It is much better to wait a day or two, when this is possible, in order to enable the patient to adjust himself to his new surroundings.

Water.

During the period of infancy and childhood water plays a most important role, even more important than in the period of adult life. It is absolutely essential that an abundant supply of water be furnished to the patient before operation. In recent years Marriott and Schloss have shown us how great an injury can be produced in infants from dehydration. Dehydration is quickly produced either from vomiting, diarrhea, refusal of food, or failure to supply fluids. As a result of dehydration the following phenomena occur. The blood becomes concentrated. The total blood volume is diminished, and likewise the blood flow. A high fever is quickly produced. The kidneys stop functioning due to a lack of water in the blood, and as a result the waste products pile up in the blood. The non-protein nitrogen may be increased up to 200 mg. per 100 c.c. Some of these patients develop symptoms which are seen in uremia, such as stupor, convulsions, etc. In others a severe acidosis is produced due to a failure of elimination of acid phosphates through the urine. When sufficient water is given in time, these signs and symptoms quickly disappear. Therefore, it would seem advisable to keep up an abundant fluid intake until a short time before the operation actually takes place. I have seen no bad results from giving

*Read before the Milwaukee Academy of Medicine, Oct. 9th, 1923.

water to infants a half hour before they are taken to the operating room.

In some conditions such as pyloric and intestinal obstructions, it is not possible to supply sufficient fluids by mouth. In these patients, fluids must be given in some other manner, either per rectum, under the skin, intraperitoneally, or intravenously.

Purgation.

The administration of a strong purgative, such as castor oil, the evening before operation is not to be recommended as a routine procedure. For one thing it predisposes to dehydration by draining the body of fluids. It irritates the intestine, and as Abt showed many years ago, occult blood can be found in the stools after the administration of castor oil. Alvarez has also demonstrated that strong purgatives tend to inhibit normal intestinal peristalsis and to predispose to reverse peristalsis. It would seem sufficient in most cases to empty the lower bowel with a simple enema the morning of the operation.

Diet.

Assuming that we have a well nourished infant or child, can anything be done in the way of diet to prevent post-operative complications? It has been our custom to give a low fat, high carbohydrate diet for three days preceding the operation. I believe that this procedure has benefitted patients who have been operated upon. Acidosis may develop following an operation even though the patient has received enough fluids. It is probably a partial starvation acidosis, and one finds a marked increase in acetone bodies in the blood and urine. Glucose or any other carbohydrate is a specific for this type of acidosis, and it will rarely occur when the patient has received a large amount of carbohydrate before operation. Gamble studied children who were receiving the starvation treatment for epilepsy. He found a marked reduction in the CO_2 tension of the blood plasma. When sugar was given by mouth to these patients the acidosis promptly disappeared. It would seem desirable to feed large amounts of carbohydrate food before operation in order to increase the glycogen reserve in the body. The fat is reduced in the diet as acetone bodies are produced from fat when there is not enough glucose available in the body to oxidize the fat completely. It should be remembered, however, that the body will burn its own fat in star-

vation, after the glycogen reserve is exhausted, and this type of acidosis is particularly liable to occur in well nourished patients with an abundant panniculus.

The giving of alkalis, as sodium bicarbonate, before operation is not advised as a routine procedure. In small amounts they do no good as they are eliminated too quickly. In large amounts they disturb the mineral balance of the body, and if given in excessive amounts, convulsions, due to alkalosis, may be produced.

Status Lymphaticus.

Sudden death during operation from status lymphaticus is not a common occurrence, but we all have seen it. Status lymphaticus is best recognized by the demonstration of an enlarged thymus gland in an X-ray picture. This is not the only diagnostic method, but it is the most reliable. In a study of the incidence of enlarged thymus in two thousand infants and children, I found that 50% of the positive cases occurred in those patients with congenital defects and malformations. In other words, status lymphaticus is found quite frequently in the patients who have congenital malformations and defects. Every patient who is to be operated on should be studied as to status lymphaticus. If recognized, pre-operative roentgen-ray treatment should be given until the thymic shadow is reduced.

Respiratory Infections.

It is advisable to clear up all respiratory infections before operations, as they predispose to post-operative pneumonia. Operations on the nose and throat should be postponed for at least ten days, after an acute throat infection has subsided. In some cases it is advisable to study the bacteriology of the naso-pharynx and tonsils, as the presence of certain organisms may delay the healing of the wound.

Heart.

In infants and children we do not often have to defer an operation because of a heart condition. A cardiac murmur is in itself no contraindication to operation. Of course, children with cardiac decompensation should not be operated upon. The question as to the proper time for removing infected tonsils and teeth after an endocarditis is a debated one. I believe that no child with a recent

cardiac infection should receive an operation until the temperature remains normal for at least one week, and the leucocyte count is below 10,000. I have seen two patients supposedly in the inactive stage of an endocarditis die following the removal of tonsils, and other cardiac patients become much worse. These patients were operated upon the day they entered the hospital, but several months after their attack of endocarditis.

Coagulation of the Blood.

Hemophilia is quite a rare condition, not often encountered, and is usually diagnosed from the history. It does not seem absolutely essential to determine the coagulation time of the blood in every preoperative case, but it is easily determined in a few moments if desired. The bleeding time, which is just as important, can be noted at the same time.

Some physicians give calcium preparations by mouth before operation. Theoretically, they should have no beneficial effect, as there is never a deficiency of calcium in the blood except in tetany and renal insufficiency. Furthermore, it is impossible to increase the blood calcium, when normal, by feeding calcium salts. The injection of horse serum, human serum or blood would seem a more logical procedure for decreasing blood coagulation time, when this is necessary. In icteric conditions the administration of calcium salts is beneficial in preventing hemorrhage during the operation.

These are some of the general principles upon which an effective pre-operative care for infants and children can be based. They are not especially complicated, yet I believe they will aid in securing better operative results.

Radium-Emanation (Radium Emanation Corporation).—The emanation, mechanically removed from a solution of a radium salt, in admixture with inert gases. It is supplied in sealed glass capillary tubes; each tube accompanied by a statement of the amount of radium emanation in terms of millicurie contained in it at the time of sale. The radiation from radium emanation as a therapeutic agent is analogous in all respects to that from radium and its salts, except that the activity decreases rapidly (see Radium and Radium Salts, New and Non-official Remedies, 1923, 255). The intensity of radium emanation decreases rapidly through decay (at the rate of about three-fourths per cent per hour). Radium Emanation Corporation, New York., (Jour. A. M. A., July 21, 1923, p. 213.)

BLASTOMYCETIC DERMATITIS.

BY RALPH M. CARTER, A.B., M.D., F.A.C.S.,

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Some time ago, four cases which presented much interest came under my observation.

The first case, V. L., was a married man 57 years of age. By occupation, he was a laborer, employed in a horse collar factory, where he was operating a machine used for cutting up straw for filler. His previous history revealed nothing of importance. He presented himself to me for treatment for a cutaneous lesion upon the anterior aspect of the right wrist. This lesion was roughly circular in outline, about 5 cm. in circumference, and elevated from the surrounding healthy skin. Surrounding it was a reddened inflammatory areola. The whole lesion was dusky red in appearance, with a marked tendency to heal in the center, and advance at the periphery. Over the healed central portion was a thin scale-like skin, which, when removed, revealed new, apparently healthy epidermis beneath. Outside of this, the tissue beneath the crust was moist, and markedly verrucose in appearance. The entire periphery was the seat of numerous miliary abscesses, from each of which, when opened, a small drop of yellow glairy pus exuded, and smears from this pus showed the presence of numerous round, double-contoured bodies, morphologically identical with *oidium blastomycosis*. The same organism was grown from this pus in almost pure culture. The treatment followed was increasing doses of saturated solution of potassium iodide, which effected a complete cure in the space of two months. This case was first seen in May, 1917.

In October of the same year, a second case came under observation. This was in a married man, a woodsman, A. F. B., 46 years of age. About a month before consulting me, he had scratched the back of his left hand on the bedstead, and a few days later had sustained an abrasion of the back of the right hand while removing a window screen. Both of these lesions had refused to heal, in fact, were slowly but progressively growing larger. There was nothing of any significance in his previous history. General physical examination was entirely negative. On the back of each hand was to be seen a lesion about 2 cm. in diameter, covered with crusts.

Each was somewhat elevated, dusky red in color, with an inflammatory area about the circumference, together with numerous miliary abscesses. There was a tendency to healing in the center, with extension at the edges. Upon raising the crusts, a moist verrucose surface was present beneath. Microscopic examination of the pus from the small abscesses showed numerous large double-contoured organisms in all stages of development, and cultures were positive for the same bodies. Under treatment with increasing doses of potassium iodide, healing was complete in six weeks.

In November, 1917, I saw the third case. This occurred in W. D., a single man aged 19, upon whom I had operated for inguinal hernia. During his convalescence in the hospital, he called my attention one morning to a lesion upon the middle finger of his left hand, and asked me to give him something to heal it up. Upon examination I found a condition exactly similar to the two cases above described, except that the lesion was smaller. The same organism was present, both upon microscopic examination and upon culture. Upon being questioned as to the origin of the trouble, he stated that about six weeks previously, he had scratched his hand while working about a paper machine. (He was a paper-maker by trade.) Increasing doses of potassium iodide caused the disappearance of this lesion in about a month.

The early part of January, 1918, I was consulted by E. C., a married man 36 years of age, and an employe of a water company. He stated that upon the 21st of December he was working upon some pipes in an excavation, and accidentally scratched the back of his right hand upon a wrench he had been using, and which was lying submerged in some water in the bottom of the trench. The abrasion had refused to heal; on the contrary, it was slowly growing larger. Examination revealed a circular lesion on the back of the right hand, 3 cm. in diameter. It was raised, with a sharply defined, inflammatory border. It was covered with a crust, which when raised, revealed the customary moist verrucose or papillary surface. About the periphery were numerous miliary abscesses. A drop of this pus examined microscopically showed almost a pure culture of spherical, double-contoured organisms in all stages. These were readily grown in cul-

ture. Complete healing occurred with potassium iodide.

These four cases stimulated my interest in the subject of blastomycosis, and led me to look up the literature upon the subject. To my surprise, I could find records of but one case reported from Wisconsin. This means one of three things: either the disease is a rarity in this section, or cases are not being recognized, or it is so prevalent that it is not deemed worthy of report. The latter supposition cannot be true, judging from my own experience. It is my belief that the disease is more prevalent than one would judge from published reports, and that the cases are not recognized because physicians generally do not keep the condition in mind. A brief discussion of the salient features of both local and systemic blastomycosis, therefore, should be of value by serving to call the attention to the fact that the condition exists in this state.

The first case of blastomycetie dermatitis was reported by Gilchrist, in 1894, before the American Dermatological Association, at their meeting in Washington. Previous to this, during the latter half of the nineteenth century, occasional observations and experiments had suggested that some yeasts might be pathogenic, but nothing definite had been advanced. Following Gilchrist's report, a few months later, also in 1894, Busse, in Germany, reported a case of systemic infection, for which he proposed the name "saccharomycosis hominis". A paper by Gilchrist appeared on the subject in 1896, to be followed in 1898, by another paper by Gilchrist and Stokes, giving an account of their experimental work. In the same year, Wells, Bushke (in Germany), and Hessler reported further cases. Hyde, Hektoen and Bevan published an account of seven cases in 1899, and by 1910 some hundred cases had been recorded, chiefly in and around Chicago. Other important papers dealing with the subject are those of Ormsby and Miller, 1903; Cleary, 1904; Eisendrath and Ormsby, 1905; Bassoe, Irons and Graham, Christensen and Hektoen, 1906-1907; Colby and Tracey, Herrick and Garvey, F. H. Montgomery; and an exhaustive paper on systemic blastomycosis by Montgomery and Ormsby, 1908.

Practically all of the early cases were reported in and around Chicago, so that for a time it was known as the "Chicago disease". In the past few

years, however, it has been found to be pretty generally distributed over the entire world. Cases have been reported from Germany, India, Italy, England, China, and South America. It was first described in the latter country in 1914; since that date specimens of ancient India pottery have been found which depict what are apparently the facial lesions of cutaneous blastomycosis. If this is true, the disease has a great antiquity.

Manual laborers are mainly affected, probably on account of the ease with which accidental traumatic inoculation may occur. For the same reason the cutaneous lesions are more numerous on the hands, arms, face, and lower extremities. The eyelids are a favorite site, and the deformities produced by cicatrization may be very serious. Sex seems to have little influence; while the disease occurs principally in men, this is probably due to the fact that more men than women are engaged in manual labor. Age likewise seems to have little influence, except insofar as the majority of cases occur during the years of greatest activity. Some evidence has been brought forward from South America suggesting that there, at least, some cases may arise as the result of an insect bite; this evidence is far from conclusive, however.

The disease has occasionally appeared in clean surgical wounds. It has also been acquired as an accidental infection, following autopsies on systemic cases.

The condition may present itself as a purely cutaneous disease, or it may appear as a systemic infection. In the latter case, cutaneous manifestations are practically always present.

The skin lesion begins as a small red papule, which soon becomes covered with a crust. When this crust is removed a papillary, oozing surface is revealed. This lesion slowly becomes larger by advancing at the periphery; at the same time, a marked tendency toward healing is shown at the center, with the formation of a delicate new skin. The advancing edge is raised, sharply defined, and separated from the healthy tissue by a distinct hyperemic zone. There are also numerous miliary abscesses about the periphery containing a thin, glairy, mucoid pus, and numerous organisms, frequently in almost pure culture. The presence of these miliary abscesses is one of the diagnostic characteristics of the cutaneous

lesions. The patches may be single, or multiple, large or small. Pain is usually absent, although occasionally it may be very severe.

If untreated, it continues to slowly spread. It may remain purely localized for years, never progressing beyond this stage. Traumatism occasionally seems to aggravate it, causing a more rapid spread and leading to systemic manifestations, or the latter may appear without any assignable cause. The systemic form may also appear without cutaneous manifestations primarily, these appearing later, or not at all.

"The general course and symptoms of the established disease are in the main those of a more or less chronic, essentially pyogenic, infection, with a special tendency to superficial localizations."—Hektoen. The onset as a rule is more or less gradual, although occasionally it is acute, resembling a generalized infection, with multiple skin lesions. The atrium of infection is presumably a pre-existing cutaneous blastomycosis, or the respiratory tract. The organism has been found in ulcers of the stomach, thus suggesting the latter as a possible portal of entry. It frequently begins as a bronchopneumonia. From the distribution of the lesions it would seem that the infection is blood borne; in fact, in a few cases, the organisms have been cultivated from the blood. The most extensive lesions are usually in the skin and subcutaneous tissues; it also localizes in the lung, liver, kidneys, adrenals, spleen, myocardium, spine, brain, bones and intestines, particularly the colon. Cases involving the larynx have been reported and the same is true of the prostate and vesicles. The mucous membranes are rarely involved, although two or three cases of the tongue are reported. The bone lesions and those of the lung resemble tuberculosis; when there is pulmonary localization the organisms appear in the sputum. Ascites may occur in hepatic involvement, and the infection may produce amyloid changes. Hektoen has found that the blood of a patient suffering from blastomycosis will agglutinate blastomyces. Bacterial invasion may occur secondarily. Fever of low grade is usually present. A few cases of apparent spontaneous recovery are on record, but the disease shows a marked tendency to recurrence and recrudescences even after the lapse of years.

The organisms of blastomycosis belong to the

yeast fungi. They are spherical or oval cells of varying size (from 3 to 30 microns), with a very refractive cell capsule, which gives them a double contoured appearance. In tissues or pus, no mycelia are formed, but increase is solely by budding. They grow well on all ordinary media, exhibiting varying cultural characteristics. Some show budding principally, others, and a larger number, produce mycelia, and still others abundant aerial hyphae. Polymorphism is sometimes exhibited, in that they may change their characteristics if grown on artificial media. Granular protoplasm is seen at times in the cells; the same is true of vacuolation. Upon artificial media, long mycelia develop after about 30 hours, which break up into cells or segments of varying length after a few days. Microscopic growth does not appear for 6 to 9 days, when white areas of radiating threads appear. From then on, the growth of mycelia is very rapid.

The organisms are readily demonstrated in the pus from the abscesses, and in the tissues. By treating the pus with a drop of liquor potassae, they become readily visible under the microscope, usually showing all stages of development. They may also be stained, as they take any of the ordinary stains well, one of the most satisfactory being polychrome methylene blue. Hematoxylin and eosin, methylene blue and eosin, Gram's and others may be used.

According to Ricketts the blastomycetes are divided into three groups, belonging to the genus *oidium*, as follows:

1. Blastomycetoid.
2. Oidiumlike.
3. Hyphomycetoid.

In culture media, group one produces abundant mycelia under suitable conditions, but exists chiefly as spherical or budding cells. The *oidium* group forms submerged mycelia, and proliferates by endogenous spore formation. The *hyphomycetoid* group produces fruit-bearing aerial hyphae, submerged hyphae, and also multiples by gemmation. According to his view, blastomycosis, the disease under discussion, is produced by group one above.

In 1891, Wernicke described an ulcerative and nodular skin disease, with extensive glandular and visceral involvement, bearing marked resemblance to blastomycosis, except that the organisms present are not budding, but endosporu-

lating. This is coccidioidal granuloma (*Ophuls*), and is supposed to be due to group two above.

So far, the third group has not been found to be pathogenic to man.

Some animals, particularly guinea pigs, are susceptible to infection with blastomycosis, and the disease may be reproduced in them experimentally.

There has been a great deal of discussion as to the etiological relationship of these organisms to the disease; some authors have claimed to have found the organisms in the healthy skin, particularly in sebaceous regions. Others have stated that they are present in a large percentage of cases of *acne vulgaris*. Blastomycetic dermatitis has also been looked upon as an unusual form of cutaneous tuberculosis, and as a manifestation of syphilis. However, it is now a pretty definitely established fact that the disease as an entity caused by infection with blastomycetes exists.

Infection by these fungi leads, in general, to the formation of inflammatory granulation tissue, showing giant cells of the Langhans or foreign body type, and more or less extensive suppuration. Whether proliferative or suppurative processes predominate, seems to depend largely upon the nature of the tissues. In loose tissues, abscess formation is marked, the abscesses containing pure cultures of the organism, with walls containing phagocytic giant cells. In dense tissues, such as the internal organs, nodular lesions appear, having a strong microscopic resemblance to a tuberculous process, and consisting of cellular accumulations around blastomycetes. Caseation and real tubercle formation do not occur, although the older lesions may show some necrosis in the center.

In the skin, the pathological changes consist of marked hyperplasia of the epithelial elements, to which the verrucose appearance of the surface of the lesion is due. This hyperplasia gives rise to numerous prolongations and processes of the epithelial layer, which extend deeply into the corium, and have a strong resemblance to carcinoma, whence the term "carcinomatoid"; the basal layer, however, is never broken through, nor does independent growth of the epithelial elements in the subcutaneous tissue ever occur. The corium shows infiltration with leucocytes, giant cells, connective tissue and plasma cells. Numerous miliary abscesses occur, both in the

epithelial prolongations and in the corium; these abscesses contain leucocytes, epithelial and nuclear detritus, red blood cells and numerous organisms.

In making a diagnosis, we have first to consider the chief ulcerative diseases of the skin, syphilis, tuberculosis, epithelioma, coccidioidal granuloma, and blastomycosis. Naturally, the finding of the organism establishes the diagnosis and in most cases these are easily demonstrated. A negative history and Wassermann reaction throw doubt upon the diagnosis of syphilis. Tuberculosis is more penetrating, starts from multiple foci and invades tissues regardless of their anatomic structure. Typical tubercle formation is also present. For epithelioma we have to consider the age, history of heredity, and glandular involvement. Here also tissues are invaded, regardless of their anatomic structure. Coccidioidal granuloma and blastomycosis resemble one another in many ways, but there are certain well-marked differences, in that the nodular lesions of granuloma bear much closer resemblance to the typical specific tubercle than blastomycosis, in granuloma there is a marked tendency to involvement of the lymph nodes, which is absent in blastomycosis, and the organism of granuloma is endosporulating, that of blastomycosis, budding. The eruption may resemble a bromide rash, and has occasionally been mistaken for leishmaniasis.

The systemic infection has frequently been mistaken for tuberculosis, and diagnosis may be impossible without the characteristic skin lesion, or demonstration of the organisms in the sputum.

As stated, the disease shows a marked tendency to recurrence. The systemic form is markedly resistant to treatment. The same is true of the local manifestations. It seems to yield best to massive doses of potassium iodide. Surgical removal of the superficial lesions has been recommended and practiced successfully in some cases. The x-ray and radium have been used, also arsphenamin. Copper salts locally and internally have been highly recommended. In South America, tartar emetic intravenously is the usual treatment.

To me, it is a remarkable circumstance that I should have seen these four cases of the disease in such a relatively short period of time, and that I had not seen any previously nor since. If I had been particularly interested in the disease

before this, and had been on the lookout for cases, I might suspect that in my zeal to discover them, I had been led into error. But at this time, blastomycosis was farthest from my thoughts, and I refused to accept the diagnosis until convinced by the evidence, clinical, laboratory, and therapeutic, that it could be nothing else. Under the circumstances, then, these conclusions follow:

1. Cutaneous blastomycosis, although very likely not prevalent, exists in this state and this locality.

2. As a natural corollary of the above, considering the characteristics of the disease, the systemic form may be present, although I have seen no cases of it. Possibly some are unrecognized.

3. The disease may appear following industrial accidents, thus making it compensable.

4. Potassium iodide, used vigorously in the early stages, appears to be a specific.

SIMPLIFIED DIETS TO ACCOMPANY INSULIN TREATMENT.*

BY ELMER L. SEVRINGHAUS, M.D., AND VIOLA MAAAG, B.S.,

BRADLEY MEMORIAL HOSPITAL,

MADISON.

Since insulin has become available to the general practitioner the successful treatment of diabetes can be carried out in many cases without the removal of the patient to a hospital with elaborate provisions for diet regulation. We have been urged to state briefly the fundamentals of diet regulation for diabetics, and to mention the best sources of diet figures. It is the unanimous opinion of clinicians who have used insulin that the diet must be prescribed with even more care than when diet regulation is the only method of treatment. This is because with a uniform daily dose of insulin it is presupposed that the patient will receive a uniform daily supply of carbohydrate. If the sugar supply is insufficient, there is a relative overdose of insulin, and the symptoms of insulin shock are apt to appear. The diet prescribed should yield very nearly the same amount of carbohydrate day after day. This one fact calls for

*From the Department of Clinical Medicine, University of Wisconsin, Madison, Wisconsin.

accurate prescription of diets. In addition, the fat part of the diet should be determined accurately. It is to the advantage of the diabetic to eat as much fat as possible without danger of forming acetone and diacetic acid. This is because fat yields over twice the heat obtained from the equivalent weight of carbohydrate and yet makes very little demand on the pancreas for insulin. If insulin is being injected rather than being supplied by the patient's own pancreas, there may be a marked saving by having the diet contain the safe maximum of fat, with corresponding reduction of carbohydrate. Large amounts of fat are being used with perfect safety now where only a few years ago fat was so studiously avoided. The protein of the diet must be carefully prescribed also, for it is essential to growth of the young, and to the regaining of weight of the emaciated. Protein in the body is converted in part to sugar.

It is not necessary for the diabetic to eat unusual foods, such as gluten breads, wafers made of bran and agar or gum, or patent foods. He should avoid highly concentrated sweet foods, because they satisfy the carbohydrate allowance in such small quantities that other foods have to be reduced to extremely low amounts. Also overly sweet foods cause such rapid absorption of sugar that the insulin supply may not be sufficient to prevent temporary glycosuria. The vegetables and fruits are excellent sources of carbohydrate. They have the added advantages of furnishing ample bulk to insure normal intestinal peristalsis, a good supply of mineral matter which avoids any need for the administration of alkalies, and sufficient vitamins. If the diet has a good variety of green vegetables, of fruits such as oranges, lemons and grapefruit, and if there is a liberal supply of butter, or cream, all the vitamin needs are well met. The growing child must be provided with a good daily supply of milk, to allow the bones sufficient calcium and phosphorus.

In determining the proportion of proteins, fats and carbohydrates the first factor is the protein need. A good supply of protein does not harm the diabetic if there are no complications. 80 grams of protein per day is a liberal allowance for a large man. The minimum should be about one-third of a gram of protein per day for each pound of body weight. The obese individual is given protein to correspond to his desired body weight. The growing child or the emaciated adult must have more protein to allow for the production of

new tissues. For such purposes from one-half to one gram per day is given for each pound of body weight. If the protein is low in amount it should be secured largely from meat, eggs and milk. Meat includes fish and fowl. These proteins are the best adapted to supply the amino acids which the body needs.

The next factor to consider is the amount of heat and work which the body must produce in a day, usually spoken of as the total number of calories per day. A calorie is simply a measure of heat. When the body is at perfect rest it produces a certain number of calories, called the "basal metabolism." This is highest in youth and decreases with age. The larger the surface of the body, the greater is the number of calories in this basal metabolism. In addition all but the absolutely bedfast must produce more calories as the work of the day is done. This additional amount of heat varies with the activity of the individual. The source of all this heat is in the diet. The ultimate test of whether a diet is large enough to provide the calories needed is whether the patient maintains his body weight on that diet. Most individuals need from 10 to 20 calories for each pound of body weight. It may be necessary to give more for very heavy work, or for very active children. The sources of this heat are as follows:

1 gram of protein.....4 calories.

1 gram of carbohydrate.....4 calories.

1 gram of fat.....9 calories.

Since the protein ration has already been determined it is necessary to add sufficient fat and carbohydrate to give the desired total number of calories. For the diabetic it is desirable to give the minimum amount of carbohydrate. But the body cannot oxidize the fat without some carbohydrate. It is always possible to use 2 grams of fat with every gram of carbohydrate. Furthermore, protein is converted in part into sugar in the body, and this sugar allows the body to use still more fat. For every gram of protein in the diet one-half gram of fat may be added. This is expressed by the widely used formula due to Wood-yatt, $F=2C+1\frac{1}{2}P$. This means that the maximum permissible fat is twice the weight of the carbohydrate plus one-half the weight of the protein. Some individuals can use even more fat, but this much is always safe. If more is given not all the excess fat may be completely oxidized. The residue is seen as acetone, diacetic acid, and beta hydroxy butyric acid in the urine. This in-

complete oxidation of fats is called ketosis, and if unchecked will lead to acidosis by using up the alkali of the blood.

In the accompanying table are shown 28 different diet proportions, which provide for the range of diets needed in nearly all cases. Six different amounts of protein are provided, and for each protein level there are diets giving either 1,500, 2,000, 2,500 or 3,000 calories. One of these four will fit the usual case. If it is desired to give more calories but not to increase the protein content of the diet, as for heavy work or colder weather, additions are made as follows. Carbohydrate and fat are added in the proportions of 1 gram to 2 grams. The addition of each gram of carbohydrate with its two grams of fat will give 22 calories. Therefore, divide the extra number of calories desired by 22, and the quotient is the number of grams of carbohydrate to add. Twice the quotient is the number of grams of fat to add.

The protein, carbohydrate, and fat of any diet contribute to the formation of glucose in the body. The total glucose of the diet is determined by adding together all the carbohydrate, 58 per cent of the protein, and 10 per cent of the fat. The glucose tolerance of a diabetic is this sum minus the number of grams of glucose in the 24 hour urine. If the diet is just sufficient to supply the needed calories, but causes glycosuria, insulin is given in large enough amounts to enable the body to use this sugar which would be lost.

When the diet proportions have been selected the patient is then instructed to select foods which will contain in the diet for the whole day the given number of grams of protein, carbohydrate, and fat. The meals are usually best made up to be approximately the same in total calories and in the three components, but they need not be monotonous. The choice is limited to those foods whose composition is known. Therefore, the patient must use some book which gives the composition of foods. Many such have been published for this very purpose. We recommend as most practical Bulletin No. 28, on "The Chemical Composition of American Food Materials," by Atwater and Bryant. This may be obtained for 10 cents from the Superintendent of Documents, U. S. Dept. of Agriculture, Washington, D. C. A booklet which is based on this bulletin, but saves much arithmetic is to be had for 50 cents from the Presbyterian Hospital, New York City. A most useful book for

patients is "Food for the Diabetic," by M. P. Huddleson, published by Macmillan, New York, for \$1.25. This gives very concrete directions for diet calculations and preparations.

These diets may seem to be very rich in fat. We find no difficulty in digestion of such meals. The simplest means of incorporating such large amounts of fat is to use liberally of bacon, butter, heavy cream, known as 40 per cent or whipping cream, and mayonnaise dressings. Whipped cream can be used without sugar. The calculation of the diets is made simpler and the selection of foods made broader if the vegetables and fruits are grouped. This is provided for very well in Miss Huddleson's book. This method is also developed in Dr. E. P. Joslin's Manual for Diabetics, published by Lea and Febiger, Philadelphia.

TABLE OF 28 SAFE HIGH FAT DIETS.

PROTEIN		TOTAL CALORIES			
		1500	2000	2500	3000
30	Carbohydrate	56	79	102	125
	Fat	128	173	218	263
40	Carbohydrate	52	75	98	121
	Fat	126	171	216	261
50	Carbohydrate	48	71	94	117
	Fat	123	168	213	258
60	Carbohydrate	44	67	90	113
	Fat	120	166	211	256
70	Carbohydrate	40	63	86	109
	Fat	118	163	208	253
80	Carbohydrate	36	59	82	105
	Fat	115	161	206	251
100	Carbohydrate	28	51	74	97
	Fat	99	156	201	246

(All figures for protein, fat and carbohydrate are in grams per day).

WISCONSIN PLACES TWO.

The November Bulletin of the American Medical Association held a pleasant surprise for Wisconsin readers. This bulletin presents in condensed form short original articles dealing only with subjects of most importance to the profession, particularly with the phase of organization.

There were seven abstracts of articles in this issue taken from other medical journals. Wisconsin had two of the seven. Those reprinted in full were the October editorial of H. E. D., on "Anniversary Meetings" and the October article appearing in "The Business Side of the Physician's Life" dealing with F. X. Suydam.

This bulletin is mailed to all Fellows of the Association and officers of the constituent societies and we consider these reprints a compliment of the highest order to both the respective authors and this Journal.

THE COUNTY NURSE AND COUNTY BOARDS.

Most of the county boards in Wisconsin had for decision at their November meetings the question of employing county nurses. The "home rule" law enacted by the last Legislature gave boards the option of retaining or doing without such workers. At this writing (December 5) returns are in hand from 52 counties. The compilations show that 38 took affirmative action and will continue to utilize this form of health service for their rural populations, and that 14 counties decided not to maintain the nurse system.

At this stage, therefore, the ratio of counties favoring county nurses is nearly three to one. There are still nearly a score of counties to be heard from, and when returns are complete this ratio is expected to remain about the same.

The counties taking affirmative action, on the basis of present returns, are: Ashland, Bayfield, Buffalo, Chippewa, Columbia, Crawford, Dane, Douglas, Eau Claire, Fond du Lac, Grant, Jackson, Jefferson, Kenosha, La Crosse, Manitowoc, Marathon, Marinette, Oneida, Outagamie, Pepin, Price, Racine, Rock, Rusk, Sauk, Sawyer, Sheboygan, Taylor, Trempealeau, Vernon, Vilas, Walworth, Washington, Waukesha, Waupaca, Winnebago, Wood.

Those voting adversely are Barron, Brown, Calumet, Clark, Green, Green Lake, Marquette, Monroe, Oconto, Pierce, Polk, Portage, Richland, Shawano. Four of these—Brown, Green Lake, Pierce and Richland—have never employed nurses, so that the vote does not mean releasing of any officials.

Two county boards were not required to take action at this time, their appropriations for the work continuing for another year.

Bayfield, Oneida, Taylor and Winnebago counties increased their appropriations for county nursing work; La Crosse county voted \$300 additional for corrective work; and Marinette, Walworth, Washington, Waukesha and Waupaca counties added sums for support of clinics.

LEGAL NOTES

That chiropractors may not make eugenic examinations required for all male applicants for marriage licenses was the opinion of the Attorney General on October 30th. The opinion follows: Mr. S. G. Dunwiddie,

District Attorney,
Janesville, Wisconsin.

Dear Sir:

In your letter of October 19 you direct attention to Sec. 2339*m*, Stats., which requires the male applicant for a marriage license to file a certificate of examination; and you ask whether this examination can be made and a certificate signed by a chiropractor or an osteopath, and whether the county clerk should refuse a marriage license on a certificate signed by a chiropractor or an osteopath.

Subsec. 2 of Sec. 2339*m* provides in part:

"Such examiners shall be physicians duly licensed to practice in this state, or in the state in which such male person resides. * * * "

Sec. 1436*b* formerly provided:

"Wherever either the words physician, surgeon, or osteopath are used in the statutes of the state of Wisconsin, they shall be construed to mean and include any and all persons holding a license or certificate of registration to practice either medicine, surgery, or osteopathy, and to no others."

By ch. 448, laws of 1923, this section was renumbered to subsec. (28) of sec. 4971 of statutes, and amended to read:

"The words 'physician,' 'surgeon' or 'osteopath' mean a person holding a license or certificate of registration from the state board of medical examiners."

In Bill No. 9S introduced by the Committee of Judiciary, this note appears in regard to the amendment: "Changes in verbiage only."

Under the provision of sec. 1436*b* as it formerly read, it is clear that a duly licensed osteopath was a physician, in contemplation of subsec. (2) of sec. 2339*m*. (See IX Op. Atty. Gen. 292, which in effect overruled the opinion in IV Op. Atty. Gen. 345, holding that an osteopath could not make the so-called eugenic examination.) The same result can logically be reached under the amended section. An osteopath, therefore, may make the examination as required by sec. 2339*m*, Stats., and the county clerk should not refuse to issue a marriage license to a person presenting a certificate signed by an osteopath.

Sec. 1435*e*, Stats., provides:

"Reputable practitioners of chiropractic may practice their profession in this State, provided that they do not represent themselves to be or hold themselves out as registered or licensed; and provided further, that there is conspicuously displayed in the offices or places where they practice their profession a sign or signs containing the following words in large and legible type: 'Not registered or licensed in Wisconsin.'"

Obviously the word "physician" as used in the statutes does not include a chiropractor. The examination required by sec. 2339*m*, Stats., cannot therefore be made by a chiropractor and the county clerk should refuse to issue a marriage license to a person presenting a certificate signed by a chiropractor.

Yours very truly,

MORTIMER LEVITAN,

Assistant Attorney General.

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"LET GEORGE DO IT."

Under this head we list each month definite offers of service available to our readers—the members of the State Medical Society of Wisconsin. Additions will be made from month to month but if you have a need not covered here your Secretary-Managing Editor will do his best to fill your needs. Address J. G. Crownhart, 558 Jefferson St., Milwaukee.

1. **PACKAGE LIBRARIES** are now available on Cancer, Schick Test, Vaccination, Periodical Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, and Control of Communicable Diseases. Address Package Library Dep't., Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. **MEDICAL BOOKS** will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. **MAGAZINES**—See price list sent by mail.

4. **PHYSICIANS' EXCHANGE COLUMN** is open to all members without charge.

5. **NEW SCIENTIFIC PUBLICATIONS** listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

6. **A NEW SERVICE** will be listed here in January.

EDITORIALS

FROM ALL OF US

All officers of the Society and of this Journal extend to every fellow member greetings at this holiday season of the year. It is our joint and sincere wish that the spirit of "Tiny Tim" will live again in the hearts of us all bringing to each a full measure of joy and good cheer, not only for Christmas Day, but throughout the coming year.

A PROPER STAND.

COINCIDENT with the recent and present exposé of the so-called health institute in Milwaukee, there appeared in the press no little comment to the effect that the District Attorney would ask for the appointment of a special prosecutor. After a week of such comment District Attorney Shaughnessy was quoted as saying that he did not contemplate making such a request and that his office would handle the prosecution.

We commend this official upon his stand because it indicates his willingness to perform a duty incident to his position. The language of

our medical practice act is plain. The language of our laws to secure the citizens of this state against fraud and deceit is plain. There is no more reason why violations of the first should require the services of a special prosecutor than of the second or any other.

The laws of this state to secure a degree of public health protection are an integral part of the entire code. They are an important part. We are glad to see a District Attorney of Milwaukee county prosecute their alleged violations as he would the violations of any other criminal law. If a special prosecutor is needed, he should be provided but not because a medical practice act is involved.

THE 1924 DUES.

At the October meeting of the House of Delegates it was unanimously decided to retain the dues at nine dollars for 1924. This decision was based upon a consensus of opinion that the Society should have a reasonable surplus fund and to this end a reduction should be postponed for a year.

Your county secretary will soon be mailing the 1924 statement. Its payment upon receipt will accomplish an important end. At the May, 1924, meeting of the American Medical Association there will be a reapportionment of delegates for the constituent state societies. This reapportionment will be made upon the basis of members in good standing on April first, 1924. Wisconsin should not lose one of her three delegates through delay.

DESERVED CENSURE.

There lies on the desk of the writer two examples of violation of the ethics of the medical profession. Both are in the form of newspaper articles; the first beyond all question was published without the knowledge of the physician involved, and the second, one which could not have been published without the physician's knowledge and aid.

"SUPERVISORS SEE RESULTS OF MODERN SURGICAL 'MIRACLE'" is the headline on the first mentioned article. This head is further embellished by a sub-head stating that "Gretchen of Crippled for 14 Years. Now Able to Walk Normally. Treated at Hospital by Dr."

The story proper then relates the fact that the county board of supervisors "were given visible

proof of a miracle in modern surgery" when the county nurse presented the girl whose deformity had largely been corrected.

In the second clipping the attention of the public is attracted by the modest (sic) head "LAUGHING GAS GOES OFF STAGE. Dr. SUBSTITUTES ETHYLENE FOR NITROUS OXIDE IN LOCAL HOSPITAL.

"The use of ethylene gas as an anesthesia has been introduced and first administered in . . (city) . . by Dr. of the Hospital and Clinic. Dr. is becoming known as an expert in the use of the gas and has written several papers on its characteristics and administration. He will conduct further experiments with it at the Clinic in the near future."

Here are two distinct types of violations. For the first we can only say that it serves to show the care physicians must exercise to prevent that type of article. It can only react to the detriment of the physician involved who in this instance was not aware of its publication until it was shown him.

In the second instance where the public was informed as to the introduction of ethylene gas and even better informed as to the physician who "introduced" it, we cannot conceive of the article being written without the knowledge and aid of the physician involved. It can neither be tolerated nor condoned. Nor can it be criticized too severely.

Reputable members of the medical profession value their individual professional standing above all else. And they also value just as highly the group standing of the profession. That is as it must be if the difference between the publicity seeking-advertising quack and the reputable physician is to be distinct and clear to the public.

Far-fetched? We think not, for since the above was first typed we are in receipt of another clipping headed "LITTLE GIRL WALKS AFTER CREEPING TWO YEARS." We would like to reprint this story in full but space does not permit. Suffice it to say that after seeing the first story we have mentioned, a chiropractor brought to the office of the paper a little girl who "was stricken with paralysis of the legs about two years ago. She had no control over the movement of her feet. They merely flopped on the ground. Certain internal organs were also affected. After some months of treatment according to Mr."

(the chiropractor)... she was able to walk."
Need we say more?

THE JOURNAL CLINIC

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PULMONARY ABSCESS COMPLICATING TONSILLECTOMY*

BY L. L. FRIEDMAN, M.D.,

Pulmonary abscess is the most feared complication of tonsillectomy and its recognized occurrence is sufficiently infrequent to warrant the report of the following cases:

Case I—M. S., female, aged 24 years, admitted to

culty in breathing and cough with the expectoration of blood tinged sputum. Cough gradually became worse. She had elevation of temperature, dyspnoea, and increase in the severity of the pain across the chest, at the time of admission.

Previous history and family history irrelevant to present complaint.

On physical examination the patient appeared very toxic and dyspnoeic. The left cheek was flushed. Lips were subcyanotic and dry. Tonsillar fossae were filled with a grey-white slough and oedema of pillars was extreme.

Chest examination showed diminution of respiratory excursions at left apex and third and fourth ribs, with tactile fremitus increased. Percussion sensitiveness over left chest with high pitched note from second to fourth ribs. Definite hyperresonance above this area. Breath sounds distant and expiration prolonged. To and fro friction rub in anterior left chest. Fine râles at left base. Posteriorly left chest showed decreased tactile fremitus and high pitched percussion note above the angle of the scapula. Bronchial breathing from



FIGURE I.

Bradley Memorial Hospital 10-11-21, complaining of cough. She had had sore throat during the previous few weeks and following this a tonsillectomy was performed under ether anaesthesia. She had a raw throat for several days following the operation and then began to complain of pain across the anterior chest with diffi-

*From the Department of Clinical Medicine, University of Wisconsin, Madison.

second to fourth ribs in left axilla. X-ray (Fig. I) at this time showed consolidation of left upper lobe and the presence of a large cavity opposite fourth and fifth interspaces, on the left side, posteriorly.

Blood count—W.B.C. 20,600, 80% Polys; R.B.C. 3,640,000; Hb. 80%. Temperature varied between 99.4 and 103.8. Pulse corresponding. Respirations 48.

October 29, 1921, a trocar was inserted by Dr. J. L.

Yates of Milwaukee, in the third interspace mid-axillary line directed slightly upward and backward and aspiration attempted, checked by fluoroscopy and X-ray. Aspiration proving inadequate by reason of the tenacity of secretions, injections of normal saline and weak methylene blue was attempted. The immediate coughing up of the latter proved the accuracy of the puncture and suggested a method of retrograde drainage after irrigation through a retained rubber catheter.

The following day 60 c.c. of normal saline was injected into the cavity through the catheter. This material did not return through the tube but was likewise coughed up by the patient. Repeated daily injections of saline were made with the same result. In addition symptomatic and supportive treatment were continued.

The cough greatly decreased and temperature began to decline. On 12-23-21 patient was discharged with temperature varying between 97 and 98.2. Pulse 78-100. Respirations 20-28. Patient had gained ground steadily but there was still impairment of percussion note at left apex, both anteriorly and posteriorly and increased breath sounds, but no rales.

Subsequent examinations have revealed continued progress. Indeed, in the Spring of 1923 no evidence of her old pulmonary involvement could be determined by physical examination or roentgenologic examination, except pleural thickening high in left axilla.

began to cough. The cough was at first very slight and accompanied by very little expectoration. However, the cough gradually increased in severity and expectoration become more abundant. At the time of admission he had one or two severe paroxysms of cough daily, accompanied each time by the expectoration of five ounces of bitter foul smelling, yellowish sputum—never blood tinged. In addition he had continuous cough throughout the day accompanied by a small amount of sputum which, however, did not have the peculiar fetor above described. He complained also of marked weakness, dyspnoea after slight exertion, severe night sweats, and a loss of about six pounds in weight since tonsillectomy.

His previous medical history was negative except for frequent attacks of tonsillitis.

On physical examination patient appeared acutely ill, was greatly undernourished, very dyspnoeic, and there was a marked flush on both cheeks, left more than right. Loss of weight probably more than patient admitted was very evident from the appearance of abdomen and extremities. The throat showed some congestion of pharynx and evidence of complete tonsillectomy. The chest showed no expansion at left apex and greatly limited expansion at the base. Tactile fremitus greatly decreased over the left first to third ribs anteriorly, and fourth to seventh ribs posteriorly. Flatness to percussion from first to third ribs (left) anteriorly sur-

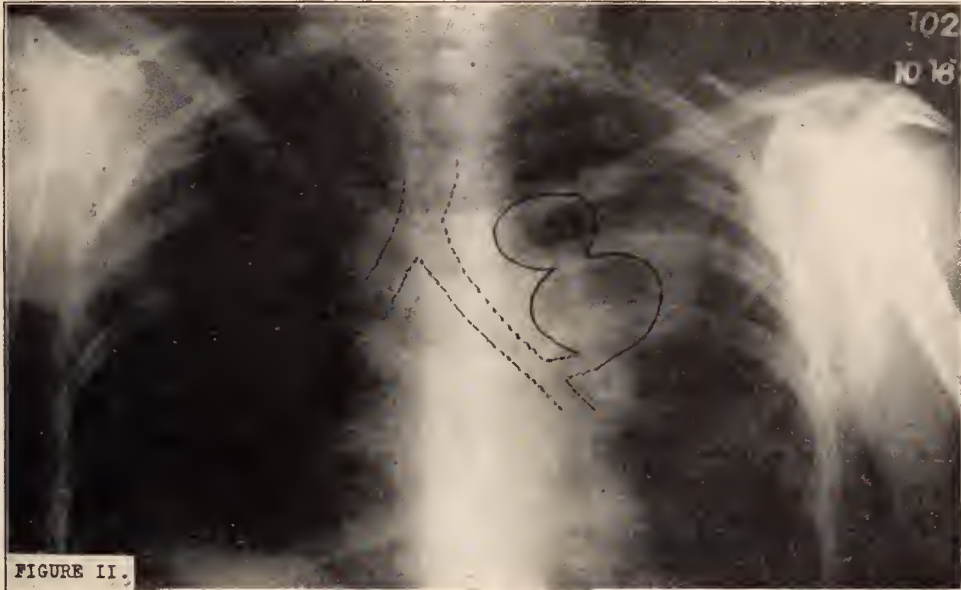


FIGURE II.

Case II—P. F., adult male age 27, instructor in the University entered the University Infirmary 9-29-23, complaining of cough and expectoration.

Tonsillectomy had been performed on 8-25-23 under local anesthesia (novocaine). Operation was uneventful and he was discharged from the hospital the following day. The next day he complained of severe constriction in the left chest. Following that there was pain in both sides of the chest, which subsequently "settled" in the left side.

Ten days after the onset all pain disappeared but he

rounded by an area of hyperresonance. Cavernous breathing and whispered pectoriloquy heard over the area of flatness. There were also many showers of fine and coarse, moist and dry râles over the left side, most marked around the area of flatness. Some moisture was also present on the right side. At subsequent examination a cracked pot sound was present at left apex.

Stereoscopic views of the chest showed marked displacement of the trachea, heart and great vessels to the right and an irregularly lobulated zone of decreased density from first to third ribs on left side. The

mediastinal glands were enlarged and there was a marked peribronchial infiltration.

Temperature varied from normal* in the mornings to 102.4 in the afternoons. Pulse corresponding. Blood count—W.B.C. 24,400, Polys. 83%; R.B.C. 3,810,000; Hb. 72%. Sputum negative for tubercle bacilli and spirilla at repeated examinations.

Treatment was largely symptomatic and supportive. Within three weeks symptoms began to improve markedly. Cough and expectoration were slight, night sweats absent, and temperature normal. Chest examination showed a few râles and slightly increased breath sounds at left apex.

Progress plates of chest, sixteen days after admission, (Fig. II), showed the cavity much more definitely demarcated, and extending from first to third ribs with a partial subdivision at level of second rib. The bronchus markedly displaced to the right and the first hyperarterial branch of the left bronchus is seen definitely to enter the mid portion of the lower subdivision.

SUMMARY.

It will be remarked that one of the reported cases succeeded tonsillectomy under a general anaesthetic, while the second complicated a local anaesthetic. More (¹) gives the relative figures of 202 well analyzed cases; 151 occurred following ether anaesthesia, 8 following gas anaesthesia and 39 following local.

Three theories of the manner of development of this serious complication following tonsillectomy are maintained: (a) aspiration of infected materials, (b) septic embolism, and (c) lymphatic. Against a septic embolic origin in both of these cases were the absence of the usual shock of pulmonary embolism and the occurrence of the lesion so close to the hilum as to involve the larger vessels. Lymphatic drainage would of necessity presuppose a retrograde passage of the infecting agent through the preaortic and tracheo-bronchial lymph nodes, or a primary lymphatic and a secondary hematogenous route should the infecting agent follow the natural lymph drainage into the subclavian vein. Neither of these routes seems applicable to the cases reported here.

The involvement of the upper left lobe in both of these cases is not so inexplicable on an aspiration basis as it would appear. Whereas foreign bodies in a vast majority of cases lodge in the right lower lobe bronchus, injection and insufflation studies (²) of semi-solid substances have shown a high incidence of primary upper lobe distribution. Nor is this result unexpected when one considers the obvious mechanism of aspiration. Materials, blood, etc., gravitate into the

pharynx, are gradually aspirated into the larynx, and having entered the primary bronchus their ultimate distribution to either side is dependent upon the orifice which they overlie at the time of the strenuous inspiratory effort that determines their lodgement.

The management of these cases was very divergent. The surgical care of case I was the very ingenious suggestion of Dr. Yates and met a difficult situation. Case II was met expectantly, and fortunately natural drainage was located dependently, as revealed by stereoscopic x-ray study. In both cases the progress was continuous and satisfactory, probably because of the favorable position and the adequacy of the drainage.

REFERENCES.

- ¹Moore, William Frederick, J. A. M. A., Vol. 78, No. 17, p. 1279.
²Middleton, Wm. S., and Reitz, Thomas, Personal communication.

UNIVERSITY OF WISCONSIN MEDICAL SOCIETY.

Regular Monthly Meeting, Thurs., Nov. 15, 1923.

BY C. R. BARDEEN, M. D.

Dr. Bardeen introduced his subject by stating that three ideals were outstanding in any plan of medical education: (1) trace, (2) science and (3) art. Medical education in the 19th century was largely dominated by the first of these thoughts, and the commercial plan necessitated merely large lecture rooms—bedside instruction and hospital facilities were of secondary importance. Medical men actually paid for professorships, in order to obtain the prestige and monetary return thereby rendered available.

The scientific ideal necessitated great expenditures of money and was in no sense profitable. Endowments or state support were necessary for such schools. Johns Hopkins, the first medical school in America to be so organized, was heavily endowed; and from the stage in which the hospital was little used for teaching and the lecture room and dissecting room represented the physical establishment, the hospital has now grown to the point where teaching is the main function in such schools. Practically all medical schools in this country, at the present time, strive for this ideal.

The art of medicine does not necessarily exclude science, and it seems probable to Dr. Bardeen, that

in an early period art will come to the fore and science will be held in abeyance. Essentially this ideal implies long terms of apprenticeship under masters in medicine. Therefore, the extension of extramural instruction is paramount to success under this plan.

Dr. Bardeen next analyzed the situation in the physical plants of the various class "A" medical schools in the country, pointing out the strength and weaknesses of certain of these plants, as dependent on three factors: (1) university control; (2) laboratories for the basal sciences; (3) the teaching hospitals and dispensaries under university control. Three subsidiary factors were considered in this discussion, namely: (a) teaching hospitals in conjunction with the laboratory, (b) location of the medical school laboratory close to the collegiate laboratory, (c) affiliation with institutions outside of the university control, to extend teaching and research.

The comprehensive scope of Dr. Bardeens' address lent much force to the arguments for the elevation of the art of medicine by extramural teaching. This paper was discussed by Drs. R. H. Jackson, Leake, Sullivan and Bradley.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

EFFECTS OF PUBLIC HEALTH WORK EMPHASIZED IN SPECIAL REPORT

In a special report to the chairman of every town board of supervisors, the State Board of Health asks for a united co-operation of all town, county and state officials to aid in the work of preventive medicine. The report places special emphasis upon the value of the county nurses and in a separate table lists the cases and deaths from contagious diseases in 1922 as compared to 1910.

"There are two important factors to be considered," declares the report. "First, the prevention of deaths and types of illness that tend to lower the efficiency of our citizens.

"Second, adopt those measures that will lessen

as far as possible the number of dependent people or institutional charges.

"It will undoubtedly interest you to know that in 1918 nearly 20% of state expenses and 26% of county expenses were for charities and corrections which means that citizens of Wisconsin are paying toward charities and corrections annually about \$4.23 per capita. These figures do not take into consideration the initial cost of land and buildings for state and county institutions. In 1883 the state appropriated \$200,000.00 to maintain inmates in its charitable and penal institutions.

"The expenditures by the Board of Control on charitable and penal institutions and allied activities according to the budget for the year 1920-1921 were \$4,535,580.06 and for the year 1921-1922, \$4,745,605.19. Included in this, however, are the expenditures incident to some activities such as the binder twine plant which is self sustaining. These figures are used simply for the purpose of calling attention to the very rapid increase in expenditures made necessary in order to house and maintain the state's dependents or the education of individuals such as the blind, and the deaf and dumb in state institutions to make as many as possible self supporting.

"There is no criticism on the Board of Control, for that board is simply a servant of the state, employed to look after the state's interest along these lines. These facts are simply mentioned for the purpose of showing the enormous increase during a forty year period.

"In addition to this the reports sent to the Tax Commission show that the counties are expending annually \$6,243,551.29 for similar purposes. We find for the purpose of comparison that the universities and normal schools of the state require \$2,860,000.00 for running expenses. These expenditures are official in type and do not take into account the large amount donated to unofficial organizations aiding in taking care of dependent, neglected and needy individuals who are supported entirely or in part outside of institutions. We believe that it is possible by united efforts and co-operation to largely reduce the number of individuals heading toward institutional care and further believe that the greatest economy from a dollars and cents standpoint can be made in extending such care and guidance to a large number of unfortunates in early life that

will make them self-supporting and do away with the necessity of future housing.

"Referring to the mentally strong and mentally weak it is found that people with normal mentality average 3.4 children per family while the people of sub-normal mentality average 4.4 per family.

"In 1922 there were 62,163 live babies born in Wisconsin. Of this number 979 were illegitimate. About one out of 60 babies born are illegitimate. If you take the number of illegitimate born outside of the state then about 2% of the Wisconsin babies are illegitimate. Unfortunately many of these illegitimate babies, about 1,000 a year, become a charge upon society.

"In 1920, 338 mothers died in confinement. Over half of these could have been saved had they had proper care and instructions preliminary to and during the time of confinement.

"In 1920 Wisconsin had the lowest maternity death rate of any of the 36 states in the registration area. By comparison with states in the United States we stand well. Of sixteen civilized countries in the world, where maternity statistics are well kept only two of these countries had a higher mother death rate than the United States. The United States ranked two from the bottom.

"There are encouraging conditions, however. One thousand less babies die annually under one year of age at the present time in Wisconsin (although more babies are born) than died ten years ago.

"In 1914, 5,506 babies died under one year of age. There is now a reduction of from 94.6 per thousand to 70.4 per thousand.

"We call your attention to exhibit "B" enclosed for reduction of deaths from communicable diseases in the past twelve years. The campaign in the last series of years, with the aid of the public health nurses, communicable diseases have been brought to a marked reduction. The better care of school children and children under school age by the public health nurses is a big factor in preventing epidemics and reducing the number of deaths from communicable diseases. For every life saved there are from 50 to 100 less cases of sickness. By lessening the amount of sickness the number of mental defectives, cripples and physically unfit are markedly reduced. The fewer mental defectives, cripples and physically unfit we have the less the need for institutions to house

these unfortunate people. Along these lines of procedure we believe the greatest economy can be brought about and that money expended for the prevention of mental defectives, cripples and the physically unfit will give returns ten fold by lessening the number of dependents.

"Practically every city in the state has one or more public health nurses. There can be no question but what the public health nurse in the cities of this state is established as a part of a regular program. If the public health nurse is so valuable in cities as she has proven to be, then we can see no reason why she is not equally valuable in the country. **THE CHILDREN OF THE COUNTRY ARE AS VALUABLE AND SHOULD BE GIVEN AS GOOD PROTECTION AS THE CHILDREN IN THE CITIES.**

"The county public health nurse under the law does not work directly in cities in a county where the cities employ some type of a public health nurse. Her whole time is spent in the rural districts although the cities pay their proportionate share of the expenses of a county public health nurse from which only indirectly do they receive benefit.

"Thirty states of the forty-eight states in the United States have laws requiring or authorizing county boards to employ county health officers. A county official, therefore, in the field of public health is not a new departure. These thirty states under the law employ physicians as county health officers with one or more nurses to assist the physicians and a clerk to tend to the office duties.

"We believe that a county public health nurse is a most efficient agent in the county along lines of health and economy and is much less expensive than the system adopted in other states of employing a medical man, nurses and an office clerk.

"As to the work done by the county nurses we desire to call your attention to exhibit A enclosed.

"Our only object in writing you is to bring before you certain facts with a hope that you will give the general health and welfare program in your county as well as the state the most careful and serious consideration and that you will render your assistance to the continuance of the county public health nurse and other officials in your county that will in the end lessen the ex-

pense to the county and do away with the necessity of additional county and state institutions.

"We all must realize that there are certain problems confronting us that are serious and we cannot afford to delay the development or continuance of a program that tends to a certain degree at least to bring about a solution.

"We will be very pleased, indeed, to extend to you any information that we may have at hand along lines indicated in this communication. We have given you the average cost of 37 county nurses and we can give you the per capita cost of a nurse in each of the counties of the state if you desire as we have given you the per capita cost of \$4.23 annually toward maintaining our citizens in our county and state institutions.

"The late president, Warren G. Harding, stated: 'IF I WERE TO OFFER A PRAYER, IT WOULD BE FIRST FOR THE SPIRITUAL EXCELLENCE OF OUR NATION, AND NEXT FOR ITS WELL BEING IN HEALTH. IN ORDER TO EFFECT THE PHYSICALLY PERFECT NATION, I WOULD EXPECT TO BEGIN WITH THE CHILDREN.'

"We earnestly solicit your co-operation and aid in a better health and welfare program in this state. I beg to remain your obedient servant.

Very truly yours,

C. A. HARPER,
State Health Officer.

EXHIBIT A.

July 1, 1923.

Report on Average Cost of a County Nurse for 1922.
(Milwaukee County Omitted).

(These figures are based on cost of 37 County Nurses for 1922).

Average running expenses of nurse a year.....\$678.32
Average running expenses of nurse per month... 56.52
Average salary per month..... 150.00
Total average cost per nurse.....2478.00
Average Amount of Work of one County Nurse for 1922.

(Based on actual work of 37 county nurses).

2,960 school children inspected.

135 schools visited.

14 cases investigated for the superintendent of the poor.

36 tuberculosis patients instructed in preventing the spread of tuberculosis.

59 communicable disease cases visited.

29 cases of crippled children investigated and reports made to proper authorities.

32 cases of dependency, delinquency and neglect, investigated and reported to county judge.

56 school absentees investigated. Report made to delinquency officer.

269 health talks to pupils.

56 talks to parents and various civic organizations.

116 infants and pre-school children visited and advice given to mothers.

243 patients received at health centers.

Many health lectures given to students at county teachers' training schools.

252 home calls made in doing follow-up work.

EXHIBIT B.

July 1, 1923.

Reports to the Wisconsin State Board of Health.
1910 1922

Population—2,333,815 Population—2,723,983.

Diphtheria—

Cases2,457 Cases3,593

Deaths 431 Deaths 238

Scarlet Fever—

Cases5,015 Cases5,708

Deaths 304 Deaths 157

Typhoid Fever—

Cases2,445 Cases 372

Deaths 558 Deaths 81

Measles—

Cases4,931 Cases8,861

Deaths 158 Deaths 40

Whooping Cough—

Cases1,156 Cases6,767

Deaths 208 Deaths 109

Smallpox—

Cases 488 Cases1,790

Deaths 2 Deaths 2

Infantile Paralysis—

Cases 22 Cases 81

Deaths 41 Deaths 22

Tuberculosis, all forms—

Cases1,270 Cases2,395

Deaths2,404 Deaths1,779

Meningitis, all forms—

Deaths 478 Deaths 217

Infant Mortality, under 1 year—

Deaths3,339 Deaths4,043

2,688

6,027

Please note the increase of over 14%, or 390,168, in population for 1922 as compared to 1910.

C. A. HARPER,

State Health Officer,

Collaborating Epidemiologist.

PUBLIC HEALTH NOTES

The state law requires local boards of health to furnish diphtheria antitoxin free of charge to indigent persons suffering from diphtheria.

Use of school basements for seating purposes, if the floors are two or more feet below grade, is prohibited and can be ordered discontinued.

A physician at Mineral Point reported a case resembling "Devil's gripe," the center of infection of which has been in eastern states. The cases were at Linden, Iowa county, and both died.

A deputy of the state health department serving northern counties prosecuted a man and his wife for repeatedly leaving their premises while under quarantine for scarlet fever. A fine of \$25 and costs was imposed.

Only health officers or someone designated by them can, under the law, take swabbings of the nose and throat for release from diphtheria. Cultures taken by the attending physician will not be accepted unless the health officer so designates it. Cultures for diagnosis may be taken by the attending physician.

There is no authority in the statutes permitting county boards to appoint a county health officer.

An opinion was given by the attorney general that the position of county nurse continues to exist until abolished by the county board under authority conferred by the "home rule" law passed by the 1923 legislature.

In reply to an inquiry concerning the right to enforce physical examination of school children, it was stated that the state board has adopted no rules, regulations or orders which provide for compulsory examination. Such examinations are optional with parents.

A local health board may provide for free vaccination of all children in a school district during an epidemic of smallpox whenever in its judgment such action is required, the expense to be paid by the governing unit. The school board has no authority to order or pay for vaccinations.

A deputy state health officer after examining 22 children in a Columbia county rural school found six afflicted with impetigo contagiosa and sent them home over the objections of their parents.

Answering a city official, the state health officer

explained there is no law making the use of sodium iodide for goiter prevention mandatory, but it is considered advisable to acquaint parents with the plan and receive their consent.

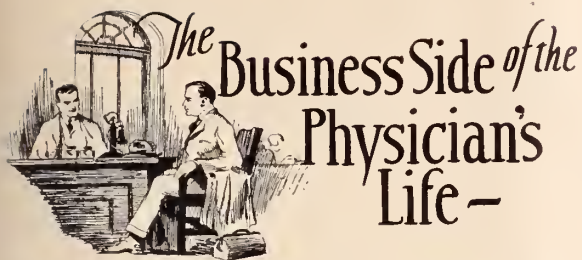
The state board of health contracted with the Lederle Antitoxin Laboratories for a year's supply of nitrate of silver solution (used in the prevention of ophthalmia neonatorum, or infantile blindness), with which to supply all physicians, midwives and hospitals in the state. The expense is borne by a special state appropriation for the purpose.

The state board of health ordered the revocation of the license of a baby boarding home in Milwaukee following proof of charges that the owner had violated health department rules and that other conditions in connection with maintenance had been subversive of the best interests of patients.

Where a school nurse is employed by a school board, it is desirable, a health officer was informed, that she be deputized by the local health board in order to give her police powers for the purpose of discovering unreported cases of communicable disease, and to assist the health officer when needed.

There are no reciprocity arrangements with other states for the registration of graduate nurses, but each applicant for Wisconsin licensure is considered on her own merits and qualifications. The principal requirements are that a nurse have at least one year of high school, be a graduate of an accredited school of nursing and hold a registration certificate in a state as a result of examination.

In cases where free antitoxin for treatment of diphtheria is indicated, the law does not specify who is to determine whether persons are indigent or not. The attorney general has given the statute a liberal interpretation, holding it is not necessary to prove that the parties are actually paupers in order to receive this aid. If the purchase of antitoxin at the usual price results in a distinct hardship to a family or would deprive it of necessities of life, the city is warranted in furnishing the remedy without charge.



I don't like agents. I don't like agents of any kind. They take up my time and—I blush as I say it—they most generally take away some of my money. I work hard for the aforesaid money. When I have figured out how my balance for the month can be best applied, in comes some agent and all too often he convinces me that my plan is not so good—all wrong in fact.

Now, I mention agents only because one of them did me a favor a few years ago that I have never forgotten. He brought in and laid on my desk a blank saying, "Doc, here is a diagnosis blank I think you ought to have."

Because it was free and only an introduction to what he had in mind to sell me, it reposed on my desk awaiting my annual desk cleaning—mine is the first of each year.

On the Sunday following Christmas, 1919, I found that blank. Because my Christmas neckties, with the exception of one, were all sufficiently modest so that I could wear them, I was feeling particularly good that day. So I looked over that blank before throwing it away.

It was a new kind of a diagnosis blank to me. It had two headings: "Cash Value of What I Own" and "What I Owe."

I had figured that out lots of times on the margin of the evening paper but because I had not done it for sometime I jotted it down on that sheet of paper. Because it was a handy slip I put it in the safe and proceeded to forget all about it.

About a year later I found that sheet on top of a Liberty Bond I wanted to clip. I looked it over—took the back of a deposit slip and started to figure how much more I was worth with a feeling of real satisfaction. Say, you know before I got through that feeling was all gone. I was only worth \$800 more than the year before. I checked and I re-checked but that fact remained—it spoiled that day completely—absolutely wrecked it—no salvage at all.

Then and there I made up my mind that "next

year" my assets-liabilities sheet would show up in better style. And it did.

In a few days I will clean up my desk and then sit down and make out my fifth annual statement with Myself, Incorporated. I am as proud of the gain from year to year as when I dropped my first duck on the wing. Now, don't think I am getting miserly because you would be all wrong. I am just taking inventory of myself once a year—just like any business or manufacturing plant. I am counting the parts. Those that look a little shop worn I sell and save a greater loss later on. Those that have been best sellers—of best value—go back in the box. And then I add up the totals to see just how much of a paying business I am.

When I get through with my little statement this year, as in previous years, I leave with a feeling of satisfaction. I have accomplished something and I know it. It gives me the inspiration to accomplish just a little more in 1924.

And incidentally I have accomplished another thing, I have provided my family with a list of my assets should one of those Chicago taxi drivers do to me what I am afraid of every time I use one.

WATER TESTS INCREASING.

Wisconsin people are placing more dependence than ever on bacteriological analysis of water supplies to safeguard against disease. Thousands of such tests are made yearly by the state laboratories, without expense to citizens or municipalities save the transportation charges on the water samples.

Few understand how to send water samples to laboratories properly, the state board of health says. Unnecessary delay in ascertaining the quality of suspected water is caused by the common practice of sending samples in jugs or bottles, and without icing. No specimens thus shipped are ever examined, because an examination would not disclose the true condition of the water.

"On account of the container not being carefully sterilized and not containing a glass stopper," the board explained, "the sample unquestionably is contaminated. It is necessary to deliver the water to the laboratory in practically the same condition in which it is collected. For this reason the sample must be iced before shipment."

The rules require that if water is to be sent to a state laboratory special sterile containers be requested of the local health officer, who will order them from the laboratory, and the collection of the sample must be made by or under the direction of that official. Under these conditions the test will be made free of charge. The containers are sent out by express, at the expense of shipper, in specially prepared boxes so that the sample can easily be iced for shipment.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

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LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists 90 counties and their respective officers.

SOCIETY PROCEEDINGS

CLARK COUNTY

The Clark County Medical Society met at Owen on November 8th, at the Woodland Hotel. A sumptuous banquet was served at seven o'clock to about twenty members with their wives and guests. After the dinner the following papers were given and discussed by the society: "Medical Aspects of Gall Bladder Infection," by Dr. E. L. Mason of Eau Claire; "Some Observations at the College of Surgeons Meeting in Chicago in 1923," by Dr. S. C. Williams of Chippewa Falls.

CRAWFORD COUNTY

The biennial meeting of the Crawford County Medical Society was held at Wauzeka on October 25th. Following a special dinner at Hotel Turk papers were read by Dr. Harold E. Marsh, Madison, on the treatment of diabetes with insulin; Dr. W. H. Guilford of the State Health Department spoke on general welfare work and its relations to the general practitioner; Dr. G. W. Henika of the State Health Department spoke on community and school health conditions; Miss Sophia Paulus, county nurse, also gave a short paper.

After the program the following officers were elected: President, Dr. C. A. Armstrong; Vice President, Dr. C. J. Willard; Secretary-Treasurer, Dr. T. E. Farrell; Delegate, Dr. A. J. McDowell; and Alternate, Dr. W. W. Coon.

DANE COUNTY

A meeting of the Dane County Medical Society was held at the Park Hotel on Tuesday evening, November 13th. Following a dinner papers were read by Dr. Daniel Eisendrath, Rush Medical College and Dr. V. E. Hyslop of Madison.

FOND DU LAC COUNTY

The regular annual meeting of the Fond du Lac County Medical Society was held at the Retlaw Hotel, November 14th, at 6:30 p. m. Following a very fine dinner, the annual election of officers took place. Results of the election are as follows: President, Dr. F. P. Marshall; Vice President, Dr. A. C. Dana; Secretary-Treasurer, Dr. D. N. Walters; Censor, Dr. S. E. Gavin.

LANGLADE COUNTY

The Langlade County Medical Society held its annual meeting at the Hotel Butterfield Thursday evening at 6:15 P. M., Nov. 1, 1923.

At 6:30 o'clock a chicken dinner was served and Mr. Marston, as always anxious to please gave the doctors a feed that satisfied, consisting of six courses. A smoker followed.

The business meeting was called to order by the President, Dr. L. A. Steffen.

Minutes of the last meeting were read and approved as read. The regular business of the society was then taken up.

Election of officers for the coming year resulted as follows:

President—L. A. Steffen.

Vice-President—E. R. Murphy.

Secretary-Treasurer—J. C. Wright.

Dr. J. C. Wright was chosen delegate to the state medical meeting to be held at Green Bay next year.

The Society was well represented. Every doctor in the county was there except three, who were unable to be present.

The doctors present were: L. A. Steffen, E. A. Murphy, E. G. Bloos, C. E. Zellmer, J. P. Gillis, P. J. Dailey, M. J. and E. J. Donohue, G. E. Moore and J. C. Wright.

The doctors enjoyed a good social time and it was the sentiment of the meeting that we hold meetings oftener and our next meeting a program that will be not only interesting but instructive.

Langlade county is probably the best organized county in the state. It stands 100 per cent with its relation to the State Medical society. The local doctors are also more thoroughly united than in any county, which is beneficial to the people as well as to the doctors. It is very frequent that one doctor will call another in for consultation. Such a spirit of harmony means much better protection to the people. The doctors also feel that they have a responsibility resting upon them.

The payment of dues and all business being completed the meeting adjourned.—J. C. Wright, Sec.

MARINETTE-FLORENCE COUNTY

The Marinette-Florence County Medical Society held a meeting November 16th, at Dr. J. V. May's office. It was largely attended, there being guests from both Menominee and Oconto Counties. Dr. Emil Nadeau, Green Bay, read a paper on his experiences in the medical centers of Europe and Vienna in particular. Dr. John W. Towey, superintendent of the Tubercular Institution at Powers, Mich., gave an illustrated lecture on "Pneumothorax in Tuberculosis." The procedure is now on a sound footing and much relief is experienced from its employment. Dr. G. R. Duer, Marinette, had a most excellent article on Diagnosis in Genito-Urinary Ailments, in which he showed several X-ray plates and photographs. Dr. H. F. Schroeder of Marinette, gave a highly entertaining talk on the State Tri-State medical meeting.

MILWAUKEE ACADEMY OF MEDICINE

Two meetings of the Milwaukee Academy of Medicine were held during November. The first was held on November 13th at which the following papers were given: "Ocular Disturbances in Pregnancy," by Dr. Nelson M. Black; "Child Welfare Problem in Milwaukee," by I. F. Thompson; and "Experiences in Europe," by Dr. A. J. Patch.

The second meeting was held on November 27th at which the following papers were read: "Furunculosis of the Nose," by Dr. T. L. Tolau; and "Some Therapeutic Problems of Nephritis," by Dr. Norman M. Keith, Mayo Clinic, Rochester, Minn.

NINTH COUNCILOR DISTRICT

Fifty members of the Ninth Councilor District Medical Society met at St. Joseph's Hospital at Marshfield Thursday afternoon, November 22nd, for the quarterly meeting. Dr. S. R. Slaymaker, Chicago, conducted

clinics on "Severe Anemia" and "Toxic Goiter." Following the clinics Dr. K. W. Doege of Marshfield gave a paper on the surgical treatment of pulmonary tuberculosis.

A banquet for the members was given at the Nurses Training School at 6:30. Following the banquet papers were read on "Tuberculosis of the Various Body Systems" by Dr. Edward L. Miloslavich, Marquette University, Milwaukee, and on "Diagnosis and Treatment of Hypertension," by Dr. S. R. Slaymaker, Chicago. Mr. J. G. Crownhart, secretary of the State Society, spoke informally on the aims of the society.

ROCK COUNTY

Supt. and Mrs. Cullen of the County Farm at Janesville were hosts to the members of the Rock County Society and their wives Tuesday afternoon and evening, November 27th. In the afternoon Dr. George W. Hall, Rush Medical College, held a neurological clinic followed with an illustrated paper. After dinner the evening was devoted to dancing.

ROCK COUNTY

An all day orthopedic clinic was held at the Mercy Hospital on Thursday, November 15th, by Dr. Fred J. Gaenslen, Milwaukee, under the auspices of the Rock County Medical Society. After a banquet at the hospital Dr. Gaenslen read a paper on "Common Deformities of the Feet."

TREMPEALEAU-JACKSON-BUFFALO COUNTY

The Trempealeau-J-B County Medical Society has had a successful season with a good attendance. Meetings and speakers were as follows: Whitehall, Dr. Harold W. Shutter, University Extension Division; Independence, Dr. H. E. Marsh, Jackson Clinic, Madison; Cochrane, Dr. C. Verne Hunt, Mayo Clinic, Rochester, Minn.; Arcadia, Dr. Edw. Evans, District Councilor, La Crosse; Galesville, business meeting.

WINNEBAGO-OUTAGAMIE COUNTY

A joint meeting of the Winnebago and Outagamie County Medical Societies was held at Neenah Thursday evening, November 8th. Close to fifty members attended the dinner meeting at which Dr. Robert H. Babcock of Chicago conducted a heart clinic.

ENGAGEMENTS

Dr. M. A. Paschen, Milwaukee, to Miss Dorothy Irene Rodems, Milwaukee.

DEATHS

Dr. Jacob Lang, 85, Milwaukee, died at his home on November tenth. Born in Germany, 1838, Dr. Lang graduated from the medical school, University of Tuebingen. He subsequently graduated from the post graduate course at the University of Leipzig.

In 1867 he established his practice in Milwaukee which was continuous up to retirement five years ago. He was an active member of the Milwaukee Society of German Physicians, founded in 1880, and was several times its president. He was a member of the Milwaukee County Medical Society, the State Medical Society, and the American Medical Association.

NEWS ITEMS AND PERSONALS

The advantage of Wisconsin's strict medical practice act was conclusively demonstrated this month following the expose of purchased diplomas in St. Louis. Owing to the fact that the "college" involved was not on the accredited list for reciprocity none of its "graduates" were licensed in Wisconsin.

The sole case of local application was that of one "Dr." V. W. Rapp. When forced to take the examination he twice failed but later, notwithstanding, set up in practice in northern Wisconsin. He subsequently disappeared and upon return was sentenced to one year for wife abandonment.

Dr. E. A. Myers, Superior, has been elected president of the Interurban Academy of Medicine of Duluth and Superior. Other officers of the Academy are: Dr. J. R. Kuth, Duluth, vice-president; Dr. George H. Conklin, Superior, secretary-treasurer; and Dr. R. C. Smith, Superior, treasurer.

A broken steering gear caused the wrecking of an automobile driven by Dr. Paul Knorr, Waupun. Dr. Knorr escaped with minor injuries.

Dr. W. F. Lorenz, Madison, was recently elected chairman of the new Dane County council of American Legion posts.

Four physicians have located in the state during the past month. Dr. Charles A. Lester, Winona, Minn., has opened offices in the Truax Building at Eau Claire; Dr. L. E. O'lell, Milaca, Minn., has established his home at Rice Lake; Dr. Damon E. Brown, Peoria, Ill., has moved to the First Central Bank Building, Madison; and Dr. R. R. Roberts, Rochester, New York, has moved to Beaver Dam, Wis.

Dr. F. C. Christensen, Racine, has left for New York where he will take up two years of post-graduate work.

Appointment of Dr. Clesson C. Atherton, Kankakee, Ill., as the superintendent of the Southern Wisconsin Colony and Training School was announced by the state board of control during November. Dr. Atherton assumed his duties December first succeeding Dr. H. G. Werner, resigned.

Dr. Atherton has served 13 years in Illinois institutions and for the past four years has been assistant manager of the Kankakee feeble-minded institution.

Despite a plea by Health Commissioner George C. Ruhland, Milwaukee, for the general increase of salaries in his department, the Milwaukee city council refused all suggested increases.

According to official figures from Washington some 482,417 prescriptions for liquor were issued during the past fiscal year. This would average one for every sixth person in the state.

Dr. George H. Williamson, Neenah, has announced that he has now limited his practice to diagnosis and

treatment in those branches of medicine usually practiced by the internist.

Dr. H. C. Werner, late head of the Union Grove state institution, resigned, has moved to Fond du Lac.

Plans for the licensing of clinics in Milwaukee have been started by Dr. George C. Ruhland, city health commissioner, following the recent exposé of the so-called "Health Institute." It is probable that an ordinance to accomplish this end will be introduced in the near future.

The Florence Nightingale society of Racine has announced that it will conduct a campaign for \$200,000 next spring for the erection of a hospital in that city. The new hospital will have 100 rooms according to the preliminary plans.

CORRESPONDENCE

November 22, 1923.

Mr. J. G. Crownhart,
Sec.-Mng. Editor of Wisconsin Medical Journal,
Milwaukee, Wisconsin.

Dear Mr. Crownhart:

The American Association For The Study of Goiter, composed of Goiter Surgeons, Pathologists, Anaesthetists, Internists, and Radiologists, will have its annual meeting in Bloomington, Illinois the 23rd, 24th, and 25th, of next January.

Our program will not be complete until about the 17th of December. We expect, however, to have an excellent program of papers, demonstrations, and diagnostic and operative clinics.

Would it be possible to get you to make an announcement of this meeting in the Wisconsin Medical Journal?

Yours truly,

E. P. SLOAN,
President.

Sec'y.—Dr. J. D. Moschelle,
Indianapolis, Ind.

November 17, 1923.

Managing Editor.
Wisconsin Medical Journal.
Milwaukee, Wisconsin.

Dear Doctor:

I have decided to begin instruction to graduates and have arranged a course as follows: The plan is to give two courses a month with classes beginning on the first and third Monday of each month. The first course will begin on Monday, January 7, at nine A. M. at St. Mary's Hospital. The courses will consist of clinical demonstrations of the various methods of employing local anesthesia at St. Mary's Hospital, didactic courses covering the drugs used, their preparation, etc., the anatomy of the sensory nervous system and laboratory courses on the cadaver where in addition to demonstrations the men will practice the introduction of the needles and segmental dissection.

I wondered if it would be possible for the Wisconsin State Journal to give a news item to this effect.

Thanking you in anticipation, I am,

Yours fraternally,

R. E. FARR.

PACKAGE LIBRARIES READY.

With the package library innovation established but a month, the Extension Division of the University of Wisconsin reports that several packages have been prepared and are ready for distribution. Most of those prepared have been on request.

A package library of clippings may now be secured on the following subjects: Cancer, Diphtheria—Schick test, Vaccination, Periodical Physical Examinations, Insulin, Fractures of the Long Bone, Treatment of Infection and Sensitizational diseases with foreign protein, and Control of Communicable Diseases. Other subjects will be added as requests are made and as the library progresses.

These libraries are loaned for a two week period upon application by any physician in Wisconsin and were established through the cooperation of the State Medical Society.

"The amount of work required to make up a library is considerable," declared Dean Reber recently," and we desire that every physician know of this service so that they can be used most extensively."

To give readers an idea of what one of these libraries consists we list the following material that has been compiled on "Diphtheria—Schick Test:"

Control of Diphtheria Epidemics (Stovall).

Diphtheria—Its Prevention and Control—Wis. State Bd. of Health.

Illinois Health News—Sept., 1922.

Results of the Schick Tests—Brookline, Mass., Health Bulletin—December, 1922.

Results of the Schick Tests—Brookline, Mass., Health Bulletin—March, 1923.

Diphtheria—U. S. Health Service.

Schick Test and Active Immunization against Diphtheria.

Chicago School of Sanitary Instruction—Sept. 30, 1922.

Chicago School of Sanitary Instruction—Oct. 22, 1921.

New York City Health Bulletin—May, 1923.

American Journal of Public Health—May, 1916.

Public Health Report—August 18, 1922.

(Continued on next page)

Formulation of Policy For Lay Education Started; Committee Asks For Suggestions.

At the October meeting of the State Medical Society the Committee on Public Policy and Legislation was authorized to present a plan for its future activities to the January meeting of the Council. The formation of such an outline is of interest to all members of our society and it will be the better for their suggestions.

Lay education which will afford the basis for proper laws for public health protection in the communities, in the counties, and in the state as a whole is not a new idea. But planning such work so as to accomplish the most in actual results requires much thought and labor.

It has long been the aim of the reputable physicians of this state to secure the adoption of an adequate standard for all who desire to practice medicine. It is an aim that has long been delayed of adequate fulfillment and for no good reason. The fact that thousands of dollars is spent each session of the legislature by unconsciencable quacks in opposition to public health measures is no good reason why the public should not have adequate health protection. The fact that in the past our legislative committees have had to rely upon our members and that our members were too often not adequately informed as to the specific measures introduced is possibly one reason for defeat. We may overcome that.

The fact that thousands of laymen are ready and willing to be of assistance in this public work but have not been informed and their assistance solicited is a second cause. We may overcome that.

As members of the Committee on Public Policy and Legislation we now want your suggestions as to these questions:

1. What legislation do you think should be enacted?
2. In what specific ways may we accomplish most in lay education?

If a piece of proposed legislation is good the details should be set forth long before the 1925 legislature convenes. Such work should be done with care and without haste. We want your suggestions now in order to begin this work early.

Secondly, lay education, such as proposed, has for its sole purpose the giving of information to the public about the scientific and demonstrated

truths in the field of medicine. The public is entitled to this knowledge and possession of such definite information will go far to secure the enactment and enforcement of laws for their own protection. Again we desire your suggestions.

Adequate medical practice acts are for the protection of the public—not for protection of the physician. Just as the laws proposing to curb the sale of "Blue Sky" stocks met with opposition on the part of those who had them for sale, so will laws for protection in the even more important field of health meet with opposition from those who prey on the credulity of the people by making alluring promises of health restored on the "while you wait" and "pay as you enter" plan.

As members of this committee we ask your assistance in the formulation of this policy. To the end that such a policy may truly represent the wishes and thoughts of all our members we are writing this article. Each future issue of this Journal will contain a short article based upon some phase of our program. It will appear in this same position, immediately following Society News.

Every article will carry information you should have—material in which you will be interested. Look for it and give your suggestions and your criticisms to the end that the people may have that degree of community, county and state-wide health protection to which they are entitled in this day of progress. Address all communications to the Secretary, 558 Jefferson Street, Milwaukee, Wisconsin.

LIBRARY SERVICE.

(Continued from page 323)

Nation's Health—Dec., 1922; New Repub., Oct. 18, 1922.

N. Carolina Health Bul., July, 1923; Wis. Bul., July, 1923.

Public Health Reports, March 30, 1923; Mich. Pub. Health, February, 1923.

Journal of Amer. Medical Association—1922.

Diphtheria is Preventable—Health Bulletin—Brookline Board of Health.

Address all requests for service of this type to the Package Library Department, Extension Division, University of Wisconsin, Madison.

Is The Decline of The Country Doctor to Continue? If Not, Why Not, If So, Who or What, Will Take His Place?

BY N. P. COLWELL, M.D.,

SECRETARY, COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION,
CHICAGO.

Editor's Note—The problem of the country doctor has become a national problem. Wisconsin is not immune and requests from communities for the services of physicians are becoming more and more common, although not numerous.

Because of the length of this paper it will be printed in two parts, the second to follow in the January issue. A third article is planned for the February number on the specific situation in Wisconsin. We take this occasion to thank the author for permission to publish his valued paper on a vital subject.

In answer to the first of these questions, the decline of the country doctor will continue until the conditions which are causing that decline are corrected. The decrease in the number of country doctors is due to the same conditions which are causing also a scarcity of preachers and teachers in rural communities, and which are making it increasingly difficult to secure and retain farmhands and other help in the smaller communities and farm districts.

CONDITIONS AFFECTING THE COUNTRY DOCTOR.

In former years the country doctor was looked up to as a leading citizen; he had access to every home; he treated everybody, rich and poor alike; he made a good living; he had all the essential home comforts; his children had as good educational opportunities as others; he was enabled to lay aside funds for the rainy day and to make provision for his family after his death. His opportunities in fact were better if anything than for physicians in cities and towns, and his personal expenses were decidedly lower. Now these conditions for the country and city doctors have been more than reversed. The city with its paved streets, easy access to larger numbers of patients, street cars, automobiles, hospitals, etc., gives the city doctor the advantage. The improvements thus far made in the country have actually added to the difficulties of the country doctor, since the improved roads in the country districts thus far are *those which lead to the city*. As a result of

the development of the automobile, the improved highways, the interurban railways and the telephone, therefore:

(a) Well-to-do people in rural districts have developed a habit of going to the city for their various necessities, as well as to consult the city doctor. This has taken away many of the country doctor's office patients.

(b) The city doctors are enabled to visit patients living much farther from the city than was formerly possible, thereby competing more vitally with the country doctor.

(c) Knowing the bad condition of the cross country roads, patients living at long distances from the country doctor appeal also to the city doctor who, because of the new highway, often gets to the patient first, so that the country doctor's time and effort has been expended in vain.

(d) With the loss of his office practice the country doctor is restricted to emergency cases; those who cannot, or will not, pay for medical service, and the widely separated patients, only a few of whom can be visited on account of the distance and serious conditions of the roads. He is required to waste more time and energy, therefore, in securing a greatly diminishing income.

(e) The number of patients in country districts is still further reduced by the greatly diminished rate of mortality in rural communities. During the last decade alone there has been a decrease of twenty per cent in preventable diseases and there are no longer the great epidemics which were so prevalent in earlier times.

(f) The country doctor's expenses have also been greatly increased. Since country roads as a rule are impassable for automobiles during a considerable portion of the year, the doctor must also maintain horses and a carriage. The difficulties are particularly extreme in mountainous districts.

(g) Loss of time, increased expenses and reduced income prevents the country doctor from attending medical societies, visiting libraries, or even securing the medical books and journals by which he would be enabled to keep up with the more favored city doctor. All these forces have

*Read before the St. Louis Country Life Conference, St. Louis, Mo.

tended also to reduce the social standing of the country doctor.

(h) The country doctor has fewer opportunities for income from sources related to medicine than the doctor in the city,—such as consultations with other physicians and work as health officers, insurance examiners, etc.

(i) A large proportion of the present day practice of the physician—a larger proportion than is necessary in fact—is in the hospital. The doctor's time is conserved by having as many patients as possible come to the hospital. Many people also have developed the habit of going to the hospital, even with the greatly increased expenses entailed. Although not essential for all patients, this additional expense is frequently justified by the greater quiet insured, the freedom from household cares and the annoyance of over-zealous friends, as well as the advantages of good nursing, regulated diet, and ready access of skilled assistance in any emergency, which are obtainable in the hospital. Since at present, hospitals are seldom found in the rural communities, the sick who need hospital attention must go to the city where they are usually under the treatment of the city doctor.

(j) There are still other reasons for the decline of the country doctor. There is the lack of facilities for the proper education of his children. The qualifications of country teachers (until recently) have deteriorated, and it is expensive to employ private tutors, or to send the children to distant schools and colleges. Then there is also the lack of churches, and the greater lack of good preachers, as well as the lack of theaters and other means of amusement which are so available in the city.

(k) In brief, the objectionable features of country practice are loss of patients, loss of income, increased expenses, long drives, bad roads, hard work, poorer facilities for practice, no hospitals, no libraries, no laboratories, few churches, poorer schools and loss of time or opportunity for professional or personal development.

What wonder, therefore, that the country doctor after struggling for years against the rising tide of difficulties finally decides to follow his disappearing clientele to the city. Was it surprising that so many country doctors who entered the government service during the world war did not return to the country after they had obtained their discharge? It is quite clear also why the young physician after graduating from medical school, usually in debt for his medical training, prefers

to, or from necessity must, remain in the city rather than go to the country. These or equally serious conditions have been found to prevail in the great majority of instances where country districts have ceased to have country doctors.

No statement in this article should be interpreted as reflecting against the country doctors themselves, many of whom have kept ably abreast of the times in both education and skill; who have contributed a large quota to the knowledge of medicine through their own painstaking work, and who have succeeded in surmounting the difficulties against which so many others have been forced to succumb.

NO SCARCITY OF PHYSICIANS.

The decline of the country doctor is not due to a decline in the annual output from the medical schools, or a scarcity of physicians in general. This country, indeed, has a generous supply. In 1921, as shown by reliable statistics, there was one physician in the United States for every 726 people, as compared with one physician for every 1,041 people in the British Islands, in the same year, and—just before the world war,—one to every 1,940 people in Germany; one to every 2,020 people in Austria, and one to every 2,824 in France.

As to the distribution of physicians in the United States, a tabulation of urban and rural populations, based on returns from the Census Bureau for 1920, shows that of the total physicians in the United States, 63 per cent are in cities of 5,000 or greater population, leaving only 37 per cent in cities or towns of less than 5,000. In other words, in cities of 5,000 or above there is one physician for every 541 people while in cities of less than 5,000 there is one physician for every 1,920 people. In an investigation for the state of Ohio, conducted by a professor of the Ohio State University recently, it was shown that in cities of less than 2,500 population there was only one doctor for every 1,600 people. The problem of the country doctor, therefore, is one of distribution and not of total supply.

RECENT IMPROVEMENTS IN MEDICAL EDUCATION.

Just a word in regard to the tremendous improvement in medical education in the United States during the last twenty years. In 1906 the United States had more medical schools than existed in all other countries of the world combined. Only a few of these medical schools could

(Continued on page 328)

Milwaukee "Health Institute" Closes After Warrants Issued For Arrest of its Promoters.

With four doctors and employees of the Milwaukee Health Institute under arrest, that institution has vacated its offices. The complaints of two patients lodged with Health Commissioner George C. Ruhland caused the investigation which has resulted in the arrest of Dr. Wallace A. Reinhardt, Dr. Nathaniel C. Rogers, M. C. Wolf and Andrew Morgan and the individual complainants now number close to fifty. All four have been released on bail pending a preliminary hearing.

Reinhardt was one of those involved in the prosecution of the "Wisconsin Medical Institute" in 1908. This case was finally dropped upon the signing of an agreement in which Wallace A. Reinhardt agreed not to practice in Wisconsin "under the names of any medical institute or corporation."

Individual complainants interviewed by the press claim to have spent varying sums of money, in at least one case over \$1,000, to secure a "cure". Former patients of the Institute have declared that they were sold bottle after bottle of medicine after an examination by "an eminent specialist from the East."

Warrants were immediately issued by District Attorney George Shaughnessy and the arrests followed. In at least two cases refunds were made before the defendants were placed under arrest. Within two weeks of the exposé the offices were closed without announcement.

The old story of "lost manhood" was responsible for comparatively large sums of money being paid by some of the patients.

In a news story on November seventh, the Milwaukee Journal declared, "Medical quackery in a superlative degree was revealed Wednesday as District Attorney George A. Shaughnessy prosecuted the investigation of a Third street 'clinic' alleged to have extorted thousands of dollars from credulous patients who applied to these 'experts' for treatment."

The Milwaukee Health Institute advertised extensively in many Milwaukee papers previous to the exposé. A four column, fourteen inch ad is reproduced on this page as a fair sample of the "shotgun" method of appeal used by the promoters.

There is a humorous side to the statement of patients of "The Health Institute" when compared to statements in advertisement.

"Our Examinations are Searching," says the ad.

The Milwaukee Journal of November 7th brings out the humor in this statement when they said, "The patient is received in an outer office by a young 'doctor' who gets the history of the patient and makes the first casual examination. The patient is then told to

strip and to step into an adjoining room, where another 'expert' will examine him. The man does this, leaving all of his clothes in the office with the first doctor, who promptly goes through the pockets to find out how much money the patient has on his person and how much the down payment for treatment shall be."

We do not wonder that their practice was extensive when we consider the shotgun method of

Are You in Ill Health? Have You Tried Various Treatments in Vain? If So, This Announcement Pertaining to SCIENTIFIC TREATMENT OF CHRONIC DISEASES By Natural Methods Will Interest You

The Newest Curative Methods, Serums, Vaccines, Electricity, Medicines, Bacterins, Inorganic Medications, etc., are all understood thoroughly by us. We use them when indicated, so if anxious about yourself, no matter who has failed nor how long you have suffered, call on us.

We Will Explain Your Trouble

We Attribute Our Success to Correct Diagnosis—We Find Out What Ails You.

When You Can Be Well, Why Be Sick? Why Suffer Delay and Grow Worse?

Enjoy Life—Health—Happiness

With Failing Nerves, Hot Bile, The Hearty Ache to Work, Get Well.

We Want to Talk to Every Sufferer From Blood, Nerve and Chronic Diseases. The First Trial of our Scientific Method of Treatment is in the Least, Nearly All of our Patients Tell of How New Life, Vigor, Energy, and Peace We Can Do the Things for you. We Especially Suffer all Shabbiness, Complaints and Long-Suffering Cases. You Who Suffer, Use Sincerity and Gravity of Your Condition. We appreciate the Doctor's Confidence and the Lasting Benefits We Give come in for Free Consultation.

We Will Explain How Different and More Reliable Are Our Methods of Treatment. Our Special Training and Experience in the Treatment of Blood, Nerve, and Skin Diseases Give Us the Best Advantage Over Best Treatment and Medication. Attention is directed to Chronic Cases.

Quick Results, Scientific Treatment is what you will get from us.

OUR EXAMINATIONS ARE SEARCHING.

OUR TREATMENT IS SCIENTIFIC.

OUR CHARGES ARE REASONABLE.

Our Equipment to consist of the latest and best apparatus in the Electrical and Mechanical Apparatus, and we are prepared by the knowledge of their use and the experience in giving treatment to get the best results from CONSULTATION AND ADVICE FREE.

If You Suffer From Diseases, Call on Us At Once Because You May Get Worse If Neglected.

No disease is so intractable, either gets better or worse, as neglected. There are intractable ailments that beyond the help of medicine cannot be cured. You are the people who can be helped, a burden is removed and a new life is brought. Why take the chance of getting to that point where a few minutes' talk with us free may show you how to get well.

IS YOUR STOMACH MAKING LIFE MISERABLE?

CLEAN YOUR BLOOD

NERVOUS DISEASES

WHY BE SICK?

COME TO US

New Offices

New Equipment

New Treatments

Get well and strong again

NO WAITING!

OUT-OF-TOWN CASES TREATED PROMPTLY. DO YOU WANT RETURN HOME THE SAME DAY

THE HEALTH INSTITUTE, Specialists

PRIVATE ENTRANCE—183 THIRD STREET—2D FLOOR, MILWAUKEE

Phone Central Exchange 4444—Milwaukee, Wis. D. R. P. 1042—Milwaukee, Wis. D. R. P. 1042

Reduced copy of advertisement in Milwaukee Journal, Sept. 23, 1923.

appeal. With one shot apiece for such symptoms as "stomach pains, headaches, dizziness, poor appetite, tired, depressed, achy, nervous, pimples, eruptions, restless, weak, run-down" and the bull's eye shot of "Are you always expecting the worst to happen?" who would they miss.

We might go on almost indefinitely but we close with a paragraph that may have its equal in literature but no superior.

"The Fact That You Are Skeptical Does Not Discourage Us In The Least; Nearly All Of Our Patients Tell Of This Same Experience. We Are Alleviating Such Cases Every Day."

DECLINE OF COUNTY DOCTOR

(Continued from page 326)

compare favorably with those in other countries. Entrance requirements were very low or lacking. Most of them were seriously unequipped, either with laboratories, teachers or hospitals whereby a satisfactory medical training could be provided. So large an oversupply, coupled with the seriously inadequate facilities for instruction, suggested at once that what was needed was fewer but better medical schools. During the twenty years the number of medical schools was reduced from 162 to 80, mostly by the merging of from two to five medical schools in each of a score of cities into one which was in every way a stronger and better equipped institution. Entrance requirements also were increased, so that instead of only two (out of 162) medical schools requiring any college work for admission, now 74 (out of 80) have adopted the higher entrance requirements and are improved in many other respects.

The numbers of students enrolled were reduced from 28,142 in 1904 to 13,052—the lowest ebb—in 1919, and the number of graduates each year was reduced from 5,747 in 1904 to 2,656 in 1919. It is significant to note, however, that in the higher grade, Class A, medical schools from 1913 to 1919 there was no diminution in the number of students enrolled, or in the number of graduates, the reductions being entirely at the expense of medical schools rated in Classes B and C. Since 1919 also the numbers of students enrolled have increased by more than one thousand each year, the number last spring having returned to 17,432. The number of graduates also since 1919 have increased with the exception of the small war class—2,529—which graduated in 1922.

Last June the number of graduates was 3,120, and the present enrollments indicate that the classes during the next three years will be increased by from 800 to 1,000 each year, reaching approximately 4,800 in 1926. These temporary reductions have had very little influence on the total supply of physicians for the United States, but have made a most tremendous difference in the qualifications of those being turned out each year.

The greatly improved medical schools and the turning out of better trained physicians were the direct result of a tremendous increase in the positive knowledge in regard to human diseases, a greatly extended field of medical practice, and of many improved methods of diagnosis and treatment which have been brought about during the last generation. Since the work of Pasteur in the early '70's, which resulted in the discovery of the bacterial origin of many of our common diseases, more indeed has been added to the definite knowledge of the causes and treatment of diseases than in all previous ages. Changes which have taken place in the field of medicine since that time have been almost revolutionary.

Changes in medical schools have been so rapid, and the number of subjects to be taught were so rapidly increased, that the results of the teaching have not proved as satisfactory as could be desired. That time was necessary for readjustment of methods was to be expected. With the many subjects crowded into the curriculum, clinical teachers naturally emphasized certain subjects which are known to belong more properly in the graduate medical school. The result has been a rapid rush of modern graduates into specialization,—more rapid than their qualifications and the need of specialists warranted.

A rapid readjustment is now taking place by which medical students are first to be thoroughly prepared for the general practice of medicine and are to be required to take higher courses if they want to become specialists. Another readjustment will in time be brought about whereby the best modern methods of caring for the sick may be placed within the reach of all the people, even to the remote hamlet.

(In the January issue Dr. Colwell will discuss the second phase of the problem—the permanent restoration of the country doctor.)

MAY SELL WATER.

There is no law regulating the marketing of drinking water in Wisconsin. Frequent tests are required however.

Muirdale, Largest Sanatorium in State, Offers Excellent Facilities For Care of Children.

BY MRS. RUTH MAC MILLAN,
WISCONSIN ANTI-TUBERCULOSIS ASSOCIATION,
MILWAUKEE.

About seven miles from the heart of Milwaukee and two miles west of Wauwatosa, located on a gentle slope of meadowland bordered by a grove of oak trees, lies Muirdale sanatorium, the Milwaukee county institution for the tuberculous, named in honor of Wisconsin's illustrious son, John Muir, the naturalist and lover of the great out-of-doors.

Muirdale is the largest tuberculosis sanatorium in the state, and without its annex, Blue Mound, about a mile away, has a capacity of 355 beds. The sanatorium was opened in 1915 with eight attractive buildings, including a large administration building and hospital, two 40-bed cottages, one for men and one for women, the children's cottage, the superintendent's home, two employes' cottages and the power plant. Blue Mound, which

an excellent laboratory with X-ray apparatus. Alpine lamps and X-ray therapy have been used at Muirdale with especially good results in surgical cases of tuberculosis.

The sanatorium is manned by a staff of seven physicians, of whom Dr. G. L. Bellis is director, and 41 nurses and orderlies. Dr. Bellis was Muirdale's first superintendent and medical director, and he has again taken charge after an absence of several years. The total number of employes, including the physicians and nurses, is 177.

Although many Muirdale patients are sent there by private physicians, a large number of them arrive at the institution by way of the free chest clinics of the Wisconsin Anti-Tuberculosis Association held in various parts of the State; by way



CHILDREN'S COTTAGE AT MUIRDALE.

can accommodate 100, gives the entire county sanatorium a capacity of 455, but although a part of the Milwaukee county institution since 1921, it was run as a separate sanatorium until the fall of 1923 when it was made the convalescent department of Muirdale.

No efforts were spared to make Muirdale one of the most efficient and modern sanatoria in the country, with the result that the institution stands out among similar sanatoria in the country as a model. The hospital building is equipped with every device known to the modern sanatorium hospital. It has an emergency operating room where unexpected cases of surgery can be cared for, a dental room and a room where nose and throat examinations are made. In the basement is

of the Milwaukee County dispensary and the Milwaukee city health department; and by way of the county nurses who discover many incipient, unsuspected and advanced cases and, cooperating with physicians, send them to sanatoria. All residents of Milwaukee county are eligible for treatment at Muirdale, and by making arrangement with Milwaukee county, patients from other counties not having sanatoria are admitted to Muirdale. Patients who cannot pay for their care are admitted free of charge upon the certification of the judge of Milwaukee county or the county from which they come, the county paying half and the state the other half of the expense.

Muirdale is the only sanatorium in the state

(Continued on page XXIV)



THE JOURNAL BOOK SHELF

- What is Psychology?** By Charles W. Hayward, M.D., M.R.C.S. New York: Alfred A. Knopf, 1923.
- Ductless and Other Glands.** By Fred E. Wynn, B.A. New York: Alfred A. Knopf, 1923. Price \$1.50.
- The Heart, Its Physiology, Pathology and Clinical Aspects.** By Selian Neuhoof, M.D., Visiting Physician, Central and Neurological Hospital, Consulting Cardiologist, Broad Street Hospital, New York City. Cloth, \$10.00. Svo, xii + 701 pages with 300 illustrations. P. Blakiston's Son & Co., Publishers, Philadelphia.
- The Hope of the Variant.** By John George Gehring, M.D., Sc.D. Price, \$2.00. Charles Scribners Sons, New York, 1923.
- Chemistry for Nurses.** By Fredus N. Peters, A.M., Ph.D. Illustrated. Price, \$2.50. C. V. Mosby Co., St. Louis, 1923.
- Obstetrics for Nurses.** By Charles B. Reed, M.D. Price, \$3.50. 144 illustrations and 2 color plates. C. V. Mosby Co., 1923.
- Principles of Bacteriology.** By Arthur A. Eisenberg, M.D. Price, \$2.25. C. V. Mosby Co., St. Louis, 1923.
- The Doctor Looks at Literature.** By Joseph Collins, New York. Price, \$3.00. George H. Doran Co., 1923.
- Outlines of Medical Zoology.** By Robert W. Hegner, Wm. W. Cort and Francis M. Root. The Macmillan Company, New York. 1923.
- The Dominant Sex.** By Mathilde and Mathias Vaerting. The George H. Doran Co. 1923. Translated from the German. Price, \$3.00. New York.
- An Experimental Study of Psychopathic Delinquent Women.** By Edith R. Spaulding, M.D. Published for the Bureau of Social Hygiene by Rand McNally & Co., New York, 1923.
- The Medical Clinics of North America.** July, 1923. W. B. Saunders Co., Philadelphia. The Mayo Clinic number.
- The Surgical Clinics of North America.** August, 1923. W. B. Saunders Co., Philadelphia. The Chicago number.
- Heart Records, Their Interpretation and Preparation.** By S. Clavin Smith, M.S., M.D. First edition. Cloth. 313 pages with 128 illustrations. F. A. Davis Co., Philadelphia, 1923.
- Crime, Abnormal Minds and the Law.** By Ernest H. Williams, M.D., and Ernest Bryant Hoag, M.D., with introduction by Henry H. Goddard. The Bobbs-Merrill Co., 1923.
- The Medical Clinics of North America.** Chicago number. W. B. Saunders Co., Philadelphia and London. (Issued serially, one number every other month.) Vol. VII, Number II, September, 1923. Octavo of 310 pages and 37 illustrations. Per clinic year (July, 1923, to May, 1924). Paper, \$12.00; cloth, \$16.00, net.
- The Surgical Clinics of North America** (Issued serially, one number every other month). Volume III, Number V (Minneapolis-St. Paul Number—October, 1923), 300 pages with 200 illustrations. Per Clinic year (February, 1923, to December, 1923). Paper, \$12.00; Cloth, \$16.00, net. Philadelphia and London: W. B. Saunders Company.
- Rubber and Gutta Percha Injections.** By Chas. C. Miller, M. D., Chicago. First edition. Cloth; 100 pages with illustrations. Price, \$1.75, prepaid. Oak Printing and Publishing Co., Chicago.
- Bulletin of the National Research Council.** By National Research Council, National Academy of Sciences, Washington, D. C.
- Test Letters and Pictographs for Measuring the Acuteness of Vision.** Green, John, and Ewing, A. E., St. Louis. C. V. Mosby Co., St. Louis.
- Exercise for Health and Correction.** By Frank D. Dickson, M. D., and Rex L. Dively, M. D. First edition. 1923. Cloth; 127 pages with 112 illustrations. Price, \$2.00. J. B. Lippincott Co., Philadelphia.

BOOK REVIEWS

W. A. MOWRY, M. D.,
Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Principles of Vital Statistics. J. S. Falk, Ph.D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.

Medical Biometry and Statistics. By Raymond Pearl, Ph.D., Professor of Biometry and Vital Statistics in the School of Hygiene and Public Health and of Biology in the Medical School, the Johns Hopkins University. Octavo of 379 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$5.00 net.

The average physician is not, as a rule, either by training or temperament versed in mathematics. Mathematics is, however, coming to play an ever greater part in the field of medicine. While the application of advanced mathematics to medical problems may be entrusted to specialists in this field, it is becoming increasingly important for the medical practitioner to have at least some knowledge of the methods used by these specialists and of the results achieved. The two books under review are designed for the purpose of furnishing an introduction to this field of knowledge.

Falk's *Principles of Vital Statistics* is a book which both physician and public health nurse should find a valuable asset. It is written in a clear straight-forward and interesting style and gives information which every one needs who deals professionally with the sick. It is dedicated to Louis I. Dublin, the author's teacher in vital statistics. Those familiar with the skill and com-

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mon sense shown by Dublin in the valuable statistical studies on morbidity which he has carried out for the Metropolitan Life Insurance Company will find Falk similarly trustworthy and interesting.

Pearl's *Medical Biometry and Statistics* is largely devoted to the mathematics of probability as developed by the English mathematician, Karl Pearson, and his pupils, and the application in the field of medicine. Pearl is the foremost disciple of this school in this country. In his presentation he follows his experience as a teacher of biologists and medical men, students who as a rule have had no special mathematical training and whose interest in the results of applying mathematical methods it is necessary to arouse in order to stimulate their use. The author begins with a general presentation of the subject, followed by a brief history of vital statistics, and then by a consideration of the chief ways whereby statistical data relating to human beings are collected and tabulated. He advocates the use of the mechanical tabulation of hospital records. He reproduces the excellent recommendations of the special committee of which Mr. Willard C. Brinton was chairman as to standards of graphic presentation of statistics. He next proceeds to a consideration of rates and ratios, life tables and standardized rates. These subjects take up slightly over half the book. The rest of the book is given up to a consideration of various aspects of the mathematics of probability, and to various tables and mathematical formulae. As the book proceeds the author feels free to give a more and more mathematical presentation.

For the student who does the outside reading suggested at the end of each chapter and who brushes up his mathematics as he goes along this presents no difficulty. For the reader who has not time to do this and who has had no special mathematical training, the latter part of the book may prove somewhat hard to follow. The book contains much information of general interest and is written in an entertaining style. The author has more talent for applying mathematics than for mathematical exposition. He makes no mention of the value of logarithmic coordinate paper in study of curves of the parabolic and hyperbolic types, although he does advocate the use of semi-logarithmic paper in the study of curves of the compound interest type. While the reviewer has no data on which to base a mathematical analysis of the probability of the appeal of this book to the readers of this journal, he ventures the opinion that it is most likely to appeal to those who like mathematics, but have not had opportunity to follow recent work in the field of the theory of probability. —C. R. B.

A Text-Book of Anatomy and Physiology for Schools of Nursing, Normal Schools and Colleges. By Jesse Feiring Williams, M.D. Professor of Physical Education, Teachers College, Columbia University, New York City. W. B. Saunders Co., 1923. 523 pages. Price \$3.00.

This book is dedicated "to workers in the field of the practical arts" to wit "household arts, nursing, occupational therapy, physical education, physiotherapy."

The critical review of a text-book which has just come

from the press is subject to great limitations. Few persons (fortunately) possess the assurance which permits them to predict after even a close perusal, what will be the degree of usefulness likely to be achieved by the volume in hand. If, on such occasions, the reviewer states that he recommends or does not recommend that the book be given a trial and perhaps adds a few reasons for his opinion, the reviewer reader must necessarily be satisfied.

Now in spite of the fact that the present reviewer is himself the author of a very dissimilar book on just the same topics as that of Professor Williams, and hence is doubtless a victim of adverse prejudice, he feels no hesitation in saying that every teacher of such classes of students as those to whom Prof. Williams dedicates his work should certainly give this book a most careful scrutiny.

These teachers will have to select a book adapted to the needs of their own particular classes and it may be that in some instances the book in question will not do at all, as is the case with the reviewer's own classes, whether of nurses or of students of physical education, where the former use the reviewer's primer and the latter the extension work of W. H. Howell. But for the teachers desiring some book intermediate in size between these two extremes, the book of Prof. Williams offers many advantages.

Its text is lucid; its many (369) illustrations very choice. The anatomical structures are often explained by references to embryology, and occasionally to comparative anatomy—both excellent ideas and well carried out. Some useful clinical applications are emphasized as for instance in the paragraphs on posture and on the arches of the foot. At the end of each chapter there are given under the caption "Practical Exercises" many miscellaneous suggestions, hints for demonstrations, directions for experiments, all of much value to the teacher. These sections are followed by lists of questions for review, which are as good as such uninspiring literature ever is, and finally there are excellent lists of references.

The reviewer will not indulge in a silly effort to discover and expose small errors. Doubtless there are plenty such, and they will probably irritate Prof. Williams when he finds them more than they will mislead his readers. There is, however, a point of general importance which the reviewer regards as pedagogically ill advised wherever it occurs in scientific literature. It is the spelling of adjectives derived from proper nouns with a small initial letter. If we are to honor a hero of the past by speaking of the "eustachian tube" (p. 348) rather than of the "auditory tube" let us call it Eustachian lest our students think that the "en" of cupnea, eustachian and engenic are all one and the same—and lest our colleagues of the English department view our practice with poorly concealed wonder.

—P. S. D.

A Premier for Diabetic Patients, by Russell M. Wilder, Ph.D., M.D., Mary A. Foley, Dietitian, Daisy Ellithorpe, Dietitian May Clinic. 119 pages (illus-

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trated). W. B. Saunders & Co., Philadelphia and London, 1923. Cloth.

This timely revision of a valuable and accessible store-house of diabetic information has been necessitated by the introduction of insulin into the treatment of diabetes mellitus. Following the lead of Joslin, most students of this question have agreed on the importance of educating the patients themselves in a knowledge of their condition and its dietetic control. The present authors have confined themselves to this plan in the main; but evidences of the customary difficulty of specialists in a given field to adapt their train of thought to the lay mind are found in the fragmentary discussion of acidosis. The propriety of discussing the highly technical question of the management of acidosis for lay readers might also be questioned. Furthermore the omission of the test for diacetic acid (or acetone) when no sugar has been found in the urine, is not justifiable. It is possible that the whole presentation might be better organized were the subject matter rearranged to take the reader through the logical sequence of normal sugar metabolism, deficient function and its expressions, methods of determining such a defect, dietary regulation and a discussion of insulin (without specific dosage).

Notwithstanding these minor faults, the Primer is an excellent guide for the diabetic patient. Especial attention is rightfully drawn to the hygienic care. The suggested diets and recipes are well chosen. In our experience the grouped food values are of especial utility to the busy patient for whom the refinements in percentages become appalling.

—W. S. M.

Physical Examination and Diagnostic Anatomy. By Charles B. Slade, M.D., New York City Department of Health. Third Edition. W. B. Saunders and Co., Philadelphia and London. 179 pages (illustrated). Cloth.

The author sets himself to the difficult and useful task of separating the fundamentals of physical examination from the more complicated field of physical diagnosis. How well he succeeds may be judged by the scanty references to pathologic signs or conditions. His approach to and treatment of the subject are orderly in the main. The appearance of the tracheal tug under the phenomenon of palpation of the pulse while unexpected, on second thought is justifiable. One is pleased to find personal idiosyncracies—in this case the use of one hand only in eliciting tactile fremitus—advocated by the author. On the whole the discussion of anatomic landmarks and surface relations is most admirable.

In any medical text the personal equation in the valuation of certain signs determines their inclusion or elimination. Many minor exceptions to the text might be taken on this score. One major omission, however, should by this time have been remedied. The work of Hoover on the costal margin activation is one of the finest recent contributions to the routine physical examination. In one of the author's few departures from the treatment of the normal subject, he discusses the underlying pathologic conditions giving use to altered percussion notes in the chest very inadequately. The repeti-

tions of the plate showing the relationship of the trachea and bronchi to the anterior chest wall are unwarranted. It is probable that, relatively speaking, blood pressure has been accorded too much space in so brief a text-book.

The tendency of the present day in medical instruction is to crowd the clinical teaching forward. The advantages of such a plan are obvious, but the disadvantages have been too lightly considered. The lamentable lack of comprehension of the fundamental anatomy, physiology and physics entering into physical diagnosis can only be met by such logical text-books.

—W. S. M.

Pediatrics by Various Authors. Edited by Isaac A. Abt., Prof. of Diseases of Children, Northwestern University Medical School. Vols. I and II. Published by W. B. Saunders Co., Philadelphia. To be published in 8 vols. Illustrated. Price \$10 per volume.

Abt's Pediatrics

The first volume is given over to a discussion of general subjects, the nature of which is shown in the table of contents, viz.:

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I History of Pediatrics	I. A. Abt
II Congenital and Acquired Predisposition and Heredity	Fielding Garrison
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V Physiology of Metabolism in Infancy and Childhood	J. R. Murlin
VI Application of Physical Chemistry to Physiology of Childhood	J. F. McClendon
VII Hygiene of The Home	W. R. Ramsey
VIII Hygiene of the School Age	Josephine E. Young
IX Hygiene of Infants in General	W. R. Ramsey
X Climatotherapy	F. L. Wakeham
XI Hygiene of Crippled Children	H. W. Orr

These monographs are most complete and are presented in a very readable form. Dr. Garrison has added a great deal of interest to the History of Pediatrics by the use of photographs of many of the men whose names are so familiar.

The chapter on Hygiene of the School Age gathers together facts covering every phase of the school age problem, much of which will be of interest not only to physicians but to parents as well.

Vol. II is devoted to discussions of the following clinical subjects: Mortalities of Infancy, Diagnosis and Examination, Treatment and Prophylaxis, Newborn and Prematures, Milk and Feeding, Disorders of Metabolism, Food Deficiency Diseases, Constitutional Diatheses. These are all treated with the same exhaustive thoroughness that characterizes the first volume.

Of particular excellence are the chapters on Prematures by J. H. Hess, Chemistry and Biology of Milk by P. G. Heinman, Breast Feeding by Sedgwick and Cole, Artificial Feeding by J. Brennemann, and Scurvey and Rickets by A. F. Hess.

—H. K. T.

The Note Book of an Electro Therapist. By Niel R. Waggener, M.D. Published by McIntosh Electrical Corporation, Chicago. 173 pages (illustrated).



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Number 8

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OF THE

SEVENTY SEVENTH ANNUAL MEETING

OF THE

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AT MILWAUKEE, OCT. 3, 4 AND 5, 1923

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TRANSCRIPT OF PROCEEDINGS OF THE HOUSE
OF DELEGATES, STATE MEDICAL SOCIETY
OF WISCONSIN.

Meeting Oct. 2nd, 3rd, 4th and 5th, 1923.

First session held in the Red Room of the Hotel Pfister, Milwaukee, Wisconsin, Oct. 2nd, 1923, 8 P. M.
Meeting called to order by the President, Dr. F. GREGORY CONNELL, Oshkosh, Wisconsin.

PRESIDENT: The first order of business of the House of Delegates will be the roll call of delegates. The secretary will call the roll by county, and the delegate or alternate may answer. If he is an alternate, please give the name. If neither alternate nor delegate are here will somebody from that county rise, and we will make him delegate.

(Roll call by the secretary.)

PRESIDENT: The secretary reports a quorum present. The first business is the report of the Committee on Public Policy and Legislation, Dr. O. B. Bock, Sheboygan, chairman.

DR. O. B. BOCK, Sheboygan: Mr. President and

Gentlemen. After listening to the message of the secretaries, anyone representing the legislative body hardly knows what to say.

We were earnest in our efforts to pass the Basic Science Bill, which would have been a protection. Unfortunately we could not do it. The blocking of a chiropractic measure for a Board of their own was accomplished, but just by a narrow margin of 2 or 3 votes in the Senate. So as a matter of fact what you see in the Literary Digest, or the report of the Illinois Medical Society is a truth and a fact in your legislative body of the state of Wisconsin. Otherwise we could not have failed in our effort, because we had before them a clear and concise piece of legislation, which was purely a health measure, could in no way protect the medical profession, but was a protection only to the people. It was a Basic Science Bill, asking everyone that practised the healing art in the state, be he dentist, doctor, optometrist, or what not, pass an examination in anatomy and physiology, the body in health; in pathology, the body in disease; and in diagnosis, or the art of telling the nature of the disease. A high school education was a preliminary requirement; yet this bill could not be passed.

Our report is published in the Hand Book, of which you all have a copy, and there is no need of my reading it to you. I have given you the sum and substance of our failure and our achievement. But nevertheless, the truth remains the same, that if the State Medical Society does not watch its p's and q's the chiropractors will have their own board. You may say, what comes from that, what has that got to do with us? Well, probably it is not our business to protect the people of the state of Wisconsin, but somebody ought to lead in this fight.

REPORT OF COMMITTEE ON PUBLIC POLICY AND
LEGISLATION.

To the Members of the 1923 House of Delegates:

In making the report of the Committee on Legislation and Public Policy it is not felt necessary to go into detail in describing legislation proposed or passed at the 1923 legislature. Full publicity of this has been had through the medium of the Wisconsin Medical Journal.

Insofar as any legislation affecting the standards of the medical practice act, the law stands today as it did before the session. That no change was made, such as was three times proposed by a strong opposition, is a victory for those who have at heart the interests of public health. That the legislature failed to pass a basic science measure is to be regretted.

Failure to pass this measure, however, clearly shows the need for a better understanding among the laity of the purpose of all public health laws. While your committee was active at Madison it never engaged in any type of lobbying other than informational work. When the facts were presented; when members of the legislature understood that medical practice acts were for the public health and not for the protection of the physician; and where the true sentiment of the laity was evidenced, there was no question as to the vote.

Since then, the enactment of measures designed to best protect the public health of Wisconsin is dependent chiefly upon placing the facts before the laity, this committee respectfully recommends:

1. That the House of Delegates authorize a continuance of the work of the Committee on Legislation and Public Policy along the lines of lay education.

2. That the Committee meet as may be necessary to adopt a concrete program which will then be placed before the Council for approval, and,

3. That upon approval of such program, specifically not to involve the expenditure of any considerable sum of money, it shall be put into effect under the direction of our Executive Secretary. Further, that a full accounting of any monies spent be made annually and published in the Wisconsin Medical Journal.

In conclusion, this Committee wishes to emphasize the fact that quackery thrives on opposition no matter how well based such opposition may be. But we express the conviction that quackery will die and public health laws will best be protected by such educational work as may give the laity the realization of its true responsibility.

Respectfully submitted,

MR. J. G. CROWNHART,
Secretary.

O. B. BOCK, *Chairman,*
GEORGE C. RUHLAND,
EDWARD QUICK,

PRESIDENT: The next business is the report of the Committee on Publication, Dr. Oscar Lotz, chairman.

DR. OSCAR LOTZ, Milwaukee: Is that report to be read?

PRESIDENT: Not if it is already published. There is no necessity to read it unless you have some comment to make.

DR. LOTZ: The report is complete, with the report of Mr. Crownhart of the financial statement of the Journal.

It might not be amiss to again recall here the work that has been carried for so many years by the men who have been doing this work voluntarily. At the present time, of course, we know that Mr. Crownhart, a full time secretary, is taking care of the Journal, but we should not forget the men who made the Journal what it is, and who have carried on the work for so many years without any compensation. In making my report I have taken the liberty of mentioning them, and I want to name them here. The editors who have devoted so much of their time to this work are Dr. Patek, the late Dr. William Myers, Dr. L. M. Warfield, and, of course, Dr. Sleyster.

The business managers who are responsible for our Journal, and we think it is a very good one, are Dr. Dearholt and Dr. McMahan.

The report otherwise is as it stands.

REPORT OF PUBLICATION COMMITTEE.

To the Members of the 1923 House of Delegates:

The high-spot of interest during the past year in the Wisconsin Medical Journal, owned and published by the

State Medical Society of Wisconsin, certainly centers around the new policy which changes the Management of the Journal from the shoulders of self-sacrificing members of the medical profession to those of the full-time non-professional Executive Secretary of the State Society. The change has now been in effect for five months. Although this is entirely too short a time from which any definite conclusions can be drawn the increased amount of advertising which is reflected by a balance on the credit side of the ledger during the month of July for the first time in my personal experience, can leave no doubt as to the wisdom of this change of policy. While I appreciate that the financial end of a professional Journal should and must ever be secondary to the scientific departments, we cannot lose sight of the fact that it does cost money to publish a Journal. During the past years this cost has been so heavy that the question of discontinuing our State Journal presented itself to the Publication Committee a number of times.

While the question of Managing Editor has, by the above policy, been definitely settled; that of Editor Manager not so. At the time of writing the Publication Committee has under consideration a plan by which a Board of Editors be created by the Counsel, each member of which is to be responsible for some part of the scientific contents of the Journal. By this plan the work and responsibility carried on at the present time by one individual member will be so allotted to the various members of the Board as not to be a time consuming and burdensome responsibility upon any one member. The Financial Statement from the present Managing Editor will give you a fairly clear insight as to the business end of the Journal. It seems unnecessary that I should recapitulate here.

In this connection it may not be amiss to stop a moment and pay a slight tribute to those members of our Society who have unstintingly and unselfishly given much of their time, energy and labor to the end that the Journal may be a success and that the members of the State Medical Society may reap the advantages. If permitted, I would suggest that the House of Delegates extend a vote of thanks and appreciation to those members of our Society who have since the birth of the Journal carried the burden of its journey up to the present time. The following men have acted as Editorial Managers:

Dr. A. J. Patek,
The late Dr. Wm. Myers,
Dr. L. M. Warfield, and
Dr. Rock Sleyster.

Among the Business Managers are included:

Dr. H. E. Dearholt, and
Dr. J. P. McMahan.

Respectfully submitted,

OSCAR LOTZ, *Chairman,*
Publication Committee.

Milwaukee, Wisconsin,
August 1, 1923.

Dr. Oscar Lotz, Chairman,
Publication Committee,
Wisconsin Medical Journal,
Milwaukee, Wisconsin.

My dear Doctor Lotz:

There is submitted herewith the annual financial reports of the Wisconsin Medical Journal for the fiscal year ending July 31, 1923. Due to the change in system of bookkeeping in the middle of the year, some data has been omitted which, under the circumstances, would have necessitated detailed compilations. Under the new system, monthly financial statements are now being rendered so that the amount of profit or loss can be ascertained and traced to source monthly.

In submitting this report your attention is respectfully directed to the following:

1. The expense to the Society for publishing the Journal during the past year was \$1,999.47. This is a saving of \$1,614.59 over the previous year.

2. The average increase in advertising revenue for the last six month period was \$190 per month.

3. No salaries nor commissions were taken for the last four months of the year (since the transfer) owing to the fact that the Managing Editor-Secretary receives his salary from the Treasurer. This would account for \$400 of the \$1,614.59 saved. The balance was due to some economies and increased advertising. With this as a guide it appears that the average saving per month under a full time Managing Editor-Secretary is \$200 or \$2400 per year. This represents a saving more than sufficient to pay the additional expense of maintaining this position.

4. At the time of formal transfer, April 1, there was charged off the following items no longer real assets: trade accounts, \$1,140.34; other uncollectable accounts, \$41.09; and a depreciation taken of \$158.75. This was done with the approval of the auditor.

In concluding this report the Managing Editor respectfully submits the following recommendation:

1. A. While the Wisconsin Medical Journal is owned by the State Medical Society, the Journal should be so maintained as to be separate financially. Only in this manner is it possible to present any accurate data as to its profit or loss.

B. To this end a definite sum should be turned over to the Journal management out of each member's dues representing a cost subscription price. Such a system is followed in Minnesota and Ohio where \$2.00 represents the cost subscription price per member per year. Based upon present publication costs, a similar sum appears to be proper for this Journal.

C. Under such a system the Journal should pay its proportionate share of the salary of the full time Managing Editor-Secretary. Inasmuch as one third of his time is devoted to the Journal in securing advertising, preparing copy, and keeping accounts, this should be the share of the salary paid by the Journal. (With the present salary this would mean that the Journal would

pay \$100 a month and the Society \$200, instead of the Society paying \$300 per month from the general treasury.)

In this way a definite financial policy can be pursued and accurate publishing costs obtained. If at any time in the future a larger balance is secured than needed, the excess may revert to the Society.

Respectfully submitted,

J. G. CROWNHART,

Managing Editor.

JGC:J

Publishing Cost Statement for the fiscal year Aug. 1, 1922 to Aug. 1, 1923.

RECEIPTS.

Gross advertising revenue.....	\$6,623.10
Foreign subscriptions	100.99
Miscellaneous	60.90
	<hr/>
	\$6,784.99

DISBURSEMENTS.

Printing	\$6,026.83
Salaries	904.00
Mailing and postage	182.53
Discounts and commissions, C. M. Advertising Bureau	673.50
Commissions, Dr. J. P. McMahon	726.06
Office Supplies	48.96
Editorial Expenses	128.38
Miscellaneous Expenses	94.20
	<hr/>
	\$8,784.46
Receipts from Journal failed to cover disbursements by	\$1,999.47

FINANCIAL STATEMENT AS OF AUGUST 1, 1923.

ASSETS.

Cash in bank	\$ 278.10	
Prepaid postage	8.55	
Accounts receivable	1,156.22	
	<hr/>	
	\$1,442.87	\$1,442.87

LIABILITIES.

Bills payable	none	
Prepaid subscriptions	\$ 36.14	
Prepaid advertising	30.25	
	<hr/>	
	\$ 66.39	66.39
Net assets or proprietary interest....		\$1,376.48

COMPARATIVE DATA. Gain Loss
1921-22 1922-23 1922-23 1922-23

Total gross earnings	\$5,996.85	\$6,784.99	\$ 788.14	
Total disbursements	9,594.39	8,784.46	809.93	
Depreciation taken	none	158.74		

Trade accounts			
charged off.....	none	1,140.34	
Other accounts			
charged off.....	none	41.09	
Net assets at end			
of year	1,682.94	1,376.48	\$306.46*
Amount contribu-			
uted by Society.	5,500.00	2,500.00	3,000.00

*This loss is due to the fact that accounts totaling \$1,340.17, formerly carried as assets, were charged off during the year.

PRESIDENT: Is it necessary to take any action on these reports of the committees? Where is Dr. Sleyster? He knows everything.

DR. ROCK SLEYSER: No, they can be adopted as a whole afterwards.

PRESIDENT: Dr. Lotz, we will now hear from you on the Medical Defense Committee, as acting secretary. This is also printed in the Hand Book.

DR. OSCAR LOTZ, Milwaukee: Mr. President and Gentlemen. I must admit that I will have to refer the members entirely and completely to the report as printed. While the chairman of that committee, Dr. Patek, has been secretary and the active member of the committee, we have been accustomed to having the active member and secretary do the actual book work of the committee. This, while it did not involve very much work, did involve the taking care of the amount of applications received, etc. Unfortunately, Dr. Patek left for Europe some time ago, and we could not get this data. The report here embodies the referendum vote that was taken, and speaks for itself.

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

To the Members of the 1923 House of Delegates:

Owing to the absence of Dr. A. J. Patek, secretary of the Committee on Medical Defense, it is not possible to submit at this time a list of malpractice actions commenced during the past year. It is believed, however, that the number of requests for defense have been somewhat less.

Following the 1922 meeting Dr. Rock Sleyster, then secretary, sent a ballot to each member requesting his vote as to the advisability of retaining the medical defense feature. The results are listed here:

For continuing the medical defense feature, 457.

For discontinuance, 401.

Without preference, 34.

The present records indicate that of 1750 members on September 12th last, 1128, or 70 per cent, paid the additional \$2.00 for the medical defense feature. The committee submits these facts without recommendation.

Respectfully submitted,

DR. A. J. PATEK, *Secretary,*

DR. OSCAR LOTZ, *Acting Secretary,*

DR. F. P. KNAUF,

DR. S. S. HALL,

DR. A. E. BACHHUBER.

PRESIDENT: The next order of business is the election of the Committee of Twelve on Nominations, and for the selection of the place of meeting for 1924. It has been customary to elect or appoint one member from each district, and that has been accomplished by calling the roll and asking the members from that district to rise, and then nominate one of those members to be on that committee.

The roll was called, and the following Nominating Committee was elected:

1st District: H. E. Bachhuber.

2nd District: H. A. Robinson.

3rd District: T. W. Nuzum.

4th District: Wilson Cunningham.

5th District: C. M. Gleason.

6th District: John Minahan.

7th District: C. C. Vogel.

8th District: M. D. Bird.

9th District: Joseph Smith.

10th District: Julius Blom.

11th District: J. M. Dodd.

12th District: R. W. Blumenthal.

PRESIDENT: This committee will report Thursday morning on the election of officers and place of meeting for the 1924 meeting.

The reports of committees continued, the next committee being that of the Committee on Health and Public Instruction, Dr. Stovall, chairman. His report is published in the Hand Book.

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION AND THE COMMITTEE ON SCHOOL HYGIENE.

To the Members of the 1923 House of Delegates:

The above named committees have been active during the past year maturing plans outlined in the last annual report. It does not seem necessary here to detail these plans again.

During the meeting of the State Society in Green Lake last year these committees met with Dr. Dodson and heard him tell of what other states are doing to promote school hygiene and the teaching of hygiene in schools. The plans of our committee were outlined to Dr. Dodson and he made favorable comment on our accomplishments so far.

During the meeting of the State Teachers' Association in Milwaukee last November, the joint committee of the State Teachers' Association and the State Medical Society held a meeting. In this meeting it was decided that the most important work for the promotion of hygiene and disease prevention work in the schools is regular courses of instruction in these subjects. Mere agitation for reform or compliance with health rules can not be effective without the proper education as a background. The committees felt that the only way to realize this idea was for the committee to outline courses to be used in the normal schools. It was thought in this way to be able to eventually have teachers trained to undertake instruction in these subjects in high school.

It was also decided that the committee urge upon the normal school regents the necessity for such instruction in the normal schools. The outlines for courses were drawn up and the whole matter brought to the attention of the normal regents.

In this matter the committee cooperated with the State Board of Health, which board had already suggested to the normal regents a plan for carrying out instruction in hygiene in the various normals, also an estimate of the amount required to put the plan in operation. This plan did not go through as suggested, and when it came to a committee hearing, the bill requested only a trained nurse for each normal school. It is plain that this bill provided only for nursing care for the sick. This, of course, is not what our committee is interested in. The bill was opposed.

The committee feels that the Committee on School Hygiene should be continued or the Committee on School Hygiene and the one on Health and Public Instruction should be so combined as to indicate that the single committee is also a school hygiene committee. It seems better, however, to continue the two committees as they are.

Signed,
 W. D. STOVALL,
Chairman.

The next report is that of the Committee on Medical Education, Dr. C. R. Bardeen, Chairman. The secretary has that report and will read it.

Report read by Secretary Crownhart as follows:

REPORT OF COMMITTEE ON MEDICAL EDUCATION.

For several years the Association of American Medical Colleges held its annual meeting in Chicago, in conjunction with the Council on Medical Education and Hospitals of the American Medical Association. This year there was inaugurated the policy of holding the meeting of the College Association preceding the meeting of the Council and at some university medical school. The meeting of the College Association was held at the University of Michigan on March 2 and 3. The meeting of the Council was held at Chicago on March 5, 6, and 7, in conjunction with the Council on Health and Public Instruction, the Association of American Medical Colleges, the Federation of State Medical Boards, and the American Conference on Hospital Service. The meetings, both at Ann Arbor and at Chicago, were well attended, and were of much interest from the standpoint of medical education. There seems to be a fairly general impression that in the remarkable advances made in medical education during the past quarter of a century, with the increase of entrance requirements, length of course, and standardization of curriculum, clinical education has made less progress than is desirable. At both the meetings referred to above, the major part of the attention was devoted to various expedients designed to develop the

clinical aspects of medical education. Some suggested a vertical rather than a horizontal stratification in the curriculum with clinical work and work in the basal sciences going on side by side from the beginning of the course, rather than as at present having the clinical follow the laboratory work. Others, while they believe that one must have a good training in the basal sciences before one can handle a patient intelligently, agree that there should be a closer association between the departments devoted to the basal sciences and those devoted to the clinical branches than at present, prevails in some institutions. It seems probable that during the next generation advances will be made in clinical education comparable with those made in training in the basal sciences during the past generation. Too rigid a standardization must be avoided in order to enable various expedients to be tried out. In the development of clinical education the teaching hospital under the control of the medical school promises to be an essential factor, but it is probable that this alone will not suffice, and that greater use than at present must be made of affiliated hospitals and other clinical and hygienic institutions.

C. R. BARDEEN,
 L. F. JERMAIN,
 EDWARD EVANS.

PRESIDENT: The next order of business is the report of the Committee on Necrology. This report is published in the Hand Book. Are there any omissions or mistakes? If so, please call them to the attention of the secretary.

DR. G. WINDESHEIM, Kenosha: Mr. President, I noticed in the report of the Committee on Necrology, the name of Dr. I. D. Steffen, and his residence is given as Hortonville. Dr. Steffen was a member of the State Board of Health, and his residence was at Antigo.

SECRETARY CROWNHART: Thank you. That will be corrected when the report is published in the Journal.

REPORT OF COMMITTEE ON NECROLOGY.

To the Members of the 1923 House of Delegates:

The following is the report of the Committee on Necrology, including deaths reported to September 10, 1923. Names of members of the State Medical Society are printed in bold face type:

- Aus, J. L. D.....Deer Park
- Axtell, E. E.....Marinette
- Bird, H. R.....Madison
- Blunt, W. S.....Waupun
- Bradley, H. E.....Milwaukee
- Braun, O.....Ashland
- Connell, M. E.....Oshkosh
- Daniels, W. N.....Mosinee
- DeLap, R. H.....Richland Center
- Durr, W. E.....Milwaukee
- Fox, P. A.....Milwaukee
- Garner, H. L.....Milwaukee
- Gartenstein, J.....Rhineland

Gault, J. A.....	Lancaster
Hannum, H.....	Bayfield
Herschmann, A. J.....	Milwaukee
Hess, C. F.....	Madison
Hopkinson, D. W.....	Milwaukee
Kellogg, E. W.....	Milwaukee
Koepfel, G. W., Jr.....	Milwaukee
Law, W. G.....	Ashland
Lewis, J.....	Milwaukee
Lyons, J. A.....	Bear Creek
Mathiesen, J. B.....	Eau Claire
Morse, A. J.....	Oakfield
Moyer, S. R.....	Monroe
Neilson, W. H.....	Milwaukee
Orr, E. D.....	Mt. Hope
Poppe, A. A.....	Adams
Poppe, H. B.....	Milwaukee
Sauerhering, D. L.....	Wausau
Scheller, A. A.....	Angelica
Schmit, A. I.....	Beloit
Seybold, E. G.....	Forest Jct.
Sibree, H. C.....	Sturgeon Bay
Steffen, I. D.....	Antigo
Sullivan, J. T.....	Milwaukee
Taughner, J. P.....	Milwaukee
Thrane, A. D. H.....	Eau Claire
Webster, B. N.....	Rice Lake
Williams, J.....	Los Angeles, Calif.
White, Mary B.....	Pasadena, Calif.
Woodworth, D. W.....	Ellsworth

Respectfully submitted,

J. G. CROWNHART,

Managing Editor.

PRESIDENT: The next report is the report of the Hospital Committee. This is by Dr. L. F. Jermain. The secretary has the report.

Report of Hospital Committee read by Secretary Crownhart, as follows:

REPORT OF ADVISORY COMMITTEE ON HOSPITALS.

During the year only two applications for approval to the list of hospitals for training internes were received, viz, from the La Crosse Lutheran, and the Grand View Hospitals, both of La Crosse, Wisconsin.

A hospital survey report was received by your committee from the former but not from the latter. Final action is pending regarding both.

Respectfully submitted,

LOUIS F. JERMAIN,
Chairman.

PRESIDENT: The report of delegates to the Annual Meeting of the American Medical Association, is the next order of business. This report is by Dr. H. M. Brown. The report is in the Hand Book, but we will be glad to hear from Dr. Brown.

DR. H. M. BROWN, Milwaukee: Gentlemen, you have all seen the reports from your Board of Delegates to the American Medical Association in the last few years, in the Journal of the Society. Those reports have been short, quick and decisive, for the reason that the detailed reports of the action of the American Medical Association are in the hands of everyone in possession of the Journal of the American Medical Association. And they would well be worthy of your careful perusal. For that reason it has not been thought necessary to go to any great length in making a report from your Board of Delegates to you as to the functioning of the House of Delegates of the American Medical Association.

But there is a matter that I would like to bring before you. It may seem to some of you as being a personal thing. I assure you it is not.

The work of the House of Delegates of the American Medical Association is an extremely complicated one. The functioning of the American Medical Association reaches out now in so many directions that there are many different views taken of most of the resolutions that are brought before that organization. Its system of functioning is such that the resolutions that are brought before the House of Delegates are referred to committees, which committees must give the most careful attention to these resolutions, view them from every side, and call before these reference committees, as many witnesses or people for enlightening the committees as is possible, and then endeavor to get as much modification of a given resolution before the House of Delegates as will redound, if adopted, to the credit of the general profession of the United States. For these reasons it is of the utmost importance that the men who represent you in the House of Delegates of the American Medical Association, should be appointed and reappointed. I have now served you, I think, through 3 terms and a half, and I have another year of service. But entirely outside of any imaginary idea that you may have that men in the House of Delegates have any amount of fun out of it, I wish to assure you that it is hard work, particularly after you have been in the House long enough to have learned the system of the activity of the House of Delegates. You find yourself put upon committees. Many of those committees have extremely important matters to come before them. And the method of functioning of these reference committees that have these resolutions placed before them is by no means a joy. The delegates go to those meetings of the American Medical Association, and see almost nothing of the general work of the sections or of the Society. But we do learn how the business of the Society is transacted. And until a man has been in the House of Delegates at least through 3 sessions, he is not looked upon as being available as a committee man, or as being an available man who can act for the greatest good of the entire profession of the United States in his work in the committees.

It is for that reason that I come before you, Gentlemen, and beg of you to return your present

representatives. Dr. Sleyster and I go back, because we are still in office, but the period of service of Dr. Smith expires, and a new delegate should be appointed in his place. I want to ask that you reappoint Dr. Smith, for the reason that he has been faithful in his duties, he has always been at the meetings, and has acted consistently, and I believe that the best interests of the general profession of our state is now represented on the committees, and in the person of Dr. Rock Sleyster, as vice-speaker of the House, and our position as delegates in the House has become a very important and a very valuable one for the general profession. I ask you, Gentlemen, if you can bring your hearts to that opinion, to reappoint Dr. Smith, for the honor of this Society and for the general benefit of the profession in the United States. (Applause.)

REPORT OF DELEGATES TO A. M. A.

To the Members of the 1923 House of Delegates:

Your board of Delegates to meeting of the American Medical Association begs to make the following report:

The Wisconsin State Medical Society was represented at the Meeting of the House of Delegates of the American Medical Association by the presence of all of the three delegates from your society.

It was anticipated that there would be an unusual amount of work to be considered by the parent association, but we are glad to report that the business that came before the House of Delegates of the A. M. A. was mostly of a routine character and the matters which came before that body were considered and acted upon without rancor or ill-feeling. To the regret of your delegates, Dr. Sarles, for fifteen years a Trustee of the A. M. A., declined to run for re-election and he was succeeded in office by Dr. T. H. J. Upham of Ohio, an able and enthusiastic member of the House.

Your delegates most earnestly urge the members of the Wis. State Medical Society to read the complete report of the business of the House of Delegates as it appears in No. 1 and 2, Vol. 81 of the Journal of the A. M. A. and thus familiarize themselves with the methods of business of the House of Delegates and the nature of the problems that are presented to it, and in this way gather a better comprehension of the problems of the profession in the entire country; these problems being fairly well reflected in the transactions of, and the resolutions brought before the parent medical body of the United States.

At the session just ended, many matters which concern the welfare of all and each of us, were considered and acted upon; we hope wisely, at any rate with careful and earnest effort.

One of our members, Dr. Rock Sleyster, was again elected Vice-Speaker of the House.

Very respectfully submitted,

H. M. BROWN,

For the Delegates.

PRESIDENT: The next order of business is the report of the Delegate to the Council on Medical Education, Dr. Jermain, chairman.

The secretary has the report.

Report of Delegate to Council on Medical Education was read by Secretary Crownhart as follows:

REPORT OF DELEGATE TO MEETING OF COUNCIL ON MEDICAL EDUCATION AND HOSPITALS.

The main topics discussed were:

1. Graduate medical schools.
2. The medical curriculum.
3. Nursing education and service.

A special committee of which Dr. Louis B. Wilson of Rochester was chairman presented a survey of the present status of graduate medical education in the United States.

Principles governing graduate or post graduate medical schools were set forth with reference to:

1. Admission of student.
2. Records.
3. Teachers.
4. Laboratories.
5. Clinical material.
6. Library, Museum and special apparatus.
7. Annual announcements.
8. Type of institutions not acceptable.
9. Issuing of advanced degrees, diplomas or certificates.

It was recommended that work in schools owned or controlled by individuals or corporations conducted for profit or work given in hospitals owned or controlled by individuals is not eligible for the approval of the Council. It was further recommended that no advanced degree, diploma or certificate should be granted for a period of study extending over less than one college year of at least thirty-six weeks duration.

There was much discussion as to how the present medical curriculum should be revised so as to make it more elastic; bring about better co-ordination between the various fundamental science and clinical subjects and give the student the medical atmosphere and a more prolonged clinical experience.

A majority and minority report of the committee on trained nursing was presented; the former recommending the training of subsidiary nurses and the latter disapproving.

Respectfully submitted,

LOUIS F. JERMAIN, M. D.,

Delegate.

PRESIDENT: The next order is the report of the Delegate to the Council on Health and Public Instruction of the A. M. A., Dr. Windesheim, Kenosha.

DR. G. WINDESHEIM, Kenosha: For some reason or other my report was not placed in the Hand Book. Just whose fault it was I do not know. I do know that I never sent it in.

REPORT OF THE DELEGATE TO THE COUNCIL
ON HEALTH AND PUBLIC INSTRUCTION
OF THE A. M. A.

Mr. President, Members of the House of Delegates:

The annual congress on Medical Education, Medical Licensure, Public Health and Hospitals, of the A. M. A. was held on March 5, 6 and 7 of this year. A part of this congress on March 7 was devoted to questions before the Council on Health and Public Instruction; your delegate was in attendance. The papers read and the discussions were very interesting and instructive; they are published in the Journal of the A. M. A. for April 21 and 28. The reading of them as well as those published for the whole session of the Congress, beginning with the number of March 17th, is well worth the time of any medical man who wants to keep up with the times. Some of the most salient points brought out are the necessity of an increased interest in Public Health, in social work, in health promotion, by each individual member of the medical profession; the closer cooperation by the doctors with the educational forces of our schools and with other organizations having the physical welfare of the nation at heart; the periodic examinations of every individual whether he seems to be healthy or not; the realization by each member of the medical profession that the intelligent public is fast approaching the point when it will demand these things and that it is high time for every doctor to take the leadership in his own community if the whole profession shall not lose its prestige.

Last, but not least, the education of the public along health lines is an important matter. This can best be achieved by spreading among the public the new magazine "Hygeia", a journal of individual and community health, published by the A. M. A. This journal should be a part of the reading matter found in every home. Every doctor should deem it a privilege to introduce it.

Respectfully submitted,

G. WINDESHEIM.

DR. G. WINDESHEIM, Kenosha: Mr. President, I notice in the Hand Book a report of our Committee on Cancer. The report of that committee has been omitted in the order of proceedings. I should like to hear from the chairman of that committee, Dr. Gray, or Dr. McMahon, if there is anything to add to what appears in the Hand Book.

I notice one thing in the report, and that is that the committee had an expense of \$4.50 for express charges, and I believe that no provision has been made to pay the expenses of that committee. If such is the case I make a motion now that that expense be paid out of the treasury of the State Society.

PRESIDENT: Owing to an error, the report of this Cancer Committee was omitted from the summary that is before me. I will call upon Dr. W. K. Gray, if he is present, to report for the Cancer Committee. If he is not present, I will call upon Dr. McMahon.

DR. J. P. McMAHON: Mr. President and Gentlemen. I do not believe Dr. Gray is here. I have nothing to add to the report. Discussion may not be amiss.

I have sometimes thought that possibly, as a result of my having improved every opportunity presented at each session of this society during recent years to stress the importance of early diagnosis, some of the members may have become possessed with the idea that I am laboring under an obsession with reference to Cancer, a Cancer phobia if you please. Such is not the case. However, as time has passed, I have been more and more impressed with the tardiness with which the majority of patients present themselves for examination. An experience gained in examining approximately five hundred cases of Cancer during the last three years shows that there is still considerable opportunity for improvement in the interest in which the members of the profession manifest in earlier diagnosis and that the efficiency with which the majority of cases are treated leaves considerable to be desired.

Your committee feels that a great deal of educational work still remains to be done and if properly undertaken and carried on consistently for a period of years immeasurable benefit will accrue. The committee feels, however, that the profession throughout the state has not accorded the cooperation which might have been expected. At least, we have not been able to secure any tangible evidence that serious effort has been made by the several County Medical Societies to arrange programs designed to improve the ability of its members to recognize precancerous and early cancerous lesions. It is our impression that there has been comparatively little effort put forth to bring the suggestive symptoms of Cancer to the attention of the laity. We believe that material progress in the control of Cancer can not be made until the last mentioned desideratum shall have been accomplished. The work and accomplishments of the Anti-Tuberculosis Societies are the best guide and must be repeated. Until such accomplishments in early diagnosis and efficiency of treatment shall have come to pass as a result of efforts directed by the members of our profession, we can not consider that we have discharged our obligation in the premises. There are still altogether too many among us who are treating early Cancer of the Cervix with ergot and early Cancer of the Breast with poltices and hot water bottles, and by other means equally as reprehensible.

Your committee is interested in correcting this state of affairs and is willing to put forth every effort which promises to be followed by improvement, but widespread improvement can only take place as a result of the cordial and continued cooperation of all of the members of the profession.

I know nothing definite about the \$4.50 item, but I am of the impression that it was disbursed to cover express on literature prepared for distribution to the laity.

If this is the proper time for further discussion, we would like to have an expression of opinion by some of

the members present, as to whether it is worth while for the committee to continue its efforts. Is the advocacy of annual County Medical Society symposia on Cancer becoming tiresome? What is the position of the members of the profession throughout the state with reference to their periodically presenting early symptoms of cancer to lay audiences?

I might state that so far as Milwaukee is concerned, we believe that the educational problem has been solved. Our health department has conducted the Cancer clinic campaigns the last three years, and Health Commissioner Ruhland recently worked out a plan providing for Cancer diagnostic clinics to be conducted in connection with other health department clinics. A plan has been nearly perfected whereby several of the hospitals will afford diagnostic facilities for those who for some reason or other prefer not to have an examination made by their family physicians or to visit a health department clinic.

A number of years ago, I took up with Dr. Dearholt the proposal of having the Wisconsin Anti-Tuberculosis Association undertake the problem of educating the laity and later suggested the advisability of having the association conduct "Cancer Clinics" in connection with its "Tuberculosis Clinics". Owing to the advent of the World war, and ever increasing demands on the talent, time and funds of the association, its officers have to date not been able to see their way clear to take on the work. Your committee recently discussed the matter with Dr. Dearholt again, and a tentative program was worked out whereby he will consider doing so provided sufficient funds can be made available to defray the necessary expenses for a period of at least three years. This program contemplates an attempt to duplicate the results accomplished in bringing about earlier diagnosis and more efficient treatment of tuberculosis. In this connection may I observe that recent developments with respect to the cause, nature and treatment of Cancer suggest that it possesses many characteristics common to Tuberculosis. The Anti-Tuberculosis regime materially benefits those suffering from Cancer and the advisability of undertaking to provide sanitarium treatment must at least be considered. Granting that we shall succeed in securing funds for diagnostic clinics, the results accruing will, as stated before, be in quite measure determined by the cooperation accorded by the medical profession. The State Board of Health has, as you know, conducted the Cancer week campaigns the last three years and it has occurred to me to ask Dr. Harper to undertake to carry on a more or less continuous campaign to acquaint the laity with the early symptoms of Cancer. However, it has been my impression that the board does not have sufficient funds to carry on the work required of it.

REPORT OF COMMITTEE ON CANCER.

To the Members of the 1923 House of Delegates:

Your Committee on Cancer has continued to function during the year 1922-1923 in conjunction with the

American Society for the Control of Cancer. Most of its efforts have thus far been restricted to lay propaganda. Dr. C. A. Harper has again taken charge of the work throughout the State while Dr. George C. Ruhland has confined his efforts to Milwaukee. We feel that each year has improved our working program although we realize the surface has hardly as yet been scratched. Diagnostic clinics were held throughout the State in many places and a considerable number of people were examined and sent back to their family physicians with advice.

During the coming year this committee hopes to extend its work greatly. It still hopes and will undoubtedly have the great help offered by the State Board of Health and the Health Department of Milwaukee. Dr. Ruhland on September 6th of this year addressed a communication to the Milwaukee County Medical Society offering the use of the two sub-stations in Milwaukee for clinical purposes and has made the following suggestions:

First, that these sub-stations be supplied by physicians chosen by the County Health Society for diagnostic purposes; and

Second, that all patients requiring treatment should be sent back to the family physician who, in turn, should be given such assistance as he requires by those of the special men whom the Society has designated. Up to the present time, since no meeting of the Milwaukee County Medical Society has been held, we are unable to say what action will be taken but strongly urge that Dr. Ruhland's suggestions should be accepted.

In the State the problem is a more difficult one. As far as was possible it has been well handled by Dr. Harper but there are limitations beyond which he cannot go. In order to extend his work, the chairman of this committee, Dr. J. P. McMahon, has addressed a letter to the Wisconsin Anti-Tuberculosis Association asking what help beyond that which they have already given could be expected if we could supply them with some financial assistance.

Dr. Dearholt, in responding, stated that he had no doubt his directors would approve the Association's undertaking a well charted educational campaign and placing a man in the field to conduct diagnostic cancer clinics throughout the State provided a sufficient amount of money was guaranteed to continue the work over a period of from three to five years.

The Committee is now working upon this end of the plan and as soon as it has gotten matters into shape will again get in touch with the Wisconsin Anti-Tuberculosis Association to make definite arrangements. This year Cancer Week will be held as usual but we will have with us in this State field workers from the National Society for the Control of Cancer who will devote three weeks previous to the usual one week.

Your committee desires to report an expense of \$4.50 for express.

Respectfully submitted,

W. K. GRAY, M. D., *Secretary.*

Cancer Committee.

PRESIDENT: We surely would be glad to hear from anybody who has any remarks to make relative to Dr. McMahon's amplified report.

DR. H. A. ROBINSON, Kenosha: Mr. President, was not there some money voted at the meeting of the Society two years ago to help in getting Cancer pictures to be shown to the laity over the state? It seems to me that we voted to advance \$200 two years ago; I may be wrong, but that is my impression. I do not know that they were moving pictures, but anyway, they were pictures to be shown to lay audiences, to illustrate the necessity for early work in the diagnosis of Cancer.

DR. J. P. McMAHON, Milwaukee: Mr. Chairman. Owing to the fact that I was discussing the Cancer problem in undertones with Dr. Evans, I did not understand the first couple of sentences of Dr. Robinson's remarks. There was a reel prepared by the National Association for the Study and Control of Cancer and we had an arrangement made whereby it was to be available in this state for use in motion picture theaters for a limited period of time. A request was made that the reel be forwarded to the State Board of Health and while I did not see it, if my memory serves me correctly, it was decided that it was not particularly adaptable for use here in Wisconsin. Dr. Harper will, of course, be able to enlighten us fully on this subject after he arrives.

I do not recall any special appropriation of \$200.00. The committee after a great deal of correspondence and work finally succeeded in assembling four sets of fifty slides each, most of which were prepared by ourselves, for use by the members of the profession throughout the state in presenting statistics on, and the early symptoms of Cancer to lay audiences. These slides cost considerable money, but the amount was less than \$200.00; approximately \$150.00. We have improved every opportunity afforded by annual reports and the pages of "The Journal" to bring the slides to the attention of the members, but only comparatively few have applied for them. They have been used in and about Marinette, Green Bay, Racine, La Crosse and other centers. There is a gentleman over here to my left who informed me this evening that he had used them very successfully in addressing 350 people at Columbus, Wisconsin. The slides are not perfect, but they serve the purpose of directing the attention of the audience more forcibly to some of the cardinal points which should be covered in lectures and on the other hand do not cause Cancer phobia. I have exhibited them myself a dozen times usually before mixed audiences and the reactions were satisfactory.

At any rate, there are four sets in our office, and we trust they will be used more generally in the future than they have in the past.

DR. P. E. RILEY, Eau Claire: Isn't it possibly true that there has been more work done by the counties in the matter of lectures, than has been reported? I speak for my section, 2 or 3 counties at least. I do not know that the County Society officials have reported to the Committee on Cancer, but the plan there

was that several members of the County Society, over a period of the school year, addressed the Parent Teachers' Associations, and it got the idea to a lot of people. I wish we could hear just a word from other delegates who know that any action was taken in their counties.

DR. C. M. GLEASON, Manitowoc: I am from Manitowoc County, and we have been trying to do something on this Cancer proposition. The way we have done it up there is this: the members of the profession have appeared before practically every organization of the county, for instance, the Federated Women's Club, the Catholic Women's Club, the Elks. For 3 years we have had a Cancer night. Last year the Rotary Club, the Lions' Club and the Kiwanis Club rotated, that is, one from each club spoke to one of the other clubs, and we had an average attendance of something like 75; the Elks had more, and the Women's Federation had nearly 200, and I think the Catholic Women's Club had nearly 200. I must say from my personal experience of talking with people afterwards, that we succeeded in making quite an impression in people's minds about this Cancer proposition. I have a great many people that I have been laboring with individually, about black moles, and the other things of that sort, that really were awakened by what they heard when they were in a group. It seems to be cumulative when a mass of women get together; if something is told them, each one oh's and ah's and they really think it is a great deal worse than it is, and you really get to them. That is about the way we have handled the proposition up there, and I am sure that there has been no official report made, because it was not official with the Medical Society. We have had our regular Cancer nights at all the Luncheon Clubs, and the Federation and the Elks have had it for 3 years.

DR. T. W. NUZUM, Janesville: I think the Doctor has struck the keynote and the medical men in every community can do much to interest and enlighten the public concerning health subjects.

In our city we have many clubs, brotherhoods, lodges and various ladies' societies.

Last spring the doctors were invited to meet with the M. E. brotherhood and spend the evening discussing some subjects pertaining to public health.

DR. T. J. Snodgrass spoke on diabetes, Dr. G. R. Wooll on venereal diseases and your humble servant on goitre and its prevention. About 100 men were present and it produced quite a sensation. There was much talk about it and some expressed themselves as understanding those diseases as they had not before.

This year we are invited to have another night and we propose to discuss the Cancer problem in its various phases stressing its prevention by early care of suspicious lesions and cure by early surgical treatment.

I think the sooner the medical profession begins to instruct the public along these lines in plain language that is understandable and putting aside this mysticism and fear of advertising; informing the public as to what can and should be done, and the ease and cer-

tainty with which many diseases can be prevented or cured when treated early, and the serious and hopeless conditions that follow on neglect, the better we can fulfill our duty to the public and bring our loved profession to occupy the public confidence and esteem which it deserves and for which we are all earnestly striving.

This to my mind is the most effective method to prevent the public from being injured by those whose only ability lies in deceiving and procuring business by advertising and great promises.

Moreover these various clubs, brotherhoods, lodges and ladies' societies offer a most excellent opportunity for such instruction.

DR. M. R. WILKINSON, Oconomowoc: Mr. Chairman and Gentlemen: No report has been made to Dr. McMahon of the work carried on in Waukesha County with regard to Cancer.

Year before last talks were given in Waukesha, Hartland and Oconomowoc by local physicians.

The only difficulty is that all physicians will not consent to addresses of this kind, some because of stage fright and diffidence, but not because each does not wish to carry on his part.

The Cancer work was taken up the year before, and last year the Waukesha County Medical Society has devoted one meeting each year to a paper on the subject of Cancer, and a discussion on the subject.

During the past year in Oconomowoc there was organized by some of the local women, securing the interest of some of the local men, what is called a Home Nursing Club or class. Lectures were given in the High School Auditorium by physicians of the city, and by the city nurse, covering Cancer, Tuberculosis and health measures that go to protect the public. The question of legislation was also touched upon.

I think that in all these talks on different subjects in the interests of health, the question of legislation should be taken up also. When physicians gratuitously give instructive talks to the people, they should at the same time impress upon them the necessity of legislation such as that which failed to pass this last year before our state legislature. If each county will do that it will not be long until we achieve results.

As far as Dr. McMahon thinking of quitting is concerned, it reminds me of a sick infant and nurse with whom I recently came in contact. The nurse had been giving the little one some sweetened water, and the infant continued to throw it off its stomach. When I arrived at the house I said that I would fix up some medicine for the baby and see if we could not put its stomach in better condition. I prepared a minute dose of calomel, a combination of milk and magnesia with elixir of lactated pepsin. The nurse said to me, "Doctor, I do not think it is any use, the baby won't keep it down." Well, I said, "you have quit before you have begun," and she had to admit it. I hope that Dr. McMahon will not do that. He has just begun. And as a matter of fact the child did not throw up the milk of magnesia and elixir of lactated pepsin or the calomel. We must not expect in this work of educating people along the line of Cancer, to get re-

sults in a year or in two years; but I do know that we have had results, and we have not reached everybody in our locality. I know of one case in particular, of a woman coming miles to have a growth examined, and have it removed. Only 3 days ago a woman called at my office, a woman in her 71st year, with a growth on one of her breasts that was the size of a hen's egg, turning a bluish red, with involvement of the axillary glands. Unfortunately that was the first time I saw that woman or knew there was anything the matter with her. The difficulty is to reach everybody and to have everybody take advantage of the knowledge.

In my opinion, if we wish to do that we must persist in this work. If we do that I believe we will get satisfactory results. But we must remember that we cannot educate people in a year or two; it will take 5 or 10 years, and maybe more; but I feel highly encouraged with the work so far, and I think it should go on.

DR. F. A. DAVIS, Madison: I wish to say that during the past year, during the week designated as National Cancer Week, a large number of the members of the profession at Madison addressed various organizations on Cancer.

DR. J. R. MINAHAN, Green Bay: Although Dr. McMahon may not have heard of it, we have had a trial of it in Door County and in Brown County.

I think that in the number of cancers we get about 99 and 99/100 per cent are beyond where we can do much for them by operation. After the educational work had gone on for some time, we noticed that those coming in, who had listened to the talks, were Cancer patients with cancers about 8, 9 or 10 months old. And I came to the conclusion that it was not a matter of education with those people, but that the only way we can get cancers early is to have a painful Cancer. As long as they are not painful the people will not come to us. It is only when the Cancer has progressed to the point that it causes discomfort that they do come.

Only a few weeks ago I had a patient in the office who said, "Doctor, I think I have a Cancer of the breast." I inquired when she first noticed it, and she said, last week.

I replied, "You do not need to open your clothes, you haven't got any Cancer." I had never in my life known of a patient going to a doctor for Cancer that was discovered only a week before. Men come to me after they have had it a year or more that they will admit, and perhaps a little longer. From my experience, I have come to the one conclusion that as long as the growths are not painful, you cannot drive them to a doctor. It was with that thought in mind that I told this woman not to open her clothes, that she did not have a Cancer. I said, "If you had had a Cancer you would have told me you noticed the lump about a year and a half ago." And she did not have a Cancer, she had a little infection on her breast. I have never seen it otherwise, and I have studied the reason why they will hang onto those things, and I

believe it is because they are not painful in the early stages and cause very little if any discomfort.

We have a doctor in our town who likes to talk to Women's Clubs—I cannot say that I enjoy it myself—and we appointed him, and he certainly did talk Cancer. But I cannot see a particle of difference.

Only a short time ago I had a lady come to me who is at the present time in the hospital, and I asked her if she did not hear Dr. Carter talk about Cancer and lumps in the breast, and such things? She replied, "Yes, Doctor, I did, but it never hurt me, there was no pain, and I did not feel it." I have come to the conclusion that the only thing we can do is to get painful Cancers, and then we will get them early.

DR. A. F. SCHEMELING, Columbus: Dr. Minahan's talk is indeed very fine. But the lecture that is given by the United States Public Health Service lays stress upon the point that people shall pay attention to things that do not pain, and upon the fact that it is the things that do not pain that are dangerous. And if this point is brought to the attention of people, that they should look out for growths that are not painful, and come to the doctor with them, I think they will come. I believe that point should be stressed in all lectures. When I made a talk to about 350 people I laid extra stress upon this point, that the painless growths are the dangerous ones.

PRESIDENT: There is a motion before the House that has not been seconded. It is Dr. Windesheim's motion relative to the \$4.50.

Motion seconded.

Motion put and carried.

PRESIDENT: The next order of business is the report of the chairman of the Council, Dr. Edward Evans.

DR. EDWARD EVANS, La Crosse: Mr. President and Gentlemen. I want to say to the delegates and councilors here present, that I was very much pleased indeed to hear the plea made by Dr. Brown for the continuance in office of our representatives to the House of Delegates of the American Medical Association.

I had the privilege—but not the pleasure—of once being a delegate for just one year. And this Society of ours has gone on that way for years and years, up until 3 or 4 years ago, and the state of Wisconsin was never heard of in the House of Delegates of the American Medical Association, until we conceived the idea of sending the same men back. And I know that you will be interested to learn that at the present time the state of Wisconsin, through its delegates, stand very, very high in the councils of the House of Delegates of the A. M. A.

There were some things that I wanted to say tonight to the delegates and councilors here, but they were so much better said by Dr. West, that I can easily omit them. I pleaded before this body for a long time that we needed quality much more than we needed quantity in our organization. I still feel that way, and was very glad indeed to hear Dr. West in his very interesting address so express himself. He has been investigating this subject and feels that way about it.

I think that if the county medical societies lack anything besides brains, it is a spinal column. I do not think our county medical society is a bit above any other medical society, and when I tell you that we have two abortionists there paying their dues year after year, and everybody knows it. And when we brought evidence before that county medical society those that brought the charges were the ones that were condemned. Those members are still members of our Medical Society. We did soak one of them, by calling the attention of the victim to the fact that the state law of Wisconsin allows the injured party to bring action in personal damages against an abortionist, without detriment or injury to herself, and she was able to recover a thousand dollars from him. The lawyers get half of it, but he paid the thousand dollars.

As you, of course, all know, we have changed secretaries. A committee was appointed last year to seek a full time secretary. They chose, and I think very wisely, a non-medical man, who, however, had been trained in journalism; and I think you must have noticed that he has been doing very good and efficient work. I am sure, with the support of the council, that he is going to give us much better work in the future, because of the good work that he has been doing.

I trust that the members of the profession in this state will not forget the old war horses, like Dearholt and Patek, and McMahan, who carried on the work of the publication of the Journal for so long. And I wish Sleyster was here so that I could make him stand up and let us pay him tribute for the splendid work that he has done for us in the last years.

DELEGATE: He is here. Stand up Sleyster. (Applause.)

DR. EDWARD EVANS: Speaking for the council, with the exception of myself, I want to state to the delegates and county secretaries, that we have at the present time a mighty fine bunch of fellows who are working hard for the welfare of the profession in the state of Wisconsin. I think the last annual meeting in January was the best meeting that we have ever had. The men took hold of the work splendidly.

I should like to make one plea to the councilors tonight, and that is, to hold up the hands of the county medical society secretaries and the hands of our state secretary, Mr. Crownhart. I am sure that with your cooperation those men in the counties, and the secretary of the State Medical Society can do very much more and better work than ever before, and I would appeal to the councilors for the coming year to do everything that they can to help the efficient county secretaries and the state secretary we now have. We believe that he is going to put the Society of Wisconsin on the map. (Applause.)

PRESIDENT: The next order of business is reports of councilors.

DR. M. R. WILKINSON, Oconomowoc, presented the report for the 1st district, as follows:

Mr. President and Gentlemen. I will say that everything has gone on very nicely in the 1st District, for the past year.

This question of eligibility and desirability of members of the profession in our Society is one that has been discussed and rediscussed, and I will cheerfully say, and I believe the delegate with me, the spokesman of our Society, Dr. A. W. Rogers, will agree that we have not one man in our Society that we would like to see go over the road. There may be a little friction or personal feeling between members of a society, and it may be justified at times, but a man should be proven an abortionist before he can be forced out of the Society.

There is just one important statement missing in the talk given us at table this evening in the case cited, where a man had been accused; he did not say that he had been convicted. As medical brethren we cannot disregard American laws and courts, and drive a man out of the fold upon evidence which was not sufficient before a Judge and Jury to convict him. For my part I would be loath to believe a man guilty because he is accused.

In regard to the membership of Dodge County, despite the increased dues last year, when they were practically doubled, we have a gain of two members. Last year we had 27 and this year 29. The membership in Jefferson County last year was 31; this year 31. The membership in Waukesha County last year was 45, this year 45, one removed and one resigned.

I think today is the most propitious time in the existence of our Society. The road ahead looks bright and rosy, and I see no reason to believe that our Society has within its fold any large percentage of undesirable men. As Dr. West stated I believe that as a body of men the physicians are the equal of any other body of men in the world. And his statement rings true to me. I feel that all that is necessary to do is to go forward with our program of education, and that the time will come when the people of this country will further appreciate the work which the medical profession is trying to do. Locally, as far as I am able to judge, the profession has not suffered in the esteem of the public. For the last 5 or 6 years we have had a member of our profession as president of the Board of Education. We have men of our profession as directors in the banks. We have had men of our profession filling other positions of trust and honor, and I believe that they stand equally as high today as at any time in the past.

I look forward with hope and encouragement for the future. I thank you, Gentlemen. (Applause.)

The report of the councilor of the 2nd District was presented by Dr. G. Windesheim, Kenosha, as follows: *Mr. President, Members of the House of Delegates:*

The report from the second district is not what your councilor would like it to be—were it not for Racine County the district would show a loss of 10 members. As it is, Racine County has 5 new members and no delinquents. 53 members as against 48 last year, a gain of 5. Walworth County has no new members, 6 delinquents and 1 removal. 28 members as against 35 last year, a loss of 7. Kenosha County has 4 new members, 6 delinquents, 1 removal. 34 mem-

bers as against 37 last year, a loss of 3. Total loss in district, 5.

It is hoped, however, that by the end of the calendar year the loss will be made up by some of the 12 delinquents paying their dues.

The Second District Medical Society held its annual meeting at Willowbrook Sanatorium on Sept. 27. The program began with a luncheon presented by the trustees and the Superintendent of the institution to the doctors and their wives and other invited guests.

The scientific part was an interesting and instructive clinical lecture and demonstration on the subject of examination for pulmonary tuberculosis by Dr. A. A. Pleyte of the examining staff of the Wisconsin Anti-Tuberculosis Association.

The meeting was not as well attended as it should have been. The question naturally arises: Are the doctors too busy with their professional duties to attend meetings of this sort; are the majority of them still on vacation, or is their knowledge of all that concerns tuberculosis so complete that they could get no valuable information from a program of this sort, or do they consider this question of so little importance that they want to ignore it altogether, in spite of the fact that according to the latest report from the State Board of Health the death rate from tuberculosis in 1922 in the state of Wisconsin was 65 per 100,000 inhabitants whereas in 1910 it was 103, in 1909 107.8, that in spite of an increase of 400,000 in population there were 625 less deaths from tuberculosis in 1922 than there were in 1910?

The answer to the question I leave to you.

Now in conclusion I should like to remind Dr. McMahon especially, and the members also, that 15 years ago the fight against tuberculosis was about in the same status as the fight against cancer is at the present time. In these 15 years the results which have been accomplished are wonderful. What the fight against cancer will be in the next 15 years we deduce from the results achieved in the fight against tuberculosis. (Applause.)

SECRETARY CROWNHART: With reference to the 3rd District, we have the resignation of our councilor, Dr. E. B. Brown, of Beloit, who requests that the resignation be considered final. Dr. Brown is not present this evening, and we will skip the report of the 3rd District.

The report of the councilor of the 4th District was presented by Dr. Wilson Cunningham, of Platteville, as follows:

Mr. President and Gentlemen: The detailed report was handed in.

The membership is practically the same in the district this year as last.

As to scientific interest I think there has been little, if any, change. I do not know as it is any better, but I do not think it is any less.

There has been considerable work done in the district in relation to public education, through the tuberculosis clinics, and by talks of different men who are giving the clinics, also by the county nurse and the

Red Cross workers. There has also been considerable work done, in the line of lectures on cancer problems to the public. Some work has also been done in infant welfare.

I think on the whole the public is becoming more interested in these general problems and more enlightened. And while it is difficult to see immediate results, I think on the whole that we are getting results, and that those results will be more marked as time goes on. Otherwise I think the district is in good condition.

The report of the councilor of the 5th District was presented by Dr. O. B. Bock, Sheboygan, as follows:

Mr. President and Gentlemen: Owing to the fact that I put in 45 days during the sessions of the legislature I did not get an opportunity to go out in the district at all this year, but it seems they took pretty good care of themselves without a councilor. The only place where we fell down was in my own county.

The membership in Calumet County remains the same as last year, 13. Manitowoc County lost one member, but Dr. Gleason tells me he has removed from Manitowoc. There is a loss of one in the Washington-Ozaukee County Society. Sheboygan County lost 7. This makes a loss of 9 in the district.

As we have heard from Dr. Gleason, Manitowoc has carried on the lecture course.

We also have had the lecture course on Cancer in Sheboygan, and the Tuberculosis week. We have also had different clinics from the university there, and have done work along those lines just the same as in every other year.

The report of the councilor of the 7th District was presented by Dr. Edward Evans, La Crosse, as follows:

Mr. Chairman and Gentlemen: The 7th District, comprising 7 counties, shows a loss of 4. Last year we had a membership of 125, this year 121. However, there is but one delinquent. The losses are the results of removals or death.

The scientific work in the 7th District I think has been better this year than in the past.

The Cancer week work was very well carried on in at least 4 of the 7 counties, and there was a great deal of propagand work done. In the city of La Crosse itself there were at least 5 addresses given before lay audiences, some of them quite large and representative, such as the Rotary Club, The Twentieth Century Club, and such organizations. We also had tuberculosis work through the good services of the Anti-Tuberculosis Association, at our sanitorium in La Crosse. On the whole I think the scientific work in the 7th District is looking up. A few years ago I said that we needed an embalmer and not a councilor up there, but I think that time has passed, and that the 7th District is now doing very well.

The report of the councilor of the 8th District was presented by Dr. T. J. Redelings, Marinette, as follows:

Mr. President and Members of the House of Delegates. The 8th District reports neither loss nor gain in membership owing to the increase in dues. However, there were some changes in the various counties.

Marinette County lost 3 members by removal, and gained 5 new members. Oconto County has one delinquent. Shawano County has one delinquent. These delinquents were balanced by the gain of 2 in Marinette County.

The Marinette County Medical Society has been very active this past year, due, I think specifically, to a live secretary. We have held monthly meetings, and they have been enthusiastic meetings. Some of our work has been done by home talent, and we have also brought in talent from the University Extension Course.

I would say that things are quite serene in Marinette-Florence County.

Activities in Oconto and Shawano counties have been at a lower ebb, but they are maintaining their organization.

The physicians of the several counties in the district have lent themselves generously to every social and educational activity which has come our way, such as Cancer, anti-Tuberculosis, and child welfare. In our own county I think not less than ten different organizations were addressed by 4 or 5 of the members of the profession. We were very well received, and my verdict has been that the effort was productive of results. It would be still more productive if continued, because education is a slow process, and spreads slowly. The point is that we are putting before these people in these various talks information that is going to go home, and they are going to be a protection to a certain number, and I think have already been to some. I am quite in favor of continuing the activities which have been going on up to the present. I believe we can do better work in the future than we have done in the past. I am very proud of what our men have done in the past.

I want to say this, that we claim a hundred per cent membership in Marinette County. Put that down, Mr. Secretary, and all who are here, note it. This membership is directly the result of personal work. And I think there are no men in our county for whom we need necessarily apologize. I doubt whether there is a county in the state in which the men are more harmonious, or in which the spirit of cordial welcome and fellowship is at a higher standard than in Marinette County. I may say this, having observed it as the senior member of the profession of the county. (Applause.)

The report of the councilor of the 9th District was presented by Dr. Joseph Smith, Wausau, as follows:

Mr. President and Fellow Delegates: During the past year we have carried on quarterly meetings of our District Society in the district. These meetings have all been well attended. At these meetings we have had clinical programs and papers. Some of these have been given by local men, others by men invited in from outside.

During the year our local society has organized under the auspices of the Wisconsin Anti-Tuberculosis Association, a tuberculosis clinic, the local men making the

examinations and carrying on the work. They have also had child welfare work.

This fall we hope to do something with the Cancer campaign. Up to this time I believe we have not actively engaged in that work.

From the standpoint of the report our district shows up rather poorly. Out of a membership of 167 we have a loss of 28, of which 24 are delinquent. These delinquencies occur in the counties of Clark, Lincoln, Marathon and Waupaca mostly. I am inclined to think this is due entirely to the laxity of the secretaries in these counties. I know that in one or two instances the secretary has made no effort to collect the dues, or to call a meeting, or anything else. Just what to do with a secretary of that sort I am at a loss to know. I have so far refrained from trying to call any meeting, in the hope that I might get some inspiration and some information at this meeting as to how to deal with one or two of these organizations that we have in our district.

The report of the councilor from the 11th District was presented by Dr. J. M. Dodd, Ashland, as follows:

Mr. President and Members of the House of Delegates. The 11th District comprises the counties of Ashland, Bayfield, Iron, Douglas, Langlade, Oneida, Forest, Vilas and Price—Taylor, the extreme northern part of the state.

Last year Ashland, Bayfield and Iron counties had a membership of 25; this year it is 23. Douglas County last year had 38, this year 31; Langlade last year 14, this year 13; Oneida, Forest, Vilas counties last year 11, this year the same number; Price, Taylor 18 last year, 13 this year. The total last year was 106, this year 91, a loss of 15. I am unable to give you the reason for this delinquency. Three of the loss is accounted for by death, Dr. Hannum of Bayfield, Dr. Law of Ashland, and Dr. Steffin of Antigo. All three were splendid men, and their passing has been a distinct loss to the profession.

I think I can say for the profession in our district that it is keeping abreast of the progress of medicine in a scientific way, and also in its practical application, and in its service to the people.

In all of the problems of public health, our people have taken a very active interest, especially in tuberculosis and cancer. I am very glad to add, for the information of the Committee on Cancer, that our efforts in the direction of educating the people up there on the subject of cancer have been very active, and have been well received. The members of the medical profession have responded very well to requests to make addresses to the different groups, organizations, lodges, etc., and I think both last year and the year before, almost every group of any size had this message on cancer given to them. I personally addressed 11 different organizations during one cancer week. Other members of the profession have responded to requests to give these addresses, and the public is well informed on this subject. The work of the Anti-Tuberculosis Association has been assisted in every way. We are glad to have been of service to that splendid

organization which has done so much for tuberculosis victims in the state of Wisconsin. We have endeavored in every way to assist the State Board of Health in carrying out its regulations for public health welfare. The county societies hold meetings, some regularly, and others at irregular intervals, and at all of which something worth while is accomplished for the doctor and his mission. All in all I feel that in our section of the country we are making progress and keeping abreast of the times fairly well for a pioneer section that is in a state of transition.

Dr. H. E. Dearholt, Milwaukee, presented the report of the councilor of the 12th District, as follows:

Mr. Chairman and Delegates: As you all know the 12th District consists only of the Milwaukee County Medical Society.

I have mislaid my membership report, but I am not much concerned in it anyway, because I am another one of those who feel that the matter of the numerical strength of a society, and particularly a society in a large county like Milwaukee, is of small moment.

It seems to me that the most outstanding event in the Milwaukee County Medical Society last year was the calamitous one of the loss of the secretary. Dr. "Danny" Hopkinson was one of the most heroic figures that I have ever personally known in the medical profession, and one that I think all of us in the State Society, and certainly those of us in the Milwaukee County Medical Society, loved. It is altogether fitting that a man closely associated with Dr. Hopkinson should have succeeded him as secretary, namely, Dr. Tharinger, and he is here tonight. I think it would be very much better if he instead of me were asked to say a word on the affairs of the Milwaukee County Medical Society.

DR. E. L. THARINGER, Milwaukee: Mr. Chairman and Delegates. I did not expect to be called on this evening to say anything of the membership of the Society, consequently I have not the records with me. But I can say that the membership is steadily increasing. We receive 2 or 3 members at each monthly meeting. I could not give you any records as to the number of delinquents at the present time.

One of the things that might be mentioned at this time is the action of the Milwaukee County Medical Society in the direction of the Abrams Method of Electro-Therapy. At the last meeting this summer the Society went on record as being opposed to this form of treatment, and that it considered it beneath its dignity to investigate the merits of this form of treatment. They also went on record that physicians using this form of treatment were not desirable members to have in the Society. It was intended, I think in the first place, to determine how many members in the Society were using this method or this form of treatment. As a result of a motion made, all of this was dropped, and they simply went on record as being opposed to the method, and not recognizing it sufficiently to determine who the members were, or to do anything about it.

PRESIDENT: The next order of business is the report of our treasurer, Dr. Hall. The report of the treasurer was presented by Dr. S. S. Hall, Ripon, as follows:

TREASURER'S REPORT.

DEBTOR.

Sidney S. Hall, Treasurer, in account with the State Medical Society of Wisconsin.

General Fund:

1922		
Sept. 1—Balance as per Report.....	\$	5,243.82
Oct. 6—Rock Sleyster, Secretary.....	\$	84.00
Nov. 3—Rock Sleyster, Secretary.....		168.00
Dec. 2—Rock Sleyster, Secretary.....		104.00
1923		
Jan. 5—Rock Sleyster, Secretary.....		159.00
Feb. 6—Rock Sleyster, Secretary.....		4,987.00
Mar. 5—J. G. Crownhart, Exec. Sec. (Includes \$11.00 for dues and 10 cents surplus from Dr. Sleyster.).....		2,612.10
Apr. 3—J. G. Crownhart.....		2,511.00
May 1—J. G. Crownhart.....		2,320.00
June 1—J. G. Crownhart.....		1,371.00
July 2—J. G. Crownhart.....		692.00
Aug. 1—J. G. Crownhart.....		796.75
Sept. 7—J. G. Crownhart.....		273.50
Oct. 1—J. G. Crownhart.....		545.75
		<u>16,624.10</u>
Oct. 1—Interest Daily Balance Feb. 6/23 to Oct. 1/23.....		247.49
1922		
Dec. 15—A. J. Wiesender, Chairman Committee of Arrangements		11.23
		<u>258.72</u>
Total		<u>\$22,126.64</u>

Milwaukee, Wis., October 1, 1923.

Dr. S. S. Hall, Treasurer, in account with the State Medical Society of Wisconsin.

CREDITOR.

1922		
Sept. 15—Dr. M. P. Ravenel, Expense.....	\$	41.90
23—Chas. R. Thrasher, Rent Hall, Green Lake		100.00
Dr. Harry G. Sloan, Cleveland Expense.....		60.00
Oct. 6—Dr. Rock Sleyster, Salary July, Aug. Sept., 1922.....		150.00
Bessie B. Mason, Salary July, Aug., Sept.....		150.00
Dr. J. A. Lichter, Pittsburgh, Expense.....		57.64
Cannon Ptg. Co., Acct. Secretary.....		137.50
L. C. Smith & Bros., Repair Typewriter, Sec.....		12.65
Lines, Spooner & Quarles, Lotz v. Cunningham.....		100.70
16—Dr. Lloyd T. Brown, Boston, Expense.....	\$	124.66
		<u>935.05</u>
Wisconsin Anti-Tuberculosis Assn. "Crusaders".....		103.50
20—Dr. Roland S. Cron, Univ. of Mich., Expense.....		38.90
24—Dr. Walter E. Dandy, Johns Hopkins, Expense.....		110.00
Nov. 3—Dr. Rock Sleyster, Expense.....		14.56
29—Dr. W. D. Stovall, Conference of Secretaries Expense.....		18.42
1923		
Jan. 5—Dr. Rock Sleyster, Salary Oct., Nov., Dec., 1922.....		150.00
Bessie P. Mason, Salary Oct., Nov., Dec., 1922.....		150.00
Cannon Ptg. Co., Expense Secretary.....		51.50
Siekert & Baum Stationery Co., Expense Secretary.....		2.15
		<u>639.03</u>
		<u>\$ 1,574.08</u>

	Forwarded		\$ 1,574.08
1923			
Jan.	5—Hoyt E. Dearholt, Exp. Chicago and Return.....	\$	10.22
	8—Rock Sleyster, Postage, Circular Letter.....		40.00
	16—J. P. McMahon, Wis. Med. Journal.....		2,500.00
	19—J. P. McMahon, Disbursements Cancer Committee.....		166.29
Feb.	6—Rock Sleyster, Salary, Jan., 1923.....		50.00
	Bessie P. Mason, Salary, Jan., 1923.....		50.00
	Cannon Ptg. Co., Expense Secretary.....		40.99
	20—C. W. Loomis, Cartage.....		2.50
	Siekert & Baum, Expense Secretary.....		6.05
			<u>2,866.05</u>
	The Milwaukee Journal, Expense Secretary.....		12.00
	26—The Gasser Fox Agency, Bond Executive Sec'y.....		12.50
	27—Dr. Geo. C. Ruhland, Legislative Expense Madison.....		9.86
Mar.	1—Mrs. H. J. Packard, Salary 2/3s month.....		50.00
	Mr. J. G. Crownhart, Salary February.....		300.00
	Mr. J. G. Crownhart, Expense, Feb. 1-28.....		125.38
	Stevens Ptg. Co., Expense Legislative Com.....		24.00
	Jacks Letter Service, Expense Legislative Com.....		34.00
Apr.	3—Mr. J. C. Crownhart, Legislative Expense.....		86.91
			<u>654.65</u>
	Forwarded	\$	5,094.78
	Forwarded	\$	5,094.78
1923			
Apr.	3—R. W. Monk, Neillsville, Aect. April 1.....	\$	17.00
	University Club of Milwaukee, Luncheon, Councilors.....		17.00
	Blid Ptg. Co., Madison, 400 Letter Heads, Exec. Sec.....		19.00
	Siekert & Baum, Expense Secretary.....		7.05
	5—J. G. Crownhart, Salary, March.....		300.00
	Mrs. H. J. Packard, Salary March.....		75.00
	S. S. Hall, Account Salary.....		100.00
May	1—Mrs. H. J. Packard, Salary April.....		75.00
	J. G. Crownhart, Salary April.....		300.00
	J. G. Crownhart, Expense.....		23.01
	Wis. A-T. Assn., Use of Telephone, Sec'y.....		9.25
	Flowers, for Funeral Mrs. Leary.....		12.75
	Fred M. Wylie, Atty., Madison Services, Legislative.....		100.00
June	1—J. G. Crownhart, Salary, May.....		300.00
	Astrid Jurgens, Salary, May.....		65.00
	J. G. Crownhart, Legislative Expense.....		76.64
	J. Gurney Taylor, Legislative Expense.....		9.35
	Wis. A-T. Assn., Use of Office, etc.....		52.50
	Forwarded	\$	1,558.55T
	Forwarded	\$	6,653.33
	Forwarded	\$	6,653.33
1923			
June	1—McDermott & Cowen, Reporters Annual Meeting 1922.....	\$	157.48
	18—American Medical Assn., 1,000 Copies "The Menace of Chiropractic".....		2.30
	23—S. S. Hall, Salary.....		100.00
July	2—J. G. Crownhart, Salary, June.....		300.00
	J. G. Crownhart, Expense, June.....		102.49
	J. G. Crownhart, Supplementary Legislative Account.....		60.53
	9—The Wis. Medical Journal, Cuts, Milk Situation.....		21.90
	10—Astrid Jurgens, Salary, June.....		65.00
	14—Dr. Joseph F. Smith, R. R. Expense, Delegate A. M. A.....		133.26
	17—Dr. O. B. Bock, Account, Legislative Expense.....		594.78
	31—Dr. Rock Sleyster, R. R. Expense Delegate A. M. A.....		135.00

Aug. 1—	Dr. H. M. Brown, R. R. Expense Meeting A. M. A.....	135.00	
	Astrid Jurgens, Salary, July.....	65.00	
	J. G. Crownhart, Salary, July.....	150.00	
	Wis. A-T. Assn., Use of Office and Telephone.....	15.00	
	J. G. Crownhart, Telephone and Postage, July.....	14.60	
	Cannon Ptg. Co., 1,000 Letter Heads, Expense Sec'y.....	8.00	
	Siekert & Baum Stationery Co., Expense Secretary.....	7.80	
3—	Meyer News Service, News Clippings, Sec'y.....	4.50	2,072.64
	Forwarded		\$ 8,725.97
1923			
Aug. 3—	F. M. Wylie, Atty., Legal Services, Legislative.....	\$ 600.00	
Sept. 7—	J. G. Crownhart, Expense August.....	78.29	
	J. G. Crownhart, Salary August.....	300.00	
	Astrid Jurgens, Salary, August.....	65.00	
	Wis. A-T. Assn., Use of Bldg., \$30.00, Multigraphing \$1.50.....	31.50	
	Meyer News Service, Aug. News Clippings Exec. Secretary.....	4.50	
	Siekert & Baum Stationery Co., Expense Secretary.....	3.55	
Oct. 1—	J. G. Crownhart, Salary, September.....	300.00	
	J. G. Crownhart, Expense, September.....	49.15	
	Astrid Jurgens, Salary, September.....	65.00	
	Cannon Ptg. Co., 200 Letter Heads, Dr. Windesheim.....	4.50	
	S. S. Hall, Postage and Incidentals.....	30.00	1,531.49
	Total		\$10,257.46
	Balance		11,869.19
			\$22,126.64

Milwaukee, Wis., Oct. 1, 1923.

Sidney S. Hall, Treasurer, in account with the State Medical Society of Wisconsin.

DEBTOR.

Medical Defense Fund.

1922			
Sept. 1—	Balance as per Report.....		\$3,759.77
Oct. 6—	Rock Sleyster, Secretary.....	\$ 26.00	
Feb. 6—	Rock Sleyster, Secretary.....	36.00	
Nov. 3—	Rock Sleyster, Secretary.....	332.00	
Dec. 2—	Rock Sleyster, Secretary.....	76.00	
Jan. 5—	Rock Sleyster, Secretary.....	46.00	
1923			
Mar. 6—	J. G. Crownhart, Exec. Sec.....	824.00	
Apr. 3—	J. G. Crownhart, Exec. Sec.....	390.00	
May 1—	J. G. Crownhart, Exec. Sec.....	304.00	
June 1—	J. G. Crownhart, Exec. Sec.....	170.00	
July 2—	J. G. Crownhart, Exec. Sec.....	66.00	
Aug. 1—	J. G. Crownhart, Exec. Sec.....	134.00	
Sept. 10—	J. G. Crownhart, Exec. Sec.....	30.00	
Oct. 1—	J. G. Crownhart, Exec. Sec.....	78.00	2,512.00
	TOTAL		\$6,271.77

CREDITOR.

1922			
Nov. 21—	Lines, Spooner & Quarles.....	\$3,190.30	
1923			
Apr. 17—	Refund Dues, S. B. Ackley.....	2.00	
June 7—	Refund Dues, A. D. H. Thrane.....	2.00	3,194.30
	BALANCE ON HAND.....		\$3,077.47

DR. WILSON CUNNINGHAM, Platteville: I move you that the report of the treasurer be referred to the Auditing Committee.

PRESIDENT: That is automatic, without a motion. I will appoint on that Auditing Committee, which must be of the Council, Dr. Redelings, Dr. Dearholt and Dr. Bock, to report on the report of the treasurer.

DR. O. B. BOCK, Sheboygan: Mr. President, as one who spent some of that money I think somebody else ought to sit on that committee.

PRESIDENT: I will appoint Dr. Wilkinson, of Oconomowoc in place of Dr. Bock, on the Auditing Committee.

The next order of business is the report of the executive secretary.

The report of the executive secretary was presented by Mr. J. G. Crownhart, Milwaukee, as follows:

REPORT OF THE EXECUTIVE SECRETARY.

To the Members of the 1923 House of Delegates,

Your Secretary is indeed pleased to report that despite the increase in the dues, the membership on October first, 1923 was 1,806 as compared to 1,850 a year ago. The total membership for 1922 was 1910 and with 161 delinquents at the present time it seems probable that the anticipated loss through the increase of dues will be negligible.

The report by districts follows:

STATE MEDICAL SOCIETY OF WISCONSIN

MEMBERSHIP REPORT.

October 1, 1923.

County Society

1st District—

	Dec. 31, 1922	Oct. 1, 1923	Loss— Gain+	Delinquent	New Members	Removals	Resigned	Deceased
Dodge	27	30	+3	4	1			
Jefferson	31	31	0	1	2	1		
Waukesha ...	45	45	0	4	1	1	2	
	103	106	+3	1	10	3	1	2

2nd District

Kenosha	37	34	-3	6	4	1		
Racine	48	53	+5		5			
Walworth	35	28	-7	6		1		
	120	115	-5	12	9	2		

3rd District—

Dane	120	107	-13	15	10	6		2
Columbia	25	22	-3	2		1		
Green	17	17	0		2	2		
Rock	79	74	-5	8	5	1		1
Sauk	25	25	0	1	1			
	266	245	-21	26	18	10		3

4th District—

Crawford	10	9	-1	3	3	1		
Grant	39	32	-7	2			3	2
Iowa	12	11	-1		1	2		
LaFayette	16	14	-2	3	1			
Richland	14	8	-6	4			1	1
	91	74	-17	12	5	3	4	3

5th District—

Calumet	13	13	0		1	1		
Manitowoc	31	30	-1	1				
Washington- Ozaukee	26	25	-1	2	1			
Sheboygan	46	41	-5	8	3		1	1
	116	109	-7	11	5	1	1	1

6th District—

Brown- Kewaunee ..	52	46	-6	8	2			
Door	4	4	0					
Outagamie ...	39	35	-4	4	1			
Fond du Lac..	45	45	0	2	2	1		
Winnebago ...	50	50	0	2	3	1		
	190	180	-10	16	8	2		

7th District—

Juneau	9	10	+1		1			
La Crosse....	54	51	-3		1	3		1
Monroe	21	21	0		2	2		
Trempealeau- J-B.	27	26	-1		1	1	1	
Vernon	14	14	0	1	1			
	125	122	-3	1	6	6	1	1

8th District—

Marinette- Florence ...	20	22	+2		5	3		
Oconto	12	11	-1	1				
Shawano	13	12	-1	1				
	45	45	0	2	5	3		

9th District—

Clark	17	12	-5	5				
Green Lake- W-A.	22	19	-3	1		2		
Lincoln	16	11	-5	5				
Marathon ...	39	33	-6	5	1			2
Portage	20	21	+1		1	1		
Waupaca	28	19	-9	8				1
Wood	25	24	-1					
	167	139	-28	24	2	3		3

10th District—									
Barron-P-W-									
S-B.	41	37	-4	5	3	1	1		
Chippewa	16	21	+5	1	7		1		
Dunn-Pepin ..	20	15	-5	1	1	3	2		
Eau Claire....	43	43	0		4	3	1		
Pierce	6	5	-1	1					
Rusk	8	10	+2			2			
St. Croix.....	14	13	-1	3	3		1		
	148	144	-4	11	20	7	6		
11th District—									
Ashland-B-I. ..	25	23	-2	3	3		2		
Douglas	38	31	-7	6		1			
Langlade	14	13	-1				2	1	
Oneida-F-V. ...	11	12	+1		1				
Price-Taylor ..	18	13	-5	4	1	2			
	106	92	-14	13	5	5	3		
12th District—									
Milwaukee ...	481	437	-44	32	4	10	6		
Grand Totals	1958	1808	-150	161	97	55	7	28	

To summarize briefly, only the first district shows a gain; the eighth district is the same as a year ago and all other districts show a loss. In many districts this loss is very small and it is probable that it will be made a gain within the remaining three months.

Seven societies have increased their membership. Chippewa and Racine counties lead with 5 each; Dodge 3; Marinette and Rusk 2 each. Eleven counties have the same number as year ago, viz., Calumet, Door, Eau Claire, Fond du Lac, Green, Jefferson, Monroe, Sauk, Vernon, Waukesha and Winnebago.

Of the 35 societies with a loss, five have no delinquents. These are Iowa, La Crosse, Langlade, Trempealeau-Jackson-Buffalo, and Wood. Thirty have a loss but have delinquents and in many cases if the delinquents were to be re-instated the society would have a total gain for the year.

During the year seven members resigned; fifty removed, and in some cases from the state; twenty-eight were reported as deceased; and ninety-seven new members have been enrolled.

FINANCES.

The financial experience under the full time lay secretary-managing editor has not been sufficiently long to make an exact statement at this time.

When the offices were separate the average expenses, plus the annual Journal deficit, totaled over \$6,000 a year. The present salary of the new officer is \$3,600; his office and traveling expenses, including the services of the stenographer is approximately \$1,500 a year; and the cost to the Society of publishing the Journal has been materially lowered. It would appear that the employment of the full time officer will not be any additional financial burden upon the Society.

Through the efforts of your secretary some \$2,300 of exhibit space was sold for this annual meeting. This will be sufficient to pay every item of expense, including many that were formally paid by the Society.

It must be understood that the figures given are but a good estimate and are submitted as such. It may be said, however, that the indications are that the new office will prove an economy rather than an expense. This is submitted without reference to the fixing of dues for 1924 which is very properly handled by your treasurer.

DUTIES OF SECRETARY.

Wisconsin is the third state to have a full-time officer. His duties may be divided into four fields. The first field is the secretarial work which includes the handling of all membership records, collection of dues, and the necessary correspondence. The second field covers the editorial duties which include the solicitation of advertising for the Journal, the writing of all material not of a scientific nature, the keeping of accounts and the general supervision over and assembling of each issue. Third, is the general field of being of service to the members. Your secretary is investigating in what ways he may be of definite and direct service to the members as individuals and as a group. And fourth, is the field of lay educational work. As a layman your secretary brings a lay point of view to the Committee on Public Policy and Legislation. Investigation of work done elsewhere, service as secretary of the Committee on Public Policy and Legislation, and actual lay education work constitutes his fourth and most extensive field of work.

POSSIBILITIES FOR SERVICE.

Employed on February first, last, the first five months saw your secretary at Madison much of the time because of the session of the legislature. A strong opposition was well entrenched and it was necessary to spend this time if money and a strong opposition lobby were not to overturn a medical practice act to the detriment of public health.

This means that your secretary has had less than three months in which to devote some time to ways of being of service. To better enable him to know just what is desired he is visiting, as rapidly as is possible, the county societies. The societies visited to date are Columbia, Eau Claire, Juneau, Barron-Polk-Washburn-Sawyer-Burnett, Ashland-Bayfield-Iron and Douglas.

The accomplishments are necessarily few but may be taken as an indication of the type of work that is being done. The University of Wisconsin Medical School will loan any book in their library to practitioners who may be without the services of libraries that are found in some cities. The Extension Division of the university, in cooperation with the Journal, is compiling a package library series on important subjects. This means that any member may write to the

Extension Division and receive a package of current material on a subject in which he may be interested. This service will become more valuable as it is older but it is now established. Members of the society, within the next two weeks, will each receive a letter offering current publications of all kinds at publisher's prices. This is possible by reason of the fact that they are subscribers to the Journal. The rates the Journal is entitled to, will be passed on to the members who will have the opportunity to make a considerable savings in many cases.

Your Secretary takes this occasion to thank Dr. Dearholt for the cooperation extended by him and the members of his staff of the Wisconsin Anti-Tuberculosis Association. Dr. Dearholt has given unstintedly of his time that the new office might be made a success and whatever has obtained may be attributed to his efforts and those of Dr. Sleyster.

Pursuant to direction of the Council an investigation has been started looking to the possibility of securing merited savings in group insurance. It will be realized that a recommendation must be based on careful investigation and your secretary is unable to make a recommendation at this time. It is hoped that this work will be completed by the January meeting of the Council.

TAXATION.

At your last meeting you instructed the Committee on Public Policy and Legislation to take up with the State Tax Commission the question of securing income tax deductions for expenses in attending clinics and post-graduate courses. This has been done but inasmuch as the federal authorities do not allow this deduction no allowances may be expected from the state.

It was informally stated, however, that the usual and customary expenses would be allowed, including your expenses in attending the annual meeting of your state society. Nothing further than this may be accomplished by the State Society.

CORRESPONDENCE.

We are in receipt of a communication from Dr. Olin West, Secretary of the American Medical Association, in which it is urged that each state society drop all delinquents on April first each year. This is for the purpose of simplifying and making all records of membership standard. Our present by-laws need no change if you desire to accept this recommendation. It has simply been customary to retain all names on the membership and mailing lists until the annual meeting each year. If it is the sense of this House that all delinquents should be dropped as of April first, it will be made effective after full notice.

A second communication is the result of the last meeting of the American Medical Association. It contains a resolution to be brought to the attention of this House, viz.,

Whereas, The honor and integrity of the Medical Profession is being reflected on by the unnecessary,

unprofessional and unlawful prescribing of alcoholic liquors by some unscrupulous physicians:

Resolved, That in the judgment of the House of Delegates of the American Medical Association, in session assembled, every state and county medical association should use its best endeavor to discipline physicians who either negligently or wilfully prescribe alcoholic liquors other than in accordance with the law, and to purge the medical profession of physicians who wilfully, under the cloak of their profession, prescribe alcoholic liquors for other than medicinal purposes; and

Resolved Further, That the secretary of this association forward a copy of this resolution to every state and county medical association affiliated with the American Medical Association.

In conclusion your secretary desires to emphasize that he has but one aim—to be of service to the members of this Society. He is a contact point between the members of the profession and the public and no matter in what part of this state you may reside, he is your secretary. He is willing and anxious to do those things that will benefit you and enlighten the lay public. To best accomplish this aim he asks for your suggestions and criticisms at all times.

Respectfully submitted,

J. G. CROWNHART,

Secretary-Managing Editor.

PRESIDENT: The next order of business is election of Delegate and Alternate to the American Medical Association, to succeed Dr. Joseph F. Smith, Wausau, Delegate, and Dr. R. E. Mitchell, of Eau Claire, Alternate.

DR. T. W. NUZUM, Janesville: Mr. President, I move you that Dr. Smith be re-elected.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: Dr. Smith is declared so elected.

We will now proceed with the election of the Alternate to succeed Dr. R. E. Mitchell, of Eau Claire.

DR. G. J. KAUMHEIMER, Milwaukee: Mr. President, I nominate Dr. Mitchell to succeed himself.

Nomination seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye", opposed "no".

Motion unanimously carried.

PRESIDENT: Dr. Mitchell is elected Alternate Delegate to the American Medical Association.

DR. A. E. BACHHUBER, Mayville: Mr. President, has it not heretofore been the habit that the Nominating Committee nominate the man and the general session elect him? I am not sure about it.

PRESIDENT: I just spoke to Dr. Sleyster about that. Which way is it, Dr. Sleyster?

DR. ROCK SLEYSER, Wauwatosa: This has been frequently referred to the Nominating Committee, Doctor, but not necessarily so.

DR. BACHHUBER: I did not know what the constitution provided.

DR. G. WINDESHEIM, Kenosha: The constitution provides that the House of Delegates select the delegates to the American Medical Association.

PRESIDENT: Relative to the next order of business, and the resignation of Dr. Brown as Councilor of the 3rd District, Dr. Sleyster suggests that the members of this district meet and talk the matter over and select a suitable delegate who will act as delegate, and not leave it to the audience at this time to pick out somebody who may or may not be suitable.

SECRETARY CROWNHART: The counties in the 3rd District are Dane, Columbia, Green, Rock and Sauk.

PRESIDENT: The members present from those counties will please adjourn to the corner and talk the matter over, and present a name to the House of Delegates for action.

SECRETARY CROWNHART: While we are waiting, Gentlemen, I might state that the members of the Nominating Committee are requested to stay over for a few minutes after this meeting adjourns, and meet in this room.

PRESIDENT: The next item of business is the election of Councilor to succeed Dr. M. R. Wilkinson, of Oconomowoc, in the 1st District, Dr. G. Windesheim, Kenosha, in the 2nd District, and Dr. E. B. Brown, of Beloit, in the 3rd District.

DR. M. R. WILKINSON, Oconomowoc: Mr. President and Delegates: As I have served the Society for a number of years as Councilor, and I think the infusion of new blood in the District is desirable, I wish to retire. I have in mind the nomination of a man who has attended every meeting, and they have been monthly meetings, of the Waukesha County Medical Society. He is an able man, a genial man, a faithful man, and a desirable man to act as your councilor. I have conferred on the matter with Dr. A. E. Bachhuber, and he agrees with me. I wish to place in nomination the name of Dr. A. W. Rogers, of Oconomowoc, as Councilor to succeed Dr. Wilkinson.

DR. A. E. BACHHUBER, Mayville: I second the nomination.

PRESIDENT: It has been moved and seconded that Dr. A. W. Rogers succeed Dr. Wilkinson as councilor of the 1st District.

DR. G. WINDESHEIM, Kenosha: Mr. President, I should like to know what the objection of Dr. Wilkinson is to serving on the council, as he has served so well in past years. Does he want to shelve himself, or what is the matter with him? Is he tired of the Society, of the councilors, or does he think it is too much work? Let him speak for himself.

DR. M. R. WILKINSON, Oconomowoc: I think Dr. Windesheim is becoming personal. I thought my statement that an infusion of new blood was desirable was sufficient, and from the caliber of the man I nominated, I think the Society is going to better itself. That is the reason I retire.

(Calls for the question.)

PRESIDENT: All in favor of the motion that Dr. Rogers succeed Dr. Wilkinson will signify it by saying "aye"; opposed, "no".

Motion carried.

PRESIDENT: The motion is carried and Dr. Rogers is elected as councilor in the 1st District.

The next order is the election of a councilor to succeed Dr. Windesheim of Kenosha, in the 2nd District.

DR. O. W. McCLUSKY, Kenosha: The 2nd District, comprising Walworth, Kenosha and Racine counties had the best councilor in the state at the present time, and I think it would be a grave mistake to make any change. I therefore nominate Dr. Gustave Windesheim of Kenosha.

DR. H. A. ROBINSON, Kenosha: I second the nomination.

DR. G. WINDESHEIM, Kenosha: I have a reason why I should like to retire from the work. I haven't the time any more to devote to it. My time is not my own, it belongs to the community. I am whole time Health Officer, and I am supposed to be in Kenosha. I cannot attend all the meetings of this session here this year because I am needed at home. I cannot attend the meeting of the Council tomorrow, because I am needed in Kenosha. And I think I have served twice the length of time that Dr. Wilkinson has, consequently I ought to be released. I believe that the members of the 2nd District that are here should get together and decide on someone else. If they do not I will have to hand in my resignation this year, if they should elect me. It is a matter of necessity on my part.

DR. EDWARD EVANS, La Crosse: Mr. Chairman, I think those remarks of Dr. Windesheim ought to be stricken from the record, and the election proceeded with.

PRESIDENT: Are there any further remarks? If not, all in favor of the election of Dr. Windesheim will signify by saying "aye"; opposed, "no".

Unanimously carried.

PRESIDENT: It is carried. Dr. Windesheim is elected councilor from the 2nd District.

The next order is the election of a councilor in the 3rd District to succeed Dr. Brown.

DR. A. F. SCHMELING, Columbus: Mr. President, I think we will place in nomination Dr. C. A. Harper, of Madison, as our councilor in the 3rd District.

Nomination seconded.

PRESIDENT: Any remarks? If not, all in favor of the motion will signify it by saying "aye"; opposed, "no".

Motion unanimously carried.

Dr. C. A. Harper of Madison is elected councilor of the 3rd District to succeed Dr. Brown.

The next order of business is election of committees and delegates. The first is the Committee on Public Policy and Legislation. The present committee consists of Dr. Bock, Dr. Ruhland and Dr. Quick.

DR. JOSEPH SMITH, Wausau: Mr. President, I move the re-election of the 3 members mentioned.

Motion seconded.

PRESIDENT: Are there any remarks?

DR. O. B. BOCK, Sheboygan: Mr. President and Gentlemen. I have served one year as president of this committee, and I think the state would be better served if one of the committee be a member of our Examining Board. I wish that this Society would change one of the members and put in a member of the Wisconsin Examining Board on that committee.

PRESIDENT: Are there further remarks?

DR. G. J. KAUMHEIMER, Milwaukee: Mr. President, it strikes me that 1924, being an off year, the position will be quite honorary, and the committee will not have much work to do. As Dr. Brown has stated, it takes some time to learn the ropes. Dr. Bock has said that he spent 45 days in Madison during the sessions of the legislature, and he has gained valuable experience in the intricacies of pulling ropes, which ought not to be lost to the Society. This next year he will not have any chance to do much rope pulling, so I think he ought to give us the benefit of the experience that he has gained.

PRESIDENT: All in favor of the motion will signify it by saying "aye"; those opposed "no".

Motion unanimously carried.

PRESIDENT: The committee consists of Dr. Bock, Dr. Quick and Dr. Ruhland.

The next order of business is the election of Committee on Medical Education consisting of Dr. Jermain, Dr. Evans and Dr. Bardeen.

DR. F. A. THOMPSON, Milwaukee: Mr. President, I move you that the same committee be retained for the next year.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: The same committee is retained for next year. The next order is the election of Committee on Publication. This committee is composed of Dr. Lotz, Dr. Joseph Smith, of Wausau, and Dr. Dearholt, of Milwaukee.

DR. T. W. NUZUM, Janesville: Mr. President, I move that the same committee be retained.

DR. OSCAR LOTZ, Milwaukee: Mr. President and Delegates. At a recent meeting of the Publication Committee we talked over the matter of whether it would be necessary to continue this committee. The Council some time ago appointed an Advisory Board to the Executive Committee. This Advisory Board consisted of the members of the Publication Committee, and one or two additional members. I do not know whether it is advisable or not that the Publication Committee be disbanded and the work left to the Advisory Committee.

PRESIDENT: I may say that the committee is provided for in the constitution.

DR. OSCAR LOTZ, Milwaukee: Well, of course, we are changing the management and changing the working of the Society, so that the Publication Committee is hardly necessary at the present time. You are

simply duplicating your committees in your Publication Committee and Advisory Committee.

DR. JOSEPH SMITH, Wausau: Mr. President and Gentlemen. It seems to me that we could get around that proposition very nicely by changing the name of the Advisory Committee to the Publication Committee, and keeping the personnel as it is.

PRESIDENT: Are there any further remarks? If not, all in favor of the motion as made will signify it by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: It is so ordered. The same committee will be retained.

The next order is the election of Delegate to the Council on Health and Public Instruction, A. M. A. to succeed Dr. G. Windesheim.

DR. H. E. DEARHOLT, Milwaukee: Mr. President, I move that Dr. Windesheim be appointed to succeed himself.

Motion seconded.

PRESIDENT: Are there any remarks? If not, those in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: It is so ordered.

The next order is the election of Delegate to the Council on Medical Education, A. M. A., to succeed Dr. L. F. Jermain.

Motion made that Dr. Jermain be appointed to succeed himself.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all those in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: Dr. Jermain is elected to succeed himself.

The next order is the election of Member on the Committee on Health and Public Instruction, to succeed Dr. I. F. Thompson, of Milwaukee. What is your pleasure regarding this delegate, gentlemen?

DR. A. E. BACHHUBER, Mayville: Mr. President, I think from the position that Dr. Thompson occupies, I will nominate him to succeed himself.

Nomination seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: Dr. Thompson is elected to succeed himself.

The last delegate to be appointed is a member of Committee on Hospitals to succeed Dr. L. E. Fazen, of Racine.

Motion made that Dr. Fazen be re-elected.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: Dr. Fazen is elected to succeed himself. The next order of business is Miscellaneous and New Business.

There is a recommendation of the Committee on Pub-

lic Policy and Legislation that the House of Delegates authorize the continuance of the work of the Committee on Legislation and Public Policy along the lines of lay education, with a necessary appropriation; that the committee is to meet as may be necessary to adopt a concrete program which will then be placed before the Council for approval; and that upon approval of such program, specifically not to involve the expenditure of any considerable sum of money, it shall be put into effect under the direction of our executive secretary. Further, that a full accounting of any monies spent be made annually and published in the Wisconsin Medical Journal.

This is a recommendation by the Committee on Public Policy and Legislation. It is up to the House of Delegates to take action upon this matter.

Motion made that the recommendation be adopted.

DR. HOYT E. DEARHOLT, Milwaukee: Mr. Chairman and Gentlemen, I should like to move the striking out of the clause that the amount of money shall not be a material amount. Personally I am convinced that one of the most important expenditures that this association can make is a considerable sum for public education. For a good many years, year after year, in this House of Delegates and in the Council I have risen to protest our expending a considerable amount of money lobbying at the legislature, contending that the lobbying should be done not with the legislators, but with the public at large, and that it should be continued throughout the year.

I want also to take this occasion to protest against the suggestion made by Dr. Kaumheimer that the work of the Legislative Committee ought to be a sinecure during the year in which the legislature does not meet. I think the off-year is the time when the Legislative Committee of the State Medical Association ought to be doing its most important work, and ought to be doing that work so thoroughly during that off-year that there will be nothing left to do during the session of the legislature but to urge various citizens committees, Boards of Trade, Kiwanis Clubs, Rotary Clubs, Women's Clubs, of all kinds, to be at the legislature and see to it that laws for the protection of the public are passed—not on the insistence of the medical profession, but on the insistence of the public itself, who ostensibly, and I believe actually, are the ones to gain from such legislation.

I do not like the clause in the recommendation which suggests limiting the appropriation to a niggardly amount.

DR. O. B. BOCK; Sheyboygan: Is that an amendment?

DR. DEARHOLT: I move the striking out of that clause.

DR. BOCK: I second the amendment.

PRESIDENT: Are there any remarks on the amendment?

DR. A. E. BACHHUBER, Mayville: Mr. President, I think we ought to give the secretary a free hand on

that, and let him use his judgment. If he is good enough to run our business affairs for us, he would certainly be good enough to know about how much would be fair to expend for that purpose.

PRESIDENT: Are there any further remarks?

(Calls for the question.)

PRESIDENT: The question is called for. All in favor of striking out this clause "Any considerable sum", will signify by saying "aye"; contrary minded "no".

Motion unanimously carried.

PRESIDENT: It is stricken out. Now a motion for the adoption of the report is in order.

DR. F. A. THOMPSON, Milwaukee: Mr. President, I move you that the report as amended be adopted.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: The motion as amended is adopted.

The second order under the head of Miscellaneous and New Business is the recommendation of the Publication Committee to extend a vote of thanks and appreciation to the former managers and editors of the Journal.

DR. G. J. KAUMHEIMER, Milwaukee: Mr. President, I move you that such recommendation be adopted.

Motion seconded.

PRESIDENT: Are there any remarks? If not, those in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: The recommendation is adopted.

The next order under New and Miscellaneous Business is the recommendation of the managing editor that \$2 of the dues of each member be turned over to the Journal, to represent the cost subscription price.

SECRETARY CROWNHART: Mr. President, if I may just explain for a moment—this is simply a matter of accounting. It will simplify the accounting of the Journal, and does not mean in any sense of the word that the dues are raised or lowered; they stand as they are. It is to simplify the accounting of the Journal and to get a better Journal with the little additional cash we will have on hand.

DR. JOSEPH SMITH, Wausau: Mr. President, I move you the adoption of the recommendation.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: The recommendation is adopted.

Next in order is the recommendation of the secretary of the A. M. A. that all delinquents be dropped as of April 1st each year.

DR. OTHO FIELDER: Mr. President, I move the acceptance of the recommendation.

Motion seconded.

PRESIDENT: Are there any remarks?

DR. G. J. KAUMHEIMER, Milwaukee: Mr. President and Gentlemen. I do not know as that is exactly fair.

I know that in a large city like this there are a great many men who would like to belong to the County Society, and in the earlier years of their practice they had a hard time scraping along. They want to pay the \$13, but they haven't always got them at a certain time. I approached a young man a couple of years ago when the dues were less, and he replied, "I will join just as soon as I can afford it, but I have all that I can do to keep body and soul together at the present time and keep up my family, and buy clothes and pay bills." During their first years many of these men have all they can do to pay taxes, and pay for coal, and pay a small installment on certain necessary books. I do not believe that we ought to tell these men they have got to pay within 90 days or get out of the Society. It is sometimes pretty hard to get them in. I think judgment ought to be used. I do not believe that there is any great rush of any of the men to join any of the county societies. There are usually a great many new comers, and the turn over in the medical profession, I believe, is greater in the city of Milwaukee than it is in any of the other counties in the state. The men will come and try to make a living, and find it difficult and go on. I think it is a little harsh to make them pay up in 90 days, because I feel that some of them can not pay. And as to the man who wants to get out, who, instead of paying, and resigning, and getting out in a decent manner, who simply hangs on until he is kicked out for non-payment of dues, it does not make any difference; he was probably dragged in by the scruff of his neck anyway.

DR. WILSON CUNNINGHAM, Platteville: I wish we might hear from our past Secretary, Dr. Sleyster, on this proposition.

DR. ROCK SLEYSER, Wauwatosa: Mr. President and Gentlemen. The constitution provides that any member who is delinquent on the 1st of February, is automatically dropped. This is merely a matter of enforcement. During my ten years as secretary I never enforced it, and did not drop delinquent members until the week prior to the state meeting. At that time I took all delinquents off the Journal subscription list, and dropped them from the rolls of the Society. I believe, however, that there are very few men who would find difficulty in paying those dues during the first 3 months of the year. If they are to be paid at all I do not think it makes much difference which quarter of the year the man is asked to pay. It is only business, and if we are going to run our Society on business principles it seems to me there should be some rules, and 90 days is a good liberal time to pay a bill. No one else will give a longer extension of time than that surely, and if the American Medical Association has requested a uniform system of dropping delinquents, Wisconsin ought to fall in line with the other states and cooperate in this matter.

DR. F. A. THOMPSON, Milwaukee: Mr. President and Gentlemen. I believe that putting the thing at April

1st is a mighty good stand to take. If people cannot pay their bills by that time, then we know where we stand on the state meeting; we know where we are on the delinquents. Another thing is that it puts it right up straight to a man that on the 1st of April he is going to be dropped. It is time that the doctors get some business ideas into their own life and into their societies.

(Calls for the question.)

PRESIDENT: All in favor of the recommendation will signify it by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: This recommendation is adopted.

The last item of business is relative to the fixing of dues for 1924.

DR. OSCAR LOTZ, Milwaukee: Mr. President, you said, the last item of business. I had not heard anything about the Committee on Medical Defense. Was that brought up?

DR. ROCK SLEYSER, Wauwatosa: That committee is elected by the Council.

SECRETARY CROWNHART: Mr. President I think this is a subject that had better be discussed by your treasurer first, and then if you want anything in addition I should be very glad to give you what information I have. I think you ought to first call on Dr. Hall.

PRESIDENT: I will call on Dr. Hall.

DR. S. S. HALL, Ripon: Mr. President and Gentlemen: I do not know what the treasurer has to do with a question of that kind. He just gets the money and pays it out; does not decide where it is to go or how it is to be expended. The secretary is the only one that really gets a clear view of the finances of the Society. I would be satisfied with almost any decision. We have a larger allowance this year than we have had in past years, and if the secretary thinks that the dues ought to drop a little, I can see no objection.

SECRETARY CROWNHART: I think that is true. While we have not had sufficiently long financial experience so that we could safely put the dues back where they were, and I do not know that that is going to be entirely possible at any time, from a little budget that I have made up I think that it is possible to reduce your dues from \$9 to \$7 and still maintain a margin of safety. It will not build up any reserve in your Society funds, but, from all that I can see I believe that it will still give you a margin of safety for the year, and you will not overdraw your account for the year figuring on the basis of 1,800 members. Should you get more members, of course your margin would be larger.

PRESIDENT: If there is no recommendation to be made relative to this matter, we will pass on.

Is there any new or unfinished business that any member desires to bring before the House of Delegates?

DR. T. J. REDELINGS, Marinette: Mr. President and Gentlemen. I am in receipt of a letter from one of our honored members reciting a grievance with reference to the defense of his case of malpractice. No

doubt you have received a similar letter, as this letter suggests you have. Dr. Noer, who writes this letter, is present here this evening, and I have wondered if it would be wise to extend to him the courtesy of the floor to state his own case, giving him ten or fifteen minutes to do this. I really haven't any solution of the apparent mishap or difficulty, and yet I have so thorough a knowledge of the character of Dr. Noer, his ability and integrity, that I reaffirm what I said on the floor of the House of Delegates a year ago, that it means a whole lot to me, and I am not sure that he has had a square deal.

PRESIDENT: You make that as a motion?

DR. REDELINGS: I make that as a motion.

Motion seconded.

PRESIDENT: It has been moved and seconded that Dr. Noer be given the floor for ten minutes. Before we pass on to that, let us settle this matter of dues one way or another.

DR. T. J. REDELINGS, Marinette: I do not wish to objection to creating a little reserve fund. I believe that the rank and file of the profession are proud to monopolize the floor, but I want to say that I see no pay what we are paying now. It is a mere pittance to what we pay to our Golf Clubs or to the Elks or to a lot of other organizations to which we belong, and this is our big organization. Why not allow the dues to remain as they are for at least another year?

PRESIDENT: Do you make that as a motion?

DR. REDELINGS: I make that as a motion.

Motion seconded.

PRESIDENT: Are there any remarks on this motion?

DR. S. S. HALL, Ripon: Mr. President and Gentlemen. I should like to say that up to the present time under our old method of collecting money and paying it out, there never was enough. It was necessary to keep the entire amount in a checking account, because it would run out before the end of year, or very nearly so. At the time of the annual report at our annual meeting of course we usually showed that there was considerable money in the treasury, but by the end of the year it was nearly if not entirely exhausted. With the dues as they have been this last year I have been able to arrange with the bank to pay $2\frac{1}{2}\%$ on the average daily deposits every month, and in that way I have picked up about \$250, as you notice by the report. It is in a savings fund account, it is not in the checking account. This account can be transferred too, by giving short notice at any time. I thought perhaps it would be well to call your attention to that fact, it may have some influence in your vote for the dues to stand as they are.

PRESIDENT: All those in favor of Dr. Redeling's motion will signify it by saying "aye"; contrary "no".

Motion unanimously carried.

PRESIDENT: The dues for next year will remain as they have been during the past year.

We will now give Dr. Noer ten minutes to address the House of Delegates.

* * * *

PRESIDENT: Gentlemen, what is your pleasure relative to this matter?

DR. ROCK SLEYSER, Wauwatosa: Mr. President, I am not a member of the House of Delegates, but it seems to me Dr. Noer's complaint certainly deserves a very careful investigation on the part of the House of Delegates. The House, however, is a body too large and too temporary in character to make this investigation and it would seem entirely proper that the matter be referred to the Council, with instructions from the House that they make a most careful investigation of the facts, that Dr. Noer be allowed to appear before them and submit his correspondence and other papers, and that they call those whom he accuses and give each side a fair hearing, trying to arrive at a just and equitable adjustment of the matter. The Council can take time in doing this, and if necessary, continue until the January meeting of the Council. At that time we should be able to reach a fair decision as to what is justice to Dr. Noer. It is a very difficult matter for the House of Delegates, a temporary body, only in session for a short time, to go into the matter, and it would be my suggestion that this be referred to the Council for full investigation. Would you be satisfied with that, Dr. Noer?

DR. NOER: Mr. President, after submitting this to the Society a year ago I took no further action in the way of investigating the matter for the reason that I wished to see whether the Society would do anything in the matter, and am ready to help them. Now the time for possibly bringing the actions is very short. If the Society is not interested, and does not care to take any action in the matter, I shall make still further effort to secure an attorney who will bring action against them, but I must do that before January, as the limit expires then about the 1st of January and the case will be closed so far as they are concerned, through the statute of limitations.

DR. A. E. BACHHUBER, Mayville: Mr. President, I move you that Dr. Sleyser's suggestion be made in the form of a motion, and that the matter be referred to the Council.

Motion seconded.

PRESIDENT: It has been moved and seconded that this matter be referred to the Council. Are there any remarks?

DR. NOER: I wish to say too that I submitted this paper to the Society a year ago, and requested that this statement of particulars, in case the Society took no action, be returned to me. I don't know what became of it. I haven't heard from anyone, have not received it back.

(Calls for the question.)

PRESIDENT: All those in favor of the motion of Dr. Bachhuber that this matter be referred to the Council will signify by saying "aye"; opposed "no".

Motion unanimously carried.

PRESIDENT: This matter will be referred to the Council at the next meeting.

The House of Delegates will meet at the Men's Rest Room in the Auditorium tomorrow morning at 8:30. Sessions will be Wednesday, Thursday and Friday mornings. The election of officers will be Thursday morning, by which time we will receive the report of the Committee on Nominations. After the House of Delegates adjourns, the Committee on Nominations will remain and organize.

DR. EDWARD EVANS, La Crosse: Could not some announcement be made as to when we might meet. It is exceedingly late now, and if you and the secretary would set some hour for the meeting, why not make it at 8:30 tomorrow morning in another room.

PRESIDENT: The Council will meet at 8:30 tomorrow morning at the same room in the Auditorium.

Adjourned to 8:30 October 3rd, 1923.

SESSION WEDNESDAY, OCTOBER 23, 1923.

8:30 A. M.

Meeting called to order by the President.

PRESIDENT: The secretary will pass out slips for your signature, instead of having a roll call.

The first order of business is the reading of the minutes of the previous meeting.

(Minutes of previous meeting read by the stenographer.)

If there are no objections the minutes will stand approved as read. Hearing no objections, they are so approved.

Is there any new business?

SECRETARY CROWNHART: Under the head of New Business, we have a communication from Dr. Woodward, executive secretary of the Bureau of Legal Medicine and Legislation of the American Medical Association, in which he desires to obtain the views of the Society regarding legislation for the control of medical laboratories.

PRESIDENT: It is too large a matter to take up at the present time. There is a questionnaire to be filled out, and it would seem that if it were referred to a committee we would get better and quicker action. Does this committee have to be of the Council or of the House of Delegates? I think this matter should be turned over to the committee of which Dr. Tharinger is chairman.

DR. R. BLUMENTHAL, Milwaukee: I so move you, Mr. President, that this matter be turned over to the proper committee for disposition.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all those in favor will signify by saying "aye"; opposed, "no".

Motion carried.

PRESIDENT: It is so ordered. Dr. Tharinger is appointed a Committee of One, to attend to this matter.

SECRETARY CROWNHART: That completes the new business I have to present.

PRESIDENT: Is there any new business to come before the House of Delegates? If not, we will adjourn until tomorrow morning at 8:30.

I wish to announce that Dr. Edward Evans has called a Council meeting immediately following this meeting. Adjournment to Oct. 4, 1923, 8:30 A. M.

SESSION THURSDAY, OCTOBER 4, 1923.

8:30 A. M.

AUDITORIUM, MILWAUKEE, WIS.

Meeting called to order by the President.

PRESIDENT: The first order of business is the reading of the minutes of the previous meeting.

(The stenographer read the minutes of the previous meeting.)

PRESIDENT: If there are no objections the minutes will stand approved as read.

The first order of business this morning is the report of the Committee on Nominations.

DR. JOSEPH SMITH, Wausau: Mr. Chairman, your Committee on Nominations beg to submit the following recommendations:

For President: Rock Sleyster, Wauwatosa.

1st Vice-President: M. R. Wilkinson, Oconomowoc.

2nd Vice-President: John Minahan, Green Bay.

3rd Vice-President: Carl Beebe, Sparta.

The committee also recommends as the place for the meeting in 1924 the city of Green Bay.

Signed T. W. NUZUM,
J. R. MINAHAN,
M. D. BIRD,
JULIUS BLOM,
A. E. BACHHUBER,
WILSON CUNNINGHAM,
ROBERT W. BLUMENTHAL,
C. M. GLEASON,
H. A. ROBINSON,
J. M. DODD,
JOSEPH F. SMITH.

PRESIDENT: Gentlemen, you have heard the report of your Nominating Committee. What is your pleasure?

DR. M. R. BLUMENTHAL, Milwaukee: I move, Mr. President, that this report be adopted by the House of Delegates.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed "no".

Unanimously carried.

PRESIDENT: It is so adopted.

I will ask that Dr. Smith present this to the meeting at the close of the session this morning.

Does the adoption of the report include the ballot, or do you wish to have a separate motion that the secretary cast the ballot?

DR. M. R. BLUMENTHAL, Milwaukee: I intended that in the motion.

PRESIDENT: It is included in the motion, that the secretary cast the ballot of the House of Delegates for these offices.

If you will make that report to the general meeting at the close of the morning session, Dr. Smith, I will call upon you at that time.

DR. JOSEPH SMITH, Wausau: Yes, sir.

PRESIDENT: Is there any other business to come before the House of Delegates this morning? Do we not have to act on this recommendation relative to the expenditure of money? Will somebody make that motion?

DR. H. E. DEARHOLT, Milwaukee: Mr. Chairman, I move you that the request of the Committee on School Hygiene for \$200 be approved.

Motion seconded.

PRESIDENT: You have heard the motion. Are there any remarks? If not, all in favor will signify by saying "aye", opposed "no".

Motion unanimously carried.

PRESIDENT: It is so approved. Is there any other business to come before the House of Delegates? If not, we will meet tomorrow morning at quarter to nine. There are some committees to report at that time.

Adjournment to Friday, Oct. 5, 1923, 8:45 A. M.

SESSION FRIDAY, OCTOBER 5, 1923,

8:45 A. M.

Meeting called to order by the President.

PRESIDENT: Dr. Tharinger will present the report of the committee to which the matter of legislative regulation of clinical laboratories was referred.

Report presented by Dr. E. L. Tharinger as follows:

REPORT OF COMMITTEE ON LEGISLATIVE REGULATION OF CLINICAL LABORATORIES.

So far as is known to this committee at the present time, there are no laws in the state of Wisconsin relative to the control of the conduct or personnel of Clinical Laboratories. It is obvious that in the near future, if not at the present time, legislative control of Clinical Laboratories will be necessary to protect the Physician and Public, and to keep the standard of Clinical Laboratories on a high level.

The enactment of a suitable set of laws to govern the activities of such institutions would not be difficult and it is questionable whether or not this is necessary. It would seem that the establishment of certain qualifications to be fulfilled by persons who wish to engage in Clinical Laboratory work would do more toward maintaining a high standard of service than supervision and control of their activities.

The determination of the required qualifications would present no difficulties if only licensed physicians

were engaged in this work. But the work is of such a nature that persons trained to do special technical procedures are often better qualified than the physician himself. A chemist for instance is better qualified to do blood chemistry than a physician. Likewise a trained bacteriologist would be similarly better qualified.

In spite of the fact that much of the work that is done in a Clinical Laboratory can be and is done by persons outside of the Medical Profession, it would appear that as long as this work is being done for and at the request of the Medical Profession, the same Code of Ethics, moral standards and legal supervision should govern the activities of Clinical Laboratories.

Dr. Ward Burdick, secretary of the American Society of Clinical Pathologists is going to read a paper on the standardization of Hospital Laboratories before the American College of Surgeons in the near future. He has sent out a questionnaire and undoubtedly his paper will voice the opinion of many persons interested in this work. In addition to this the American Society of Clinical Pathologists is intensely interested in this matter and actively engaged in outlining rules and regulations for the betterment of laboratory service.

With these agencies engaged in solving this difficult problem, it will be but a short time before we will have certain definite ideas around which to complete a suitable set of rules and regulations.

E. L. THARINGER,

Committee.

PRESIDENT: Gentlemen, what is your pleasure regarding this report?

DR. M. R. BLUMENTHAL, Milwaukee: Mr. President, I move you that the report be accepted and placed on file.

Motion seconded.

PRESIDENT: Are there any remarks? If not, all in favor will signify by saying "aye"; opposed, "no".

Motion unanimously carried.

PRESIDENT: It is so voted. The report will be placed on file.

Is there further business to come before the House of Delegates?

SECRETARY CROWNHART: No other business on the secretary's desk, Mr. President.

PRESIDENT: Is there any other business to come before the House of Delegates? If not, a motion to adjourn will be in order.

Motion to adjourn made, seconded and carried.

TRANSACTIONS OF THE COUNCIL

First Meeting, Oct. 3, at 9 A. M.

Auditorium, Milwaukee, Wis.

The meeting was called to order by Pres. Edward Evans at 9 A. M. with Councilors Wilkinson, Windenheim, Cunningham, Connell, Evans, Redelings, Smith, Dodd and Dearholt and the Secretary present.

The Council elected as honorary members of the State

Medical Society, Dr. L. M. Warfield, Michigan, and Dr. L. M. Boothby, Hammond, Wisconsin. It approved the election of honorary members in the respective county societies of Drs. Emil Steiger, Prairie du Chien, Crawford County, and C. F. Kind, Hudson, St. Croix County.

Dr. Redelings moved that the Chairman of the Council appoint a committee of three to confer with the committee on medical defense in the matter presented to the House of Delegates by Dr. P. J. Noer, Wabeno, and referred by the House to the Council. Further, that the joint committee is instructed to have Dr. Noer submit a brief of the charges together with all records, including court records if possible. The committee is further instructed to call in the defendants and to submit a report and recommendation at the January, 1924, meeting of the Council. Further, it is understood that the Council does not assume in this investigation any financial responsibility to Dr. Noer.

The motion was put and carried. (Pres. Evans subsequently appointed on this committee Drs. Rock Sleyster, Wauwatosa; Henry Hitz, Milwaukee, and T. J. Redelings, Marinette.)

There being no further business the Council adjourned to Thursday morning at 9 A. M.

Second Meeting, Oct. 4 at 9 A. M.

The meetings was called to order by Pres. Evans at 9 A. M. with Councilors Wilkinson, Cunningham, Connell, Evans, Redelings, Smith, Dodd, Harper and Dearholt and the Secretary present.

Dr. Dearholt presented the report of the committee appointed to audit the accounts of the Treasurer as follows:

The Council of the State Medical Society;
Gentlemen:

Your committee, consisting of Doctors Wilkinson, Redelings, and Dearholt, appointed to audit the accounts of the Treasurer, spent considerable time in carefully checking receipts and expenditures and is pleased to report that it has found the records correct and in good order.

Because of this fact your committee has no embarrassment in recommending that fundamental changes in the practice of the Council in connection with its trusteeship be made at this time:

1. In justice to the Treasurer, himself, and to the members of the Council; and in the light of the greatly increased sums now passing through his hands, it is recommended that a bond for the Treasurer be secured, the cost of which shall be borne by the Society.

2. That henceforth a public accountant be engaged to audit the books, instead of imposing this obligation upon members of the Council who are seldom qualified by experience or interest to make as thorough an audit as justice to the officers and the members calls for. The cost need not be material but any reasonable sum constitutes, in our opinion, an entirely proper expenditure.

Respectfully submitted,

HOYT E. DEARHOLT,

Chairman.

Upon motion of Dr. Smith the report with recommendations was accepted and approved.

The Secretary presented a request from Dr. W. D. Stovall, Committee on School Hygiene, that the committee be authorized a drawing account of \$200 for its work during the coming year. Upon motion this request was approved and the account authorized.

Dr. Smith asked for suggestions in the work of supervising the county societies and a brief discussion followed.

There being no further business the Council adjourned to call of the President in January, 1924.

J. G. CROWNHART,

Secretary.

FISH AND THE BRAIN FOOD FICTION

During the World War, many efforts were devoted to the plan of conserving certain types of food supplies, and of encouraging the use of other more readily available but less popular products. These attempts to alter the traditional dietary habits and food customs of large numbers of persons called for not a little energy in the direction of education and propaganda by all sorts of agencies sympathetic with the governmental food administration bureaus. The hope of increasing the consumption of a great variety of fish in place of the much needed meat was fostered for a number of more or less obvious reasons. A peculiar difficulty was encountered in the fact that fish is largely a "Friday food" in many homes, and rarely enters there into the meals of the remaining days of the week. There is, of course, no physiologic reason why such a limitation in the use of fish should continue in vogue; indeed, there are reasons why fish could advantageously become a more frequent ingredient of the diet in many parts of the country. From this standpoint, the campaign to advertise fish into all-the-week use has a defensible propriety. It will not be easy to change the established limitations of "fish day," but the attempt is certainly justifiable. Not so much can be said of another form of advertisement which tends to perpetuate a long-fostered illusion. Recently, campaigns have been directed to increase the use of specific fishes. In widely circulated advertisements of "shad—order it today" we are told by the promoters of the sales effort that "it is a tissue builder and for brain workers has no equal." Here is an unworthy perpetuation of the old absurd adage that fish is brain food. The fallacy of the assumption that there are specific food for brain, skin, muscle, lungs or liver building have been pointed out too often to require repetition. It seems unfortunate that large organizations should continue in these days of enlightened knowledge of nutrition to foist on a partly untutored public the idea that fish makes brawn or brains in greater measure than does bread or milk or meat—or even the extremest vegetarian diet. Fish is a wholesome food; its nutrient virtues deserve to be extolled, but they will only be belittled by the revival of ancient fiction.—*Jour. A. M. A.*, July 14, 1923.

LIST OF MEMBERS OF THE STATE MEDICAL SOCIETY OF WISCONSIN, 1923

- Abbott, LeRoy, Wilton.
 Abelman, Theo. C. H., Watertown.
 Aebelman, Wm., Milwaukee.
 Aekley, S. B., Oconomowoc.
 Adamkiewicz, Jos. J., Milwaukee
 Adams, Geo. F., Kenosha.
 Addleman, Irving M., Wausau.
 Ainsworth, H. H., Madison.
 Akerley, A. W., St. Louis, Mo.
 Albers, H. H., Allenton.
 Aldridge, H. W., Manitowoc.
 Alexander, W. S., Fond du Lac.
 Allen, C. F., Middleton.
 Allen, Jessie E., Beloit.
 Allen, J. S., Norwalk.
 Allen, Laurie Lee, Wauwatosa.
 Allen, L. P., Oshkosh.
 Allen, S. C., Waterloo.
 Allen, Wm. J., Beloit.
 Altenhofen, A. R., Wauwatosa.
 Altman, Maurice, Milwaukee.
 Amundson, Karl K., Cambridge.
 Amunson, Philip B., Mondovi.
 Anderson, Chas. E., Montreal.
 Anderson, F. G., Eau Claire.
 Anderson, Harold B., Beloit.
 Anderson, Jens, Racine.
 Anderson, N. E., La Crosse.
 Andrae, R. W., Plainfield.
 Andrae, F. E., Kenosha.
 Andrew, C. H., Plainville.
 Andrew, G. F., DeSota.
 Andrews, Mahom P., Manitowoc.
 Andrews, Niel, Jr., Oshkosh.
 Andrus, A. D., Ashland.
 Andrus, A. P., Ashland.
 Antoine, F. J., Prairie du Chien.
 Aplin, F. W., Waukesha.
 Armbruster, R. E., Milwaukee.
 Armitage, John E., Milwaukee.
 Armstrong, C. A., Prairie du Chien.
 Armstrong, C. E., Oconto.
 Armstrong, Guy, Pound.
 Arnold, F. W., Milwaukee.
 Arneson, Ray G., Frederic.
 Ashley, T. W., Kenosha.
 Ashum, David W., Eau Claire.
 Austria, W. F., Merrill.
 Avey, Sarah E., Milwaukee.
 Axley, A. A., Washburn.
 Axtell, Luella E., Marinette.
 Aylward, Richard C., Madison.
- Baasen, J. M., Mt. Calvary.
 Babcock, L. G., Cumberland.
 Bach, J. A., Milwaukee.
 Bachhuber, A. E., Mayville.
 Bachhuber, L. M., Mayville.
 Baer, A. N., Milwaukee.
 Baer, C. A., Milwaukee.
 Bailey, Mark A., Fennimore.
 Bair, Francis M., Cuba City.
 Baird, J. C., Eau Claire.
 Baird, John, Superior.
 Baker, G. L., Rib Lake.
 Baker, Geo. R., Tomahawk.
 Baker, Julian C., Hawkins.
 Baker, John H., Bryant.
 Baker, W. F., Wausau.
 Baldwin, F. H., Bloomington.
 Baldwin, Geo. E., Green Lake.
 Balkwill, C. A., Grafton.
 Bangsberg, S. G., La Crosse.
 Bannen, W. E., La Crosse.
 Barber, J. L., Marathon.
 Bardeen, C. R., Madison.
 Bardenwerper, H. E., Milwaukee.
 Barnes, E. C., Ripon.
 Barnes, H. T., Delafield.
 Barnes, J. S., Milwaukee.
 Barnstein, Chas., Timothy.
 Barnstein, J. E., Manitowoc.
 Barrett, Edw. J., Sheboygan.
 Barta, Edw. F., Milwaukee.
 Barth, G. P., Milwaukee.
 Bartran, Wm. H., Green Bay.
 Bath, Dane H., Oshkosh.
 Batty, A. J., Portage.
 Bauer, K. T., West Bend.
 Baumh, Chas. W., Milwaukee.
 Baum E. L., Milwaukee.
 Baumgart, Clarence H., Milwaukee.
 Bayer, W. H., Merrill.
 Bear, W. G., Monroe.
 Beck, A. A., Wantona.
 Becker, B. A., Silver Lake.
 Becker, W. C., Watertown.
 Becker, W. F., Wauwatosa.
 Beebe, Chauncey D., Wauwatosa.
 Beebe, C. M., Sparta.
 Beebe, C. S., Milwaukee.
 Beebe, Geo., Eau Claire.
 Beebe, L. W., Superior.
- Beebe, P. A., Glenwood City.
 Beebe, S. D., Sparta.
 Beech, Geo. D., Adams.
 Beffel, John M., Milwaukee.
 Beier, Aug. D., Milwaukee.
 Belitz, Alfred, Pepin.
 Belitz, Wm., Cochrane.
 Bell, A. R., Tomah.
 Bellack, B. F., Columbus.
 Bellerue, A. R., Iola.
 Bellin, Jos. J., Green Bay.
 Bellin, Julius J., Green Bay.
 Belting, Geo. W., Orfordville.
 Bennett, J. F., Burlington.
 Bennett, Louis J., Ft. Atkinson.
 Bennett, W. C., Denver, Colo.
 Benson, G. H., Richland Center.
 Bent, Xenna P., Benton.
 Benton, Jos. L., Appleton.
 Bentzein, E. W., Milwaukee.
 Berglund, Simon A., Marinette.
 Bernhard, A., Milwaukee.
 Bertrand, Jos. H., De Forest.
 Betz, J. C., Boscobel.
 Beust, M. von, Milwaukee.
 Beutler, W. F., Wauwatosa.
 Bever, H., Pittsville.
 Bill, Benj. J., Genoa Junction.
 Bilstad, G. E., Cambridge.
 Binnewies, Frank C., Janesville.
 Rinnie, Helen A., Kenosha.
 Bickel, Edwin F., Oshkosh.
 Bird, M. D., Marinette.
 Birk, Benj. J., Milwaukee.
 Bitter, R. H., Oshkosh.
 Black, Nelson M., Milwaukee.
 Blackburn, F. E., Cassville.
 Blair, J. C., Hazel Green.
 Blankinship, R. C., Madison.
 Blanton, Snley, Madison.
 Bleckwenn, W. J., Mendota.
 Blewett, M. T., Markesan.
 Blom, Julius, Menomonie.
 Bloor, E. J., Antigo.
 Blumenthal, R. W., Milwaukee.
 Blumer, Edward, Monticello.
 Bock, Otto B., Sheboygan.
 Boddin, A. M., Milwaukee.
 Bockman, Frank A., Greenwood.
 Boerner, R. W., Milwaukee.
 Bolton, Ernest L., Appleton.
 Roohar, John S., Richland Center.
 Boorse, L., Milwaukee.
 Boothby, E. L., Hammond.
 Borchardt, A. C., New London.
 Boren, C. H., Marinette.
 Boren, J. W., Marinette.
 Bornstein, Max, Milwaukee.
 Roslough, A. W., Wausau.
 Rossard, C., Richfield.
 Rossard, M., Spring Green.
 Bowen, E. W., Watertown.
 Bowen, H. P., Watertown.
 Boyce, S. R., Madison.
 Boyd, C. D., Kaukauna.
 Boyd, G. T., Fond du Lac.
 Boyer, E. R., Rhinelander.
 Boynton, R. D., Kilbourn.
 Bradbury, E. L., Neillsville.
 Bradford, J. A. L., La Crosse.
 Bradford, E. B., Hudson.
 Brady, D. L., Bloomington.
 Brah, A. J., Milwaukee.
 Braun, Robt. F., Milwaukee.
 Brazeau, G. N., Milwaukee.
 Breckenridge, H. E., Racine.
 Breed, A. L., Elmwood.
 Brehm, H. J., Racine.
 Brehm, Theo., Racine.
 Brewer, Jay C., Jefferson.
 Brey, P. F., Milwaukee.
 Briggs, S. J., Madison.
 Brinkerhoff, F. E., Beloit.
 Brockway, Frank, Oshkosh.
 Broghammer, F. J., Superior.
 Broache, A. H., Oshkosh.
 Bronson D. A., Fond du Lac.
 Brook J. J., Milwaukee.
 Brookie, R. W., Pepin.
 Brooks, E. H., Appleton.
 Brooks, Lester M., Milwaukee.
 Brown, Allan D., Mineral Point.
 Brown, Edw. B., Beloit.
 Brown, E. J., Madison.
 Brown, Frank E., Milwaukee.
 Brown, G. V. I., Milwaukee.
 Brown, S. V. I., Milwaukee.
 Brown, H. M., Milwaukee.
 Brown, J. F., Waupun.
 Brown, R. C., Milwaukee.
 Brumbaugh, E. V., Madison.
 Brunkhorst, F. O., Hortonville.
 Brunkhorst, R. O., Milwaukee.
- Ruchanan, R. C., Green Bay.
 Buck, G. C., Platteville.
 Buckley, W. E., Redgranite.
 Buckner, H. M., Mt. Horeb.
 Bugher, C. E., Ladysmith.
 Bunting, Chas. H., Madison.
 Burbach, Theo. H., Milwaukee.
 Burdon, R. M., Green Bay.
 Burger, Harry E., Beloit.
 Burkhardt, E. W., Menomonee Falls.
 Burns, Robt. E., Madison.
 Burton, J. J., Milwaukee.
 Busse, Alfred A., Jefferson.
 Bussewitz, M. A., Milwaukee.
 Butler, E. F., Mosinee.
 Butler, F. E., Menomonie.
- Caffrey, A. J., Milwaukee.
 Cahana, Stephen, Milwaukee.
 Cahoon, Roger, Baraboo.
 Cairns, Rolla, River Falls.
 Caldwell, Henry C., St. Croix Falls.
 Caldwell, Margaret, Waukesha.
 Callahan, T. J., Ladysmith.
 Callan, J. L., La Crosse.
 Calvey, P. L., Milwaukee.
 Campbell, J., Fond du Lac.
 Campbell, Lorne A., Clear Lake.
 Cannon, H. B., Waukesha.
 Cannon, H. J., Wauwatosa.
 Cantwell, Roger C., Shawano.
 Caples, R. M., Waukesha.
 Carhill, N. W., Milwaukee.
 Carhart, G. A., Milwaukee.
 Carlson, E. S., La Crosse.
 Carlson, G. W., Appleton.
 Carmichael, Chas. S., Helenville.
 Carter, Homer M., Madison.
 Carter, R. M., Green Bay.
 Carthaus, A. H. C., Thiensville.
 Cary, E. C., Reedsville.
 Casey, Merle, Almond.
 Cassels, G. S., Port Washington.
 Caswell, H. O., Fort Atkinson.
 Caughey, C. R., Kenosha.
 Cavanaugh, T. E., Milwaukee.
 Cavaney, Jas. J., Milwaukee.
 Chandler, Fremont E., Waupaca.
 Chandler, Jos., Pardeeville.
 Chapman, F. M., Milwaukee.
 Chapman, Vernon A., Milwaukee.
 Charbonneau, A., Green Bay.
 Charbonneau, E., Superior.
 Charron, T. A., Rice Lake.
 Chloupek, C. J., Green Bay.
 Chorlog, J. K., Madison.
 Christensen, Emil, Two Rivers.
 Christensen, F. C., New York City.
 Christensen, J. W., Westby.
 Christiansen, Geo., Galesville.
 Christiansen, H. H., Wausau.
 Christofferson, A. L., Kenosha.
 Christofferson, A. M., Waupaca.
 Christofferson, H. H., Colby.
 Christofferson, P. J., Waupaca.
 Churchill, B. P., Milwaukee.
 Clark, Burton, Oshkosh.
 Clark, F. T., Waupun.
 Clark, Isaac F., Bruce.
 Clark, J. F. W., Laona.
 Clark, Kate, Cable.
 Clark, M. H., Ripon.
 Clark, R. B., Monroe.
 Clark, W. T., Janesville.
 Clarke, T. C., Milwaukee.
 Clawson, H. E., Redgranite.
 Cleary, B. L., Edgerton.
 Cleary, J. H., Kenosha.
 Clement, W. J., Kaimuki, Honolulu.
 Clifford, P. M., Green Bay.
 Coerper, E. E., Fredonia.
 Coffey, Chas. J., Milwaukee.
 Cohn, Arthur H., Milwaukee.
 Coleman, H. M., Barron.
 Collins, D. B., Madison.
 Collins, W. P., Racine.
 Combacker, Hy. E., Osceola.
 Combacker, Leon C., Osceola.
 Combs, C. J., Oshkosh.
 Comee William, Green Bay.
 Conklin, Geo. H., Superior.
 Conley, J. M., Oshkosh.
 Connell, Daniel R., Beloit.
 Connell, F. Gregory, Oshkosh.
 Conroy, Jno. M., Milwaukee.
 Cook, E. H., Watertown.
 Cook F. S., Eau Claire.
 Cooksey, R. T., Madison.
 Coon, Geo. E., Milton Junction.
 Coon, J. W., Stevens Point.
 Coon, W. W., Gays Mills.
 Cooney, Ed. W., Appleton.
 Cooper, C. A., Colfax.

- Cooper, E. S., Almond.
 Copeland, Ernst, Milwaukee.
 Coppins, L. A., Marshfield.
 Corbett, M. E., Oshkosh.
 Corcoran, C. J., Milwaukee.
 Cornwall, W. B., Amery.
 Corr, J. T., Racine.
 Couch, E. E., West Allis.
 Coumbe, W. R., Richland Center.
 Cowan, Wayne F., Stevens Point.
 Cowles, Robt. L., Green Bay.
 Cox, J. A., Wantoma.
 Cremer, C. H., Cashton.
 Crikelair, F. L., Green Bay.
 Cristman, E. S., Aluena.
 Crockett, Walt. W., Beloit.
 Cromptett, H. B., Amery.
 Cron, C. O., Camp Douglas.
 Crou, Roland S., Milwaukee.
 Crone, Virgil D., Beloit.
 Crosby, E. P., Stevens Point.
 Crosley, Geo. E., Milton.
 Crowe, N. F., Delavan.
 Crowell, Dean P., La Crosse.
 Cummings, J. H., Superior.
 Cunningham, J. N., Stanley.
 Cunningham, Michael A., Janesville.
 Cunningham, R. B., Cadott.
 Cunningham, Wilson, Platteville.
 Curl, Howard, Sheboygan.
 Curless, Grant W., Walworth.
 Currier, P. M., Milwaukee.
 Curtin, Adam Lee, Milwaukee.
 Curtin, J. J., West DePere.
 Curtis, G. E., Eau Claire.
 Cushing-Lippitt, Eleinore, Milwaukee.
 Cutler, J. S., Wauwatosa.
 Cutter, J. D., Tomahawk.
- Dailey, P. J., Elebo.
 Dallwig, E. L., Milwaukee.
 Dallwig, Herbert C., Milwaukee.
 Dalton, Raymond J., Milwaukee.
 Dana, A. C., Fond du Lac.
 Danforth, Quincy H., Omro.
 Daniels, J. L., Jefferson.
 Daniels, L. J., Milwaukee.
 Darby, G. S., Brodhead.
 Darling, Earl, Milwaukee.
 Darling, F. E., Milwaukee.
 Darling, Wm. S., Milwaukee.
 Davelaar, G. W., Milwaukee.
 Davies, R. E., Waukesha.
 Davis, Carl H., Milwaukee.
 Davis, F. A., Madison.
 Dawson, C. A., River Falls.
 Dawson D. L., Rice Lake.
 Dean, James P., Madison.
 Dean, Jos. A., Madison.
 Dearholt, H. E., Milwaukee.
 Decker, C. O., Crandon.
 Decker, H. G., Milwaukee.
 DeCock, J. L., Green Bay.
 Dehne, W. O., Appleton.
 Deisher, H. F., Plymouth.
 Delaney, Harry O., Beloit.
 Del Marcelle, C. C., Neenah.
 Dennis, Jas. F., Waterloo.
 Derge, H. F., Eau Claire.
 Desbois, P., Marinette.
 De Swarte, L. T., Beloit.
 Devine, Geo. C., Ontario.
 Devine, Hubert A., Fond du Lac.
 DeWire, M. V., Sharon.
 Diamond, J. A., Frederick.
 Dickenson, G. H., Milwaukee.
 Differt, Chas. C., Milwaukee.
 Dike, B. H., Owen.
 Dill, Geo. M., Prescott.
 Dishmaker, D., Kewaunee.
 Doctor, John, Racine.
 Dodd, J. M., Ashland.
 Dodge, Chas. H., Clinton.
 Doege, K. H., Marshfield.
 Doege, K. W., Marshfield.
 Doern, W. G., Milwaukee.
 Dohearty, F. P., Appleton.
 Dohearty, W. H., Peshigo.
 Domann, W. G., Menomonie Falls.
 Donnell, J. E., Cuba City.
 Donnelly, F. J., Monches.
 Donohue, E. J., Antigo.
 Donohue, M. J., Antigo.
 Donohue, W. E., Manitowoc.
 Doolittle, J. C., Lancaster.
 Doolittle, S. W., Lancaster.
 Doughty, J. W., Delavan.
 Doughty, P. H., Juneau.
 Douglas, F. A., La Crosse.
 Downing, Dana F., East Orange, N. J.
 Doyle, J. H., Little Chute.
 Doyle, John N., Wausau.
 Drake, Frank L., Mendota.
 Drexel, A., Milwaukee.
 Dreyer, R. A., Wheeler.
 Dries, Jos., Milwaukee.
 Driessel, S. J., Barton.
 Drissen, W. H., Port Washington.
- Dudley, L. W., Statesan.
 Duer, G. R., Marinette.
 Dunn, E. A., Platteville.
 Durner, Urban J., Milwaukee.
 Dwight, C. G., Madison.
- Eagan, R. L., La Crosse.
 Eames, H. F., Egg Harbor.
 Edden, R. W., Janesville.
 Eastman, Verne E., Wausau.
 Echols, C. M., Milwaukee.
 Eck, Gust E., Lakemills.
 Edmonson, C. C., Waukesha.
 Edwards, A., Reedsburg.
 Edwards, A. C., Baraboo.
 Edwards, John B., Stevens Point.
 Edwards, W. A., Chicago, Ill.
 Egan, G. J., La Crosse.
 Egan, W. J., Milwaukee.
 Egland, G. R., Sturgeon Bay.
 Egloff, L. W., Pewaukee.
 Ehmer, J. W., Lomira.
 Eickelberg, F. A., Reeseville.
 Eidaul, L. W., La Crosse.
 Eisenberg, J. J., Milwaukee.
 Eisenberg, P. J., Milwaukee.
 Ekblad, V. E., Superior.
 Elfers, Jos. C., Sheboygan.
 Ellenson, E. P., Chippewa Falls.
 Elliott, E. S., Fox Lake.
 Elliott, J. T., Rhinelander.
 Ellis, W. E., Nilesville.
 Elmergreen, R., Milwaukee.
 Elsom, J. C., Madison.
 Elvis, E. B., Medford.
 Engsborg, Wm. A., Lakemills.
 Ennis, S. A. J., Shullsburg.
 Epley, O. H., New Richmond.
 Epperson, P. S., Milwaukee.
 Erdlitz, Frank J., Peshigo.
 Erdman, C. H., Stanley.
 Erickson, H. C., Viroqua.
 Ernst, G. R., Milwaukee.
 Evans, C. A., Milwaukee.
 Evans, Edw., La Crosse.
 Evans, E. P., Milwaukee.
 Evans, J. S., Madison.
 Evans, Owen, Bangor.
 Eversoll, N. J., Milwaukee.
- Faber, C. A., Milwaukee.
 Fairchild, R. J., Embarrass.
 Fairfield, W. E., Green Bay.
 Falk, V. S., Stoughton.
 Farnsworth, A. L., Baraboo.
 Farnsworth, Frank B., Janesville.
 Farr, J. F., Eau Claire.
 Farrell, A. M., Two Rivers.
 Farrell, T. E., Seneca.
 Faerberbach, Louis, Madison.
 Fazen, L. E., Racine.
 Fochter, F. J., Elkhart Lake.
 Federman, E. H., Montello.
 Federspiel, M. N., Milwaukee.
 Fellman, G. H., Milwaukee.
 Felter, Edw., Plymouth.
 Felon, Chas. D., Phillips.
 Festerling, E. G., Reedsville.
 Fidler, Chas., Milwaukee.
 Fiebiger, Geo. J., Waterloo.
 Fiedler, Otho A., Sheboygan.
 Field, L. M., Beloit.
 Fifield, Geo. W., Janesville.
 Finney, W. H., Clintonville.
 Fisber, R. F., Wausau.
 Fitzgerald, J. J., Eagle.
 Fitzgerald, Robt. E., Milwaukee.
 Fitzgibbon, W., Milwaukee.
 Fitzpatrick, Mary L., Milwaukee.
 Flanagan, G. J., Kaukauna.
 Flatley, M. A., Antigo.
 Fleek, J. L., Brodhead.
 Fleming, E. E., Wausau.
 Fleming, W. J., West Allis.
 Fletcher, E. A., Milwaukee.
 Fletcher, Wm., Salem.
 Flynn, L. H., Eau Claire.
 Flynn, R. E., La Crosse.
 Foat, J. S., Ripon.
 Foerster, H. R., Milwaukee.
 Foerster, O. H., Milwaukee.
 Fogo, H. M., Evansville.
 Foley, F. P., Dorehester.
 Foley, L. J., Milwaukee.
 Folsom, Wm. H., Fond du Lac.
 Forbush, Sanford W., Orfordville.
 Ford, W. B., Milwaukee.
 Forkin, Geo. E., Menasha.
 Fortier, C. A. H., Milwaukee.
 Fortner, W. H., Princeton.
 Fosse, B. O., Beloit.
 Foster, J. H. A., Cornell.
 Fowle, F. F., Wauwatosa.
 Fowle, I. H., Milwaukee.
 Fowler, J. H., Lancaster.
 Fox, Paul A., Beloit.
 Fox, Philip R., Jr., Madison.
 Fox, Philip, Sr., Madison.
- Francis, J. H., Kennan.
 Francois, S. J., New Glarus.
 Frank, J. H., Neillsville.
 Frank, John H., Milwaukee.
 Franklin, I., Milwaukee.
 Franklin, Samuel N., Milwaukee.
 Franzel, J. C., Fort Atkinson.
 Frawley, Ray M., Wausau.
 Frawley, W. J., Appleton.
 Freeman, Jos. M., Wausau.
 Frew, J. W., Milwaukee.
 Frew, F. H., Wausau.
 Frey, P. G., Milwaukee.
 Frick, Lewis, Athens.
 Friedrich, R. O., Milwaukee.
 Friend, L. J., Merrill.
 Froelich, J. A., Milwaukee.
 Froggatt, W. E. L., Cross Plains.
 Fueck, Ed. J., Williams Bay.
 Fultow, W. A., Burlington.
- Gaenslen, F. J., Milwaukee.
 Gallagher, E. E., La Crosse.
 Gallogly, M. J., Milwaukee.
 Galloway, A. D., Clayton.
 Ganser, W. J., Madison.
 Gates, A. J., Tigerton.
 Gates, Eugene, Two Rivers.
 Gates, J. F., Fall Creek.
 Gathmann, Henry, Milwaukee.
 Gaunt, Peter F., Milwaukee.
 Gavin, S. E., Fond du Lac.
 Gendron, A. E., River Falls.
 Genter, Arthur E., Sheboygan.
 Gehart, C. H., Kenosha.
 Geyer, C. W., Milwaukee.
 Giesen, C. W., Superior.
 Giesler, R. J., Racine.
 Gifford, H. B., Juda.
 Gilbert, Her. A., Madison.
 Gilchrist, Ralph T., Milwaukee.
 Gilles, A. S., Winnebago.
 Gillespie, W. W., Milwaukee.
 Gillette, Harry E., Pardeeville.
 Gillis, J. P., Antigo.
 Gilmer, L. T., Milwaukee.
 Glasier, M. B., Bloomington.
 Glaubitz, Bruno J., Sheboygan.
 Gleason, C. M., Manitowoc.
 Gnagi, W. B., Monroe.
 Goddard, J. B., Eau Claire.
 Godfrey, Jos., Lancaster.
 Godfrey, Rush, Lancaster.
 Goetsch, O. P., Hustisford.
 Goggins, G. F., Green Bay.
 Goggins, J. W., Chilton.
 Goggins, R. J., Oconto Falls.
 Golden, C. H., Wonewoc.
 Golley, F. B., Milwaukee.
 Goodfellow, J. R., Superior.
 Gordon, John S., Milwaukee.
 Gorst, Chas., Madison.
 Gosin, F. J., Green Bay.
 Gramling, Elmer H., Milwaukee.
 Gramling, H. J., Milwaukee.
 Gramling, J. J., Milwaukee.
 Graner, L. H., Coleman.
 Grannis, I. V., Menomonie.
 Gratiot, C. C., Shullsburg.
 Gratiot, Mary, Shullsburg.
 Graves, J. P., New Iolstein.
 Graves, L. S., Mineral Point.
 Gray, A. W., Milwaukee.
 Gray, R. H., La Crosse.
 Gray, W. K., Milwaukee.
 Greeley, H. P., Madison.
 Green, M. K., Mendota.
 Green, Wm. A., Wausau.
 Greenberg, H., Milwaukee.
 Greenthal, R. M., Milwaukee.
 Greenwood, S. D., Neenah.
 Gregory, A. T., Mauston.
 Gregory, D. H., West DePere.
 Gregory, Frank, Valders.
 Gregory, J. H., Ashland.
 Gregory, W. W., Stevens Point.
 Grigsby, R. O., Kenosha.
 Grinde, G. A., Cumberland.
 Griswold, C. M., Clintonville.
 Griswold, F. L., Mazomanie.
 Griswold, G. W., Alma Center.
 Grob, A. R. F., Milwaukee.
 Grosskopf, E. C., Milwaukee.
 Grotjan, Wm. F., Milwaukee.
 Ground, Wm. E., Superior.
 Grove, Wm. E., Milwaukee.
 Groves, R. J., Lodi.
 Gudex, V. A., Eau Claire.
 Guilfoyle, John P., Evansville.
 Gunderson, S. B., La Crosse.
 Gunderson, A., La Crosse.
 Gunderson, C. A. S., Deerfield.
 Gunderson, G., La Crosse.
 Gunther, Emil, Sheboygan.
 Gunther, Otto, Sheboygan.
 Gunther, T. J., Sheboygan.
 Gunther, Wm. H., Sheboygan.
 Gutseh, Otto J., Sheboygan.

- Guntman, Paul, Cato.
 Gupp, J. E., Milwaukee.
 Guyton, E. A., Eau Claire.
- Iabegger, C. J., Watertown.
 Iakoff, J. H., Milwaukee.
 Hadley, D. A., Oconomowoc.
 Haessler, F. H., Milwaukee.
 Hagerman, F. H., Milwaukee.
 Iagerup, T. A., Dodgeville.
 Iake, Cecil B., Milwaukee.
 Hall, H. H., Webster.
 Hall, R. M., Milwaukee.
 Hall, S. S., Ripon.
 Halsey, R. C., Lake Geneva.
 Halsey, Wm. Howard, Milwaukee.
 Hambley, T. J., Hurley.
 Hamilton, D. B., Dodgeville.
 Hammond, A. W., Beaver Dam.
 Hammond, F. W., Manitowoc.
 Haney, F. C., Watertown.
 Hankwitz, P. G., Milwaukee.
 Hansen, John, Glenbulah.
 Hansen, Roy T., Wauwatosa.
 Hanson, John W., Milwaukee.
 Hanson, L. E., Galesville.
 Hanson, W. C., Racine.
 Hardgrove, J. H., Eden.
 Hardy, C. F., Milwaukee.
 Hargarten, L. J., Milwaukee.
 Harkins, J. P., Beaver Dam.
 Harlow, G. A., Milwaukee.
 Harper, C. A., Madison.
 Harper, Carl S., Madison.
 Harrington, T. L., Milwaukee.
 Harris, Chas. F., Bayfield.
 Harris, F. M., Green Bay.
 Harrison, Geo. W., Ashland.
 Harter, A. F., Wausau.
 Hartman, R. C., Janesville.
 Harvey, J. R., Footville.
 Harvie, W. D., Fond du Lac.
 Hastings, J. F., Kenosha.
 Hatleberg, C. N., Chippewa Falls.
 Hathaway, G. J., Chetek.
 Haubrick, H. J., Oshkosh.
 Hansberry, J. S., Wauwoc.
 Haushalter, H. P., Milwaukee.
 Hausherr, Wm. V., Florence.
 Hansmann, N. E., Kewaskum.
 Haven, W. S., Racine.
 Havens, Fred Z., Wauwoc.
 Hawkins, T. R., Cameron.
 Hayes, D. J., Milwaukee.
 Hayes, E. P., Eau Claire.
 Hayes, E. S., Eau Claire.
 Hayman, C. S., Boscobel.
 Hayward, J. C., Marshfield.
 Hayman, L. H., Pasadena, Calif.
 Hecker, Wm., Beloit.
 Heck, Harry J., Milwaukee.
 Heffron, James J., Milwaukee.
 Hefty, C. A., New Glarus.
 Hefty, Paul L., New Glarus.
 Hegner, G. T., Appleton.
 Heiden, H., Sheboygan.
 Heidner, A. H., West Bend.
 Heising, A. F., Menomonie.
 Heldt, Thos. J., Detroit, Mich.
 Helgeson, E. J., Evansville.
 Helm, Arthur C., Beloit.
 Helm, Harold M., Beloit.
 Helms, L. O., Monticello.
 Helz, J. W., Fond du Lac.
 Hemmingsen, T. C., Racine.
 Henbest, G. M., Beloit.
 Henderson, M. L., Milwaukee.
 Hendrickson, H., Green Bay.
 Henes, Edwin Jr., Milwaukee.
 Henika, G. W., Madison.
 Henke, W. A., La Crosse.
 Henken, Jacob F., Racine.
 Hennev, C. W., Portage.
 Henriksen, J. A., Larsen.
 Heraty, J. A., Milwaukee.
 Heraty, J. E., La Crosse.
 Herbert, R. H., La Crosse.
 Herner, W. L., Milwaukee.
 Herrick, Edward L., Kenosha.
 Herron, A. L., Milwaukee.
 Hertzman, C. O., Ashland.
 Heuson, W. J., Niagara.
 Hicks, L. N., Burlington.
 Hidershede, G. N., Arcadia.
 Higgins, E. G., Melrose.
 Higgins, S. G., Milwaukee.
 Hildebrand, G. J., Sheboygan.
 Hilger, Wm. F., Milwaukee.
 (Resigned Oct., 1923.)
 Hill, W. B., Milwaukee.
 Hilliard, H. G., Minong.
 Hineley, H. G., Merrill.
 Hines, L. L., Rockbridge.
 Hipke, G. A., Milwaukee.
 Hipke, Wm., Marshfield.
 Hirschboeck, J. G., Forestville.
 Hitz, H. B., Milwaukee.
 Hodges, F. L., Monroe.
- Hodgson, A. J., Waukesha.
 Hoermann, B. A., Milwaukee.
 Hoermann, R. B., Milwaukee.
 Hoesley, Henry F., Shullsburg.
 Hoffman, E. E., Sharon.
 Hoffman, Geo. H., Milwaukee.
 Hoffman, J. G., Hartford.
 Hoffman, Leo, Campbellsport.
 Hoffmier, L. A., Superior.
 Hogan, J. H., Racine.
 Hogan, J. M., Oshkosh.
 Hogue, G. I., Milwaukee.
 Holbrook, A. T., Milwaukee.
 Hollenbeck, N. W., Milwaukee.
 Holmes, Benj. H., Racine.
 Holtz, H. M., Beaver Dam.
 Holz, A. P., Seymour.
 Hood, A. J., Milwaukee.
 Hopkins, Minnie, Oconto.
 Horsewell, U. M., Wausaukee.
 Hosmer, M. S., Ashland.
 Hougren, Ed., Grand Rapids.
 Houck, Mary P., La Crosse.
 Hough, A. G., Madison.
 Howde, A. G., Redlands, Calif.
 Howard, T. G., Milwaukee.
 Howe, H. W., Sheboygan.
 Howell, E. C., Fenimore.
 Howison, N. L., Menomonie.
 Hoyer, A. A., Randolph.
 Hoyer, G. C., Appleton.
 Hoyer, George H., Beaver Dam.
 Hoyme, G., Eau Claire.
 Hubenthal, J. C., Belmont.
 Huber, Gale W., Minocqua.
 Hudek, D. F., Neshkoro.
 Huennekens, Jos. H., Milwaukee.
 Hughes, J. R., Dodgeville.
 Hugo, D. G., Oshkosh.
 Hull, Edw. S., Milton Junction.
 Hummel, W. J., Ablemans.
 Hunt, F. O., Fall River.
 Hurd, H. H., Chippewa Falls.
 Hurth, O. J., Cedarburg.
- Ide, Chas. E., Milwaukee.
 Ingersoll, R. S., Madison.
 Irvine, W., Manawa.
 Irwin, H. J., Baraboo.
 Ishmael, O. E., Mt. Horeb.
 Ison, G. W., Crandon.
 Iverson, M., Stoughton.
- Jackey, F. D., Thorp.
 Jackson, Arnold, Madison.
 Jackson, Edward, Denver, Colo.
 Jackson, F. A., Eldorado.
 Jackson, J. A., Mosinee.
 Jackson, J. A., Jr., Madison.
 Jackson, R. H., Madison.
 Jacobs, E. C., Durand.
 Jacobs, Simon A., Milwaukee.
 Jacobson, T. L., Delavan.
 James, A. W., Muscoda.
 Jamieson, Geo., Lone Rock.
 Jamieson, Raymond D., La Crosse.
 Janney, F. R., Waukesha.
 Jardue, E. W., Alma.
 Jeffers, Dean, West Salem.
 Jegli, H. A., Galesville.
 Jenner, A. G., Milwaukee.
 Jensen, A. B., Menasha.
 Jermain, H. F., Milwaukee.
 Jermain, L. F., Milwaukee.
 Jermain, Wm. M., Milwaukee.
 Jewell, Thos. M., Mindoro.
 Jobse, W. P., Milwaukee.
 Johnson, Arthur W., Milwaukee.
 Johnson, C. G., Milwaukee.
 Johnson, Fred, Eau Claire.
 Johnson, F. G., Iron River.
 Johnson, H. B., Tomah.
 Johnson, H. C., Bruce.
 Johnson, H. C., Madison.
 Johnson, James E., Holmen.
 Johnson, Laura M., Boston, Mass.
 Johnson, W. L., Janesville.
 Johnston, G. B., Abbottsford.
 Johnston, H. E., Oshkosh.
 Johnston, W. M., Johnson Creek.
 Johnstone, W. W., Racine.
 Jones, Asa N., Reedsburg.
 Jones, David T., Wausau.
 Jones, E. H., Weyanwega.
 Jones, G. S., Milwaukee.
 Jones, J. C., Spearman, Tex.
 Jones, M. L., Wausau.
 Jones, Richard W., Wausau.
 Jones, Susan, Racine.
 Jones, Walter J., La Crosse.
 Jorgensen, P. P. M., Kenosha.
 Juckem, Geo. J., Howards Grove.
 Judge Thos. A., Milwaukee.
 Jurgens, L. W., Milwaukee.
 Junck, John A., Sheboygan.
- Kahn, Joseph, Milwaukee.
 Kamm, Adolph X., Ashland.
- Kane, J. J., Prairie du Chien.
 Kappelmann, F. W., Milwaukee.
 Karnopp, G. L., Prairie du Sac.
 Kasten, H. E., Beloit.
 Kastner, A. L., Milwaukee.
 Katz, H. M., Cedarburg.
 Kaunheimer, G. J., Milwaukee.
 Kay, Harry M., Madison.
 Kaysen, Ralph, Milwaukee.
 Kearns, W. M., Wauwatosa.
 Keech, J. S., Racine.
 Keenan, Harry, Stoughton.
 Keenan, T. P., Lake Geneva.
 Keithley, J. A., Palmyra.
 Keithley, John W., Beloit.
 Keland, G. A., Madison.
 Keland, H. B., Racine.
 Keller, S. C., Sauk City.
 Kelley, F. L., Merrill.
 Kellogg, J. R., Portage.
 Kelly, D. M., Baraboo.
 Kelly, E. J., Milwaukee.
 Kelly, John, Cato.
 Kelly, W. W., Green Bay.
 Kellner, V. V., Maribel.
 Kemper, W. G., Manitowoc.
 Kennedy, Frank H., Iron Ridge.
 Keunedy, W. R., Milwaukee.
 Kenney, G. F., Milwaukee.
 Kenney, R. L., Mendota.
 Kersten, N. M., DePere.
 Kettelhut, E. J., Milwaukee.
 Keyes, Thos. B., Chicago, Ill.
 Kiefer, J. G., Milwaukee.
 Kiley, W. E., Milwaukee.
 King, C. E., Hudson.
 King, Jos. M., Milwaukee.
 King, Mollie, Eau Claire.
 Kings, J. S., Milwaukee.
 Kinne, Ed., Elkhorn.
 Kinsman, F. C., Eau Claire.
 Kirmse, A., Milwaukee.
 Kispert, R. W., Green Bay.
 Kissinger, C. A., Melrose.
 Kissling, A. C., Milwaukee.
 Klein, Jno. T., Milwaukee.
 Kleinboehl, J. W., Milwaukee.
 Kleinhaus, F. A., Milwaukee.
 Kleinschmidt, H. W., Oshkosh.
 Kliese, L. A., Milwaukee.
 Knapp, E. J., Rice Lake.
 Knauf, Arthur J., Sheboygan.
 Knauf, Fred P., Kiel.
 Knauf, G. Edmund, Sheboygan.
 Knauf, N. J., Chilton.
 Knowles, W. L. M., Spooner.
 Knox, C. S., Superior.
 Knox, E. S., Green Bay.
 Knutson, Oscar, Osseo.
 Koch, Benno F., Milwaukee.
 Koch, Herman C., Whitehall.
 Koch, Martin J., Milwaukee.
 Koch, V. W., Janesville.
 Koehler, A. G., Oshkosh.
 Koehler, J. P., Milwaukee.
 Koethals, F. J., Milwaukee.
 Kosanke, F. E., Watertown.
 Kovats, Fred C., Milwaukee.
 Kradwell, W. T., Wauwatosa.
 Krahn, A. J., Beaver Dam.
 Krahn, Geo. W., Oconto Falls.
 Kratsch, A. W., Milwaukee.
 Kraut, Elgie, Lancaster.
 Kremers, Alex., Milwaukee.
 Krentzer, A. G., Milwaukee.
 Kristjanson H. T., Milwaukee.
 Krohn, H. C., New Holstein.
 Krueger, Bernard, Cudahy.
 Krueger, W. F., Burlington.
 Kriz, G. H., Milwaukee.
 Krygiar, A. A., Milwaukee.
 Krzysko, F. L., Milwaukee.
 Kuhn, H. J., Milwaukee.
 Kulig, A. H., Turtle Lake.
 Kuny, Bartholomew, Baldwin.
 Kyes, S. M., Owen.
 Kyo, A. L., Superior.
 Kyo, J. C., Superior.
- La Breck, F. A., Eau Claire.
 Lademan, O. E., Milwaukee.
 Ladewig, A. W., Milwaukee.
 Ladewig, Harry, Haverden, Ariz.
 Ladwig, Walter A., Wausau.
 Laird, J. J., Black Creek.
 Lator, J. C., Sauk City.
 Lambeck, F. J., Milwaukee.
 Langenfeld, P. F., Theresa.
 Langjahr, A. R., Milwaukee.
 Langland, P., Milwaukee.
 Lansdowne, F. B., Kenosha.
 Larsen, G. A., Hayward.
 Larsen, L. A., Colfax.
 Lander, C. E., Viroqua.
 Lawler, C. F., Hilbert.
 Lawler, G. W., Sussex.
 Lawler, T. S., Milwaukee.

- Lawrence, G. H., Stevens Point.
Layton, O. M., Fond du Lac.
Leahy, J. D., Butternut.
Leaper, W. E., Green Bay.
Leasum, R. V., Oasco.
Le Cron, W. L., Milwaukee.
Lee, J. H., Madison.
Lee, M. A., Superior.
Leeson, Fred W., Beloit.
Lehnkering, C. F., Darlington.
Leicht, Philip, Lakemills.
Leitch, G. W., Milwaukee.
Leitzell, P. W., Benton.
Leland, Abram M., Whitewater.
Lemmel, J. T., Albany.
Lemmer, G. N., Spooner.
Lencfesty, J. P., DePere.
Leonard, C. W., Fond du Lac.
Lettenberger, Jos., Milwaukee.
Levitas, I. E., Green Bay.
Lewis, C. H., Milwaukee.
Lewis, Marion, Milwaukee.
Lid, T. A., Marinette.
Liefert, Wm. C., Milwaukee.
Lillie, O. R., Milwaukee.
Lindores, J. D., Stevens Point.
Lindsay, W. T., Madison.
Linger, Earl A., Oconto.
Linn, W. N., Oshkosh.
Lintleman, Fred R., Janesville.
Lippitt, S. Ifferman, Milwaukee.
Livingstone, A. H., Hudson.
Lobedan, E. T., Milwaukee.
Lochemes, W. T., Milwaukee.
Lockhart, C. W., Mellen.
Lockhart, J. W., Oshkosh.
Loevenhart, A. S., Madison.
Lohmiller, R. K., Superior.
Longley, J. R., Fond du Lac.
Loomis, Edw. A., Janesville.
Loope, T. E., Iola.
Looze, J. J., Wisconsin Rapids.
Lorenz, W. F., Madison.
Lotz, Oscar, Milwaukee.
Loughlin, D. M., Milwaukee.
Loughlin, T. F., Hartford.
Loughnan, A. J., Oconomowoc.
Ludden, Homer D., Mineral Point.
Lueck, G. W., La Crosse.
Luhman, F. S., Manitowoc.
Lumsden, Wm., Menomonie.
Lund, S. O., Cumberland.
Lundmark, L. M., Ladysmith.
Lyman, J. V. R., Eau Claire.
Lynch, D. W., West Bend.
Lynch, Geo. V., Oshkosh.
Lynch, H. M., Allenton.
- McCabe, Harry, Milwaukee.
McCabe, P. G., Fond du Lac.
McCallister, Geo. H., Avoca.
McCann, Edith, Milwaukee.
McCarey, A. J., Green Bay.
McCarthy, Geo. W., Kenosha.
McCarthy, H. C., Richland Center.
McCarty, E. O., Chippewa Falls.
McChesney, W. M., Edgerton.
McClusky, O. W., Kenosha.
McComb, Isaac N., Brillion.
McCorkle, S. C., Milwaukee.
McCoy, L. L., Seattle, Wash.
McCracken, J. O., Kenosha.
McCracken, R. W., Union Grove.
McCutcheon, W. R., Thorp.
McDonald, H. F., Hollandale.
McDougall, G. T., Fond du Lac.
McDowell, A. J., Soldiers Grove.
McEachern, W. A., Superior.
McGarty, M. A., La Crosse.
McGauhey, F. M., Fond du Lac.
McGill, P. G., Superior.
McGonigal, M., Loyal.
McGovern, J. J., Milwaukee.
McGovern, P. H., Milwaukee.
McGrath, Earle E., Appleton.
McGrath, Edw., Baraboo.
McGuinness H. S., Medford.
McGuire, Wm. H., Janesville.
McHugh, Francis T., Chippewa Falls.
McIndoe, T. B., Rhineland.
McIntosh, R. L., Madison.
McKinnon, G. E., Prentice.
McLaughlin H. J., Bloomington.
McMahon, Francis B., Milwaukee.
McMahon, Henry O., Milwaukee.
McMahon, J. P., Milwaukee.
McNary, John F., Milwaukee.
McNaughton, Walter T., Milwaukee.
McNicholas, L. T., Racine.
McRae, J. D., Chippewa Falls.
McRae, Mudroch, Milwaukee.
Maas, W. C., Rio.
MacArthur, D. S., La Crosse.
Macaulay, E. M., Wausau.
MacCollum, C. L. R., Manitowoc.
MacCormack, E. A., Callao S. America.
MacCormack, R. L., Whitehall.
MacDonald, Wm. H., Lake Geneva.
- MacGregor, S. A., Westfield.
MacKeechne, R. S., Hillsboro.
Mackoy, F. M., Milwaukee.
MacLachlan, W. G., McFarland.
MacLaren, J. B., Appleton.
MacMillan, Angus E., Stevens Point.
Madison, J. D., Milwaukee.
Maechtle, E. W., West Allis.
Maercklein, O. W., Milwaukee.
Maes, C. G., Kimberly.
Majerus, P. J., Ft. Atkinson.
Malloy, T. E., Randon Lake.
Malone, F. A., Waterford.
Malone, T. C., Milwaukee.
Malone, W. F., Milwaukee.
Marek, F. B., Racine.
Markson, S. M., Milwaukee.
Marquis, A. J., Wausaukee.
Marsh, Jas. M., Elkhorn.
Marss, Fred A., Stevens Point.
Marsden, T. H., Fennimore.
Marsh, Harold E., Madison.
Marshall, F. P., Fond du Lac.
Marshall, V. F., Appleton.
Martens, W. A., Milwaukee.
Martin, Hilmar G., Milwaukee.
Mason, C. H., Superior.
Mason, E. L., Eau Claire.
Mason, V. A., Marshfield.
Mast, Bernard William, La Crosse.
Matthews, J. B., Milwaukee.
Mauermaun, J. F., Monroe.
Maurer, A. A., La Crosse.
Maurer, H. C., Beloit.
May, J. V., Marinette.
Meachem, John G., Jr., Racine.
Meachem, John G., Sr., Racine.
Meacher, B. C., Portage.
Meade, Frank S., Madison.
Meany, J. E., Manitowoc.
Meany, S. G., East Troy.
Meggers, E. C., Elkader, Ia.
Mehigan, David D., Milwaukee.
Meiding, A. E., Milwaukee.
Meiklejohn, D. V., Fond du Lac.
McLaa, Wilbur G., Beloit.
Melster, W. H., Milwaukee.
Mensing, Edmund, Milwaukee.
Merrill, W. G., Grand Rapids.
Merten, Alfred N. E., Milwaukee.
Merten, Peter J., Milwaukee.
Mertens, H. G., Bayfield.
Metch, A. A., Milwaukee.
Messmer, Clemens, Milwaukee.
Meusel, Harry, Oshkosh.
Meyer, Edw. E., Manitowoc.
Meyers, J. M., Superior.
Meyst, Chas. H., Milwaukee.
Middleton, W. S., Madison.
Midelfart, H. C., Eau Claire.
Mieding, A. E., Milwaukee.
Mielke, E. F., Appleton.
Milbee, H. H., Marshfield.
Millard, Frank D., Milwaukee.
Miller, D. C., Marshfield.
Miller, E. A., Clintonville.
Miller, E. W., Milwaukee.
Miller, H. C., Whitewater.
Miller, Myron H., Orfordville.
Miller, Thos., Oconomowoc.
Miller, W. J., LaValle.
Miller, W. S., Madison.
Mills, N. P., Appleton.
Minahan, John J., DePere.
Minahan, J. R., Green Bay.
Minahan, P. R., Green Bay.
Minahan, R. E., Green Bay.
Mishoff, I. D., Milwaukee.
Mitchell, E. J., Brodhead.
Mitchell, F. W., Ogema.
Mitchell, R. E., Eau Claire.
Mitchell, R. S., Appleton.
Mitchell, S. R., Milwaukee.
Mock, F. C., Milwaukee.
Moe, H. B., Blanchardville.
Moeller, J., Milwaukee.
Mollinger, S. M., Milwaukee.
Monk, R. W., Neillsville.
Monroe, W. B., Monroe.
Montgomery, A., Milwaukee.
Montgomery, R. C., Madison.
Moore, G. E., Antigo.
Moore, L. A., Monroe.
Moore, W. N., Appleton.
Moreau, Felix, Luxemburgh.
Morgan, J. J., Durand.
Morgenroth, F. C., Milwaukee.
Morgenroth, H. W., Oshkosh.
Mork, Ole, Blair.
Morley, F. E., Viroqua.
Morris, E. K., Merrill.
Morris, R. C., Fort Atkinson.
Morris, Sarah I., Madison.
Morrison, Morris, Chicago, Ill.
Morrison, Wm. W., Edgerton.
Mortenson, O. N., Grand Rapids.
Morter, Clyde W., Milwaukee.
Morter, Ralph E., Milwaukee.
- Morton, H. H., Cobb.
Muckerheide, A. J., Milwaukee.
Mudroch, J. A., Columbus.
Mueller, Gilbert F. C., Milwaukee.
Mueller, W. E., Green Bay.
Mulsow, J. E., Milwaukee.
Mulvaney, F. M., Marion.
Munkwitz, F. H., Milwaukee.
Munn, Wayne A., Janesville.
Murphy, E. R., Antigo.
Murphy, Francis D., Milwaukee.
Murphy, S. W., Kenosha.
Murphy, W. J., Milwaukee.
Museus, H. B., Eau Claire.
Myers, C. E., North Freedom.
Myers, E. A., Superior.
Myers, I. A., Cottage Grove.
Myrick, A. L., De Sota.
- Nadeau, A. T., Marinette.
Nadeau, E. G., Green Bay.
Nason, W. G., Ripon.
Natvig, Gerhard A., Prairie Farm.
Nause, F. A., Sheboygan.
Nauth, Daniel F., Kiel.
Nedry, C. J., Chippewa Falls.
Nee, Frank, Spring Green.
Neff, E. E., Madison.
Neilson, C. W., Milwaukee.
Neis, F. P., Thorpe.
Nelson, A. L., Racine.
Nelson, A. N., Clear Lake.
Nelson, James D., Milwaukee.
Nelson, N. O., Madison.
Nelson, Oliver O., Arcadia.
Nelson, W. V., Milwaukee.
Newell, Frank, Burlington.
Newell, Geo. W., Burlington.
Newman, Robt., Chicago, Ill.
Newton, J. E., Hudson.
Nieely, W. E., Waukesha.
Nichols, Forest C., Wausau.
Nichols, R. M., Sheboygan Falls.
Nichols, W. T., Milwaukee.
Nichols, A. C., Watertown.
Nielsen, C. S., Withee.
Niland, P. J., Milwaukee.
Nixon, H. G. B., Hartland.
Nixon, R. T. A., Brookfield.
Noble, J. B., Waukesha.
Nobles, Byron O., Milwaukee.
Noer, Julius, Berkeley, Calif.
Noer, P. J., Wabeno.
Nolte, L. G., Milwaukee.
Notbohm, D. R., White Lake.
Notbohm, W. R., Dousman.
Nott, G. W., Racine.
Nowack, L. H., Watertown.
Noyes, G. B., Stone Lake.
Nuzum, Thos. W., Janesville.
Nuzum, W. F., Madison.
- O'Brien, H. N., Darien.
O'Brien, J. M., Oregon.
O'Connell, D. C., Milwaukee.
O'Connell, J., Watertown.
O'Connell, J. E., Milwaukee.
O'Connor, W. F., Ladysmith.
O'Leary, T. J., Superior.
O'Leary, T. J., East Troy.
O'Neil, Orville, Ripon.
Oakland, H. G., Milwaukee.
Oatway, W. H., Waukesha.
Oberembt, B., Milwaukee.
Ogden, A. W., Joliet, Ill.
Ogden, H. V., Milwaukee.
Oshwaldt, H. F., Oconto Falls.
Oliver, T. J., Green Bay.
Olunsted, A. O., Green Bay.
Olson, A. L., Stoughton.
Olson, Chrsten, Racine.
Olson, E. A., Osseo.
Olson, Russell E., Milwaukee.
Orsted, Nils, Stoughton.
Orchard, H. J., Superior.
Orton, Susanne, Darlington.
Ott, H. A., Dale.
Ouellette, C. J., Oconto.
Overbaugh, J. H., Hartland.
Overton, O. V., Janesville.
Ovitz, E. G., Laona.
Owens, Wm. H., Milwaukee.
Ozanne, I. E., Neenah.
Ozanne, J. T., Oshkosh.
- Packard, C. D., Rhineland.
Palm, C. A., Colony, Kans.
Palmer, C. W., Cassville.
Palmer, J. A., Arcadia.
Palmer, Wm. H., Janesville.
Palt, Joseph, Kenosha.
Panetti, E. J., Milwaukee.
Pantetti, P. A., Iustisford.
Parke Geo., Viola.
Parker, Albert S., Clinton.
Parker, T. G., Union Grove.
Partridge, C. D., Shorewood.
Partridge, O. F., Mattoon.
Paschen, James G., Milwaukee.

- Patek, A. J., Milwaukee.
 Payne, A. L., Eau Claire.
 Pearce, W. J., Dodgeville.
 Pearson, L. M., Tomahawk.
 Pease, W. A., Jr., Rio.
 Peck, W. W., Darlington.
 Pederson, A. M., Scandinavia.
 Peehn, F. G., Corliss.
 Pegram, James W., Milwaukee.
 Pelton, L. H., Waupaca.
 Pember, A. H., Janesville.
 Pember, John F., Janesville.
 Perrin, G. H., Menomonee Falls.
 Perrin, H. E., Star Prairie.
 Perry, Gentz, Kenosha.
 Peters, H. A., Oconomowoc.
 Peterson, C. F., Independence.
 Peterson, E. F., Wauwatosa.
 Peterson, G. E., Waukesha.
 Peterson, R. O., Racine.
 Petzke, E. A., Hixton.
 Phaneuf, S. J., Somerset.
 Pfeffer, E. N., Milwaukee.
 Pfeifer, F. J., New London.
 Pfeifer, H. A., Jackson.
 Pfeil, R. C., Milwaukee.
 Pfister, Franz, Milwaukee.
 Pfisterer, Frank W., Markesau.
 Phalen, C. S., Sparta.
 Phelps, E. J., Elderon.
 Philips, T. C., Milwaukee.
 Pickering, C. R., Muscoda.
 Pickett, S. L., Bayfield.
 Pierson, P. R., Readstown.
 Pinkerton, W. T., Prairie du Chien.
 Pitz, M. N., Neenah.
 Plahner, D. S., Milwaukee.
 Pleyte, A. A., Milwaukee.
 Plumlee, R. S., Brooklyn.
 Podlasky, H. B., Milwaukee.
 Pomainville, Frank, Wisconsin Rapids.
 Pomainville, George, Nekeosa.
 Pope, F. J., Racine.
 Pope, F. W., Racine.
 Poser, E. M., Columbus.
 Post, C. C., Barron.
 Potter, J. Y., New London.
 Potter, L. A., Superior.
 Potter, R. P., Marshfield.
 Powell, J. J., Galesville.
 Powers, Fred H., Beaver Dam.
 Powers, H. W., Milwaukee.
 Powers, J. W., Milwaukee.
 Pratt, Geo. N., Appleton.
 Pratt, Maud, Mendota.
 Prince, L. H., Waukesha.
 Pritchard, J. F., Manitowoc.
 Proctor, T. C., Sturgeon Bay.
 Prouty, W. A., Burlington.
 Puestow, Karver L., Madison.
 Pugh, G. A., Kenosha.
 Pullen, A. J., N. Fond du Lac.
 Puls, A. J., Milwaukee.
 Purcell, H. E., Madison.
 Purtell, E. J., Milwaukee.
 Purtell, J. A., Milwaukee.
 Quade, E. B., Wausau.
 Quam, Jacob, Deerfield.
 Quick, Edward, Milwaukee.
 Quinn, J. F., Milwaukee.
 Quinn, R. B., Darlington.
 Raasock, Halfdan, Nelsonville.
 Radloff, A. C., Plymouth.
 Ragan, W. F., Milwaukee.
 Ragan, W. J., Shawano.
 Randall, M. W., Blue River.
 Rasmussen, Hans, Milwaukee.
 Rath, R. R., Granton.
 Rathert, E. T., Chilton.
 Ravn, E. O., Merrill.
 Ravn, Michael, Merrill.
 Raymond, R. G., Brownsville.
 Reagles, Robt., Arlington.
 Reay, G. R., La Crosse.
 Rector, A. E., Appleton.
 Redelings, T. J., Marinette.
 Reeve, J. S., Appleton.
 Regan, E. D., Milwaukee.
 Rehling, C. E., Fremont.
 Rehorst, J. J., Fond du Lac.
 Reich, W. F., Milwaukee.
 Reichert, J. E., West Bend.
 Reineck, C., Appleton.
 Reineking, H., Milwaukee.
 Reinert, E. N., Cleveland.
 Reinhardt, J. Paul, Fountain City.
 Reinhart, D. B., Merrill.
 Reinke, C. C., Milwaukee.
 Reis, G. W., Junction City.
 Reitz, Thos. F., Chicago, Ill.
 Remer, Wm. H., Chaschurg.
 Reynolds, J. C., Lake Geneva.
 Rheineck, A. F., Milwaukee.
 Rhode, H. P., Green Bay.
 Rice, D. S., Stevens Point.
 Rice, E. M., Milwaukee.
 Rice, Fern A., Delavan.
 Rice, R. H., Milwaukee.
 Richards, C. A., Rhineland.
 Richards, C. G., Kenosha.
 Richardson, W. C., Walworth.
 Ridgway, E. T., Elkhorn.
 Riegel, J. A., St. Croix Falls.
 Riehl, F. W., Milwaukee.
 Riley, E. A., Park Falls.
 Riley, P. E., Eau Claire.
 Ringo, H. F., Montreal.
 Riopelle, W. G., Long Beach, Calif.
 Riordan, J. F., Berlin.
 Ripley, G. H., Kenosha.
 Ripley, H. M., Kenosha.
 Ritchie, G. A., Appleton.
 Robb, J. J., Green Bay.
 Robbins, G. H., Madison.
 Roberts, D. W., Milwaukee.
 Roberts, J. A., Portage.
 Robinson, H. A., Kenosha.
 Robinson, J. F., Eau Claire.
 Roby, Harlow S., Milwaukee.
 Rock, J. N., Milwaukee.
 Rock, John Wm., Milwaukee.
 Rodecker, R. C., Holcombe.
 Roethke, R. W., Milwaukee.
 Roger, Ronald B., Neenah.
 Rogers, A. W., Milwaukee.
 Rogers, E. H., Stevens Point.
 Rogers, F. C., Oconomowoc.
 Rogers, Malcolm F., Milwaukee.
 Rogers, P. F., Milwaukee.
 Rohr, J. H., North Milwaukee.
 Rolfs, Theo. H., Milwaukee.
 Rollefson, C. J., Superior.
 Rood, J. F., Darien.
 Rose, Felix, Green Bay.
 Rose, H. L., Kenosha.
 Rose, J. F., Lena.
 Rosenberger, A. I., Milwaukee.
 Rosenberry, Abraham B., Wausau.
 Rosenheimer, A. M., Fox Lake.
 Rosholt, J. A., La Crosse.
 Ross, Geo. L., Kenosha.
 Ross, H. R. T., Ladysmith.
 Ross, J. M., Richland Center.
 Ross, P. M., Milwaukee.
 Roth, Walter C., Franksville.
 Rothman, L., Wittenberg.
 Rouse, H. A., Brownstown.
 Rowles, J. A., La Crosse.
 Rowley, A. G., Middleton.
 Ruckle, W. M., Grand Rapids.
 Rudolf, A. J., Milwaukee.
 Rueth, J. E., Milwaukee.
 Ruethin, K. A., Barron.
 Ruhland, Geo. C., Milwaukee.
 Ruka, E. A., Muscoda.
 Ruudell, Annie S., Beloit.
 Rupp, L. G., Sullivan.
 Ruschaupt, L. F., Milwaukee.
 Russell, F. G., Milwaukee.
 Russell, H. C., Milwaukee.
 Ryan, C. E., Appleton.
 Ryan, D. J., Neenah.
 Ryan, E., Sheboygan.
 Ryan, Edw. R., Milwaukee.
 Rydell, C. B., Superior.
 Salbreiter, W. P., Racine.
 Sandborn, M. J., Appleton.
 Sanders, Jos. B., Beaver Dam.
 Sarazin, F. C., Superior.
 Sargent, H. W., Wauwatosa.
 Sargent, James C., Milwaukee.
 Sarles, W. T., Sparta.
 Sarvela, H. L., Superior.
 Sattre, O. M., Rice Lake.
 Saunders, Geo., Superior.
 Saunders, O. W., Green Bay.
 Sauthoff, Aug., Madison.
 Sauthoff, Mary, Madison.
 Savage, G. F., Port Washington.
 Savage, Gerald T., Milwaukee.
 Sayle, R. G., Milwaukee.
 Sayles, L. W., Baraboo.
 Scantleton, J. M., Sparta.
 Schaefer, C. O., Racine.
 Schaper, H., Appleton.
 Scharpe, H. R., Fond du Lac.
 Schee, John, Westby.
 Scheid, M. M., Rosendale.
 Schein, J. E., Oshkosh.
 Schell, Ida L., Milwaukee.
 Schemmer, A. L., Colby.
 Scheurich, L. G., Tomah.
 Schiller, L., Milwaukee.
 Schlag, R. A., Prairie du Sac.
 Schlegel, Herman T., Wausau.
 Schloemer, A. J., Jackson.
 Schloemilch, A., Portage.
 Schlomovitz, B. H., Milwaukee.
 Schlossman B., Washburn.
 Schlueter, Urban A., Milwaukee.
 Schmeling, A. F., Columbus.
 Schmidt, E. S., Green Bay.
 Schmidt, F. M., Eagle.
 Schmidt, Hugo E., Wauwatosa.
 Schmidt, H. G. N., Milwaukee.
 Schmidt, J. A., Brillton.
 Schmitt, Felix, Milwaukee.
 Schmitt, Gus., Milwaukee.
 Schmitt, Louis, Milwaukee.
 Schmitt, Phil., Milwaukee.
 Schneider, Fred, New London.
 Schneider, John F., Oshkosh.
 Schneider, Joseph, Milwaukee.
 Schnell, W. H., Superior.
 Schoen, Chas., Milwaukee.
 Schoen, R. E., Beaver Dam.
 Scholter, E. W., Milwaukee.
 Scholz, G. M., Milwaukee.
 Scholz, Herbert F., Thiensville.
 Schoofs, J. J., Fond du Lac.
 Schoofs, O. P., New York City.
 Schowalter, Raymond, Milwaukee.
 Schram, C. F. N., Beloit.
 Schreiner, J. K., Kristiania, Norway.
 Schrockenstein, R. S., Marion.
 Schroeder, E. L., Shawano.
 Schroeder, H. F., Marinette.
 Schulberg, P. A., Durand.
 Schuldt, C. M., Platteville.
 Schumm, Herman C., Milwaukee.
 Schwalbach, C. G., Juneau.
 Schwartz, A. B., Milwaukee.
 Schwartz, B. J., Kenosha.
 Schwartz, Rollin, Chippewa Falls.
 Schwarz, S. G., Humbird.
 Schweitzer, G. J., Milwaukee.
 Scollard, J. T., Milwaukee.
 Scott, B. E., Berlin.
 Seaman, Gilbert E., Milwaukee.
 Searle, D. R., Superior.
 Sears, H. B., Madison.
 Seeger, Stanley J., Milwaukee.
 Seelman, J. J., Milwaukee.
 Seemann, W. O., Eau Claire.
 Seiberth, J., Lugerville.
 Seidel, J. G., Warrens.
 Senn, C. U., Ripon.
 Senn, F. C., Oshkosh.
 Senn, Geo., Green Bay.
 Senn, U., Milwaukee.
 Senn, W. G., Marshfield.
 Shafferzick, Chas., Spokane, Wash.
 Sharpe, H. A., Verona.
 Sharpe, J. J., Fond du Lac.
 Shastid, T. H., Superior.
 Shaw, A. O., Ashland.
 Shaw, B. W., Waunakee.
 Shaw, J. L., Manitowoc.
 Shaykett, F. E., Brandon.
 Shearer, A. T., Edgerton.
 Shearer, F. E., Edgerton.
 Shearer, H. A., Edgerton.
 Sheehy, T. J., Tomah.
 Sheldon, W. H., Madison.
 Shepherd, E. L., Brandon.
 Shepherd, W. A., Sevmour.
 Sherman, A., Winneago.
 Sherwood, M. W., Milwaukee.
 Shimek, A. J., Manitowoc.
 Shinnick, Thos. F., Beloit.
 Shockley, H. O., Darlington.
 Sholtes, C. A., Caledonia.
 Shutter, H. W., Milwaukee.
 Sickles, W. A., South Milwaukee.
 Sidler, A. C., Cudahy.
 Sieker, A. W., Plymouth.
 Siefert, Hugo P., Milwaukee.
 Sifton, H. A., Milwaukee.
 Simon, L. J., Fond du Lac.
 Simones, Victor Leo, La Crosse.
 Siscock, H. A., Superior.
 Sisk, Ira R., Madison.
 Sivertson, Martin, La Crosse.
 Sivyer, Allen W., Milwaukee.
 Skemp, Archie, La Crosse.
 Simons, Neal S., Whitehall.
 Sizer, E. M. A., Rio Hando, Tex.
 Skwor, Chas. J., Mishicot.
 Slaney, Andrew F., Milwaukee.
 Sleyster, Rock, Wauwatosa.
 Smedal, Ellef, La Crosse.
 Smiles, C. J., Ashland.
 Smiley, R. B., Stevens Point.
 Smith, A. D., Gilmanton.
 Smith, Chas. E., Beloit.
 Smith, D. S., La Crosse.
 Smith, Ernest V., Fond du Lac.
 Smith, G. M., Chippewa Falls.
 Smith, H. F., National Home.
 Smith, J. Clyde, Beloit.
 Smith, Jos. F., Wausau.
 Smith, J. W., Milwaukee.
 Smith, K. W., Madison.
 Smith, L. D., Boston, Mass.
 Smith, O. E., Mukwonago.
 Smith, R. C., Superior.
 Smith, Sidney M., Milwaukee.
 Smith, S. M. B., Wausau.
 Smith, T. D., Neenah.
 Smith, W. A., Boyd.
 Snodgrass, T. J., Janesville.

- Solberg, A. A., Coon Valley.
 Soles, F. A., Spencer.
 Somers, A. J., Chippewa Falls.
 Sommers, J. C., Madison.
 Sonnenburg, C. N., Sheboygan.
 Sonnenburg, W. S., Sheboygan Falls.
 Sorenson, S., Racine.
 Southwick, Frank A., Stevens Point.
 Spawn, Myron G., Beloit.
 Speck, J. T., Park Falls.
 Sperry, S. B., Milwaukee.
 Sperry, W. P., Phillips.
 Spiegelberg, E. H., Roseobel.
 Spitz, M. M., Milwaukee.
 Sproule, Ralph, Milwaukee.
 Squire, C. A., Sheboygan.
 Stack, G. F., Independence.
 Stack, S. S., Milwaukee.
 Staehle, Max, Manitowoc.
 Stamm, L. P., Milwaukee.
 Stang, H. M., Eau Claire.
 Stanley, Wm. S., Milwaukee.
 Stannard, Gilbert H., Sheboygan.
 Stark, R. M., Milwaukee.
 Starnes, Brand, New Lisbon.
 Steuck, A. F., Manitowoc.
 Stebbins, W. W., Madison.
 Steele, G. A., Oshkosh.
 Steele, G. M., Oshkosh.
 Steffen, L. A., Antigo.
 Stein, J. F., Oshkosh.
 Stemper, I. G., Milwaukee.
 Stephenson, W. L., Brodhead.
 Steves, B. J., Menomonie.
 Stewart, W. C., Kenosha.
 Stiennon, O. A., Green Bay.
 Stiles, V. W., Sparta.
 Stimpson, Geo. C., Pine River.
 Stirn, F. J., Dubuque, Ia.
 Stockinger, R. S., Milwaukee.
 Stockman, B. G., Woodville.
 Stoddard, C. H., Milwaukee.
 Stoelting, C. W., Oconto.
 Stoland, L., Eau Claire.
 Stolz, Charles E., Los Angeles, Calif.
 Stone, E. J., Milwaukee.
 Stovall, W. D., Madison.
 Stranberg, W. L., Milwaukee.
 Strass, H. W., Milwaukee.
 Stratton, F. A., Milwaukee.
 Strauss, F., Milwaukee.
 Strong, Russel J., Milwaukee.
 Stubenvoll, C. E., Shawano.
 Studley, F. C., Milwaukee.
 Stuesser, C. N., Oconomowoc.
 Stussey, Sylvia G., Madison.
 Suiter, F. C., La Crosse.
 Sullivan, A. G., Madison.
 Sullivan, Eugene S., Madison.
 Sullivan, John T., Milwaukee.
 Sullivan, Jos. D., Kenosha.
 Sure, J. H., Milwaukee.
 Surenson, M., Viroqua.
 Sutherland, Chas. H., Janesville.
 Sutherland, Fred E., Janesville.
 Suttle, H. J., Viroqua.
 Swanson, A. J., Frederic.
 Swarthout, E. C., La Crosse.
 Swarthout, Edith C., La Crosse.
 Sweemer, Wm., Milwaukee.
 Sydow, H. F. I., Waukesha.
 Sykes, H. D., Milwaukee.
 Sylvester, Homer, Madison.
 Szlapka, T. L., Milwaukee.
- Thienhaus, C. O., Milwaukee.
 Thill, D. P., Milwaukee.
 Thomas, J. S., Milwaukee.
 Thomas, Wm. O., Clinton.
 Thompson, Albert S., Mt. Horeb.
 Thompson, Bertha V., Oshkosh.
 Thompson, F. A., Milwaukee.
 Thompson, I. F., Milwaukee.
 Thompson, J. B., Wittenberg.
 Thompson, R. D., Baraboo.
 Thomson, W. J., Portage.
 Thorndike, Wm., Milwaukee.
 Thorne, James P., Janesville.
 Tibbits, U. J., Waukesha.
 Tillson, Edwin M., Milwaukee.
 Tiunm, E. W., Milwaukee.
 Tindall, P. G., Madison.
 Tisdale, L. C., Milwaukee.
 Titel, E. A., Greenleaf.
 Tkadle, Jos., Cazenovia.
 Tolan, T. L., Milwaukee.
 Tompach, Emil, Racine.
 Tomer, Thomas J., Kenosha.
 Toothaker, J. E., Algoma.
 Tormey, A. R., Madison.
 Tormey, T. W., Madison.
 Towne, W. H., Shiocton.
 Townsend, E. H., Sr., New Lisbon.
 Townsend, Elma J., Madison.
 Townsend, Eugene H., Jr., La Crosse.
 Tranckle, H. M., Bloomer.
 Treadwell, C. L., Faith, So. Dak.
 Treat, Chas. R., Sharon.
 Treglown, L. H., Livingston.
 Trentzsch, M. W., Highland.
 Trowbridge, Charles H., Viroqua.
 Trowbridge, P. T., Hayward.
 Trowbridge, William, Viroqua.
 Truitt, John W., Milwaukee.
 Tryon, F. E., Baraboo.
 Tucker, W. J., Ashland.
 Tupper, E. E., Eau Claire.
 Turgasen, F. E., Marshfield.
 Twohig, D. J., Fond du Lac.
 Twohig, H. E., Fond du Lac.
 Twohig, J. Elmer, Fond du Lac.
 Tyvand, J. C., Whitehall.
- Inkrich, C. R., Whitewater.
- Vachitinsky, Samuel, Milwaukee.
 Van Altena, L. A., Jr., Cedar Grove.
 Van Cleve, Mildred, Madison.
 Van de Erve, Walter, Milwaukee.
 Van Hengel, G. T. A., Waupun.
 Van Kirk, Frank W., Janesville.
 Van Schaick, R. E., Caroline.
 Van Slyke, Lloyd H., Knapp.
 Van Valzah, Robt., Madison.
 Van Westrienen, Art, Kenosha.
 Van Zanten, Wm., Sheboygan.
 Vedder, H. A., Marshfield.
 Vedder, J. B., Marshfield.
 Venning, J. R., Bagley.
 Ver Meulen, J. R., Waupun.
 Vogel, C. A., Elroy.
 Vogel, C. C., Elroy.
 Voight, O. P., Gillette.
 Voje, J. H., Oconomowoc.
 Von Buddenbrock, E., Racine.
 Van Neupert, Carl, Jr., Stevens Point.
 Van Neupert, Carl, Sr., Stevens Point.
 Voskuil, Anthony, Cedar Grove.
- Wade, F. S., New Richmond.
 Wadley, R. J., Belleville.
 Wagner, N. B., Racine.
 Wahl, C. M., Black Hawk.
 Wahl, H. S., Wausau.
 Waite, R. A., Milwaukee.
 Waite, W. S., Watertown.
 Wakefield, G. F., West Salem.
 Walsh, Frank C., Clintonville.
 Waldschmidt, J., Fond du Lac.
 Waldschmidt, Wm. J., Fond du Lac.
 Walker, F. W., St. Croix Falls.
 Walker, L. J., Merrilan.
 Wallis, J. H., Rice Lake.
 Walsh, C. C., Merrill.
 Walters, D. N., Fond du Lac.
 Walters, Harry G., Cedarburg.
 Was, Edw., Oostburg.
 Washburn, R. G., Milwaukee.
 Washburn, W. H., Milwaukee.
 Waters, Don, Grand Rapids.
 Waters, Hugh, Nekeosa.
 Watkins, W. C., Oconto.
- Waufl, Guy C., Janesville.
 Weaver, L. A., Iron Belt.
 Webb, E. P., Beaver Dam.
 Webb, W. B., Beaver Dam.
 Weber, A. J., Milwaukee.
 Weber, Carl J., Sheboygan.
 Weber, E. P., Chilton.
 Weber, F. T., Arcadia.
 Weber, H. F., Newburg.
 Webster, Fred E., Amherst.
 Wedge, A. H., Cambria.
 Wedge, W. F., Milwaukee.
 Wehle, W. J., West Bend.
 Weideman, Wm. G., Milwaukee.
 Weingart, W. F., Milwaukee.
 Weisgerber, A. L., Superior.
 Welch, Fred B., Janesville.
 Wenstrand, D. E., Milwaukee.
 Wenker, R. J., Milwaukee.
 Wenn, J. F., Milwaukee.
 Wentzell, W. L., Hollywood, Calif.
 Wenzel, J. V., Ashland.
 Werner, C. F., St. Cloud.
 Werner, H. C., Fond du Lac.
 Werner, Nels, Eau Claire.
 Werner, R. F., Eau Claire.
 Westgate, H. J., Rhinelander.
 Westhofen, R. C., Milwaukee.
 Wetzer, S. H., Milwaukee.
 Whalen, G. E., Milwaukee.
 Wheeler, W. P., Oshkosh.
 White, A. G., Culquoist, Scotland.
 White, W. E., Burlington.
 Whitehorn, E. E., Vesper.
 Whyte, W. F., Madison.
 Wiesender, A. J., Berlin.
 Wiger, H. C., Barron.
 Wilcox, A. G., Solon Springs.
 Wiley, F. S., Fond du Lac.
 Wilkinson, J. A., Hales Corners.
 Wilkinson, J. F., Oconomowoc.
 Wilkinson, M. R., Oconomowoc.
 Willard, C. J., Wauzeka.
 Willard, Lee M., Wausau.
 Williams, A. E., Boyceville.
 Williams, A. J., Waukesha.
 Williams, H. H., Sparta.
 Williams, S. E., Chippewa Falls.
 Williams, W. B., Argyle.
 Williams, W. E., Cambria.
 Williamson, G. H., Neenah.
 Wilson, C. J., Winchester.
 Windesheim, G., Kenosha.
 Wing, W. S., Oconomowoc.
 Winter, A. E., Tomah.
 Witte, Dexter H., Milwaukee.
 Witte, W. C. F., Milwaukee.
 Wittman, A. R., Merrill.
 Wocho, F. J., Kewaunee.
 Wocho, W. M., Kewaunee.
 Wolf, H. E., La Crosse.
 Wolfram, O. J., Lyons.
 Wolter, H. A., Green Bay.
 Wolters, Herbert F., Milwaukee.
 Wood, F. C., Waupaca.
 Woodhead, F. J., Waukesha.
 Woolf, Gerald K., Janesville.
 Worthing, Hugh O., Sheboygan.
 Wright, Charles A., Delavan.
 Wright, E. A., New Richmond.
 Wright, F. R., West Allis.
 Wright, J. C., Antigo.
- Yaffe, Aaron, Milwaukee.
 Yanke, A. E., Milwaukee.
 Yates, C. A., Kendall.
 Yates, J. L., Milwaukee.
 Youmans, I. E., Mukwonago.
 Young, Albert F., Wauwatosa.
 Young, Joseph H., Elkhorn.
 Young, M. L., Ashland.
 Young, Will, Fort Atkinson.
- Zaegel, R. L., Sheboygan.
 Zaun, G. F., Milwaukee.
 Zellmer, Carl E., Antigo.
 Ziegler, E. J., Oxford.
 Ziegler, J. E. B., Eau Claire.
 Zilisch, H. E., Milwaukee.
 Zilisch, Wm. E., Wausau.
 Zimmermann, C., Milwaukee.
 Zimmermann, W. C. L., Reedsburg.
 Zinns, A. J., Milwaukee.
 Zivnaska, J. F., Milwaukee.
 Zohlen, John P., Sheboygan.
 Zuercher, J. C., Milwaukee.
 Zwaska, A. B., Rockton, Ill.
 Zwickey, W. H., Superior.

AND HE WILL CHUCK IT.

"At a meeting of the Kiwanis club Tuesday noon, the silent boost, a prize given weekly to one of those at the luncheon, was a course of ten treat-

ments by a chiropractor and the prize was drawn by the speaker of the day, "Chuck" or C. R. Manley, M. D., a physician from India."

—La Crosse Tribune, Oct. 17.

ORIGINAL ARTICLES

PRESIDENT'S ADDRESS*

BY F. GREGORY CONNELL, M.D.

President State Medical Society of Wisconsin, 1923

OSHKOSH

I wish formally to acknowledge my sincere appreciation of the honor of presiding at this, your 77th Annual Meeting. I am quite unable to express myself suitably and it is probably just as well for were I gifted to that extent, but little time would remain for the less personal matters to be discussed under the title of President's address, which gives one considerable leeway in the choice of a subject.

It seems that one of the outstanding needs of the present time is the establishment of a better understanding between the medical profession and the laity.

Two lines of activity will materially aid in this matter.

(1) One is collective and concerns the problem of how best to carry on a campaign of publicity relative to the *facts* of health and disease: in opposition to the array of misinformation relative to these matters that is being broadcasted by commercial interests. This is such a large question that in the available time it can only be mentioned.

(2) The second is more individualistic and concerns as elementary a matter as: *the Doctor securing better results*; which calls for complete study and accurate diagnosis, in suitable cases, before the institution of treatment.

The practice of snap shot diagnoses and gun shot therapy, whether it be by medicines, vaccines, electricity or operations, has proven detrimental to all concerned and the consideration of a notorious example will, I trust, prove beneficial.

In 1911 at the Waukesha meeting of this society, I drew attention to the rather large percentage of unsatisfactory results following appendectomy for so-called "Chronic Appendicitis."

At that time I was advised that such statistics might be used against the medical profession.

This attitude, to me, seemed decidedly wrong. The medical profession is, or should be, interested only in facts and both the patient and the physi-

cian are entitled to know what might, reasonably, be expected to follow a method of treatment.

Consequently—in season and out—before this society and others¹ I have repeatedly called attention to these unsatisfactory results until it becomes more or less of a nuisance, and the rejoinder that, "Regardless of the result, the appendix is better out" was supposed to settle the question.

Recent literature, however, shows that there is a growing interest in, and dissatisfaction with, this question. For example R. C. Cabot, Boston (1919 "Physical Diagnosis") in the preface, expresses his growing scepticism as to the diagnosis of "Chronic Appendicitis." Hugh Cabot, Ann Arbor, has frequently spoken upon the subject. J. B. Deaver and I. S. Rodin (Arch. Surg. 6, 31-40, Jan., 1923) and C. L. Gibson (A. J. Med. Sci., 159, 65406663, 1920), J. A. Lichty (J. A. M. A., 79, p. 887, Sept. 9, 1922), H. L. Prince (N. Y. S. J. of Med., Feb., 1923) report series of remote results.

At the last meeting of the American Medical Association A. B. Cooke (J. A. M. A., 1181, No. 8, p. 627), W. E. Lower and T. E. Jones (J. A. M. A., 1181, No. 8, p. 629), R. C. Coffey (J. A. M. A., Vol. 81, No. 11, Sept. 15, 1923, p. 900), and Harry Blackford opened a discussion which included chronic appendicitis.

From recent British Literature one finds: Robt. Hutchinson, "The Chronic Abdomen" (B. M. J., 1923, 1, p. 677), (Editorial on above J. A. M. A.), James Berry, "Excessive Operation for Appendicitis" (J. A. M. A., vol. 79, No. 25, p. 2097), and C. H. Whiteford (Practitioner, Lond., Aug., 1922, 109, No. 2).

This evidence of widespread interest shows the importance of the subject.

Had the fact, that our results in such cases were often unsatisfactory, been emphasized to the profession, and in turn to the laity, for the last ten years, there would, in my opinion, at the present time, be much less dissatisfaction with, and distrust of, the medical profession and more benefit to the people at large. And we would not be meeting conditions today in which we are often on the defense when suggesting operative procedure in cases of *acute* appendicitis: the layman, of course, being unable to differentiate between a present acute case, and a past so-called chronic case, in which the result has been unsatisfactory.

I believe it to be a fact that the most frequent mistaken surgical diagnosis is that of "Chronic

*Read before the 77th Annual Meeting, Milwaukee, October third, 1923.

Appendicitis" and something should be done to decrease the frequency of this error.

Before the subject may be intelligently discussed it is, of course, imperative that chronic appendicitis be defined and its symptoms be described, which up to the present time, has not been done in an entirely satisfactory manner.

Volumes have been written upon acute appendicitis, while until very recently, practically nothing had been written on "Chronic Appendicitis," in spite of the fact that there are many operations for the latter to one of the former.

The glib manner in which the diagnosis is made and operation carried out, calls to mind Lower's terse statement that, "Pain in the right side and consent of the patient, are insufficient indications for the removal of the appendix."

The lack of definite information concerning this elusive condition is well shown by the fact that one is often unable to diagnose "Chronic Appendicitis" with any degree of certainty:

- (1) After a study of the symptomatology.
- (2) After a physical examination including X-ray, barium meals and enema.
- (3) After the direct inspection of the appendix at laparotomy, or
- (4) After the study of microscopic sections of the appendix.

A practical method of attempting to clear up this lack of knowledge would be by a review of remote results in cases in which appendectomy has been performed after diagnosis of "Chronic Appendicitis." The criterion for judging the correctness of the diagnosis being—relief of symptoms.

A comparison of the pre-operative and the post-operative histories shows, among other things, the following marked, and therefore important, distinction between the satisfactory and the unsatisfactory cases:

In those in which the results were satisfactory, the previous attacks were unquestionably acute appendicitis, and there was a lack of pain and tenderness in the right iliac fossa between attacks.

While on the other hand, in those in which the results were unsatisfactory, the previous attacks were such as to make the diagnosis of appendicitis questionable; and there was practically continuous pain, tenderness and discomfort in the right abdomen, between attacks.

Therefore it would seem that there is sufficient evidence to justify the conclusion that constant and practically continuous pain, tenderness or discomfort in the right iliac fossa make the diagnosis of chronic appendicitis questionable and calls for careful study. Chronic appendicitis with its unsatisfactory results is becoming a reproach to the profession. What are we to do about it? The answer is simple. Diagnose it.

The diagnosis is *automatically* followed by proper treatment, the removal of the appendix, and the result will be satisfactory. If after removal of the appendix, the symptoms persist or return, the diagnosis has been incorrect and the result consequently unsatisfactory.

What then is the cause, or what are the causes, of these symptoms that are not removed or relieved by appendectomy?

Experience extending over a number of years, with observation of many cases, before, during and after single, and often repeated, laparotomies, has failed to answer this question; but has not been entirely valueless, for the following possible causes have been eliminated:

1. The appendix; because of persistence or return of symptoms, after appendectomy.
2. Other definite intra or extra abdominal pathological entities have been excluded by repeated exploratory laparotomies or after careful clinical study and consultation.
3. "Adhesions" without name or with special names: by their presence without symptoms; by presence of the classical symptoms without "adhesions" and by persistence of the symptoms after the removal or correction of these "adhesions."
4. Ptosis, atony, dilatation or displacement of viscera, mal-fusion of visceral and parietal peritoneum, decrease of intra abdominal pressure, etc., etc., because of operations aiming at the correction of these various conditions have but rarely been followed by permanent relief of symptoms.

After exclusion of the above possible factors it would seem that the real cause must be searched for more centrally, for example:

In the intestinal wall itself,

Within the lumen,

In the retroperitoneal space,

The sympathetic or cerebro spinal nerves or ganglia, or

In abnormal function of the endocrine glands.

The intestinal wall itself, brings up the question of the various types of constipation and of colitis, which opens the subjects of gastro-intestinal tonus, peristalsis and sphincter control, none of which is perfectly understood.

The serosa may be inspected and palpated at laparotomy at which time it frequently shows a subserous blistering, thickening and congestion, which has failed to aid in clearing up the question.

The muscularis: The myenteric plexus of Auerbach, the neuro muscular tissue of Keith, has been given a great deal of attention, thanks to the recent work of Keith who has demonstrated nodes, similar to the pace maker in the heart, at the cardia, the pylorus, the ileocecal valve, transverse and descending colon. Abnormal function of these nodes is supposed to cause disturbances of the mechanical function of the gastro intestinal tract, with the resultant atony or spasticity of the wall, which may be visualized by barium meal and X-ray.

The mucosa: Inspection of the mouth may give one a clue as to the intestinal mucosa, as may likewise the gastric and stool analyses. Rectal and proctoscopic examination is essential in the study of these cases.

Within the Lumen: Food, bacteria, protozoa, call for attention.

The food: Except as a supposed cause of an "Acute indigestion" the food element has been largely disregarded, but Robt. McCarrison in his "Studies in Deficiency Disease" brings most conclusive arguments showing the influence of improper, deficient or ill balanced diet in chronic gastro intestinal invalidism. His unique experience in primitive India, demonstrates that appendicitis and abdominal gastro intestinal symptoms are absent in a race that exists upon unsophisticated food (grain, fruit, vegetables, milk, butter and goat meat only on festive days, with an active outdoor life and an abstinence from alcohol). Speaking of his experimental and clinical observations, McCarrison states, "These effects provide the pathological basis for attaching to food deficiencies a prominent etiological significance in regard to that great mass of ill-defined gastro-intestinal disorders and vague ill-health which throngs clinics at the present day, and concerning which we have hitherto known little or nothing."

The influence of such conditions as "Coeliac Disease" or "Mucous Disease" in infancy should be given due consideration. The possibility of food allergy or hypersensitiveness to certain types of disease is now well recognized.

Stool examination allows a study of the bacteria and protozoa.

Bacteria: Much attention has been given to the intestinal flora, staphylococci, streptococci, colon bacilli and bulgarian bacilli and of late implantation of the bacillus bifidus of acidophilus has been suggested as a therapeutic measure.

Protozoa: Despite the enormous amount of study that has been given to the vegetable parasites (bacteria) until the war and the introduction of warm stool examinations but very little attention was paid to the smaller animal intestinal parasites. The larger worms may be excluded in this discussion.

Of the unicellular organisms the amoeba and the flagellates have been demonstrated to be a cause of *acute* gastro intestinal disease.

The suggestion that these protozoan parasites might under certain conditions (for instance climatic changes from tropical or subtropical to temperate environment) be likewise a cause of *chronic* gastro intestinal disease seemed quite reasonable and worthy of investigation; consequently in 1919 I began a systematic research, a warm stool examination in all chronic abdominal cases, a majority of which had undergone previous appendectomy for chronic appendicitis.

In the last few years, I have personally conducted over 500 warm stool examinations. The results, reported in detail elsewhere, were interesting, but not conclusive.

Amoeba were encountered so often that it seemed that we had proven a relationship; but a control series in symptomless individuals showed nearly as high a percentage of positive findings. We were able to differentiate amoeba hystolitica and amoeba coli, but the clinical findings in the case rarely fitted the amoeba.

Flagellates: (Giardia, Lamblia, Trichomonas, Cercomonas) were frequently found in conjunction with chronic gastro intestinal symptoms.

Improvement often followed treatment attempting to rid the host of these parasites, but recurrence was the rule.

Kofoid and a few others consider their pathogenicity is established, while the majority of ob-

servers look upon these protozoan parasites as merely comensal.

Retroperitoneal space: The lower extremity of the root of the mesentery being situated in the right iliac fossa, at once suggests a possible relationship to this pain in the right side and a reason for its infrequency in the left side iliac fossa.

Lymph glands: (Tbc. or Hodgkins must of course be excluded) enlarged glands are frequently met with in the mesentery of the ileocecum, but repeated histologic study and examinations by various pathologists failed to reveal other than simple round cell infiltration.

Ganglia of the sympathetic nervous system, semilunar, superior and inferior mesenteric and other ganglia are present in this location, abnormalities of which may account for the tenderness and pain on pressure in the various regions.

Nerves: It has been said that this right sided pain is a "Perityphlitic Neuralgia" that occurs in neurotic subjects, but this still calls for satisfactory explanation as do other so-called "Hysterogenic spots."

The vagus which stimulates, and the sympathetic which inhibits, gastro intestinal function are probably balanced in health. But to say that imbalance between these antagonist nerves is the cause of chronic abdominal symptoms, calls in turn for a satisfactory explanation of the cause of this imbalance.

The theory of Eppinger and Hess in which individuals were divided into vagotonic and sympathicotonic, promised to simplify the problem, but these nerves are so intimately associated with the neuro muscular tissue of Auerbach's plexus that their actions at times vary, often overlap and are therefore very difficult to analyze. Personal attempts, years ago, to carry out this subdivision led to disappointment.

Finally, as in all obscure conditions since the recent studies of the thyroid, a pseudo explanation is attempted by attributing the symptoms to malfunction or dysfunction of the endocrine glands, but the cause of the abnormal function of the glands still remains obscure.

Each of the above enumerated possibilities have been given serious study, but the exact cause or definite combination of causative factors has not as yet been determined.

The object of this brief review of the subject is to emphasize the fact that "Chronic Appendicitis"

and pain in the right side are not synonymous. And that instead of being the simplest abdominal diseased condition it is one of the most complex; and is, therefore, worthy of study, serious study, *before and not after* the removal of the so-called "Chronic Appendix."

¹F. Gregory Connell, "Ileocecal Adhesions (Lane's Kink and Jackson's Membrane)" (S. G. & O. Nov, 1911, pages 485-491).

²F. Gregory Connell, "Etiology of Lane's Kink, Jackson's Membrane and Cecum Mobile" (S. G. & O. Apr. 1913, p. 353-359).

³F. Gregory Connell, "The Chronic Abdomen, A Review of Nineteen cases of Pericolitis and Ileal Kink in which the Appendix had been previously removed. (S. G. & O. Dec., 1914, p. 742-746.)

⁴F. Gregory Connell, "Pseudo-Appendicitis" (J. A. M. A. July 29, 1916, vol. LXVII, p. 355-337.)

⁵F. Gregory Connell, "The Acute Abdomen" (S. G. & O. June, 1919, p. 583-597).

⁶F. Gregory Connell, "Chronic Appendicitis So-called. (Medical Record Feb. 5, 1921.)

THE SURGERY OF SPASTIC PARALYSIS*

BY F. J. GAENSLEN, M.D.
MILWAUKEE

Paralysis is either flaccid with involvement of the lower motor neurone or spastic with involvement of the upper motor neurone. The surgical treatment of the flaccid type as applied to infantile paralysis is more frequently discussed and is more widely known than that of the spastic type. Indeed, many of the modern text books devote but a minimum of space to the subject of treatment of this condition. While the prognosis is not what one may term favorable in many cases and distinctly unfavorable in others, the outlook is not as hopeless as is generally believed. It is for this reason that the subject is brought before you today.

Cerebral spastic paralysis for clinical purposes may be classified as (1) congenital, (2) acquired intra partum, and (3) acquired post partum. The pathology varies with the etiology. In the congenital type there may be absence or under-development of entire convolutions or various degrees of pencephalitis. In Little's disease there is probably imperfect myelinization of the pyramidal tracts in children prematurely born. In those due to injury at birth the patho-

*Read before the Inter-State Assembly of the Tri-State District Medical Association, Des Moines, Iowa, Oct. 29, 30, 31 and Nov. 1.

logical end result is dependent upon brain contusion and intra cranial hemorrhage with thrombosis congestion and oedema or cyst formation involving destruction of the cortical cells in a considerable area. In some cases only slight irritative lesions result. Those acquired post partum result from the various forms of meningitis and encephalitis, the pathological end result being due to the associated inflammatory processes involving meninges and cortex.

The clinical picture will vary with the location, degree and extent of the cerebral involvement. The three components, muscular weakness, spasticity and incoordination are present in all possible combinations. The mentality is infrequently affected and here too impairment may be either slight or of very marked degree, amounting to actual idiocy. In most cases certain muscle groups are much more affected than others so that disturbances of muscle balance results. This becomes evident on attempts at walking when the weakness, incoordination and spasticity give rise to most awkward movements. When the spastic element predominates, the entire child may be rigid. In other cases the spasticity merely gives rise to a slight peculiarity in gait. The muscular weakness may be completely over-shadowed by the spasticity. The so-called scissor leg gait in which the adductors of the thighs are over-active is characteristic of one of the common types.

Normally all muscles are in a state of constant moderate tonus resulting in what may be called a normal muscle balance. When this tonus is unequal, disturbance of muscle balance results and awkwardness in gait or other movement follows. This normal tonus depends upon an intact reflex arc including both cerebral and spinal elements. Sensory stimuli reaching the cortex are transformed into efferent or motor impulses traveling down the upper motor neurones which connect with the anterior horn motor nerve cells in the spinal cord. It is assumed that in cerebral injuries associated with hemorrhage the function of the inhibitory fibres in the pyramidal tracts is interfered with so that their dampening or regulatory effect is lost. The excitation of the lower motor neurones is therefore excessive and results in over-action of the muscle groups involved.

With this brief sketch of the physiology and pathology we may pass on to a consideration of the remedial measures. Muscle training deserves first consideration. It has been well said that the

success of every method depends finally on muscle training but before muscle training can be applied to advantage, existing deformities must be corrected. Thus a long continued over-action of the thigh adductors will result in adduction contracture deformity and contribute to the scissor leg gait and no amount of training will overcome this. In fact, efforts at muscle training before correction of deformity may be counted as time wasted. The first thing to determine therefore, is the presence or absence of deformities due to muscle contractures and correction of these when they exist. Shortening of the adductors of the thighs and of the heel cords is very frequent while flexion contractures at the hips and knees are also quite common. Correction of these deformities is accomplished by simple tenotomy or myotomy or by gradual stretching. Having overcome these obstacles, the logical attack is on the reflex arc, the unregulated activity of which is responsible for the muscular spasticity and incoordination. Direct attack on the intra cranial lesions has been advocated by Sharpe & Farrell of New York. They published a series of sixty-five carefully selected cases subjected to bilateral decompression in all but four of which they found a supra-cortical lesion, most often a cyst. These cysts were punctured and the walls removed as far as possible. In about forty per cent more or less improvement resulted. The improvement they attributed to diminution of pressure on the cells of the surrounding cortex.

In cases of spastic paralysis associated with Jacksonian epilepsy Krause and others have recorded improvement in a few cases following an attack on the cortical lesions. On the whole, however, results of intra-cranial surgery have not been encouraging, at least in cases of long standing.

Foerster has attacked the reflex arc on the sensory side by laminectomy and section of the posterior nerve roots corresponding to the spastic muscle groups and while he has had excellent results in a comparatively large series of cases, this operation has never become popular on account of the relatively high mortality. In collective statistics the mortality has reached 15%. Many of the cases are very poor surgical risks.

In 1911 Stoffel added a new procedure to the surgery of spastic paralysis by neurectomy or resection of sufficient portions of the motor nerves to the over-acting muscles. Thus in case of adductor spasm resulting in scissor leg gait, the

obturator nerve supplying the adductor muscles is resected, resulting in sufficient weakening of this group to balance the adductors against the antagonistic abductors with immediate relief of spasm. This operation has been used for relief of spastic over-action of practically all groups in both the upper and lower extremities. In the lower extremities resection of the nerves for spastic flexion of the knee and for plantar flexion of the foot are often required. Sometimes, also, lateral deformities of the foot due to spasticity of pronators and supinators resulting in valgus and varus deformity respectively call for correction.

Where as in the case of the adductor muscles the isolated nerves can be attacked, the problem is somewhat simpler than in cases where the nerve to be resected forms a part of the larger nerve trunk from which it must be isolated before resection. Stoffel has done a real service by his painstaking studies on the internal anatomy of nerve trunks. He found that the individual peripheral nerves can be traced upward some distance into the common nerve trunks as separate strands which can be isolated readily from the main trunk, also that in the larger nerve trunks these different strands occupy more or less definite relations to one another. They are not gathered into a common cable to mingle indiscriminately. Thus in a cross section of the median nerve, the fibres to the pronator radii teres occupy an antero-lateral position, while the bundle for the finger flexors occupies a dorsal position in the trunk. This internal anatomy of the larger nerves has been worked out in great detail by Stoffel and while some doubt has been cast on the accuracy of his work by several investigators who have not been able to confirm his findings, it seems to me entirely logical that a more or less definite relation should exist.

While this definite arrangement of the individual nerve bundles in the larger trunk is of great value in the isolation of nerves to spastic groups, accurate determination by means of an electrode should be resorted to, in order that there may be no doubt as to the identity of the nerve tract to be resected. The suspected nerve tract is very carefully freed from the main trunk for a distance of several centimeters. The strand is then lifted away from the trunk and gently stimulated with a needle electrode, using the very weakest current which will still elicit a muscular contraction. By observation of the resulting muscle contraction,

the identity of the nerve bundle is determined beyond question. Depending upon the degree of spasticity a portion of the nerve bundle so isolated is resected a distance of about 5 centimeters, the thickness varying as a rule between one-half and two-thirds of the whole bundle.

In a number of cases in our own series both obturators were reached from a single transverse supra pubic skin incision following the technique described by Seelig with separate approach through the right and left rectus for the right and left obturator nerves. The latter are reached on the inside of the pelvis but extraperitoneally just before their entrance into the obturator foramen on each side. For resection of the nerves to the spastic ham string muscles the sciatic is reached in the mid thigh posteriorly. Spastic equinus is remedied by partial resection of nerves to the gastrocnemius and soleus group, the incision being made in the popliteal space and the respective nerves isolated. The same procedure has been used for over-action of the triceps in which the posterior cord of the brachial plexus is reached in the upper arm on the medial aspect while the over-acting pronator radii teres is dealt with through an incision on the median aspect of the arm exposing the median nerve. The technique for reaching other groups has been carefully worked out. This operation is used more and more and promises to maintain an important position in the surgical relief for spastic paralysis.

Much the same principle actuated Allison, who advised alcohol injections into the nerves to the spastic muscles and Jones who advised crushing of the nerves, the idea being to temporarily paralyze the nerve and during the paralytic period to train the antagonists more effectually to establish muscle balance for proper control of the joints.

While over-correction following resection of too large a portion of nerve is entirely possible, this seems to be a rare occurrence. Resection of an insufficient portion and incomplete correction has been recorded more often. Over-correction, of course, may result from simple tenotomy after injudicious lengthening of a tendon. For this reason an open tenoplasty in spastic paralysis is preferable to simple closed tenotomy to prevent extreme retraction of the cut ends of the tendon of the spastic muscle and non-union. The latter would result in deformity in the opposite direction. In a spastic equinus this is a very serious mishap, since a calcaneus deformity resulting in a

heel walk is much more disabling than the spastic equinus.

Aside from the above remedial measures, recourse to tendon transplantation is sometimes necessary. Thus the flexor carpi ulnaris and radialis may be transplanted to the dorsum of the wrist to overcome spastic wrist flexion and in the forearm the pronator radii teres may be converted into a supinator after the method of Tubby for spastic pronation of the forearm.

Contra-indications to any of these more radical procedures are marked athetosis, also spasticity so diffuse and inconstant that no particular group may be considered as dominating the picture, and marked mental impairment rendering the patient unable to cooperate in the tedious after-treatment or unable to utilize possible improvement in locomotion.

In this connection due allowance must be made for the rather remarkable mental improvement sometimes accompanying improvement in locomotion. It is just as though the child's mind formerly engrossed in combating ungovernable trunk and extremities is now freed from this burden and ready to receive and act more co-ordinately on the incoming sensory stimuli.

A rigid course of after-treatment is absolutely essential to success, no matter what surgical measure are employed and this point is emphasized by all as the crucial point in every method. This is best carried out under supervision of a trained personnel able to give the children sufficient time and to instruct the parents in the use of simple apparatus in the home. Walking bars, pendulum exercises, obstacle walking and a number of other devices and above all, infinite patience on the part of both physician and trainer are essential.

As to prophylaxis, much may be done by the obstetricians to prevent the development of these deplorable effects in the cases due to intra cranial hemorrhage in the new born. The need of careful pelvic measurements before delivery and substitution of Caesarian section for high forceps with their well known attendant dangers, should be emphasized. Sharpe urges careful examination of infants during the first days of life, especially in cases of difficult labor, for early signs of intra cranial hemorrhage, and prompt decompression when necessary. Sharpe, Cushing and others have operated successfully on a considerable number of such infants. In view of the distressing character

of the late results of hemorrhage, early operation holds out the greatest hope.

FURUNCULOSIS OF THE NOSE*

BY T. L. TOLAN, M.D.

MILWAUKEE

I appreciate that most of us are fully aware of the gravity and seriousness of the so-called trivial boil or small pimple of the vestibule of the nose and upper lip. However, the laity, as a rule, has no conception of the seriousness of the condition. Since the successful treatment depends upon early diagnosis and proper advice, I thought it might be of service to report two or three cases with the literature on the subject.

When only two textbooks on rhinology mention furunculosis and do not hint that there may be grave complications and when only a few textbooks on general surgery speak of the subject, it is not surprising that this matter is considered so lightly. It is unfortunate that these cases are not reported. So few of them get into literature and still one often hears of cases, and the larger clinics admit their frequency.

In order to understand the complications that might arise, one must be acquainted with the venous drainage from this region. The veins drain almost entirely into the internal jugular. The route, however, is not always the same. The internal jugular collects blood from the side of the head, neck and sinuses of the dura. The three pathways which interest us, here, are:

1st. The ophthalmics, superior and inferior. The superior begins anteriorly in the nasofrontal vein and anastomoses with the angular vein, which is the beginning of the anterior facial vein. It enters the orbit above the mediopalpebral ligament, runs backward in the upper portion of the orbit and through the superior orbital fissure to the cavernous sinus. The inferior ophthalmic arises from the veins of the lower lid and lachrymal sac and passes through the orbit to the cavernous sinus. While passing through the orbit it receives the anterior and posterior ethmoidal veins, anterior and posterior conjunctival veins, ciliary veins and sometimes the large central vein of the retina.

2nd. The common facial vein. It arises be-

*Read before the Milwaukee Academy of Medicine, Nov., 1923.

low the angle of the mandible in the carotid fossa, from union of the anterior and posterior facial veins, which collect blood from the face, including the nose and its vestibule.

3rd. There is one other avenue of drainage not to be overlooked, which is especially true in children. It is a small vessel, (or vessels), which passes through the foramen caecum to enter the superior, longitudinal sinus. This vessel anastomoses freely with the nasal veins. The lumen of the foramen caecum is relatively large in children, gradually becoming smaller, until in adult life it may not be present and, therefore, not transmit veins.

From the above it is evident that any process, which would cause a thrombosis of the veins in the region of the nose and upper lip, will present a picture which will vary with the direction of the extension, be it by the ophthalmic back to the cavernous sinus, or through the foramen caecum to be superior longitudinal sinus, or by the facial directly to the internal jugular, which is usually followed by metastasis to the lung and heart.

Etiology:

The staphylococcus is the common organism, although it may be a mixed infection. The predisposing causes are the same as for furuncles elsewhere on the skin, plus the pernicious habit of pulling out hair, picking and squeezing small pimples in this region.

Pathology:

The condition is primarily a folliculitis. It is sometimes associated with constitutional disturbances. In this connection it is not infrequent to have a high blood sugar content without glycosuria. If the condition progresses a cellulitis develops with subsequent localization. The venous channels are blocked, the outlets sealed by crusts and extension follows to the sinuses, meninges, or heart and lungs.

Symptoms and Signs:

It usually begins with a small, insignificant looking pimple, but very painful due to the density of the tissue in this region. It progresses to a small furuncle, the tissue becomes infiltrated and usually there is a chill and rise in temperature. The process has the consistency of hard dough. It may extend to the forehead and temples. Usually the eye on the affected side is closed.

From here on the symptoms and signs depend upon the avenue of extension. With thrombosis

of the ophthalmic veins there is usually swelling of the lids, which closes the eye; a purulent discharge from between the lids; a suppuration in the orbit; marked exophthalmus and edema of the retina. Then the neighboring nerves become involved, causing ptosis and dilatation of the pupil, loss of vision and fixing of the eyeball. Finally the picture of general sepsis supervenes—chills and sweats, temperature ranging from 97 to 105, pulse weak and thready.

A history of severe headache, septic temperature, chills, edema of the retina, exophthalmus, especially when it involves the other eye in a short time, is pathognomonic of thrombosis of the cavernous sinus.

If the thrombosis extends along the facial and metastasizes to the lungs, the picture will be that of a lung abscess or a pneumonia.

In like manner, if the meninges are attacked the clinical picture will be a meningitis.

Unfortunately, however, one condition follows shortly or accompanies another and often death overtakes the patient before one is able to make a complete diagnosis.

Postmortem:

The picture is quite typical.

1. There is a thrombosis of the veins which may extend to the cavernous sinus, the jugular, or both.

2. Inflammation of the meninges or an edema of the brain. Sometimes the postmortem will show the latter when a clinical diagnosis of meningitis had been made.

3. In nearly every case one finds some lung involvement despite the negative antemortem findings. In Hofmann's¹ series of 182 cases of furuncles of the face, with 15 deaths, only two cases could be diagnosed as having lung involvement antemortem, whereas postmortem all cases showed lung involvement, with a process varying from an edema to a frank pneumonia and abscess formation. In Wacker's² case no diagnosis of lung involvement was made and postmortem showed multiple lung abscesses.

Prognosis:

This depends upon the size of the furuncle or, more explicitly, on the stage of the process. Early diagnosis, proper advice and treatment, offer the only hope of avoiding complications.

Complications:

Cavernous sinus thrombosis, pneumonia, lung abscesses, erysipelas, septal abscess, acute accessory sinusitis and sloughing of the inferior, lateral cartilages of the nose.

Mortality:

1. Chisholm and Watkins³ report two fatal cases of cavernous sinus thrombosis.
2. D. Smith⁴ reports five fatalities from this condition.
3. von Wacker² reports one fatal case.
4. Riverdin collects forty-five fatalities from the literature on furunculosis of the face. Of these cases twenty-two were in the nose or on the upper lip.
5. Hofmann¹ reports 182 cases of furunculosis of the face, 111 of which were of the nose and upper lip, of which 15 died. Eight of these were cases in which the nose and upper lip were involved.

Treatment:

In combatting an infection that has started in any part of the body, we usually make use of two ways:

1st. We get at the seat of infection and try to stop the development.

2nd. We mobilize the general resistance by helping the body to discard the infection. This is brought about by building up the general resistance and helping elimination by vaccines, etc.

In a perusal of the literature on the treatment of this condition the use of leeches was first mentioned, as it was the accepted treatment in all localized infections. Later hot applications and hot fomentation were used. In 1880 Verneuil⁵ cauterized a case with carbolic, and Lindermann reported a case he incised and then used carbolic. Both cases recovered. In the same year Riedel⁶ reported a case in which radical extirpation was done and advised this, but states that it may be fatal. In 1881 Gluck⁸ tied off the facial in a case. In 1916 Hasemann⁷ did a radical extirpation and then tied off the jugular. Patient died.

Despite the mention of these cases the literature at that time seemed to favor the conservative treatment, Riedel⁶ saying that incision might be the first thing to call forth complications. Lenhartz, in his book "Septic Infections," advises poultices. Later Bier,⁸ getting his idea from Schon's book "Hyperemia as a Remedy," advocates conservative treatment by the passive hyperemia method that

now bears his name. This was a method of choice for a long time and is still used to advantage in conjunction with other methods. He used a two or three cm. yarn a little less than the circumference of the neck. This was placed around the neck and could be tightened to a degree necessary to flush the face. The cord was left on for from 20 to 22 hours and repeated if necessary. In describing the treatment he says that in two or three days the temperature would go down, the secretion become more abundant and healing result in from eight to ten days.

The consensus of opinion at present, among men in the special field, is against surgery in Furunculosis, at least against radical surgery. This, of course, does not exclude ligation when necessary or indicated. Hofmann,¹ in his series of 182 cases at the Surgical Clinic at the University of Berlin, for the past fifteen years, reports a mortality of 8.2%. Of the cases treated conservatively the mortality was 4%. This is about the story in other large clinics.

Appreciating that it is a surgical rule to open and drain abscesses or other accumulations of pus, men in the specialty feel that best results do not always follow strict adherence to this principle. When a patient presents himself with a small furuncle in the nose or on the upper lip, we first advise him about putting and keeping the part at rest. If there is crusting wet dressings are applied until it can be lifted off without difficulty. Then an antiseptic emollient is used freely to prevent further crusting, hot applications several hours a day and, in the interval, the area around the process is gently packed with a tampon saturated with 2% mercurochrome. If surgery is resorted to at all, the incision should be small and well within the barrier nature has set up around the process. No curetting should be done. If thrombosis of the veins extends to the ophthalmic or toward the jugular, with resulting symptoms, one should consider the advisability of ligating the anterior facial or the common facial. Thrombosis of the lateral sinus, following mastoid disease, is now successfully treated by tying off the jugular.

It is reasonable to expect that the cavernous sinus may overcome an infection if further supply is stopped. At least this is a simple procedure and may save the patient's life. Operation on the cavernous sinus itself has so far been unsuccessful, the mortality being practically 100%.

Summary:

1. We should consider furunculosis of the nose a serious condition from the start, for in spite of treatment or because of it, it may terminate fatally.

2. The choice of method is the conservative one—hot applications, vaseline to prevent crusting, Bier's passive hyperemia and, if surgery is resorted to, staying well within nature's barrier and avoiding frequent incisions.

3. Small furuncles should be treated with an emollient and bandages. Larger ones should be treated by putting the patient to bed, keeping the face quiet by avoiding talking, ordering liquid diet, preferably feeding through a tube.

4. It is the duty of the physician to impress upon the patient the seriousness of the condition and forbid scratching, squeezing or irritating in any manner the affected part.

Report of Three Cases:

Case No. 1. Seen in consultation. Furuncle beginning just at the edge of the vestibule, on the upper lip, right side. It had been squeezed by the patient. This was followed by swelling, later a discharge of pus into the nose, with development of an ethmoidal infection. Patient died within ten days from the onset, of meningitis.

Case No. 2. Two days before patient was seen she pulled a hair from the vestibule of the nose, left side. Following day she experienced pain and noticed some swelling. Examination showed left side of the nose swollen and red, especially in the region of the inferior, lateral cartilage. Inside of the nose there was a swelling in the roof of the vestibule. Nose was very tender. Right side of the nose was normal. Patient was put on hot compresses and emollient inside of the nose. For three days the swelling and tenderness increased, then the abscess opened into the vestibule, discharging thick pus. The external swelling receded. Two days later considerable swelling of the septum was noticed on the affected side. Following day the swelling fluctuated. The next day patient was removed to hospital and septal abscess opened under gas. Patient made an uneventful recovery.

Case No. 3. This case was known personally and is reported through the courtesy of Dr. B. F. Lounsbury, Chicago. R. C. Patient, when first seen by Dr. Lounsbury, was brought to Washington Boulevard Hospital, Chicago, with a history

of having had a small pimple in his nose, four or five days previously. This pimple enlarged to a small furuncle, when he consulted his family doctor, who opened it and squeezed some pus from it. The nose swelled and the next day the doctor opened it wider and squeezed it more thoroughly. On the following day the nose was swollen so much that the eyelid became puffed, and it was on this day he was transferred to the hospital, where hot saturated boric compresses were applied over the nose and eyes. Twenty-four hours later the eye was quite badly swollen and it was noticed the skin above the eyebrow became edematous. At this time a tentative diagnosis of erysipelas was made. The edema extended up into the scalp and cold compresses of magnesium sulphate were applied which seemed to make him more comfortable. The next morning the left parotid gland became swollen and the patient began to talk irrationally. That evening he complained of a pain in the chest and a friction rub was noted. The next morning a definite pneumonia developed. He sank rapidly and died the following day from acute pneumonia, pulmonary edema. The entire period of his illness covered only a week or eight days. No autopsy.

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 THE DEVELOPMENT OF INTESTINAL SURGERY.

Harry Hyland Kerr, Washington, D. C. (*Journal A. M. A.*, Aug. 25, 1923), concludes his review of the development of intestinal surgery as follows: The history of intestinal surgery is punctuated by the gradual establishment of definite surgical principles. Intestinal wounds heal, not by reciprocal healing of adjacent cut edges, but by adhesion of the inverted peritoneal coats. Each bite of the suture should be securely anchored in the fibrous coat, thus necessitating only one suture. All openings of the intestine, whether perforations or anastomosis, should be closed transversely by a continuous suture. Ideal aseptic intestinal resection is readily performed by the hasting stitch method. The method is applicable to all forms of anastomosis of viscera covered by peritoneum.

BLASTOMYCETIC DERMATITIS

A most valuable and interesting article on blastomycetic dermatitis, by Dr. Ralph M. Carter of Green Bay, appeared in the last issue of the WISCONSIN MEDICAL JOURNAL. The doctor is in doubt about its frequency in Wisconsin. Judging from personal experience, I would not consider this affliction of extremely rare occurrence. Rather do I believe that little mention has been made of it because the specific organism, causative of this skin infection, has usually not been recognized. In Buffalo County during former years, and in Pepin County more recently, cases have come into my care of skin lesions identical with the local lesions as described by Dr. Carter. In one case the axillary glands were perceptibly enlarged and tender. Cases of constitutional invasion I have not encountered, but feared it in one of the cases.

In all cases I seem to have been able to trace the infection to animals on the premises, with apparently related lesions. The last recent person infected had been engaged in skinning wild animals, some of which, he stated, were diseased. I am inclined to believe that many other physicians of the state have encountered similar cases without being aware of the specific organism causing it.

As to treatment, I would hesitate to consider potassium iodide a specific, rational elimination diet and general hygiene, together with local rest and treatment by means of one-time honored simple antiseptics, cautiously applied, in varying strength, in accordance with obtained reaction, varying also, as to moist or dry application in accordance with response attained. This with thorough, but gentle, evacuation of all pustules, will cure the cases within a few weeks without medicinal constitutional administration of special kind.

A few words as to treatment for disease in general: I believe it to be a frequent and grave mistake, against the best interests of the members of our profession, and to those treated by them, to advance with favor remedial agencies without previously giving them a very thorough and reliable test.

There are now on the market for our use thousands of remedies for disease, and yet we fail so often in obtaining results from them. It would be a most splendid advance if these many remedies could be sifted by the hands of a body of unbiased, learned and experienced physicians to separate

chaff from kernel and to retain only those proven to be reliable.

ALFRED BELITZ, M. D.,
Pepin, Wis.

ANNUAL MEETING IN AUGUST

At a meeting of the Program-Arrangement Committee for the 1924 Annual Meeting, the date for this year was set for August 20, 21, and 22. This date precedes by one week the State Fair at Milwaukee and the Brown County Fair at Green Bay.

Dr. J. R. Minahan, Vice-president of the State Society, is chairman of the Arrangement Committee, while Dr. W. E. Fairfield, Green Bay, heads the Program Committee. The other members of the central committee are Dr. A. O. Olmsted, Green Bay; Dr. R. C. Buchanan, Green Bay; and Dr. T. J. Oliver, Green Bay. Other members of the Program Committee include Dr. F. Gregory Connell, Oshkosh; Dr. T. J. Redelings, Marinette, and President Rock Sleyster of Wauwatosa.

The municipal pavilion of Bay View Beach will house the 1924 meeting. This building, facing the bay, will afford the best housing for an annual meeting that Wisconsin has ever secured. It may be reached in ten minutes by street car or by automobile over concrete roads. The building has two large adjoining halls, one of which will house the exhibits and the other will be used for the meeting proper. A restaurant is included in the building, while the Tourist Camp is but a few hundred feet distant.

Meetings of the Central Program-Arrangement Committee have already been held to formulate plans for the 1924 meeting, which they promise will be "the best yet."

BOARD APPOINTMENTS

Two appointments to the State Board of Medical Examiners were presented to the Board at its meeting at Madison January 8th to 10th, inclusive. Dr. Robert B. Cunningham, Cadott, was appointed January 3, 1924, for the term expiring July 1, 1925. Dr. Charles W. Rodecker, Holcombe, was reappointed for the term ending July 1, 1927.

Three appointments are now pending to succeed Dr. J. M. Dodd, Ashland; Dr. G. W. Ripley, Kenosha, and Dr. Spencer D. Beebe, Sparta. Their terms expired on July 1, 1923.

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"LET GEORGE DO IT."

Under this head we list each month definite offers of service available to our readers—the members of the State Medical Society of Wisconsin. Additions will be made from month to month but if you have a need not covered here your Secretary-Managing Editor will do his best to fill your needs. Address J. G. Crownhart, 558 Jefferson St., Milwaukee.

1. PACKAGE LIBRARIES are now available on Cancer, Schick Test, Vaccination, Periodical Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, and Control of Communicable Diseases. Address Package Library Dep't., Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. MEDICAL BOOKS will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. MAGAZINES—See price list sent by mail.

4. PHYSICIANS' EXCHANGE COLUMN is open to all members without charge.

5. NEW SCIENTIFIC PUBLICATIONS listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

6. A NEW SERVICE will be listed here in February.

EDITORIALS

NINETEEN TWENTY-FOUR

THE arrival of a new year suggests to any well ordered house, the taking of an inventory of the previous year's accomplishments, and the making of plans for the year to come. The past year has seen some radical departures in the policy and management of our organization—more sweeping and comprehensive than the combined work of many years past. These changes have resulted in the establishment of a state headquarters, the employment of a full time executive secretary with clerical help and the placing of the society on a firm business basis. Mr. George Crownhart, a graduate of the University of Wisconsin and a trained newspaper man, was employed by the council and assumed his duties as executive secretary and managing editor of the JOURNAL February 1, 1923. It was to be expected that it would take him at least a year to learn his work, become familiar with medical affairs, organize his office and acquire a vision of what could and should be accomplished.

Your president-elect, after a ten-year experience, feels Mr. Crownhart has met every expectation and has "made good" in every respect. His early adoption of the slogan "Let George do it" indicated his desire to be of service to the members and he has steadily found new ways and means of making the office more and more useful to the rank and file of the profession. Today we stand as one of four or five state societies on a firm

business basis, maintaining a service department the year round rather than a part-time office for the collection of dues and the preparation of an annual meeting.

It would be quite impossible in a short editorial to attempt to relate in any detail the activities of the secretary's office during the past year or to even mention all of them. Much of the secretary's time was taken up by the legislative session which required his being in Madison weeks at a time. Through his training and acquaintance with the press he has been able to institute a splendid press service on medical and public health subjects which will accomplish much in the campaign of lay education. But recently he has instituted weekly talks on these subjects broadcasted by radio to the people of Wisconsin. The JOURNAL has been enlarged and improved and the advertising has been materially increased, bringing it to a more nearly self-supporting basis. During the coming year new activities of the organization will be developed and explained in the pages of the JOURNAL.

When the present scheme of activities was planned it was thought their fulfillment would entail much greater expenditures and the dues were materially raised to care for them. A hasty audit at the end of the year discloses the fact that efficient and full-time management has probably been a saving rather than an expense to the society and that the office has paid its way. The expenses of the annual meeting (something over \$3,000) for the first time in the history of the society, were paid for by the exhibit and a profit of \$30.33. The end of the year found a deposit of nearly twelve thousand dollars in the general fund of the treasury as compared with twenty-five hundred a year ago. This would seem to indicate that we have saved practically the entire amount of the additional dues of five dollars per member and this, despite the fact we spent \$1,600 for legislative work and probably an equal amount in activities to be of service to our members. For the first time in history we are not "doing business on a shoestring." This year will see additional services established as well as a comprehensive program looking to a better educated laity. The end of 1924 should see us with fifteen thousand dollars in our treasury. The dues can then be reduced materially and we can feel the safety of a well financed organization with a reserve for emergencies on a rainy day.

The prospects for a new year have never been brighter. There has been an awakened interest in the organization and a newly developed loyalty in its members. The new facilities and machinery for accomplishment are but started and promise results we have never seen before. Membership in this splendid organization is becoming a privilege rather than a duty. It will return to you and to the people of Wisconsin a hundred-fold what you put into it. Let us give it in 1924 a new loyalty, a new enthusiasm—a support it has never known before—for it represents medicine at its best—your idealism and mine.

ROCK SLEYSER.

MADMEN AT LARGE

IT has been said that neurasthenia is the great American disease and it might be added that procrastination is the great American habit. This statement applies at least to one situation in this country. In spite of our knowledge that certain situations are fraught with great danger to the public, we are too prone to overlook the facts and postpone any action toward preventing and correcting such conditions until some terrible tragedy arouses us to activity. It is a sad and humiliating commentary on the intelligence of any community that it permits potential tragedy to stalk in its midst and acts only when this tragedy strikes. We take no means to render our theaters safe until an Iroquois theater fire awakens the public conscience. Half a hundred people are killed or injured in a railroad wreck before we insist that proper appliances be used to prevent such accidents.

There is another public menace greater than all others because so little understood and, even though partially recognized for so many years, little has been done to remedy it. Every community has one or more individuals designated as morons, defectives, epileptics, or so-called "harmless insane" moving about quite unrestricted. To begin with it is an error to speak of anyone belonging to one of these types as harmless. On the contrary they are all dangerous. Lincoln, Garfield, McKinley and Roosevelt were all shot down by "harmless cranks"—men long known to be peculiar and unable to adjust themselves to the community in which they lived. The press daily reports the criminal activities of these individuals and discloses a situation which must be studied and

corrected. If the editors of our daily papers could be made to realize the powerful suggestion the reports of these tragedies produce on many a poorly balanced mind to go and do likewise, reports of such occurrences would be made less gruesome and less in detail.

Primarily this situation exists because the layman and too many physicians are unable to discriminate between the least dangerous and those dangerous at all times. They cannot properly interpret the significance of acts and ideas of these mentally warped individuals.

Again the relatives through false pride hesitate or fear to act and the public at large is indifferent. Furthermore, we lack the proper facilities—farms and similar institutions—properly to segregate and care for these unfortunates.

Remedial measures lie along the lines of public enlightenment and a greater knowledge of these conditions on the part of the medical profession at large, proper places to segregate and control the irresponsible, a state society for mental hygiene, whose duty should be to have in every community individuals trained to seek out, recognize and bring under control those individuals dangerous to the public welfare. Our immigration laws should be corrected so that our country will not be the dumping ground of Europe's undesirables.

Just so long as the present condition obtains, children will be kidnapped and mistreated, women will be assaulted and all of us liable to a sudden and horrible death at the hands of one of these irresponsibles.

A. W. R.

A WORTHY ACCOMPLISHMENT

IN connection with the present expose of medical diploma mills it has been estimated by the press that 25,000 fake graduates were turned out to prey upon an unsuspecting public. We question this figure, but assuming that it is correct in the normal course of events Wisconsin would have been "entitled" to 875 of these fake graduates.

The fact is that Wisconsin did not have a single one of these men.

It is the most striking example of the accomplishments of a good medical practice act. But more than that, no board of medical examiners could have accomplished a more enviable record. It was their rules, their examinations, their strict vigilance that has kept Wisconsin clean. To the

members of that board and their executive officer, Dr. J. M. Dodd, of Ashland, we extend a word of appreciation from the medical profession of Wisconsin. Nothing that we can say can add to the honor of their record of service to the people of Wisconsin. It is a record that stands unsmirched, unquestioned and probably unsurpassed.

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REPORT OF A CASE OF AORTITIS COMPLICATING PULMONARY TUBERCULOSIS.

BY CHARLES E. IDE, M. D.,

MILWAUKEE.

Lesions of the heart and aorta complicating Pulmonary Tuberculosis in order of usual frequency are as follows: (Note A.) (1) Pulmonary Stenosis, usually congenital and likely to be fatal at about the age of puberty. (2) Mitral disease, insufficiency occurring more frequently than stenosis. (3) Aortic disease. The relative infrequency of cardiac complications can be judged by the report of Meisenberg, who found only 53 cases out of 4649 tuberculosis individuals, or 1.14%. Mitral insufficiency is the most frequent lesion found in adults. Aortic valve lesions complicated with hypertrophy of the left ventricle may be found at advanced age, when clinical tuberculosis become less frequent.

The practice of taking X-Ray plates of suspected pulmonary cases has called our attention to changes in the size, shape and position of the heart due to pathology in the lungs. This emphasizes the importance of careful lung examination before trying to outline cardiac dullness. A brief description of the normal cardiac silhouette is as follows: (Note 2.) On the right there are two arcs; the lower formed by the right auricle and the upper by the superior vena cava, or by the more dense *ascending aorta*. On the left there are sometimes four subdivisions. The uppermost arc is formed by the arch and *descending aorta*, the lowest arc by the left ventricle, the middle arc by the pulmonary artery between the lowest and middle arc, while the fourth is formed by the left auricular appendage. This last is not always visible.

When interpreting X-Ray plates, it is well to remember that the heart shadow does obscure a portion of the lung field. Its area is situated in the left lower quadrant of the chest. That portion of the posterior lung field obscured by the heart shadow is very important, as it may be the seat of pathological conditions which can be entirely hidden. The lower portion of the descending aorta is usually covered by the heart shadow.

REPORT OF CASE.

Patient male, colored, age 35. Family History, Negative. Previous History, diseases of childhood; no serious illness or accident until December, 1922. Present History, in December, 1922, a box fell and struck patient on the head and chest. He suffered from contused wound in the head at vertex and fracture of the second rib at junction of sternum on left. At the time of the accident, and subsequently, the findings other than those mentioned have not been consistent with the subjective symptoms. The complaints of the patient are as follows: weakness, shortness of breath, slight hemoptysis, occasional epistaxis, headache, pain behind the left ear and in the left side of the neck, pain over the sternum of the junction of the second rib, pain over the second and third vertebrae and in the interscapular region to the left from the third to the sixth dorsal spine. Patient's reflexes normal. Careful examination of the eye shows nothing abnormal. No signs indicative of central nervous system involvement. Ears were normal. Blood normal. Negative Wassermann reaction. Temperature normal. Systolic B. P. 130; Diastolic 110. After exercise of one hour, Systolic 120, Diastolic 98. It is to be noted that the pulse pressure before exertion is about 50 per cent of normal.

Chest examination made June 28, 1923. Chest fairly well developed, slight depressions above and below clavicles. Scapulae not unduly prominent. Scoliosis slightly to the left. Expansion slightly diminished on the left side. Palpation: trachea deviated to the right, vocal fremitus diminished on the left side, increased over upper half of right lung. Percussion: diminished resonance upper half of right lung; diminished resonance entire left lung except on area in the left interscapular region from the third to the sixth dorsal spine. This area was dull. Auscultation: breath sounds feeble over left lung, except area to the left of the spine from the third to the sixth dorsal spine. In this area there was bronchial breathing and an increase in voice conduction. Over the right upper lobe prolonged expiration, harsh breath sounds and slightly increased voice conduction. No rales. Diagnosis from the above physical findings: tuberculosis, pulmonary, chronic, right upper lobe, apparent quiescent. The findings in the left posterior area from the third to the sixth dorsal spine were diagnosed as a probable consolidation over the left bronchus.

The X-Ray plate gave evidence pointing to a marked fibrosis of the right upper lobe. Heart normal in size

and position. The most significant finding in the plate was the marked widening of the ascending, transverse and descending portion of the aorta. It was noted in the physical findings that there was a pathological condition in the left lung behind the heart shadow. The pressure of the transverse portion of the aorta might account for the trachea deviated to the right. The descending (Note A) portion of the aorta with pressure on the large veins, nerves and bronchus, together with the vertebrae would account for feeble breath sounds of the left lung by direct pressure. Also a passive congestion might be caused by pressure in the blood vessels with resulting feeble breath sounds. The pressure on vertebrae would account for pain in the region of the left ear, neck and the constant dyspnoea may have been a result of pressure on the nerves and blood vessels. The uniform dilatation of the aorta would suggest, as a cause, arterio-sclerosis or syphilis. The fact that the examination of the eye showed no sclerotic change in the walls of these vessels, the fact that there was low pulse pressure and no hypertrophy of the left ventricle and the fact that the dilatation was not confined to the transverse portion of the aorta would divert our attention from arterio-sclerosis. While the Wassermann was negative, still by process of elimination rather than by laboratory evidence, the cause would more likely be syphilitic, either congenital or acquired.

The subjective symptoms of the patient were dyspnoea, weakness, nervousness, slight cough and slight hemoptysis as well as epistaxis. Patient's temperature, pulse and respirations were within normal limits; sputum negative; no rales on expiration and cough. The slight hemoptysis could be accounted for by a passive congestion of the lung. Musser states that pressure of the dilated descending aorta may cause pressure on the vertebrae that may simulate Potts disease. He also states that symptoms of pressure in this location, namely, the descending portion of the aorta from the third to the sixth dorsal spine, may simulate phthisis very closely.

The significant findings in this case are the lowering of the blood pressure after exercise and the creeping up of the diastolic toward the systolic. The pulse pressure, 50 per cent of normal, is evidence of cardiac decompensation. The heart has been obliged to work under the handicap of a very much dilated and consequently less elastic aorta.

No heart murmurs were found on examination. An aortic regurgitation might be expected if dilatation has not been uniform and did not involve all portions of the aorta. Wm. D. Reid states that it is necessary, when murmurs occur, to have a certain difference in diameter between the dilatation and the narrowing (real or relative) which precedes this. He also emphasized the statement that a certain velocity of the stream is necessary. In this case, the uniform calibre of the blood vessel and cardiac weakness may account for the absence of murmurs. With a chain of physical signs and subjective symptoms, some of which are similar to an active pulmonary tuberculosis, the case presents an interesting problem in diagnosis.

PROGNOSIS.

With a reduction of the blood pressure and with pulse pressure at 50%, to me there seems more likelihood of development of active pulmonary tuberculosis than of approaching aneurism with rupture.

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UNIVERSITY OF WISCONSIN MEDICAL
 SOCIETY
 HEREDITY IN RELATION TO HUMAN
 CANCER
 BY H. GIDEON WELLS, M.D.
 CHICAGO

Doctor Wells introduced his subject by stating that all statistical efforts to determine a relationship between heredity and the incidence of cancer were fallacious from a number of causes. For example hospital statistics obviously erred in the varied intelligence of cases so questioned, in the inaccurate knowledge of causes of ancestral death and in the diagnosis of deep seated tumors, particularly. In the last relation, Dr. Wells pointed out that since the records bearing on this point were dependent on post mortem examinations, perfectly obvious errors arose from the fact that the surface tumors, not necessitating autopsy for diagnosis, were rather infrequently brought to such examination, so that the percentage of error in the diagnosis of cancer was obviously overstated. His figures in this relation were highly instructive.

In introducing the specific subject of cancer study, Dr. Wells stated that a cancer was a group of cells resembling other cells in body structures, but in growth overwhelming normal cells. Familial cancer is a well known occurrence. In other words cancer families have been known and reported frequently in the medical literature. In this case, again, deaths below the cancer age frequently invalidated statistics on this question, and many diseases killing young individuals tended to vitiate statistics on this question. That is to say the percentage of cancer deaths might be influenced by the death of individuals in cancer families before the period when cancer first made its presence felt. Since a high percentage of individuals over forty years of age develop neoplasms, chance might determine supposedly high incidence.

However, slides were shown demonstrating tumor in twin sisters, on the same spot in the left

breast. Polydactylism has been remarked in certain families, in one particular family occurring in all single children but in none of a series of twins. Glioma of the retina, an unusual tumor, has been remarked in ten out of sixteen children in one family. Von Recklinghausen's disease has been traced through several generations of certain families, as have also certain other unusual tumors. It has been concluded from clinical evidence that relatives of cancer patients are more likely to develop cancer than those of a non-cancerous family.

The experimental aspect of the question was stimulated by the independent discovery of the transplantability of mouse cancer by Jensen and sarcoma by Loeb. It must be thoroughly understood, however, that in both cases the host in each transplanted generation of cancerous tissue represented merely a living test tube, and frequently in transplanted tumors spontaneous retrogression was noted. The first constructive progress in this question arose from the observations of the development of epithelial cancer on the hands of workers in pitch and tar. This observation was applied, experimentally, through the repeated application of tar to rats or the ears of rabbits. All such treated animals developed, in time, tumors on the treated portions.

The animal kingdom has been supposed to be relatively free from tumor growths. Early death alone explained this infrequency. In all fowls or animals permitted to live to old age, such as the dog, parrot, etc., tumors are very common. The work of Miss Sly was quoted at this point to show that mice living under healthy conditions, protected from the usual death-dealing agencies, developed at an old age every type of tumor known to man. Certain differences in distribution have been noted in this respect—in man carcinoma of the stomach is more frequent than any other single tumor, whereas in the mouse only one has been determined to date. With this information the ability to follow many generations of this experimental animal (mouse) made it a most admirable choice for genetic study of the factor of heredity in cancer.

Mendelian laws of heredity have been applied without alteration to the strains under study, and Miss Sly with 10,000 to 12,000 mice living under best conditions began this study, the autopsy materials being handled by Dr. Wells. Forty-five thousand autopsies have been completed on various

strains under observation, but no evidences of contagion have been determined. Over thirty generations of certain strains have been followed without a single instance of cancer. There are other strains now under control in which the natural death (90% in 6 months) is cancer. It is apparent from this study that resistance to cancer is a simple dominant character, whereas susceptibility to cancer is a true recessive. Various combinations of cancer and non-cancer strains have been followed and the Mendelian laws obeyed without fail. In a masterly handling of materials and charts, Dr. Wells carried conviction to his audience on these points.

Dr. Wells made it clear that the tendency only was inherited—environment, reaction to injury, inability of the body structures in such reactions to halt the same at a given point, all were factors. Evidence was likewise introduced to prove that resistance to infection was a dominant characteristic, whereas susceptibility was a recessive. An interesting group of mice studied by a Dutch observer in Java proved this point. Several examples of sex-linked and of race heredity tendencies were discussed. Dr. Wells concluded his discussion by an appeal for universal post-mortems to eventually clear the question of human cancer.

COUNTY NURSES—RECAPITULATION

Further returns on the votes taken by county boards on the county nurse question show that at least 41 counties elected to retain or adopt the nurse system, while 13 are known to have voted against it. There are still a few counties which have not been heard from. In numerous others the nurse system has never been established and the question did not come up at the November meetings. The present data indicate that in the counties taking action last November the nurse system prevailed in the ratio of more than three to one. They do not include the counties which never have employed nurses and which took no action in November.

In addition to the counties listed in the December issue of the *JOURNAL*, Forest, Iron, Lincoln and Ozaukee counties favored the nurse, while Dodge, Langlade and Sawyer were added to the number voting against the plan.

Sawyer county was previously listed among the counties favoring the system. Upon the first vote of the county board, in November, the plan was rejected; upon a reconsideration it was approved, and upon the third vote it was rejected, and this decision prevailed.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

THE HEALTH ORGANIZATION OF THE LEAGUE OF NATIONS

BY PAUL F. CLARK*

Professor of Bacteriology, University of Wisconsin, Medical School

MADISON

Most people in this country think of the League of Nations simply as a political organization and all too many conceive it to be a quixotic effort to accomplish the impossible. The organization of the League of Nations consists of the Assembly, the Council and the Secretariat together with several other more loosely connected and largely autonomous bodies. The Assembly is legally and actually "The League" and is composed of representatives from each of the subscribing governments. It meets once a year. The Council, which is a small body of men representing the authority of the League when the Assembly is not in session, meets six times a year and is usually in session for a month at a time. Consequently it plays a very active part in the organization. The Secretariat of the League is a permanent body constantly at work attempting to carry out the plans of the Assembly and the Council. It now has a staff of considerable size made up of able and energetic men and women from many countries, including six or seven from the United States, in spite of the fact that our country is not a member. From this body emissaries go to all parts of the world to obtain information and to establish personal connections. The headquarters of the League is in the Palais des Nations, Geneva, beautifully situated in a small park, over-looking Lake Geneva and the gorgeous Mont Blanc chain in the distance. It is an impressive setting for this organization. The city itself which dates from before the Christian Era; the many international conferences that have been held there; the intimate association with those apostles of the freedom of conscience, John Calvin, John Knox and Voltaire; memories of Jean Jacques Rousseau, who was the

*Dr. Clark will write several articles on his trip to Europe this summer.

most influential writer before and after our revolution and was the inspiration of those who wrote the Constitution of the United States, and of those who directed the affairs of state in that period; thoughts of these come as one looks out of the window of the well-appointed building which, although it was built for a hotel, serves so admirably its present function. Whatever may be the outcome of this particular attempt to establish more amicable relations between countries and whatever we as individuals may think of the present plan, it is obviously important for us to keep in touch with the many activities of the League. Whether we realize it or not, the work of the League is affecting this country and the citizens of this country, and will continue to do so so long as we and the League remain on the same small planet together. For example, last spring a United States congressional committee was attempting to solve the perennial opium question. In their work they found it necessary to send representatives to Geneva to find out what the League has initiated in its attempts to handle this situation. Of course the representatives of the United States Government were very well received, but the fact remains that in carrying out their work they found it essential to go to the League as suppliants, not as representatives of a government playing a part in organizing the program. Again, our Federal Public Health Service has found it desirable to cooperate with the Health Organization of the League in order to be in a better position to prevent the admission of pestilential diseases through our ports. To be sure, Surgeon General Cumming attended the meetings of the Health Committee in Paris in "an advisory capacity" only and not in an official capacity.

I give merely these two instances of an apparently growing appreciation on the part of our official representatives that we need to avail ourselves of the committees and plans of the League by round-about methods, as long as the more direct routes are closed.

It is to the activities of the Health Organization of the League, with which our own Federal Public Health Service is to some degree cooperating, that I especially wish to direct attention.

During a visit to Geneva, last June, I keenly enjoyed studying the activities of the Health Division of the League, as well as some of the other non-political duties which it has assumed.

The Health Organization of the League has for

the past four years had a temporary form. Recently, however, during the meetings of the Fourth Assembly, in September, the plan of the organization proposed by a mixed committee representing the Office International d'Hygiène Publique and the League Health Committee was approved. The plan will prevent over-lapping in the activities of these two bodies and the consequent waste of effort. "The scheme stipulates that the Committee of the Office International d'Hygiène Publique, which meets twice a year and is composed of government representatives, should be used as the Advisory Council of the League Health Organization. The chairman and nine members chosen by the Advisory Council, together with six members appointed by the Council of the League after consultation with the Health Committee, will constitute the Health Committee of the League Health Organization. In addition, the present Health Section of the League Secretariat will continue as before to be the Secretariat of the League Health Organization."

This plan, which has now become a fact, for the drawing together of the existing agencies for inter-governmental health cooperation was originally discussed by the First Assembly of the League in 1920. At that time "action was postponed largely because of the fact that the United States, which is a member of the Office International d'Hygiène Publique, was not represented on the Health Committee of the League." Now, however, this international effort has assumed such importance that the United States has found it desirable to become associated with the work, although this cooperation must be labeled "unofficial."

The work of the Health Section of the League Secretariat has from the beginning been supported largely by subscriptions. Since 1922 considerable sums have been received from the Rockefeller Foundation through its International Health Board. At the present time, Dr. Reijman, a Pole who has lived for many years in England, is in charge of the work with Dr. Sydenstricker of the American Public Health Service as second in command. Dr. Sydenstricker is especially well trained in handling vital statistics and the book-keeping end of Public Health work and has been loaned to the League for a time by the United States Government.

Some of the larger sums given by the Rockefeller Foundation have been made to aid in carrying out certain definite projects of the Health

Section, especially the development of the Service of Epidemiological Intelligence and Public Health Statistics. "It was early realized that one of the most important fields of activity of this service would be the unification of methods of compiling health statistics and considerable effort is being expended in this direction. Obviously the statistics from different countries vary greatly both as regards the laws upon which the figures are based and the accuracy with which they are reported. Through the use of more suitable forms and through a study of the laws and methods of the different countries, Dr. Sydenstricker is gradually learning how to articulate and combine the reports from various sources so that they may be studied as a unit.

I will cite the method of approach used in one particularly difficult situation as an example of the thorough procedure of this Service. They desired to know whether any dependence could be placed on the vital statistics coming from Russia, especially because of the importance of the cholera and typhus fever situations. Accordingly last summer, with that express purpose in view, Dr. Hans Zinsser, Professor of Bacteriology in Harvard Medical School, was sent into Russia accompanied by a Russian physician. He also hoped to find out whether there is an endemic focus of Asiatic cholera down in southern Russia. Reports of the results of his investigations have not yet appeared.

In the study of epidemics the Health Section of the League has during the past two years published fifty-three specific reports and in the month of July it published the first World Health Report. This will be published hereafter in the form of a monthly epidemiological report of the world. "Its purpose is to effect an interchange of information for the use of the various Ministries of Health" and as it gradually grows in accuracy it will be of great and increasing value. The first issue contains current reports from forty-four different countries. Whereas the notifiable diseases vary somewhat in the different countries, the information was fairly general in regard to plague, cholera, typhus and relapsing fever, influenza, smallpox, cerebrospinal meningitis, acute poliomyelitis, diphtheria, scarlet fever and enteric fever.

In order to make the statistics of greater value for epidemiological purposes, "the reports for preceding months or weeks are also published to indicate the general trend of each disease for each

country. For purposes of comparison, the figure for the week or month for the preceding year, corresponding to the period for which the latest report was received, is also included for each disease in each country." Similarly also, the current mortality rates from all causes are published for two hundred and sixty cities in all parts of the world, and special tables are included culled from official health reports of various countries. The July issue, for example, contained a survey of the recent course of epidemic encephalitis both in Europe and the United States. It is known that this disease has been showing a slight epidemic wave during the past few months.

A series of special international inquiries is another important phase of the work of the Health Section. These include a study of cancer mortality, methods of prevention of malaria, port sanitation, sleeping sickness and control of the traffic in dangerous drugs.

A marked difference in the mortality from certain forms of cancer has been noted through the study of the figures obtained from England, Wales, Holland and Italy. A sub-committee has been appointed to investigate the reasons for these differences. In view of the increased number of deaths from cancer and our lack of knowledge as to the etiology, any clue that may give information should be diligently followed. "During and since the war, malaria has increased greatly in Eastern Europe and has spread widely from endemic centers to areas particularly in Russia, Albania, Bulgaria, the Serb-Croat-Slovene Kingdom and Greece, which were formerly relatively free of this scourge." A committee has been appointed to investigate this matter also. In this connection, the government of Albania has asked the Health Division to aid in formulating plans for combating malaria, and to give special instruction to Albanian medical officers in anti-malaria work. This malaria campaign is also of especial interest because of the spread of malaria in our own country and in our own state since the war.

At the meeting of the Health Committee in Paris, the Dutch Government asked through its delegate, Dr. Jitta, "whether the Health Organization of the League could be instrumental in grading ports from a sanitary point of view, so that ships which have been given a clean bill of health at a duly qualified port need not undergo disinfection and similar measures between ports of one country, and, where bi-lateral conventions to that

effect exist, between ports of different countries. This proposal would involve changes in existing conventions and might bring about a periodic international inspection and a preliminary survey of ports. It would obviously affect all our international commercial relations, so we are very glad to see that Surgeon General Cumming of the United States Public Health Service has been appointed as one of the members of the committee for the technical study of this question.

The spread of sleeping sickness in tropical Africa has raised some interesting international problems, because of the fact that so many of the wild beasts of Africa serve as a reservoir for the trypanosomes causing this disease. These animals cannot be induced to observe political boundaries. A committee composed of health experts from Great Britain, France and Belgium, the three countries with colonial interests in equatorial Africa, has been appointed to make inquiry into the prevention of this dreaded disease.

Still another committee is working on the commerce in opium and other dangerous drugs. As a preliminary step, they are trying to ascertain the legitimate needs of countries for these drugs.

There are also several epidemic commissions working for the League in different sections of the world where the need is most urgent. The epidemic commission in Greece, for example, was organized at the request of the Greek Government to conduct a campaign of vaccination among the refugees. The funds and general plan were furnished by the commission, while the personnel was obtained locally. "The refugees number one-fifth of the whole population of Greece and in certain districts outnumber the local residents. Since last January, over 1,500,000 persons have been vaccinated against smallpox, cholera, typhoid, and various para-typhoids." Similar commissions are at work in Poland and Russia.

For almost a year, also, Dr. Norman White, a member of the League Health Organization, has been conducting an inquiry regarding epidemic diseases in Far Eastern ports. He has been ascertaining exactly what anti-epidemic measures are in force, especially in the case of the plague and cholera. As these diseases are always knocking at our doors, the importance of a more adequate control, at places where they are endemic, is apparent. Dr. White has also been studying the possibility of obtaining greater uniformity in the sanitary formalities in Far Eastern ports. "During

his long tour, Dr. White was able to collect a large mass of information regarding the evolution of epidemics of cholera, bubonic plague, pneumonic plague, smallpox and other diseases during recent years. He also noted facts concerning the health administration and the methods of recording vital statistics in certain of the countries visited."

Under the auspices of the League Health Organization important technical conferences are being held. Such a conference on the Standardization of Biological Remedies was convened at Edinburgh in the offices of the Scottish Board of Health from July 19th to 21st. The conference was opened by Professor Madsen, Director of the Serum Institute at Copenhagen, and Professor Cushny of Edinburgh University served as chairman during the technical proceedings. The conference considered methods of standardizing all biological antisera and vaccines as well as such important therapeutic agents as digitalis, insulin and ergot. After prolonged discussion, one or two methods of standardizing the remedies were adopted and different laboratories were chosen to try these methods for subsequent comparison. The results obtained in these laboratories will again be considered at a later conference and after a final agreement has been reached, recommendations will be submitted to the several governments.

We perhaps do not realize that many of the European countries have no organization comparable to the Laboratories of the Federal Public Health Service which so efficiently control the standardization of our antitoxins and similar biological remedies. In neither France nor Belgium, for example, is there any centralized control of such biological products. The situation is not so bad as that statement might seem to imply, however, as the larger part of such products used in these countries is produced at the excellent laboratories of the Pasteur Institutes at Paris and Brussels respectively. International standards will undoubtedly make it easier for investigators to compare their results and will lead to an interchange of ideas and improvement of biological products.

The last project of the League Health Organization which I have to chronicle appeals to me as being possibly the most important they have initiated. It is a system of general and specific interchanges of public health personnel. The *general* or collective interchange consists in taking groups of health officials from different countries and working them through the various laboratories,

hospitals and quarantine procedures of another country. Three such interchanges have already occurred. "The last of these began on September 10th in Washington under the auspices of the United States Public Health Service." What such an opportunity would mean for the health officers of some of the newly formed countries in Europe can well be imagined.

The *specific* interchange is one of specialists attempting to learn more about the control of a single disease. For example, last June there was such an interchange in Italy. Health officials from all parts of the world were shown how, for generations, Italy has been combating malaria. Probably no other country has had such a difficult problem in the control of this disease as has Italy. Much valuable interchange of ideas must have occurred during the weeks devoted to this study.

"There was one other such specific interchange this year consisting of an exchange of higher officials from various public health institutes in different countries. Two further interchanges for specialists in tuberculosis and school hygiene respectively are being organized, as well as four general interchanges for the year 1924. One of these will be held in Great Britain, another in Holland and Denmark, and a third either in Switzerland or one of the new States such as Poland, Czecho-Slovakia or the Serb-Croat-Slovene Kingdom. Provision will be made later for an interchange in the Far East and possibly in South America."

May I comment specially on the value of the specific interchange for the health officials of the United States? Bubonic plague has already established a foothold in this country. An endemic focus exists among the ground squirrels of California and in the last few years 60 cases have been reported in three of our southern states, Texas, Louisiana and Florida. Where could our health officials obtain better experience in the control of this disease than by taking advantage of the privilege which will be available when the Far Eastern interchange occurs? In India they will be able to learn more about the plague in a few weeks than in the United States in many years. Asiatic cholera, leprosy and yellow fever all have their importance for us but fortunately they are not the omnipresent menace here that they are in some other countries. Obviously the place to study these diseases is in the countries where they are endemic, and, by the same token, it is in these

countries that the greatest struggle must be made to eliminate them from the world.

Already the important focus of yellow fever in Ecuador has been stamped out through the efforts of the Rockefeller commission. This gives us hope that gradually this disease may be driven from its stronghold in Mexico and elsewhere.

In similar ways through international cooperation the health workers of the future will gradually by the process of "bearding the lion" eliminate infectious diseases at their sources, that is where the endemic foci exist, thus freeing not only those particular localities but the world at large from epidemic invasion. Such a hope is at the bottom of the work not only of the Rockefeller International Health Board but also of the efforts of the Health Organization of the League of Nations.

Dr. Clark will write several articles on his trip to Europe this summer.

*Dr. Clark will contribute other articles to this section about his stay in Europe last year.

PUBLIC HEALTH NOTES

School children afflicted with psoriasis or ringworm are not permitted to attend school until such time as the affliction is no longer communicable.

The state's death rate for the third quarter of 1923 was figured from mortality records to be 8.9 per thousand people, which was lower than the average rate for the last five years.

A physician was warned that prosecution will follow the next violation of either the statute or rules of the State Board of Health which forbid the release of cases of diphtheria from quarantine without taking release cultures denoting absence of the germ in the nose and throat.

Regarding the failure to file a birth certificate, due in 1920, a deputy state health officer was advised as follows: "It is possible the certificate may have been lost, and unless the doctor presents strong evidence that he has complied with the law we advise that a prosecution be started."

There is no state law nor any regulation of the State Board of Health which prescribes methods to be used in the disposal of garbage for cities or villages. Public collection paid for by general tax is the system recommended.

To a P.-T. A. official the State Board of Health gave the opinion that it is not necessary to have school children examined for the presence of goiter before giving the sodium iodide preventive treatment, but that it is desirable to have such an examination made to discover defects that may be carried by pupils.

The danger of conveying scarlet fever infection through milk bottles was stressed by a deputy state health officer, who warned a city that milk bottles should not be removed from any home where the disease exists, except with the health officer's permission. It is recommended that the milk supply be poured into a receptacle for the quarantined family.

Public health nurses, it was explained, should do bedside nursing only in occasional emergency cases and when other nursing service is not available.

Bayfield county engaged Miss Guila Fierman, Milwaukee, to be county public health nurse, to take up her work Jan. 1. She will succeed Miss Anna Thompson, now with the Wisconsin Anti-Tuberculosis association.

Dr. Louis Dorpat, Rhinelander, deputy state health officer for the first district, submitted his resignation after several years' service in that capacity. He will become health officer of Ironwood, Mich., on Jan. 1.

Although there is no specific law requiring parents to call a physician in cases of illness in the home, a citizen was told that some supreme courts have held that where medical aid is not summoned for children seriously ill or dying from certain diseases, the responsibility is placed upon such parents, on the ground that it is the function of the state to protect children from neglect or abuse.

A parent was informed that extra hours in public schools added for the teaching of health subjects are probably intended to fulfill the requirements made by the Holly bill, in the last legislature, providing for the teaching of symptoms of disease, proper care of the body, etc. It is specified, however, that such instruction shall not be given to any pupil whose parent refuses consent in writing.

Defining a "public funeral," the department termed it one in which the general public is invited, or at least not excluded. It is not permitted to hold a public funeral in the case of death from scarlet fever and several other dangerous communicable diseases, and bringing the remains into a church or other public building is prohibited. The general public must be excluded from services at the grave, and members of the family must be transported to and from the services by private conveyance and not come in contact in any way with the general public, the purpose being to prevent the intermingling of persons who may have the disease or be a carrier of it.

Unless local rules have been adopted relative to the handling of mumps, requiring placarding, the health officer has no authority to placard the home, and a family would not incur any liability in removing such a placard under the conditions existing, a parent was informed. All well members of the family can go about their work as usual.

SCHEDULE FOR EYE INJURIES

At the present time the following schedule rating for eye injuries is enforced by the State Industrial Commission. A. J. Altneyer, secretary of the commission, recently declared that a revision of the schedule is under consideration.

The present schedule follows:

Reading	Percentage Loss
20/20	0
20/25	5
20/30	10
20/40	20
20/50	25
20/60	33½
20/70	40
20/80	50
20/100	75
20/120	85
20/200	100

MEDICAL APPROPRIATION VOTED

An appropriation of \$5,500 for the continuation of medical post-graduate work in the extension division of the University was passed by a majority vote of the State Emergency Board. Governor John J. Blaine and State Treasurer Solomon Levitan voted for the appropriation and Secretary of State Fred Zimmerman, Milwaukee, voted in the negative.

Because the secretary of state refused to audit the emergency appropriation the supreme court will be called upon to validate them.



The Business Side of the Physician's Life—

One cold January day when the mercury had slumped to rest at the bottom of the tube, and talk was general on the frozen condition of radiators, we lunched, a physician friend and I, at a club that is one of the hangouts of the medicos.

Before the meal had finished, four or five others had joined us, all physicians, myself the lone oasis in a medical desert. What talk there was, then—all the way from a discussion of the merits of Piper Heidsick tobacco, a small kernel of which rolled under the cheek will last the morning, I learned, right up the line to an argument as to the prevalence of cholera in the Middle Ages. Then back to earth with talk about the accuracy of the reports that some of the near beer that is sold about town is a little "nearer" than Volstead specified when he laid out the provisions of his much maligned prohibition act. Then up again with learned discussion on the principles of Einstein. Two of the fraternity, meanwhile, deeply engrossed in an analysis of a rare case in which they were joined in consultation, with medical phraseology popping like the wash of fire from a machine gun.

And as I sat—listening—the thought came to me, "What a range of interests these medical fellows have, what voluminous information or opinion on so many unrelated things."

Yet this is not so remarkable, after all. The physician touches life at many points. He is the confidant of the rich man, the poor man—yes, the beggar man, thief. Into his ear the housewife pours her troubles and her problems. The little child prattles her thoughts to him. He meets men—all types of men—at their best and at their worst. He knows much of life.

But is there in this a danger for him? Knowing *much* of life outside of the immediate affairs of his profession, does it lull him into the belief that he knows *all* of life?

Your butcher, or your baker, or your banker learn the rules of the game of butchering, baking or banking, as the case may be, and are content to be successful in their own realms. How fre-

quently have you gazed upon a beetle-browed, pot-bellied creature fashioned after the pattern that God made man, who had wrested a fortune out of hair, hides or huckleberries—a fortune that would make your modest competence, if you have such a thing, look like a thin dime—and asked yourself, "How does he do it?"

This is no contemptuous attitudinizing toward business. Those who are in it know how perilous are its courses. They, too, often wonder how some of their associates make the successes they do. Luck? Yes, once in a while. But not often. Usually back of every success, large or small, is a bed-rock of ability.

The business man who succeeds knows his business, just as the physician who succeeds knows his profession. The business man who tries to dabble in some other business gets trimmed just about as often as the physician does who tries the same thing. There is this one fine distinction—comparatively few business men so dabble, many physicians do.

I am wondering if my two physician friends ever agreed on the diagnosis of that rare case, and whether or not the patient survived the ordeal of conflicting opinions.

Aesop wrote good fables, fables that for centuries have lived on from generation to generation. Aesop may have been able to do many other things passing well, to mend a watch, make capital wine, weave a beautiful tapestry, who knows? Aesop's main job appears to have been writing fables. Aesop wrote good fables.

A thousand years ago, Aesop said: "The shoemaker should stick to his last."

CLINICAL SESSION FOR INTERNISTS

The Eighth Annual Clinical Session of The American Congress on Internal Medicine will be held in the Amphitheatres, Wards and Laboratories of the various institutions concerned with medical teaching, at St. Louis, Mo., beginning Monday, February 18, 1924.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address enquiries to the Secretary-General.

ELSWORTH S. SMITH, *President*,

St. Louis, Mo.

FRANK SMITHIES, *Secretary-General*,

1002 North Dearborn Street,

Chicago, Ill.

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ORGANIZED 1841

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LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists 90 counties and their respective officers.

SOCIETY PROCEEDINGS

B-P-W-S-B COUNTY

Dr. A. N. Nelson, Clear Lake, was elected president of the Barron-Polk-Washburn-Sawyer-Burnett County Medical Society at a meeting held at Cumberland, Tuesday, December 4th. Dr. D. L. Dawson, Rice Lake, was reelected secretary-treasurer.

The scientific program included papers by Dr. C. C. Chatterton, St. Paul; Dr. H. M. Stang, Eau Claire; Dr. H. B. Crommett, Amery.

CHIPPEWA COUNTY

The Chippewa County Medical Society met at Chippewa Falls on Dec. 20th, at the Hotel Northern. Dinner was served to about twenty members. After dinner a paper was read by Dr. Milbee of Marshfield on "The Treatment of Diabetes with Insulin." The following resolution was passed "Whereas, The Chippewa County Medical Society has suffered a severe loss in the death of Dr. C. A. Hayes, most beloved and esteemed by all, Be it resolved that our sympathy be extended to Mrs. Hayes and family in this great bereavement."

The following officers for the coming year were elected: president, Dr. A. J. Somers; secretary-treasurer, Dr. C. B. Hatleberg; delegate, Dr. E. P. Ellenson, all of Chippewa Falls, Wis.; alternate, Dr. L. A. Larson of Colfax.

COLUMBIA COUNTY

Members of the Columbia County Medical Society held their annual meeting at Hotel Endler, Portage, on December 12th. Sixteen members were present together with Dr. C. A. Harper, Madison, councilor, and Mr. J. G. Crownhart, secretary of the state society.

Dr. A. F. Schmeling, Columbus, reported as delegate to the annual meeting and Dr. R. D. Boynton, Kilbourn, gave the report of the secretary-treasurer. A vote of thanks was extended both officers. Dr. C. W. Henney, Portage, gave a most interesting report of the Tri-State meeting and case reports of some abdominal obstructions.

Dr. C. A. Harper, Madison, was called upon to discuss the advisability of the Columbia County Society associating itself with some other society. After some discussion the society voted unanimously to continue a separate existence. Officers elected for the ensuing year are: President, Dr. A. F. Schmeling, Columbus; vice president, Dr. B. F. Bellack, Cambria; secretary-treasurer, Dr. R. D. Boynton, Kilbourn.

DANE COUNTY

The annual business meeting of the Dane County Medical Society was held at Madison on December 13th. The society went on record as being opposed to the use of other than well water for the water supply at Madison, declaring that any change would endanger a typhoid epidemic.

Dr. James P. Dean, was elected president of the society, succeeding Dr. Albert Torney. Other officers chosen are: Dr. W. D. Stovall, vice president, and Dr. Eugene Sullivan, secretary and treasurer. Dr. William

F. Lorenz was reappointed censor for the coming two years and Dr. Corydon G. Dwight was elected a delegate from the Dane county society to the state convention.

Dr. C. A. Harper, state councilor for this district, remarking on the spirit of get-together that has been shown by the society during the past year, urged that the Dane county organization promote joint meetings with the neighboring county societies, and attempt to join the various Madison societies into one unit.

DOUGLAS COUNTY

The annual meeting of the Douglas County Medical Society was held at the Hotel Superior.

A turkey dinner "with trimmings" was served at 7:00 P. M.

The following members were present: Drs. Schnell, Baird, Sarvella, Shastid, Mason, Potter, Ground, Hoffmier, E. A. Meyers, Beebe, Conklin, Weisgerber, Broghammer, Giesen, Charbonneau, Sarazin, Zwickey, Smith, Searle, Lohmiller, Rydell, O'Leary, Knox, Ekblad, A. L. Kylo, McGill, Orchard, and Cummings.

Guests present were, Dr. A. E. Wilcox of Minneapolis, Minn.; Dr. C. F. McComb and Dr. Kuth of Duluth, Minn.; Dr. Fred Johnson of Iron River, Wis., and Dr. Hilliard of Minong, Wis.

Following the dinner Dr. A. E. Wilcox discussed the treatment of fractures, illustrating his talk with lantern slides.

In appreciation of the lecture, Dr. Wilcox was given a rising vote of thanks and by unanimous vote was elected an honorary member of the society.

Election of officers as follows—

President—F. J. Broghammer.

Vice President—A. L. Weisgerber.

Secretary and Treasurer—Chas. B. Rydell,

(528 Tower Ave.)

New Censor—L. A. Hoffmier.

Present Board of Censors—

R. C. Smith, 2 years.

H. J. Orchard, 1 year.

L. A. Hoffmier, 3 years.

Delegate to the State Convention, Dr. P. G. McGill.

Alternate, Dr. John Baird.

The report of the retiring secretary and treasurer was read and approved.

DUNN-PEPIN COUNTY

Dr. E. C. Jacobs of Durand was elected president of the Dunn-Pepin Medical Society at its annual meeting held December 17th. Dr. L. H. Van Slyke of Knapp was elected vice president and Dr. Julius Blom was elected secretary-treasurer. Doctor Blom was elected to the board of censors for the three year term succeeding Dr. O. N. Grannis. Other elections were: delegate, Dr. F. E. Butler, Menomonie and alternate, Dr. Julius Blom, Menomonie.

GRANT COUNTY

The twenty-third annual meeting of the Grant County Medical Society was held at Lancaster Thursday afternoon, December 13, 1923. By courtesy of Judge E. B. Goodsell, the session was held in the probate court room

in the new court house. The following officers were elected for the ensuing year: president, Dr. J. C. Doolittle; vice president, Dr. J. E. Donnell; secretary-treasurer, Dr. M. B. Glasier; delegate, Dr. C. A. Andrews; alternate, Dr. J. H. Fowler; Censors, Dr. E. C. Howell and Dr. F. H. Baldwin.

It was decided to hold all of the regular meetings in 1924 at Lancaster, the location being central in the county.

JEFFERSON COUNTY

The December meeting of the Jefferson County Medical Society was held in the court house at Jefferson on December 20th. Dr. Evans of the state university medical school gave a very interesting and instructive talk on nephritides. Dr. Meek, likewise from the state medical school, explained the present situation of the medical school and what it hopes to accomplish, both for the people and the physicians of the state. The new officers are:

President—T. F. Dennis, Waterloo.

Vice President—L. H. Nowack, Watertown.

Secretary-Treasurer—A. C. Nickels, Watertown.

MARINETTE-FLORENCE COUNTY

The annual meeting of the Marinette-Florence County Medical Society was held Friday, December 7th. The following officers were elected: president, Dr. T. J. Redelings, Marinette; secretary-treasurer, Dr. M. D. Bird; delegate; Dr. A. T. Nadeau; alternate, Dr. J. W. Boren.

A banquet at Hotel Marinette preceded the scientific program. Dr. R. C. Blankinship, University of Wisconsin, talked on "Acute Upper Respiratory System;" Dr. J. W. Boren gave a comprehensive talk on "Diaphragmatic Pleurisy," and Dr. William Dohearty gave an interesting address on "The Experiences of a Country Doctor."

MILWAUKEE COUNTY

The annual dinner meeting of the Milwaukee County Medical Society was held at the Athletic Club December 17th. Dr. Hugh Cabot, Dean of the University of Michigan, School of Medicine, was the speaker of the evening. His subject was "The Care and Management of Small Renal and Ureteral Calculi."

Following the scientific program officers were elected for the new year:

President—Dr. M. L. Henderson.

Vice-president—Dr. Robert W. Blumenthal.

Secretary—Dr. Edward Tharinger.

Treasurer—Dr. J. J. Purtell.

Discussion of the suggestion that Milwaukee needs a clinic for the treatment of social diseases will come up at a future meeting.

OUTAGAMIE COUNTY

At a meeting of the Outagamie County Medical Society at Appleton December 6th, Dr. E. F. McGrath, Appleton, was elected president for the ensuing year. Other officers elected were: Dr. W. H. Towne, Shiocton, vice president; Dr. E. L. Bolton, Appleton, treasurer.

The society opened its meeting with a dinner at 6:30, followed by the business meeting. Dr. V. F. Marshall read a paper on hernia.

PORTAGE COUNTY

The annual meeting of the Portage County Medical Society was held at Stevens Point on December 19th. The following officers were elected:

President, Dr. F. A. Marrs, Stevens Point; vice president, Dr. E. P. Crosby, Stevens Point; secretary-treasurer, Dr. G. H. Lawrence, Stevens Point; delegate, Dr. F. A. Southwick, Stevens Point; alternate, Dr. J. D. Lindores, Stevens Point.

PRICE-TAYLOR COUNTY

Members of the Price-Taylor County Medical Society met at Phillips on December 6th. Dr. E. O. Riley of Park Falls was elected president; Dr. J. E. McKinnon, Prentice, vice president, and Dr. E. B. Elvis, Medford, secretary-treasurer.

RACINE COUNTY

Members of the Racine County Medical Society met at St. Mary's Hospital at Racine on December 20th. Dr. James C. Sargent, Milwaukee, addressed the meeting on "The X-Ray Diagnosis of Diseases of the Kidney."

SHEBOYGAN COUNTY

Dr. Edmund Knauf, Sheboygan, was elected president of the Sheboygan County Medical Society at a meeting on November 27th. Other elections were: Dr. Otto Gunther, vice-president; Dr. G. J. Hildebrand, secretary-treasurer; Dr. Otho Fiedler, delegate, and Dr. Arthur Knauf, alternate.

The society discussed at length selection of a site for the Sheboygan County Tuberculosis Sanatoria.

ST. CROIX COUNTY

Dr. F. S. Wade of New Richmond was elected president of the St. Croix County Medical Society at its annual meeting. Dr. B. G. Stockman, Woodville, was re-elected secretary-treasurer.

VERNON COUNTY

The Vernon County Society met at Dr. Suttle's office, Viroqua, on Wednesday, December 19th. Dr. Sears, from the State Board of Health, Madison, gave a very instructive talk on the relation of the local physician to the health worker. After more or less discussion the meeting was adjourned.

WAUKESHA COUNTY

The annual meeting of the Waukesha County Medical Society occurred Dec. 5th, and was held at the Waukesha Springs Sanitarium with 31 members present. Officers elected for 1924 were: President S. B. Ackley, Oconomowoc; vice president L. W. Dudley, Statesan; sec.-treas. J. F. Wilkinson, Oconomowoc; censor, H. T. Barnes, Delafield. The retiring president gave a very comprehensive and practical talk on diet.

The next meeting will occur Wednesday, Jan. 2nd, at the Spa, Waukesha.

WAUPACA COUNTY

Members of the Waupaca County Medical Society held a most interesting meeting at Manawa Wednesday evening, December fifth. Dr. Wesley J. Irvine, Manawa, read a paper summarizing the more recent literature on Hypertension. An extended discussion followed this paper.

Senator Herman J. Severson, Iola, was a guest of the

Society and spoke informally on the propoganda that was sent members of a legislature by those interested in lowering general standards for health laws. Following Senator Severson's address, Mr. J. G. Crownhart, Secretary of the State Society, spoke on the aims and work of the Society. A general discussion followed these two talks. A rising vote of thanks was extended to Senator Severson and Mr. Crownhart following the discussion.

Dr. W. H. Finney, Clintonville, reported as chairman of a committee appointed to present the views of the society on the retention of the county nurse to the county board. He said that the nurse had been retained by a vote of 21 to 10. The next meeting will be upon call of the Secretary and President.

NEWS ITEMS AND PERSONALS

Dr. Richard L. Bower, Madison, has returned to that city after a year's post-graduate work in New York and Chicago. He will again be associated with the Dwight and Davis Clinic.

Dr. G. W. Leitch, Milwaukee, returned from a two week's hunting trip early in December. The doctor shot a nine hundred pound moose during the vacation spent in Canada.

Organization of a Milwaukee County Public Health Association was completed during December. Upwards of 200 men and women active in welfare work are members of the organization. Four general meetings of the association will be held each year.

Driving to attend a medical meeting at Rochester, Minn., Dr. J. B. R. Lyman, Eau Claire, was seriously injured near St. Charles, Minn., on December 14th. The automobile struck loose sand causing it to turn over. Doctor Lyman sustained two fractured ribs, a fracture of the right femur, and minor injuries to the head and face.

Dr. E. E. Tupper, Eau Claire, was elected president of the staff of the Sacred Heart and Luther Hospitals of that city. Dr. H. F. Derge was elected vice president and Dr. F. Kinsman was elected secretary-treasurer.

Dr. J. F. Shimpa, formerly of the medical staff of the Wisconsin Anti-Tuberculosis Association, has now established an office at 3517 North Avenue, Milwaukee.

Members of the Soo Line Surgical Association elected Dr. F. Gregory Connell, Oshkosh, president of the association for 1924. The next meeting of the association will be held in Chicago.

Dr. Gentz Perry has accepted the position as Roentgenologist for the Kenosha Clinic. Doctor Perry has been in St. Louis for the past few years.

A private home for furnishing obstetric attention to a limited number of patients has been established at Fond du Lac. The home is to be known as "The Manse" and is under the direction of Mrs. G. W. Fisher.

Dr. J. W. Burns, Appleton, celebrated his 78th birthday at his home on December 12th. Doctor Burns was the first white child born in Oakfield where he resided until fifteen years ago.

Charles G. Palotta, chiropractor, with offices in Fond du Lac and Princeton has been arrested in both cities. The district attorney of Fond du Lac County has sworn out a warrant charging his obtaining money under false pretenses and District Attorney Paul of Berlin charges Palotta of practicing medicine without a license.

Dr. C. N. Stuesser, Ashippun, has removed to Juneau where he has taken over the practice of the late Dr. C. G. Schwalbach.

At the annual meeting of the St. Mary's Hospital staff of Milwaukee, Dr. W. C. Witte was elected president for the ensuing year.

Dr. Richard Dewey, Pasadena, Calif., has been the guest of Dr. Rock Sleyster, Wauwatosa, during the holiday season. Doctor Dewey was the first president of the Milwaukee Neuro-Psychiatric society and a former resident of Milwaukee and Wauwatosa. Several entertainments were held in his honor during the holiday season.

Wisconsin was one of five states whose mortality rate from cancer for 1922 showed a decrease over 1921. The rate decreased from 97.6 to 92.8 and the number of deaths decreased from 2,614 to 2,514.

Dr. J. C. Sommers, Madison, was painfully injured December 16th in an automobile collision.

Announcement has been made of the opening of an office in Manitowoc by Dr. Edw. Meyer. Dr. Meyer has practiced in Brillion for the past eighteen years.

Dr. Virgil D. Crone, Beloit, has been chosen as president of the Beloit Kiwanis Club.

A Student Health Service will be started at Marquette University with the opening of the second semester. The service will include physical examinations, hygiene courses and general lectures.

Dr. L. P. Dorpat, Rhinelander, has resigned as State Health Officer for the Fifth District to become health officer of the city of Ironwood. He will succeed Dr. C. W. Olson.

A \$15,000 addition to the South Madison Sanatorium is now planned. Work on the addition will be commenced in the spring.

Dr. A. J. Somers, Chippewa Falls, has been elected superintendent of speed for the Northern Wisconsin State Fair.

Dr. C. H. Bunting, pathologist of the University of Wisconsin, has received an offer to become associated with the University of Iowa.

Dr. Philip R. Fox, Madison, was declared not guilty on a charge of malpractice brought by James Davison, a farmer.

MARRIAGES

Dr. B. A. Lungmus, Shorewood, Milwaukee, to Miss Martha Lucille Snyder of Oconomowoc on December 1st.

DEATHS

Dr. Henry H. Zaun, Omro, died on December 2nd after a short illness. Dr. Zaun was born at Richfield, Wisconsin, January 2, 1862. He was a graduate of the Chicago Medical School and a practicing physician in the state for thirty-three years. He had been a resident of Omro but for three months and formerly resided at Edgar.

Dr. J. J. Schoofs, Fond du Lac, dropped dead in his office on December 3rd. Doctor Schoofs was fifty-seven years of age and had practiced at Malone, Wisconsin, for close to thirty years previous to establishing a practice at Fond du Lac.

Doctor Schoofs was a member of the Fond du Lac County Medical Society, the State Medical Society and the American Medical Association.

Dr. C. G. Schwalbach, Juneau, died on December 9th at St. Agnes' Hospital, Fond du Lac, after a short illness. Doctor Schwalbach was born February 11, 1874, at Merton, Wis. He was a graduate of Marquette in 1897. Following graduation he established his practice at Juneau.

Doctor Schwalbach was a member of the Dodge County Medical Society, the State Medical Society and the American Medical Association.

Dr. C. S. Nielsen, Withee, died on December 9, 1923. Doctor Nielsen was a graduate of the Chicago College of Homeopathy in 1896. He was a member of the Clark County Medical Society, the State Medical Society and the American Medical Association.

PROGRAM ANNOUNCED FOR GOITER MEETING

Annual Meeting of the American Association for the Study of Goiter, Bloomington, Ill., January 23rd, 24th, and 25th, 1924. Hotel Headquarters—Illinois Hotel.

Operative Clinics at St. Joseph Hospital and Mennonite Hospital. General Sessions, Exhibits, and Registration at the Unitarian Church, corner of East and Jefferson Streets, one block east of Square.

FIRST DAY.

Wednesday, January 23rd, 1924.

Operative Clinic—featuring different forms of Anaesthesia, 8:00 A. M., St. Joseph's Hospital.

1. Two thyroidectomies, local anaesthesia.
2. Two resections thyroid, Nitrous Oxide-Oxygen anaesthesia.
3. Two thyroidectomies, Ethylene Oxygen anaesthesia.
4. Two resections thyroid, Ether anaesthesia.

Physicians attending clinic can register at the hospital Wednesday morning.

Operative Clinic, 2:00 P. M., Mennonite Hospital.

1. Thyroidectomy, Local anaesthesia.
2. Ligation Inferior Thyroid, Local anaesthesia.
3. Ligation Superior Thyroid, Local Anaesthesia.

4. Resection thyroid, Ethylene-Oxygen anaesthesia.
 5. Ligation one Inferior and one Superior thyroid, Ethylene Oxygen anaesthesia.
- 9:00 P. M., Smoker.

SECOND DAY.

Thursday, January 24th, 1924.

7:00 to 7:40 A. M., St. Joseph's Hospital: Demonstration of Fluoroscopy of the Heart, Thymus and Thyroid—Dr. H. W. Grote, Bloomington, Illinois, and Dr. Frank Deneen, Bloomington, Illinois.

General Session: Unitarian Church.

8:00 A. M., Diagnostic Clinic—Dr. Andre Crotti, Columbus, Ohio. Non-toxic parenchymatous goiters, toxic parenchymatous goiters, non-toxic diffuse colloid goiters, toxic diffuse colloid goiters, non-toxic nodular colloid goiters, toxic nodular colloid goiters.

9:00 A. M., Demonstration of gross Pathology of the Thyroid. Exhibition of specimens—Dr. Loyd Arnold, Professor of Pathology, Loyola University of Medicine, Chicago, Illinois.

10:00 A. M. Address—Dr. H. S. Plummer, Mayo Clinic, Rochester, Minn.

11:00 A. M. Address—Dr. Wm. Englebach, St. Louis, Missouri. "Relation of the Thyroid to the other Endocrine Glands." Illustrated by Lantern Slides.

1:00 P. M. Address—Commander Wm. Seaman Bainbridge, New York. "Goiter in the Navy, and in Europe."

2:00 P. M. Address—Dr. Andre Crotti, Columbus, Ohio. "The Etiology of Endemic Goiter and of Toxic Goiter."

3:00 P. M. Address—Dr. Wayne Babcock, Philadelphia.

4:00 P. M. Address—Dr. George Van Amber Brown, Detroit, Michigan. "Comparative Anatomy of the Thyroid."

5:00 P. M. Address—Dr. Edw H. Skinner, Kansas City, Missouri. "X-ray and Goiter."

Banquet, Illinois Hotel, 7:00 P. M., January 24th, 1924.

THIRD DAY.

Friday, January 25th, 1924.

Unitarian Church.

7:00 A. M. Exhibition of cases and discussion.

8:00 A. M. Diagnostic Clinic—Dr. Wm. Wayne Babcock, Philadelphia.

9:00 A. M. History Clinic.

10:00 A. M. Address—Dr. Joseph L. De Courcy, Cincinnati, Ohio.

10:30 A. M. Radium Treatment—Dr. F. M. Hagans, Lincoln, Illinois.

11:00 A. M. Medical Treatment.

11:30 A. M. Prevention.

1:00 P. M. Goiter in Nevada—Dr. Thomas W. Bath, Reno, Nevada.

1:30 P. M. Incipient Goiter vs. Incipient Tuberculosis—Dr. Roswell Pettitt, Ottawa, Illinois.

2:00 P. M. Round Table discussions. Five minute talks.

3:00 P. M. Movie Clinic—Goiter operations.

Basic Science Law A Primary Need in Field of Preventive Medicine; Diagnosis Essential.

EDITOR'S NOTE—This is the second of a series of articles setting forth the work and aims of the Committee on Public Policy and Legislation.

There was proposed before our last legislature what was known as the Basic Science Bill. It was defeated by a powerful lobby with the aid of more funds than was spent by any other organization represented before the legislature. We are not concerned in this article with the history of the fight for the enactment of that particular measure.

But because this Committee believes that in a basic science law lies the very foundation of the fight against disease, we are concerned with its principles. And we believe that these principles when presented to physicians and laity alike will constitute self-justification for the enactment of such a law in this enlightened day and age.

The Supreme Court of this State declared as late as April, 1923, that when a person holds himself out to treat disease "he must exercise the care and skill in so doing that is usually exercised by a recognized school of the medical profession."¹

This has long been the stand of our Supreme Court. What form of treatment is used or upon what theories the treatment was given is not of paramount interest to this Court. What they do ask is whether it was proposed to treat disease, and if so, was the usual care and skill exercised that is usually exercised by a recognized school of the medical profession?

But the Court went farther than that. It declared that "Diagnosis is ordinarily assumed and performed by licensed medical or osteopathic physicians. But it may be assumed by others * * *" and stated, in fact, that when it was so assumed it constituted the "practice of medicine."

This is clearly true. The term "practice of medicine" is a term that covers all who assume to treat disease regardless of the methods they may presume to employ.

It then clearly follows that in order to exercise the usual skill and care, a given practitioner must comply with the usual standards and determine what ailment or affliction or injury his patient may be suffering. This act is called diagnosing the case.

To make a diagnosis with the usual skill and

care requires a basic understanding of the functioning of the body in health and disease. The practitioner must have a knowledge of physiology and anatomy, the body in health, and pathology, the body in disease. Wisconsin laws provide that physicians must differentiate between 205 causes of death in making out death certificates. It is absurd to assume that this may be done with the usual skill and care exercised by a licensed physician without this basic knowledge.

With this in mind it is at once apparent that class legislation that would exempt any so-called school in the field of the healing art from this essential and basic educational requirement, is at once to license those who are incompetent and to provide a constant source of danger to the welfare of all communities and all peoples in this state.

The first essential in the fight to prevent disease is the ability on the part of those who treat disease to recognize early the cases of contagious disease. The State Board of Health rightfully requires that these cases be promptly reported to that office. What may appear locally to be but an isolated case of smallpox or typhoid fever may, when reported, show an incipient epidemic in a given section. With this information gathered, all forces of present-day science are used to arrest its spread.

In the second place, a progressive disease not correctly diagnosed will soon pass beyond a curative or operable state.

And last, a contagious disease not recognized is a real source of danger to all people for the patient may and will infect many others.

The situation may be summarized, then, that the need for a basic science law in this state is twofold. First, it but puts into effect what the High Court of this State has declared to be the law. Secondly, a well educated profession is the only foundation upon which the great work of preventive medicine may be erected.

Those interested in the health of our people may indeed consider a recent editorial in the Milwaukee Journal as the forerunner of the demands that will be made for the enactment of such a law by an awakened and enlightened public. This editorial is not only the voice of its writer but the voice of the thousands of readers of the Milwaukee Journal.

(Continued on page 402)

Is The Decline of The Country Doctor to Continue? If Not, Why Not, If So, Who or What, Will Take His Place?

BY N. P. COLWELL, M.D.,

SECRETARY, COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION,
CHICAGO.

Editor's Note—This is the second and last article by the author on this national problem. In the December Journal Dr. Colwell declared the objectionable features of country practice to be loss of patients, loss of income, increased expenses, long drives, bad roads, hard work, poorer facilities for practice, no hospitals, no libraries, no laboratories, few churches, poorer schools, and loss of time or opportunity for professional or personal development.

The author pointed out that the decline was not due to scarcity of physicians and that the standards of medical education are constantly improving.

In the February issue we shall have an article on the problem as applied to Wisconsin.

HOW FILL THE PLACE OF THE COUNTRY DOCTOR?

The second question as to who or what will take the place of the country doctor is a more difficult problem. There can be no satisfactory substitute for a well trained physician in any community. The better training of the recent graduate in medicine, and the better opportunities of the city doctors to obtain up-to-date qualifications have undoubtedly had much to do with the desertion of the country doctor by his more wealthy clientele and, later, the desertion of the country by the doctor. Country people have as much need of, and as much right to have, better trained doctors as the people who live in the city. Until some readjustment can be made to restore competent doctors to the country districts some special measures will be required to provide medical care for those districts.

In many states there are salaried health officers who make periodic visits through different sections, but at present the duties of these physicians are limited to preventive measures, the districts are too large, and the physician's rounds are too infrequent to provide the essential medical care of the sick. In some states also public health nurses, or social service workers (nurses) are employed in addition to health officers. While nurses can do a great deal of good in minor health matters they can never become and never should be considered as substitutes for the modern trained physician. They can and do aid in securing physicians for emergency cases. In backward

country districts or in mountainous communities having a widely scattered population where bad or largely impassable roads are still found, it is next to impossible to provide the needed medical service. A help in the more favored districts would be to have small hospitals or clinical stations established at positions, preferably along improved highways, and a district nurse provided for each, where all sick in the surrounding district might be taken, thus conserving the time of the physician who could more easily visit these stations than the homes of the patients. The further improvements in cross country roads would enable physicians, whether in the country or in the city, to more easily visit these clinics or individual patients and cover a much wider area than at present.

Such methods as these should be looked upon as temporary but may be necessary in order to provide medical care for the more remote country districts until such time when a better distribution of the supply of competent physicians will provide permanently for these districts.

HOW PHYSICIANS MAY BE IMMEDIATELY SECURED.

No physician can be induced to locate in a neighborhood where he cannot obtain a fair living. In communities, therefore, where there are sufficient people to provide for a physician, the following methods have in some instances at least, proved successful:

1. The most successful scheme thus far recorded is to have a group of citizens guarantee an income of \$2,500 or \$3,000 per year or more for a physician. The points favoring this plan are:

(a) The people of the community have a voice in the selection of their physician and can secure one who is well recommended.

(b) Since they have pledged themselves in his support they will patronize him, so far as possible, rather than go to a city doctor.

(c) Many young physicians are short of funds at the time they complete their medical training and will be attracted to places where a reasonable income is guaranteed.

2. One state, New Hampshire, has passed a law enabling the people of the county or commun-

ity to tax themselves in order to support a local physician.

3. In Iowa and some other states, laws have been passed which enable citizens of any county or community to tax themselves for the support of a hospital. With a hospital, one or more competent physicians can more readily be obtained.

The authority for the last two measures should be exercised with care, however, since they are feasible only where the community has a sufficient population to justify the employment of a physician or to provide for the maintenance of a hospital.

PERMANENT RESTORATION OF THE COUNTRY DOCTOR.

To permanently restore doctors for rural communities requires a restoration of reasonable living conditions in those districts. Even now, community, state and national forces are cooperating toward the improvement of country roads, and the equalizing of educational opportunities, and in time will undoubtedly provide more social, recreational and other opportunities. It is noteworthy that for the last ten years particularly, a reorganization of education in rural communities has been going on. Instead of twenty or more small, dilapidated, unsanitary, single-room school houses in country districts, each with its separate teacher, who endeavored to teach all subjects to students of all grades, now there has been or is being established, one centrally located, consolidated and graded school where several better qualified and better salaried teachers have been secured, each subject having its special teacher. Some of these schools provide also high school grades. The students, meanwhile, are taken to and from this consolidated school in motor busses. Thus the country is being supplied with modern educational facilities more nearly, if not fully, equal to those of the city.

Is it too much to expect that, in the future, beautified community centers will be established where, in addition to the consolidated school, one can find also a church, a theater—at least a movie house—a general store, a small hospital and other facilities for public welfare and recreation. In more remote and thinly populated districts instead of the hospital at least a combined dispensary and drug store could be established where such essential materials as diphtheria antitoxin, serums and other modern remedies could be available for

emergency use. Wherever a small hospital can be maintained a physician can also be secured and, with the improved roads, outlying clinical stations can also be visited with greater frequency. At the hospitals or clinical stations, clinical and X-ray laboratories, which are now of so much aid in the examination and treatment of the sick, could also be available.

COMPETENT DOCTORS ESSENTIAL.

No ignorant or untrained physician can possibly develop a practice in a rural community, nor will he ever prove satisfactory in such a district. In no community are a physician's shortcomings more promptly discovered and generally known than in the rural community. To be a success, the country doctor must be one who will command the respect of the people of the community; he must be up-to-date, competent and resourceful. Such a doctor indeed, if it is at all possible, will supply his own needs in the place in which he locates, even though it be in a rural community. He will develop his own laboratory and provide such apparatus as the occasion shall demand. He is the one who will convert an upper floor with a few rooms into a hospital. He will secure essential nurse assistance and will gradually, but none the less surely, develop a reputation which will draw to him patients from a distance who otherwise would go to the city. Instances might be mentioned where small and insignificant country towns or communities have become famous through the locating in them of competent and resourceful physicians.

It is interesting to note in this connection that the ill-trained output of certain pseudo-medical institutions are not successful in rural communities, nor will they in any sense take the place of country doctors. People of rural communities, perhaps more than those in cities, are a thinking people and know what they want. The modern cults, therefore, which are endeavoring to advance wild theories and bombastic claims in place of positive facts in medicine are not being listened to in rural communities. Thinking people now recognize the necessity of an extended and thorough training of those who are to become qualified to treat the sick. They recognize the necessity for the present requirements of medical schools; that the student must obtain two or more years of college work and secure a knowledge of the sciences of physics, chemistry and biology before he can enter

the medical school. Four more years of training in laboratories, dispensaries and hospitals are then necessary to provide the physicians with the essential knowledge of the causes of diseases and the means by which he can differentiate one disease from another. He then completes one or more years as an intern in a hospital where, while still under supervision, he learns to apply the knowledge he has previously obtained and to develop skill in the examination of patients, in the recognition of diseases and in providing the best form of treatment which each particular disorder requires.

These are the qualifications, which are possessed by those now being turned out by our better medical schools. For those who graduated before the modern medical school was developed, graduate medical schools are now being organized which, in addition to resident courses for physicians who can leave their practice and secure training in modern methods, so-called extension courses are being provided by which a knowledge of these modern methods can be carried to physicians in their home districts, making it unnecessary for them to leave their practice or go to a distant city. Thus the means by which the older practitioners can keep up-to-date in their methods are also being provided.

Marvelous advances are being made in every line of human knowledge and endeavor. It is safe to predict also that there will be developments whereby community centers will be established, which will bring back to the rural communities all of the advantages of education, religion, amusement and recreation, as well as a modern hospital with its physicians and nurses, where the latest and best methods of caring for the sick will also be made available.

BOOKS ON TUBERCULOSIS.

The following books on tuberculosis are in the Library of the Wisconsin Anti-Tuberculosis Association, 558 Jefferson Street, Milwaukee. They will be gladly loaned to physicians of Wisconsin.

Tubercle Bacillus Infection and Tuberculosis in Man and Animals—Calmette.

Clinical Tuberculosis—Second Volume—By Pattenger.

Pulmonary Tuberculosis—By Fishberg.

Domicilliary Treatment of Tuberculosis—By Walters.

Pulmonary Tuberculosis—By Muther.

Tuberculosis and How to Combat It—By Pottenger.

Epidemiology of Tuberculosis—By Bushnell.

Pulmonary Tuberculosis—By Otis.

Consumption and Civilization—By Huber.

An Autobiography—By Trudeau.

Handbook of Tuberculosis—By Ritter.

The Battle with Tuberculosis—By King.

Consumption—By Flick.

Fresh Air and How to Use It—By Darrington.

Information for the Tuberculous—By Wittech.

Practical Tuberculosis—By Gammons.

JOURNAL RECOGNIZES NEED FOR BASIC LAW

(Continued from page 399)

waukee Journal. It is a voice that will grow in volume and be heard in the future. The editorial follows:

"The resolution passed by the United States senate calling for an investigation of the fraudulent practice of medicine is both timely and needful. Not since the great cleanup of 20 years ago has there been such an opportunity to make the people realize the dangers to which they have been exposed. The disclosures of the fake "diploma mill" in St. Louis and illegal practices in a number of the larger cities are concrete evidence of charlatanism.

"While it is not desirable to have the federal government interfere with state functions in licensing and supervising the practice of medicine, a government investigation ought to center the minds of the people on the dangers of quackery and it ought to reveal to them just where the weaknesses are that make possible this preying upon human ills and frailty. It should, if it brings out the facts, make state legislators sit up and take notice—legislators who have constantly blocked efforts to have the standards of medical practice raised and clarified.

"The movement for a revision of the licensing system in New York state and in Illinois is already in full swing. In Wisconsin the statutes cover the ground fairly well, but health officials conversant with the situation emphatically declare that in spite of this there is a great deal of medical practice that does not come up to these standards. Many are treating human ailments who are not grounded in the fundamentals of anatomy, physiology, pathology and diagnosis. In this movement to safeguard the public, it would be a mistake for the different schools and systems of medicine to fall to quarreling among themselves. It would be a mistake to raise a question of superiority among them. But surely it is within reason and well grounded in public policy to ask them all to meet certain fundamental requirements, and not to allow them to administer to those who are suffering from illness unless they do answer to these requirements.

¹Kuechler vs. Volgmann, 180 Wis. 238.

Morningside Sanatorium Near Madison Founded As Result of Pitiful Case.

BY MRS. RUTH McMILLAN

Wandering about the streets of Madison, unable to get a room although he had the money to pay for it and refused admission to hospitals because they "could not take that kind of a patient," a Madison man in the last stages of tuberculosis appealed to Dr. Louis R. Head, formerly his physician, for a place in which to die. That was twelve years ago.

Unable to get a room for him or to place him in a hospital—there was no tuberculosis sanatorium in Madison at that time—Dr. Head gave him the coachman's room in his barn and there the sick man died after having been nursed for two months. Dr. Head, himself, was obliged to carry every meal to the patient, the servants being afraid to do so.

The cruelty of a situation which made no provision for such emergencies was the prod which resulted a couple of years later in the purchase of the beautiful wooded sanatorium site, just off the Lake Monona drive, six miles from the heart of Madison. The initial payment was made by the Madison branch of the Wisconsin Anti-Tuberculosis Association, with funds raised from the sale of the penny Christmas seals.

When in 1916, Dr. Head and other members of the Madison Anti-Tuberculosis Association planned for two modest little cottages to be erected on the site, help came in a most unexpected manner from an unsolicited source. The late Dr. Charles H. Vilas, whose fortune both during his life and after his death has meant so much to Wisconsin people, came forward with an offer to finance the building of much larger and better cottages than Dr. Head had dared hope he might secure. The cottages were built and in 1917 Morningside Sanatorium was opened.

Owing to the scarcity of government sanatoria at that time, the institution was at first used entirely for tuberculous soldiers, but two years ago it was turned back to the Madison Anti-Tuberculosis Association and is now used entirely as a private philanthropic institution. When the institution grew and new buildings and more money to run the sanatorium were needed, Dr. Vilas repeatedly and without once being appealed to for help,



offered to finance these necessities, so worthwhile did he feel the work to be. When he died about two years ago, the sanatorium was named one of the four residuary legatees of his estate and received the sum of \$25,000.

The sanatorium is built on the cottage plan and even the infirmary is a large, comfortable cottage. In this building is located an extremely attractive dining room, a delightful living room with a big, open fire-place, the kitchen, modern in every respect, and six private rooms, furnished with taste and comfort. These private rooms lead out upon a broad screened porch that has a southern exposure. The sanatorium can accommodate comfortably 20 patients, and if a large percentage are of the ambulatory type, 25 or even 30 can be accommodated. The cottages lie against the back of a large and wooded hill facing the south with a fine view of Lake Waubesa.

Dr. Head is the attending physician, and as president of the Madison Anti-Tuberculosis Association, has a very keen interest in the welfare of the institution. The superintendent is Mrs. S. Stoeber Snyder. She is assisted by a staff of four nurses, the proportion of nurses usually being kept at one for every five or six patients, depending largely on the condition of the patients.

The sanatorium is financed by funds obtained from several sources: by the very moderate charges made to the patients, which, owing to the necessarily large overhead expenses in such a small institution do not cover the operating cost; by funds received annually from the Community Chest in Madison; and by money raised by the Madison Anti-Tuberculosis Association through its sale of the penny Christmas seals.

In addition to the services of Dr. Head who

(Continued on page XXV)

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

Principles of Vital Statistics. By J. S. Falk, Ph.D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.

Medical Biometry and Statistics. By Raymond Pearl, Ph.D., Professor of Biometry and Vital Statistics in the School of Hygiene and Public Health and of Biology in the Medical School, the Johns Hopkins University. Octavo of 379 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$5.00 net.

A Text-Book of Anatomy and Physiology for Schools of Nursing, Normal Schools and Colleges. By Jesse Peiring Williams, M. D., Professor of Physical Education, Teachers' College, Columbia University, New York City. W. B. Saunders Company, 1923. 523 pages. Price, \$3.00.

A Premier for Diabetic Patients. By Russell M. Wilder, Ph.D., M. D., Mary A. Foley, Dietitian, Daisy Ellithorpe, Dietitian, Mayo Clinic. 119 pages (illustrated). W. B. Saunders Company, Philadelphia and London. 1923. Cloth.

Physical Examination and Diagnostic Anatomy. By Charles B. Slade, M. D., New York City Department of Health. Third Edition. W. B. Saunders Company, Philadelphia and London. 179 pages (illustrated). Cloth.

The Dance of Life. By Havelock Ellis. Boston and New York. Houghton, Mifflin Company. 1923. Price, \$4.00.

Pediatrics by Various Authors. Edited by Isaac A. Abt, Professor of Diseases of Children, Northwestern University Medical School. Vols. I and II. Published by W. B. Saunders Company, Philadelphia. To be published in 8 vols. Illustrated. Price, \$10 per volume.

The Note Book of an Electro Therapist. By Niel R. Wag-ganer, M. D. Published by McIntosh Electrical Corporation, Chicago. 173 pages (illustrated).

Cures. By James J. Walsh, M. D. Cloth. 291 pages. D. Appleton & Company, New York. 1923. Price, \$2.00.

Sex and the Senses. By James S. Van Teslaar, M. D. Richard G. Badger, The Gorham Press, Boston. 1923. Price, \$6.00.

Doctor Nye. By Joseph C. Lincoln. First edition. Cloth. Appleton & Company, New York City. 1923. Price, \$2.00.

Blood Chemistry Colorimetric Methods for the General Practitioner. By Willard J. Stone, M. D., New York: Paul B. Hoeber, Inc. 1923. Illustrated. Price, \$2.25.

Psychoanalysis. By Ernest Jones, M. D. Third edition. New York: William Wood & Co. 1923. Price, \$3.00.

Nutrition and Clinical Dietetics. By H. S. Carter, M. D., P. E. Howe, Ph.D., and H. H. Mason, M. D. Third Edition. Philadelphia and New York: Lea & Febiger. 1923. Price, \$7.50.

Life and Confessions of a Psychologist. The autobiography of G. Stanley Hall, Ph.D., LL.D. New York: D. Appleton & Co. 1923. Illustrated. Price, \$5.00.

The Examination of Patients. By Nellis B. Foster, M. D., associate physician to the New York Hospital; associate professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages. Illustrated. Philadelphia and London: W. B. Saunders Company. 1923. Cloth, \$3.50 net.

An Introduction to the Study of Mental Disorders. By Francis M. Barnes, Jr., M. D. Second Edition. St. Louis: C. V. Mosby Company. 1923. Price, \$3.75.

BOOK REVIEWS

W. A. MOWRY, M. D.,
Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Gynecology. Third Edition (Publ. Oct., 1923) by William P. Graves, A.B., M.D., F.A.C.S., Professor of Gynecology at Harvard Medical School; Surgeon in Chief to the Free Hospital for Women, Brookline, Consulting Physician to the Boston Lying-In Hospital. Third Edition, thoroughly revised. Large octavo of 936 pages with 388 half tone and few drawings by the author; 146 microscopic drawings; 103 illustrations in colors. 1923. Cloth, \$9.00 net. W. B. Saunders Company, Philadelphia, London.

Grave's Gynecology—a text with individuality—by an author who is both a thorough student and practitioner of Gynecology has been since its first issue a work quite original in conception and in execution and is based in great part upon Dr. Grave's personal experience. The woman herself—her femininity—is of fundamental consideration throughout.

A complete section is devoted to physiology of the pelvic organs and to correlated gynecology—the relationship of gynecology to the glands of internal secretion, breasts, skin sense organs, digestion, respiration, blood and circulatory apparatus, abdominal organs, nervous system, bones and joints, Enteroptosis, intestinal bands and movable kidney are adequately discussed.

Over 500 pages are devoted to non-surgical gynecology emphasizing medical and mechanical treatments and material of great value to the general practitioner as well as to the gynecologist.

The section on surgical gynecology is modern in conception and technic and includes profusely illustrated descriptions—a large number of them personal draw-

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ings—of those gynecologic operations that seem most feasible to the author. The book is illustrated with 388 drawings by the author and by 146 microscopic drawings. Many of the illustrations are colored.

Among the most important changes in the new (3rd) edition are operation for Prolapse of Urethral Mucus Membrane; Strumdorf Operation for Chronic Endoerovicitis; Ward's Method for Operation of Cystocele; Operation for Tubal Sterilization; Histogenesis of Ovarian Dermoids; Implantation Tumors of the Ovary and the rewriting of the section on Ovarian Tumors. New additions have increased the work by 51 pages. New illustrations number 45.

Grave's Gynecology should gain many new friends and should continue to enjoy its former large usefulness and popularity among gynecologists, surgeons, general practitioners and students because of its excellent illustrations and its completeness and clearness throughout.

—E. F. S.

Habitual Constipation: Its Causes, Consequences, Prevention, and Rational Treatment. By Ismar Boas, M.D. Translated by Thomas L. Stedman, M.D. 12Mo. Cloth. 299 pages. \$2.00 net. Funk & Wagnalls Company, Publishers.

The subject is well covered, and, for the most part, the method of presentation is clever and entertaining. The book should be of particular service to the layman who is a sufferer from constipation, and who is earnestly trying to effect a cure. He will be given a clear insight into the chronicity of his disease, and he will be cautioned and lead to understand that he is not to expect sudden or miraculous results. There are some statements which seem to border on inaccuracy but which are saved by the use of conjunctions. For instance, page 23 "In the first place there is no doubt, however, that habitual constipation *may* be of hereditary and family origin." The facts which would lead one to suspect that constipation is hereditary are, of course, similarity in diet and mode of living with succeeding generations or particular families and are in no way inherited.

Nurses and dietitians will find a lot of material of value in the book and in his spare moments a physician may read it with some benefit.

—R. C. B.

A Manual of the Practice of Medicine. By A. A. Stevens, A.M., M.D. Eleventh Edition, W. B. Saunders Co., Philadelphia. Price, Cloth, \$3.50.

"A Manual of the Practice of Medicine" by A. A. Stevens, M.D., appears to the medical student and the hurried practitioner alike, as an old friend, reclothed, in the revised eleventh edition. The book contains much of its well known concise and systematic arrangement of material although many of the sections have been rewritten, the general material slightly rearranged, and some new special articles added, notably among the last-named being those on tumors of the lungs and pleura, epidemic encephalitis, secondary hyperthyroidism, chronic and early jaundice, progressive lenticular degenerations and subacute combined sclerosis of the cord.

The author's ability to glean the essential features of disease and its treatment and present them in an easily

accessible and readily usable form is shown in this as in previous editions. He has introduced the main points in the most important advances in medicine and eliminated much of that part of the earlier editions which has become obsolete, keeping the work the practical and useful manual which has made it so popular in the earlier editions.

—S. J. M.

The Chemical Basis of Growth and Senescence, by T. Brailsford Robertson, Ph.D., D.Sc., University of Adelaide, South Australia. J. B. Lippincott & Co., Philadelphia and London. 389 pages, (illustrated), cloth.

This is one of a series of *Monographs on Experimental Biology*. It is not written for clinicians. Apparently it is written only for men in experimental biology. The language is often highly technical, and the terms are not defined. As the author says, this is an attempt to show how the phenomena of growth and its opposite senescence, may be interpreted by laws of physical chemistry. The impression is gained that some laws are applied more rigorously to these biological phenomena than the data would at present warrant. As is to be expected the author stresses very heavily the process of autocatalysis. Tethelin does not receive undue mention. The book gives relatively little attention to the vitamins and this chapter is not up-to-date. In many places the author uses detailed data as evidence for his argument, while in others he presents only generalizations. The book is in no sense a manual of all known facts. It does, however, present a bibliography of 583 references all of which are incorporated into the text itself. There is an appendix illustrating some of the mathematical methods of the author. The book is rather well indexed, but it is difficult to scan or to read rapidly, in looking for any one point. This is due to the insufficient use of paragraph headings and also to a rather discursive style without the use of an outline for the chapters. The book should be interesting to any one who desires to gain a chemical point of view on these biological problems.

—E. L. S.

Alcohol and Prohibition in Their Relation to the Civilization and the Art of Living, by Victor G. Veeki, M.D., San Francisco, California. Published Philadelphia and London—J. B. Lippincott Co., 165 pages, cloth covered; price \$2.00.

In this book the author gives a fair and unprejudicial presentation of the facts involved in the liquor question of today. A large part of the book consists in reports and editorials of the leading newspapers and medical journals which present some of the following problems:

Opinion as to the constitutionality of the Volstead Act; what prohibition has accomplished; difficulties in enforcing the Volstead Act because of the ease with which alcoholic beverages can be made; some of the difficulties which are encountered by the medical profession to get above the quota of alcoholic beverages for patients; the opinion of the medical profession upon the value of alcohol in medicine; the disregard for law and other interesting facts.

In summing up the book as a whole one gets the im-

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pression that the author is not opposed to prohibition but is opposed to the way in which it is being enforced. This seems to be expressed in the words "drastic laws have never accomplished the purpose they were enacted for."

—C. P. B.

The Dietary of Health and Disease, by Gertrude I. Thomas, Instructor in Dietetics, University of Minnesota. 210 pages (illustrated). Lea & Febiger, Philadelphia and New York. 1923. Cloth.

This book is a very complete, well written outline of practical dietetics for dietitians and nurses. The author gives a clear, concise summary of food and its relation to the human body. Several chapters are devoted to a brief explanation of carbohydrates, proteins, fats, water, and mineral matter. Tables of vitamin, salt, iron, and purin content of various foods are given. Also tables of the caloric value of foods are included in 100-gram portions and in 100-caloric portions and a complete table of the percentage value of foods. The tables seem reliable. The author does not neglect the preparation and service of food. All underlying principles in the preparation and service of food are given in outline form which helps to emphasize the importance of these principles. General hospital dietary is outlined. The recipes selected are practical and well chosen, meeting all necessary demands for use in normal and abnormal diets.

The last five chapters of the book are devoted to specialized diets. The diseases are outlined with the underlying principle for the dietetic treatment. Sample diets are given for each individual disease. An explanation of the Joslin method of diet treatment in diabetes is arranged. No mention is made of the new method of diabetic diet treatment by Woodyatt and his colleagues. Diet treatment in combination with insulin is also ignored.

The bibliography is very complete and in general I could recommend no better book as an outlined text for teaching practical dietetics to nurses and student dietitians.

—V. M.

Diathermy and Its Application to Pneumonia, by Harry Eaton Stewart, M.D., Paul B. Hoerber, N. Y. 210 pages, cloth, \$3.00.

The author discusses in detail the technique and rationale of diathermy in relation to many conditions, local and general. His treatment of the subject is neither exhaustive nor convincing. Certainly further evidences than are advanced would be necessary to prove the efficacy of this form of treatment in nephritis, myocarditis and cerebral hemorrhage.

Of two hundred and four pages of subject matter, one hundred and nineteen are devoted to general considerations. The real topic under discussion, therefore, receives scant attention. Without entering into a detailed criticism of the text, the number of cases considered would obviously be too small for definite conclusions. Mortality statistics are ever inconclusive where pneumonia is concerned. Had the author heeded his own repeated caution on this point, an obvious pitfall would have been avoided. If we consider Dr. Stewart's cases separately, we find that five deaths are

reported in twenty-four treated cases, as compared with two deaths in twelve controls. Granting that no case is made for diathermy through mortality reports personally controlled by the author, the real evidence for the utility of this procedure is yet problematic. That there is a definite influence on the pneumonia process is evidenced by the constant lytic curve assumed by the temperature of patient under treatment. A serious doubt aside from ignorance of the mechanism of action of diathermy in pneumonia is aroused by the admission of recrudescences. Their frequency must be determined before granting the innocuousness of the method. The subjective improvement alone justifies its trial on a wider scale, however.

The publisher has produced a creditable text in workmanship and illustrations.

—W. S. M.

Pierre Curie (including Autobiographical Notes), by Marie Curie; translated by Charlotte and Vernon Kellogg. 242 pages. The Macmillan Co., New York. Price \$2.25.

Madame Curie with characteristic adherence to fact has accomplished the difficult task of writing a husband's biography. A truly charming picture is drawn of her sensitive companion, who entered the holy state of matrimony only after he had assured himself that their mutual interests were such as to add to their separate and collective usefulness to science. For an abstract scientist his home life was most happy and his interest in outdoor life unusual. The discovery of radium (1898), for which the Curies are world renowned, was the result of their combined efforts in the face of privation and almost insurmountable deficiency in equipment. When recognition did come, Curie insisted that science rather than the man be honored. He refused all decorations, seeking instead support for his laboratory. Curie was too idealistic to capitalize his discovery, but Madame Curie expresses some doubt as to the wisdom of this position, which clearly closed a source of ready income for the more rapid development of their work. Honors were heaped on the Curies, most notable among which was the Nobel Prize in 1903 (with Henri Becquerel). A street accident brought Curie to an untimely end in 1906.

Of necessity much of the Madame Curie's autobiographical materials are repetitions of those in the biography of M. Curie. Polish in origin she sought higher education in science in Paris. Her devotion to her native land was second only to her love of her husband. Indeed she named the element polonium, after Poland. Unusual deference was shown Madame Curie in academic appointment both with her husband and since his death. To her was accorded the unusual honor of a second Nobel award in 1911. She rendered notable services in the war. Her gratitude to the American people for their glorious reception to her and her daughters (1921) and the gift of a gram of radium is touching.

This biography and autobiography of two scientists who have contributed so much to humanity, deserves a wide circulation and will doubtless be read with interest by the medical profession, particularly.

—W. S. M.

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ORIGINAL ARTICLES

SHOULDER AND HIP FRACTURES*

BY FRED J. COTTON, M.D., F.A.C.S.

BOSTON, MASS.

Shoulder fractures, common, are regarded with a dread hardly justified. Save for a few they do surprisingly well if only treated with proper optimism and proper basic technique. It is just in the smashed shoulder of elderly ladies, so often seen, that results are so good.

And the key to the matter is that anatomic reposition in the shoulder is very unimportant; horrid heresy, but true.

So long as the greater tuberosity will go under the acromion the shape of the upper humerus end matters little. Union occurs, always, I think, and very promptly. A fortnight sees a working union already established. I can not recall a case of non-union—outside the Warren Museum.

Suppose we have an impacted fracture of the anatomic neck, one of the sort so often seen in which the X-ray shows curious distortion of general outline with vague lines of fracture. As a rule this type occurs in the elderly. By no means do we break this up or worry about the symmetry of the result. Skillfully mobilized, such a condition permits all the motion the old lady will ever use. The risk is of stiffening *only*, and of stiffening due to immobilization. In these cases the form of fixation is immaterial, the period not over a week, the rest is up to the P. T. aide.

Fractures of the surgical neck are usually loose, and must be reduced. Under ether, the best practicable reposition is to be sought. Usually this means reduction of the shaft fragment from the point forward and inward to which the pectoral has dragged it. Perfect reductions are not reached—nor necessary—and open reduction in the average elderly patient, not to be thought of.

We have two ways of handling to be considered, the Jones-Murray splint for traction in bed at a right angle, or the various forms of aviation splint.

The army aviation splint is almost as poor as the old time plaster spica. Cleary's is better, but best of all is the half-forgotten Monks' triangle which I nearly always use for the ambulatory cases.

The essential is an abduction, with traction if need be, at such an angle that we are sure the greater tuberosity will clear the acromion and will stay clear for our initial ten days.

If there is a complicating fracture of the greater tuberosity this also is taken care of by forced abduction.

If there is only the greater tuberosity broken clear, abduction, and in this case without traction, is all we need.

In any case ten days does the trick.

Then the arm may come down into a sling and proper mobilization, including a daily return under handling to the abduction position secured at the start, ensures our result. Often I bring the arm down in two stages, using the Osgood Penhallon splint for the intermediate stage.

Just now I am finishing with a case of loose fracture of the surgical neck with separation of the greater tuberosity. It is two months now, and the ten days after ether reduction were spent in a necessarily uncomfortable abduction, Monks' triangle, and after that mobilization. She can get to her back hair now, though she is a plump little old lady, and the work since the tenth day has been done nearly all by my masseuse.

A second case, loose anatomic neck only, reduced and held in abduction splint, needed later support in an adhesive plaster sling to control a downward subluxation due to the drag of the weight of the arm when it came down, a not uncommon complication, slung so as to take care of this without limitation of motion. This case also went into the hands of the P. T. aide. More recent, she shows less motion as yet, but will presently reach the stage of full usefulness.

It is not of importance whether one attains a perfect position in these cases but absolutely essential that one avoid a stiffening that will not let the patient reach her back hair or the placket of her skirt behind.

These are the cases I see most often, and their treatment in the last few years has become a matter of successful office routine.

*Read before the Inter-State Assembly of the Tri-State District Medical Association, Des Moines, Iowa, Oct. 29, 30, 31 and Nov. 1, 1923.

In the younger cases one must regard anatomic results more. The same abduction splints are indicated for a while but one is dealing with conditions of muscle spasm not met with in the elderly.

Many may be handled with the routine above dictated, but not a few are irreducible or intractable, and not a few call for open reduction. Particularly in adolescents with breaks just below the epiphysis or with epiphyseal separation, one fails of satisfactory reduction. In these cases the bugbear of stiffening from fixation is not much to be considered, and it is fair to call for better anatomic results. Hence in this class the proportion calling for open operation is fairly large. Often on operation one finds the biceps tendon as the obstacle. Reduced, these cases go up in abduction, are mobilized at about three weeks and do well.

Rarely one meets fracture luxations.

Rarely with good luck one juggles these into place.

Commonly, one operates, and secures reduction; uncommonly excision of a loose rolling head is the best thing to do, with an end-result by no means perfect but apt to be curiously serviceable.

It is odd to note how rarely the adhesions of the subaeromial bursa, which must constantly occur, do affect our results under this routine; not less odd, perhaps, but less happy, to note the proportion of hopeless stiffening especially in older patients that results from even good anatomic reduction under a routine that lays less stress on early mobilization. Rarely, owing to heavy pectoral spasm, abduction to the side is called for—in a double sling with axillary pad.

FRACTURES OF THE HIP.

Few lesions are more troublesome and few in which the literature is more painful than in fractures to the hip.

Here in Des Moines I hesitate a little to speak on hip fracture but I have my return ticket and am going to take a chance. As I see it the trouble has been that we have talked too much.

The fact is that there are two types, one that does fairly well and accounts for boasted results—the other that doesn't do any too well on any basis of treatment.

Hip fractures, more than any other break, are injuries of the old, who are clumsy as well as brittle.

Not a few cases die—in the first week or not seldom in convalescence. They die of heart or

lung or brain complications due to shock or to the confinement which is inevitable in such cases. They die because they are old and unsound, not because of one or another form of treatment. In public hospitals the mortality runs with curious constancy from 15 to 18%—in private practice, with a better "material," the percentage is a little lower but still a considerable mortality exists.

Now as to treatment.

First, I let them alone under pillow support for a few days to get over the initial shock. Also, to get X-rays and a definite diagnosis. Also, to see if they are going to "blow up" and get a heart dilatation or hypostatic pneumonia or prompt bed sores. If they are, I'm going to hold my hand a bit, on the ground that I can do no good by early interference and can easily accumulate discredit. Whatever happens after any surgical interference is debited against the surgeon, of course.

There are many cases of hip fracture that are essentially hopeless and it is simply silly to attempt radical interference in such cases.

After five days, let us say, we are convinced that our old lady is fit to treat with a view to locomotor results. X-rays have shown us a fracture intra or extra capsular, impacted or not. If it is extra-capsular, intratrochanteric, we are going to get union, whatever we do. The problem is of avoidance of deformity, and there is no way so satisfactory as traction.

The Phillips-Maxwell-Ruth method of longitudinal and lateral traction is the prettiest scheme. It has fully justified itself in this class, and all the post mortem specimens Ruth used to lug around in his bag, which I have examined carefully, seem to me to be cases of this type, adequately treated, with admirable results.

With careless treatment we have horrid coxa vara deformity and serious disability.

In my own practice I used to use the Phillips M. R. method. The only possible objection to it is that it requires skill and care to avoid interference with circulation and working as I do in a large municipal hospital I find the detail of work by interns and nurses a matter of some worry.

Therefore of late I have substituted traction in abduction with an increase of weights to balance against Dr. Ruth's attention to detail with about the same results. All those cases do well and get *early* union. They are stiff at 6 weeks, solid at 8, walking in 12, and if one has done a proper job,

the resultant disability is no more than a minimum stiffness and sensitiveness.

The other class is "something else." The break is within the joint, "intra capsular," "subcapital." The problem is one of union, and that only.

The trouble is that we are dealing with the separation of a head which by the occurrence of the fracture has lost most of its blood supply and of its capacity for bone repair. Many of the cases fortunately are impacted. Unfortunately the impaction is often a frail safeguard, and often with the progress of the bone softening, which everywhere precedes repair of bone, the impaction gives way.

I think the frequency of this calamity has not been appreciated. Personally, I have seen this happen in a number of cases and from investigation of end-results in hospital cases think it decidedly common. Every bone softens before it begins to unite and in this particular location softening may well result and does result in the loss of an impaction none too firm at best.

Given impaction in tolerable position our problem is to minimize the chance of this disaster. What we can do is to fix and to minimize the untoward result of muscle spasm. That means abduction, of course, the position of choice in all hip lesions for the reason first of all that it avoids adduction contracture; second that it minimizes the distorting effect of muscle spasm by bringing the pull more nearly in the line of the broken neck; third, that it tightens the Y ligament. Whitman has very usefully popularized this principle.

Secondly we must invert the limp. Peckham of Providence, R. I., deserves a credit never given for stressing this point.

Anyone who has operated on hips can testify to the definite fixation produced by such sharp inward rotation. The mechanism is, of course, that of ligament tension. With impaction, then, abduct and invert, to the limit obtainable without breaking up the impaction.

Fix for three months, preferably in plaster. I use a double spica, stopping at the line on the sound side.

Allow motion in bed through the fourth month.

Crutches at four months with increasing weight on the foot.

Full weight at six months.

Recovery of full use needs a year, and under any routine we know there are going to be a proportion of failures—of non-unions.

And now as to the unimpacted cases:

They can be reduced, in such instances as allow of general anesthesia, by traction and manipulation.

Whitman says they can be locked in abduction.

I prefer, still, to add the assurance given by my scheme of artificial impaction after reduction.

One can demonstrate easily as I have often done and lately did three days ago, the locking into firm position of a fracture previously loose, so that it does not "flop" into outward rotation or shorten under muscle spasm.

This done one can do no more than fix in abduction and sharp inversion.

This gives a condition about like that of a primary impaction in favorable position.

After this it is "up to" the patient's repair power.

We can care for the fixation and the subsequent return to use—that is all.

Campbell reports the best results, I think—Whitman seems to have no collection of cases, and mine, while not bad, do not show up as well as Campbell's—a difference due, I fancy, rather to difference in "material" and to hospital conditions than to method. My private cases have shown admirable results in the main, but here again an occasional case of utter failure to get bony union despite care and a favorable start. X-rays in these cases, have shown a curiously intense absorption process from the start. I am at a loss to give any real explanation as to why this process varies so from case to case and have no suggestion, so far, as to any means of influencing the process.

What of late cases?

Two cases, one of mine, one of Dr. Otto Hermann's seen by me in consultation have gotten solid union and admirable results from reduction and artificial impaction done after two months. His case had given way under the Whitman routine, was then re-reduced and impacted. Possibly even later cases may prove amenable to such treatment. Operative results are not very good, I fear. Like others, I have had my successes and have not made a very loud noise about my failures.

If one must operate it is a question, I think, not of bone-grafting stunts but between the Brackett operation, the choice in most cases, and excision of the head with shaping of the neck to serve as a new head, with or without the fat flap of a formal Murphy arthroplasty. The choice rests in the matter of age and time. The Brackett operation means six months, gives a solid hip with some loss

of motion, the arthroplastic excision gives a result usable in half the time, but less stable. In many cases not fit for extensive operative procedure one accomplishes much with a supportive belt, and non-union is not necessarily a crippling disability.

To sum up:

Extracapsular fractures can be restored to near normal function.

Intracapsular fractures handled as sketched, give a proportion of *perfect* results, many serviceable limbs, a proportion irreducible as yet, of failures not all of which are to be restored to useful function by any operative or other means as yet at our command.

THE PREVENTION AND CURE OF GOITER*

With a Review of One Hundred Thyroidectomies Performed in 1923

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MADISON

Toxic goiter is one of the most commonly discussed and least understood of our important medical problems. It should be of especial interest to physicians of Wisconsin inasmuch as this state ranks sixth in the incidence of goiter. Seemingly the disease is on the increase. It is discouraging to realize how many patients who could be cured, if treated early, are neglected and in how many others the condition is not correctly diagnosed and is wrongly treated. The study of goiter is complex, and much confusion exists over the diagnosis and treatment of the various forms. In spite of diversity of opinion on this subject, there are a few principles which should be generally accepted. The conclusions drawn in this paper are based on a study of over 3500 cases observed at the Jackson Clinic and at the Mayo Clinic.

A simple classification such as the following is essential:

1. Colloid goiter.
2. Adenoma.
 - a. With hyperthyroidism (toxic adenoma).
 - b. Without hyperthyroidism (simple adenoma).
3. Exophthalmic goiter (Basedow's or Grave's disease).

4. Tuberculosis, malignancy, syphilis, thyroiditis, actinomycosis, and so forth.

COLLOID GOITER.

Colloid goiter most frequently appears in young girls at puberty, and is often spoken of as a physiologic enlargement. The growth is soft, globular, and causes a symmetrical enlargement of the neck. A small percentage, those with vascular glands, have thrills and bruits. If nervous symptoms, tachycardia, and palpitation are present, exophthalmic goiter must be eliminated. The absence of exophthalmos, high pulse pressure, quadriceps loss, history of loss in weight and strength, or a crisis rules out exophthalmic goiter. A normal basal metabolic rate confirms the diagnosis.

In the treatment of colloid goiter, three mistakes are often made:

1. The diagnosis is too long delayed and treatment is begun too late.
2. There is no uniformity in the manner of treatment.
3. Treatment is continued in spite of the development of large adenomas.

Marine and Kimball have proved that colloid goiter may be prevented and even cured. Their results in the Cleveland and Akron schools have been so successful that the Swiss government has now adopted a similar manner of combating goiter. Thirty grains of sodium iodid are given over a period of two weeks, twice during the school year. A better plan, when possible, is to give 10 mg. every week throughout the entire school year. This dosage may be safely given to all children over ten years of age whether or not there is any evidence of colloid goiter. The table nu-salt idea, as advocated before this society by Dr. Sloan last year, may cause harm because the dosage is inaccurate and cannot be regulated by the laity. We recently heard a public health official advocating its use to a large group of women as a cure for all kinds of goiter. Whether iodine is painted on the skin, or the fumes absorbed by inhalation from an open bottle as in some English school rooms, or it is taken by mouth does not materially effect the result; but in order that statistics may be compiled and compared, the accurate method worked out by Marine and Kimball should be adopted as it is the simplest.

While iodine is a specific in colloid goiter, it may cause serious harm when used in cases of adenoma. Twenty-five per cent of the patients with toxic

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adenoma whom I observed this year were toxic as a result of having been given iodine over a period of several months. The use of iodine in large or even moderate doses often causes the adenomatous tissue to hyperfunction. In Switzerland hyperthyroidism so frequently followed the administration of iodine that Kocher called the condition "Jod-Basedow" and repeatedly warned against this danger. One patient referred to me at the Jackson Clinic was a woman six months pregnant, in extremely serious condition, with a metabolic rate of 44 per cent. She had been given iodine for a period of several months, and this was continued in spite of the evident signs of developing hyperthyroidism. The administration of iodine in adenomatous goiter in a patient more than twenty years of age is attended with considerable risk. If there is doubt regarding the presence of an adenoma, iodine should not be given. In patients under twenty years of age, colloid goiters containing small adenomas may justifiably be treated with iodine for brief periods and when frequent metabolic tests are made. The adenomas will not be permanently affected, but by putting the gland at rest their growth may be retarded. The treatment of colloid goiter should be started early before the development of adenomas which usually appear between the ages of sixteen and twenty years.

ADENOMA WITHOUT HYPERTHYROIDISM.

Simple adenoma, also called nontoxic adenoma to indicate the absence of the constitutional symptoms of hyperthyroidism, is one form of endemic goiter, which, on account of its regional distribution, follows closely that of colloid goiter. The incidence of adenoma of the thyroid is decreased by the prophylactic treatment of colloid goiter. Apparently adenomas frequently start in neglected colloid goiters as a form of compensatory development. Histologically, there are two main types of adenomas, the fetal and the adult, so-called because of their resemblance respectively to normal fetal or normal adult thyroid tissue.

Adenomas may enlarge so slowly that they become apparent to the patient only after many years, or they may grow rapidly and early undergo degenerative changes through hemorrhage within the capsule of the adenoma. In this manner the various clinical types of cystic, hemorrhagic, or calcareous goiter are formed. The thyroid is asymmetrically enlarged, and one or more nodular tumors may be palpated.

Adenomas rarely cause constitutional symptoms before the patient is twenty years of age, unless provoked by iodine medication. Occasionally an adenoma will grow rapidly, involve the trachea, and cause pressure symptoms. There may be interference with the voice from pressure on the recurrent laryngeal nerve. Under these conditions, or if the goiter is unsightly, operation is indicated. Otherwise, operation is seldom advised until after the patient is twenty-one. If the patient may then be observed at frequent intervals, operation may be delayed. I say delayed, because since every adenoma is a neoplasm, it is potentially a precursor of cancer and should be removed. During the first series of 100 goiters which we observed this year there were four carcinomas of the thyroid. One of these occurred in a woman whom we had urged to have a thyroidectomy eight months previously for the removal of a benign multiple adenoma. Moreover, one of every four cases of simple adenoma will in time develop symptoms of hyperthyroidism and before this condition is recognized there may be permanent damage to the heart, kidneys, and blood vessels.

As we have done all thyroidectomies for simple adenoma under local anesthesia and have permitted patients to leave the hospital on the fifth day, fear of the operation is seldom encountered. Patients do not suffer as much discomfort following thyroidectomy as following an ordinary tonsillectomy and the small incision is pretty well healed at the end of a week.

ADENOMA OF THE THYROID WITH HYPERTHYROIDISM.

An adenoma is present sixteen to eighteen years before toxic symptoms develop. The average age of the patient is forty-four years. Adenomas are about five times as common in women as in men. The onset of toxic symptoms is both more gradual and less severe than in patients with exophthalmic goiter. The symptoms are of a slow, insidious type with a serious and lasting effect on the kidneys and heart. Acute crises do not occur. Thrills and bruits are rare, and true exophthalmos is not seen. Myocardial degeneration, evidenced by irregularities in heart rhythm and edema of the legs, is common. There is a tendency to hypertension and the diastolic blood pressure is considerably higher than in exophthalmic goiter. The average basal metabolic rate of our patients with toxic adenoma was 28 per cent. The treatment of

this condition, as soon as pre-operative preparation will permit, is thyroidectomy. If this is performed before a marked degree of hyperthyroidism and serious cardiac damage have developed, the mortality is less than 2 per cent. In the long neglected cases the risk increases up to the point



Fig. 1—Advanced case of exophthalmic goiter one week following ligation. Basal metabolic rate 74 per cent. The patient shows marked exophthalmos, emaciation, and muscular asthenia.

where the surgeon must say that it is too late for surgery. Ligation is seldom of any benefit in these cases.

EXOPHTHALMIC GOITER.

In contrast to toxic adenoma, exophthalmic goiter is characterized by a history of rather rapid onset of symptoms, averaging nine months' duration. It is a disease of youth occurring most frequently between the ages of eighteen and thirty-five. As pointed out by Plummer, exophthalmic goiter progresses in a series of waves, at the crests of which all symptoms are exaggerated and a crisis occurs with painless nausea, vomiting, and diarrhea.

The gland is symmetrically enlarged in exophthalmic goiter in contrast to toxic adenoma. Thrills and bruits occur in 80 per cent of the cases. Bilateral exophthalmos is seen in one of every two patients within three months. Tachycardia, tremor, and a warm moist skin are characteristic. The pulse pressure is high; the systolic pressure averages between 120 and 140 and the diastolic

seldom rises above 75. There is a history of early excessive mental and physical capacity for work followed by a tendency to tire easily. A peculiar type of nervousness, often accompanied by insomnia, is an early symptom. Loss in weight, in some cases rapid and extreme, is accompanied by a variable and at times excessive appetite. Muscular asthenia, most marked in the quadriceps group of muscles occurs. Fever is present only during a crisis or a terminal attack. After two ligations the average rate dropped to 33 per cent and after thyroidectomy it fell to 6 per cent.

THE PRE-OPERATIVE TREATMENT IN CASES OF TOXIC GOITER.

Two important factors in securing successful operative results are the time and choice of operation. Each case should be carefully studied before considering operation. Marked, recent loss in weight and strength with a rapidly rising metabolic rate may indicate the approach of a crisis in exophthalmic goiter. At this time even a ligation or hot water injection may be attempted with grave risk. On the other hand a patient who is gaining



Fig. 2—Same patient as in Figure 1, one year after thyroidectomy. Basal metabolic rate 6 per cent. The patient has gained fifty pounds. Note the remarkable change in the facies. This patient is an excellent argument for the surgical treatment of exophthalmic goiter.

in weight and strength is probably in a period of remission and the presence of a stationary or falling metabolic rate indicates a very favorable condition for operation.

In the pre-operative handling of the patient the greatest diplomacy, tact, and thoughtfulness must be exercised. Cheerful, quiet, gentle attendants are essential. All patients should be given digitalis. I prescribe routinely 2 c.c. of tincture of digitalis three times a day for three days, and in the more toxic cases this dose may be repeated in a week or ten days, or continued to the point of anorexia. It is important not to digitalize to the point of vomiting.

The patients are allowed up for from one to three hours daily, and the rest of the time they are kept as quiet as possible with an ice bag on the heart. Thirty grains of bromides are given every day for not longer than a week.

The diet, which must exceed 4000 calories a day as a minimum in order to maintain body weight, may consist largely of carbohydrates and fats.

Patients with toxic adenoma do not require as careful preparation as those with exophthalmic goiter. After digitalization and when the heart is in condition thyroidectomy is performed with little risk. The more advanced cases offer a serious problem and even after weeks of preparation the

lution in the pre-operative treatment of exophthalmic goiter as advocated by Plummer. Although the use of iodine had been known for a long time, it was generally considered of slight benefit and in some cases harmful. During the past year we have treated twenty patients pre-operatively with



Fig. 4—Same patient as in Figure three, three weeks after thyroidectomy. This boy has gained sixteen pounds in weight. In young persons the surgical risk is so great that a five-stage operation was required.



Fig. 3—Exophthalmic goiter in boy aged nineteen years. Note exophthalmos and symmetrical enlargement of the thyroid gland. Basal metabolic rate 48 per cent. Following treatment with Lugol's solution the rate was reduced to 28 per cent.

myocardium may be in such condition that operation is undertaken with a high surgical risk.

The greatest advance during the past year in the treatment of goiter has been the use of Lugol's so-

Lugol's solution and have been able to reduce the metabolic rates an average of 20 per cent. The clinical improvement is proportional. The patients become more quiet and composed and lose the starey expression so characteristic of their diseases. They cease thrashing about in bed and picking at the bed clothes. In many cases improvement is so marked that ligations may be dispensed with. In all the operative risk is materially reduced.

There is not sufficient data available as yet to warrant the use of Lugol's solution in cases of toxic adenoma. In the cases of hyperthyroidism in which we have administered it there has been no indication of improvement and we have discontinued its use. Briefly, the theory of its value in exophthalmic goiter is that the overworked gland is sending forth an incomplete product, and Lugol's solution relieves the excessive demand on the part of the tissues, thus putting the gland at rest and allowing it to complete its secretion.

Before operation, patients are advised that

There are two conditions met with before and after the age of twenty which modify symptoms, physical findings, X-ray pathology and laboratory. The first condition is pregnancy. During pregnancy the temporary healing process in the lung causes the following modifications: the sputum may become negative, the chest findings less and the X-ray pathology less apparent. It is well to delay the interpretation of chest findings until three or four months after pregnancy. The healing is temporary and the chest signs are more evident after than before pregnancy. Another condition is an active tuberculous process elsewhere than in the lungs. The chest findings may decrease while this process is active and increase when this process is quiescent.

When pulmonary tuberculosis develops after the age of thirty, prognosis is much more favorable than in the earlier periods of life. The chest findings may be in evidence early. The subjective symptom of fatigue after thirty may express itself by dyspnoea. The scar tissue within the lung after the age of thirty diminishes the area of air bearing surface and embarrasses the heart's action.

In the aged the sputum may become positive after the individual has suffered from a non-tuberculosis operation may be performed that day depending somewhat on their behavior. The majority prefer to have it over with and this strengthens their courage and composes their nervous system. Unaware of the date of operation they have benefitted by a good night's sleep.

The room is darkened and the patient's eyes and ears covered. One hour before operation two hypodermics of morphine, gr. $\frac{1}{4}$, followed in fifteen minutes by scopolamine, gr. $\frac{1}{300}$, are given.

In order that operation may be successful the patient must be in the correct position on the table. The field is prepared with alcohol and picric acid, and the draping and local anesthesia begun almost simultaneously.

A review of 100 thyroidectomies performed at the Jackson Clinic during the past year shows that local anesthesia alone was used in 90 per cent of the cases. Combined local anesthesia and gas anesthesia was used in 5 per cent and gas analgesia after the method of Crile was used in 4 per cent of the cases. Ether anesthesia alone was used once. The merits of local anesthesia have been too well demonstrated to need further discussion here. The most serious complication in surgery of the thyroid, injury to the recurrent laryngeal nerve,

has been almost eliminated through its use, and postoperative hyperthyroidism has lost its terrors. In this series there was no case in which the recurrent nerve was permanently injured. There was no case of postoperative hyperthyroidism.

OPERATIVE TECHNIC.

In operating for small adenomas a modified Kocher incision, which is straight and short, is used. This incision leaves an almost perfect scar that is well healed within a week. In all other cases the regular Kocher incision is used. In dissecting up the skin and platysma it is important to observe three points. The assistant should make very strong upward traction, the scalpel should be extremely sharp, and it should be applied edgewise and not too deep. This will eliminate most of the bleeding and will require the ligating of only half a dozen vessels. It is often advisable to ligate and divide the two large superficial veins on the surface of the muscles.

The capsule is then divided in the midline to the surface of the gland. The muscles and capsule are separated from the gland, the sternocleidomastoid retracted, special non-crushing muscle clamps applied laterally and muscles divided. The gland may then be further injected with novocaine. As the first assistant elevates the right lobe with clamps, the second assistant retracts the sternocleidomastoid muscle. The gland is freed from the capsule and the lateral veins are divided and ligated. Next the upper pole is double clamped and divided, thus permitting easy rotation of the gland. Ochsner clamps are then applied on the larger vessels and the gland resected. The surgeon and the assistant compress and support the gland between their index fingers, thus maintaining perfect hemostasis. The first assistant clamps the larger vessels, while the operator resects the gland and the second assistant maintains a perfectly dry field. The larger vessels or those in proximity to the nerve are ligated independently.

The gland is then quickly sutured by a mattress stitch through the capsule on either side. Especial care is taken to avoid suturing too deep and thus injuring the nerve. The isthmus and left lobe are removed in a similar manner. Before the wound is closed the patient is aroused sufficiently so that he may be made to talk and cough. It is thus made sure that the nerve is uninjured, that no bleeder has escaped, and that the field is left dry.

We use two small tapes as packs and to facilitate

drainage as advocated by Crile. Also rubber tissue drains are left at each end of the incision and a rubber in the center. A warm boric-alcohol dressing is applied. The purpose of this is to aid in the elimination of toxic secretions. The first assistant and surgeon, working independently, close the incision. When team work is highly perfected it is possible to perform the majority of thyroidectomies in from thirty minutes to one hour.

POSTOPERATIVE TREATMENT.

Postoperative treatment consists in keeping the patient absolutely quiet with morphine and ice bags. The fluid intake must be kept up to 3500 c.c. in 24 hours. We prefer to withhold fluid by mouth for six hours, when all danger of the vomiting that may initiate postoperative hyperthyroidism is usually past. If the heart gives indication of weakening, digitalis, gr. 1/25, hypodermically, is given every hour as long as indicated.

PROGNOSIS.

My experience with the X-ray and radium in the treatment of toxic goiter is limited to observations on cases treated elsewhere. The literature is filled with premature and extravagant claims regarding the merits of these therapeutic agents. In most instances the number of cases presented and the time allowed for results are too limited for satisfactory conclusions to be drawn. The work of a few men, notably Means and Aub, deserves further consideration.

In the treatment of exophthalmic goiter X-ray and radium are largely of palliative benefit, and are contra-indicated in adenoma. Treatment must be continued over a long period of time with uncertain results. As pointed out by Crile, there exists a serious risk of producing myxedema from the inaccurate X-ray dosage. I cannot conceive of their use in the treatment of colloid goiter.

In contrast to the rather uncertain results with the use of these agents, consider the brilliant achievements of surgery in the treatment of toxic goiter. In 1920 I assisted Dr. Judd in reviewing the postoperative results of 200 operations for toxic goiter at the Mayo Clinic. This series showed that approximately 80 per cent of the cases of exophthalmic goiter and 83 per cent of the cases of toxic adenoma were cured after a period of six years.

After talking with other men who are interested in the prevention and cure of goiter, I have come to this conclusion: that others can continue to

experiment with X-ray and radium but until more satisfactory results are obtained with these agents my choice will be surgery.

SUMMARY.

1. A simple classification is essential to a clear understanding of the complex study of diseases of the thyroid gland.

2. A colloid goiter may be prevented and cured if treatment is begun before the development of adenomas.

3. Adenoma of the thyroid should not be treated medically. It is a surgical condition. One in every four patients will in time develop symptoms of hyperthyroidism.

4. Toxic symptoms develop insidiously in adenoma with hyperthyroidism but there is a more serious damage to the heart and kidneys than in exophthalmic goiter. The average metabolic rate in this series was 28 per cent.

5. In exophthalmic goiter there is an acute onset of symptoms. Important symptoms little stressed are: excessive appetite with severe loss of weight, muscular asthenia, especially noted in the quadriceps; a high pulse pressure with a low diastolic reading; and gastro-intestinal symptoms including vomiting and diarrhea.

6. Early operation and the preoperative treatment of exophthalmic goiter as advocated by Plummer have constituted the greatest advance during the year. In the series of twenty patients treated with Lugol's solution at the Jackson Clinic, the metabolic rate was reduced an average of 20 per cent. All patients are digitalized before operation. The diet should exceed 4000 calories daily.

7. Local anesthesia was the method of choice in 90 per cent of the 100 thyroidectomies in this series. The advantages are indicated by the fact that there were no instances of injury to the recurrent laryngeal nerve or of postoperative hyperthyroidism.

8. With perfect team work it is possible to perform a rapid, almost bloodless resection of the thyroid gland.

9. Surgery will effect a cure in 80 per cent of the cases of toxic goiter. X-ray and radium are not advocated in the treatment of exophthalmic goiter, but may be used in cases demanding palliative measures.

TABLE 1.

100 CONSECUTIVE THYROIDECTOMIES IN 1923.

Number of patients	100
Thyroidectomies	100
Ligations and stages	45
Total operations	145
Successful operations	143
Deaths	2

DIAGNOSIS.

Adenomas	75
Multiple nontoxic	53
Multiple toxic	22
Exophthalmic goiter	23
Carcinoma	2

TABLE 2.

ANESTHESIA IN 100 CONSECUTIVE THYROIDECTOMIES.

Total anesthetics given	145
Local anesthetics	130
Combined local and gas anesthesia	9
Gas analgesia	4
Gas-ether anesthesia	1
Ether anesthesia	1

TABLE 3.

BASAL METABOLIC RATE IN 100 PATIENTS WITH GOITER.

	B. M. R.	
	Cases	Per cent
<i>Exophthalmic goiter</i>	23	
Preoperative average		54
Maximum		92
Minimum		25
Average after 1 ligation		39
Average after 2 ligations		33
Average 2 weeks postthyroidectomy ..		6
Patients treated with Lugol's solution	10	
Average reduction after Lugol's		20
<i>Nontoxic adenoma</i>	53	
Preoperative average		7
Postoperative average		1
<i>Toxic adenoma</i>	22	
Preoperative average		29
Postoperative average		5

TABLE 4.

AVERAGE GAIN IN WEIGHT IN 98 PATIENTS WITH GOITER.

	Cases	Gain in
		Weight Pounds
Exophthalmic goiter	23	30
Multiple toxic adenoma	22	18
Multiple nontoxic adenoma	53	5

SUMMARY OF DISCUSSION BY DR. R. H. JACKSON.

The most important factors in advancing the treatment of that form of toxic goiter known to the laity as inward or heart goiter is an earlier recognition on the part of the general practitioner of the signs and symptoms indicative of its presence and

a keener appreciation on his part of his responsibility, not only as regards the diagnosis but also as regards the necessity of proper surgical treatment without undue delay. Delay in the surgical treatment of this type of goiter often results fatally.

The situation at the present time is very similar to that which years ago obtained in regard to acute appendicitis, the correct diagnosis often not being made until a wide-spread septic peritonitis was present, placing a tremendous handicap upon the surgeon who was called to operate the case.

The element of time is a very important factor in the progress and treatment of surgical conditions. Too often the surgeon is compelled to see advanced cases of toxic goiter die within a few days of admission without daring to make any surgical procedure whatever.

The technical surgical procedures in the treatment of this type of goiter are practically standardized. The results obtained are remarkably good, considering the advanced complicated nature of many of the cases. Far better results can be obtained by the same methods, both as regards mortality rate and the ability of the patient to "come back" to a more normal state post-operatively, by the simple procedure of advancing the time at which these measures are instituted.

DISCUSSION.

Dr. Arnold Jackson—I appreciate the points brought out in the discussion of this paper. Dr. McMahon has called attention to many interesting points which could not be discussed in the limited time. As regard focal infection I agree with him that the teeth and tonsils probably are a factor and if diseased they should be removed, but only a month or more after thyroidectomy. The mere extraction of a tooth is sufficient to precipitate a crisis in a case of exophthalmic goiter. As to the basal metabolic rate it is of great diagnostic value, but when deciding the time or choice of operation it is of secondary importance as compared with the clinical history and physical findings. There the weight record, the quadriceps test, the pulse pressure and so forth, are of greater importance. Dr. Babcock has asked if the blood pressure returns to normal after the removal of a toxic adenoma. The damage has been already done and the blood pressure does not return to normal although it falls a few points. I wish to congratulate Dr. Eyster on the interesting observations he

has made on the early cardiac changes in exophthalmic goiter. It has been my good fortune to see some early cases of this disease in consultation with Dr. Eyster and I believe he has a keen appreciation of the value to the surgeon of the early diagnosis and treatment of such patients.

—————

**RELATIVE IMPORTANCE OF HISTORY,
SYMPTOMS, PHYSICAL SIGNS, X-RAY
AND LABORATORY IN DIAGNOSIS
OF PULMONARY TUBERCULOSIS***

BY CHARLES E. IDE, M.D.

MILWAUKEE

The deductions that follow are based upon a survey of one thousand cases of pulmonary tuberculosis. The ages of the patients examined varied from six to sixty years. The cases were under observation for periods varying from three months to two years. Physical examinations were made monthly and X-ray plates were made monthly, in some cases, to study the changes taking place in the lung. A routine sputum examination was made at intervals of one to three months.

The difficulty in making a diagnosis of pulmonary tuberculosis can be accounted for, if we consider that the disease may produce a distinctive chain of subjective symptoms in different periods of life. From infancy to old age, subjective symptoms are seldom confined to the lungs. Through all periods of life there is one subjective symptom that usually occurs. The symptom is fatigue. It can be defined as a lack of energy to perform the usual play or occupation. In other words, the ordinary amount of rest does not bring the patient the natural feeling of well being. The first twenty years of life may present distinct problems in differential diagnosis. Infancy infection may mean disease and death. From the age of four to fifteen, this infection may mean a lymphatic reaction. This lymphatic reaction may be a source of relative immunity of uncertain duration. The low death rate and comparatively few cases of pulmonary tuberculosis before the fifteenth year indicate an increased resistance at this period.

In childhood, subjective symptoms usually precede lung findings. Fatigue in childhood may express itself by lack of interest in play and disturb-

ance of the normal appetite. If the warning is heeded and a period of rest is instituted accompanied by sun baths, recovery is rapid. The first line of defense in childhood is the lymphatics. So with indefinite symptoms, usually elsewhere than in the lungs, we think of the possibility of tracheo-bronchial gland tuberculosis. With no history of recent infectious disease, enlargement of the tracheo-bronchial glands may be of tuberculous origin. If the gland tuberculosis does not respond to treatment, the condition may progress and deep seated or miliary tuberculosis develop.

Pulmonary tuberculosis between the ages of fifteen and twenty may show subjective symptoms before the lungs give definite evidence of disease. Nervous instability and digestive disturbances may precede all other symptoms. Weeks of observation in bed may be necessary to make diagnosis. Checking the temperature and pulse after exercise is of the utmost importance. Put the patient to bed and don't wait for signs of moisture in the chest or positive sputum. Twenty per cent of the cases at this age are far advanced by the time the surface signs of moisture can be clearly demonstrated. The lesions are deep seated, usually near the bifurcation area, and a period of months passes, in some cases, before a positive diagnosis can be made. The X-ray plate is a great help in these cases, especially a well taken oblique plate.

Pulmonary tuberculosis before the age of twenty presents a most difficult problem in diagnosis. The disease is so distinctly individual at this age that description is almost impossible. The lymphatic fight in childhood, followed by the endocrine adjustment at puberty, may account for the confusing symptomatology. The greater the number of years that may elapse after the first infection and before the development of clinically active pulmonary tuberculosis, the better the prognosis.

After the age of twenty, the diagnosis is influenced by the amount of scar tissue in the lung prior to disease. Toxaemias from infectious diseases as well as dust irritations may produce a net work of scar tissue in the lung which limits the progress of the disease and also the subjective symptoms. Mode of life may have a bearing on the warning of fatigue that becomes evident. Those engaged in sedentary occupations use little physical energy and never test their strength. The cases may be well advanced before the disease is discovered. Those engaged in occupations that require the expenditure of physical energy may get

*Presented at the Seventy-seventh Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, Oct. 4, 1923.

their warning early. Tuberculous breakdown after the age of twenty may be an indication that immunity has protected the individual thus far.

Between the ages of twenty and thirty the diagnosis is usually less difficult than at any other period of life. The history, physical signs, symptoms, X-ray pathology and laboratory may all give conclusive evidence of the disease.

tuberculous respiratory condition for years. Through all the ages of life the heart must be considered in pulmonary tuberculosis. Small, poorly developed hearts together with low blood pressure are poor weapons for fighting the disease.

Pulmonary tuberculosis not only expresses itself differently at different ages, but also by individual subjective symptoms. Care in taking history, a record of blood pressure and noting the reaction of temperature and pulse to exercise are just as important as chest examinations. The patient has a responsibility as well as the physician and should seek medical advice for physical examination when symptoms of fatigue first appear.

Fatigue, let me repeat, is the one symptom that is carried through all ages of the patient's suffering from pulmonary tuberculosis. Toxaemia is usually the cause of fatigue the first twenty years of life. Ever increasing fibrotic changes in the lungs from the twentieth year to old age may modify subjective symptoms and the fatigue may be cardiac in origin expressed by dyspnoea. Before the age of twenty, history and subjective symptoms take the lead in importance. After twenty years of age, physical findings, X-ray and laboratory may nearly approach history and subjective symptoms in value.

PUBLIC HEALTH SCHOOLS.

Courses on public health work have been included for the summer session at Columbia University, the University of California and the University of Iowa. The courses will be given under the direction of the United States Public Health Service.

The faculties of these various summer schools will include many specialists of the United States including M. M. Davis (dispensary management), Robt. H. Gault (criminal psychiatry), Emery Hayhurst (industrial hygiene), William J. Mayo (non-communicable diseases), E. V. McCollum and H. C. Sherman (nutrition), William H. Park (laboratory methods), Earl B. Phelps and George C. Whipple (public health engineering), M. J. Rosenau and Victor C. Vaughan (epidemiology), Thomas W. Samon (psychotherapy), John H. Stokes (syphilis), Philip Van Ingen (child hygiene), C. E. A. Winslow (public health administration), and Francis Carter Wood (cancer).

PRACTICAL CONSIDERATIONS OF THE DANGERS ASSOCIATED WITH SURGERY OF THE THYROID*

BY JOHN deJ. PEMBERTON, M.D.

Section on Surgery, Mayo Clinic

ROCHESTER, MINN.

In the past it was customary to group all operative statistics under the general term "goiter operations," which is misleading, in that it does not give an accurate idea of the varying risks associated with the different types of goiter. With regard to the surgical risk, all lesions of the thyroid may be divided into two groups, goiters unassociated with hyperthyroidism, and goiters associated with hyperthyroidism. The operative risks in the two groups are not comparable. In the former the dangers are confined to the accidental causes to which any operation of equal magnitude is subject, while in the latter the greatest danger lies in the disease itself, or the residual effects of the disease. Even a minor operative procedure may induce a hyperthyroid crisis, resulting in death of the patient, whereas a technically formidable operation, such as the removal of a large intrathoracic goiter unassociated with hyperthyroidism, may be followed by no reaction whatever. In order, then, to evaluate accurately statistics on operations for goiter, the proportion of goiters without hyperthyroidism included in the computation must be known.

The removal of goiters unassociated with hyperthyroidism, such as adenomas, colloid, and malignant, is attended by the dangers of operative and postoperative accidents only. With the standardized operation of today, by care in details, hemorrhage, tetany, air embolism, myxedema and infections have been practically eliminated. In the Clinic the incidence of postoperative obstructive dyspnea and pneumonia have been materially decreased, since it has been appreciated that both are at least partially avoidable. In the past the causes of postoperative obstructive dyspnea were believed to be confined to collapse of the trachea and edema of the glottis, both unavoidable complications, but in recent years a clearer recognition of the important part played by the injury of the recurrent laryngeal nerve has led the surgeon to exercise more care in its avoidance; in consequence, post-

*Read before the Tri-State Medical Association, October 29 to November 1, 1923, Des Moines, Iowa.

operative obstructive dyspnea is rare. Likewise the incidence of postoperative pulmonary infection has been materially reduced by the avoidance of prolonged anesthesia and of injury to the recurrent laryngeal nerve. The operative mortality in this group is less than 0.25 per cent.

The goiters associated with hyperthyroidism include exophthalmic goiter and adenomatous goiter with hyperthyroidism. The added surgical risk in each type of goiter is due to the same two factors, the development of an acute hyperthyroidism, and the presence of visceral degeneration. But there is a decided difference in the operative mortality; that of exophthalmic goiter has been reduced to 1.0 per cent by case, while that of adenomatous goiter with hyperthyroidism is between 3 and 4 per cent. In order to understand the reason for this difference in the mortality, it is necessary to discuss the two types of goiter separately.

Exophthalmic goiter. In searching for the reasons for the reduction of the surgical mortality rate in cases of exophthalmic goiter, two factors stand out prominently. First, the patient is coming to surgery earlier in the course of the disease, before the occurrence of visceral degenerative changes. This is strikingly illustrated by a comparison of the data for different periods, relative to the duration of hyperthyroidism. In 1909 the average duration of hyperthyroidism in the series of patients with exophthalmic goiter was thirty-one months; in 1916, twenty-three months, and for the first six months of 1922, nineteen months. Thus one of the causes of the relatively high mortality rate of exophthalmic goiter in the past has been partially eliminated by the patient himself. Second, the incidence of acute hyperthyroidism, has been reduced by the employment of preventive measures. As the intensity of hyperthyroidism in patients with exophthalmic goiter fluctuates, a period of exacerbation often being followed spontaneously by a period of remission of symptoms, it was early recognized that the operative risk was greatest during certain phases of the cycle, that is, during or near a crisis. Accordingly, it was seen that major operative procedures should be avoided during these phases, and that minor or preliminary procedures, such as ligation of the thyroid arteries and injection of boiling water into the gland, should be substituted. Further, it has been learned that the course of the disease can often be influenced by such nonsurgical measures as rest, adequate supply of food and fluids and administra-

tion of iodine. Thus, by the employment of medical and surgical preparatory measures, and by an accurate check on the course of the disease by means of repeated estimations of the metabolic rate, the danger of postoperative reactions has been reduced to a minimum.

To reduce the mortality, in the management of patients with adenomatous goiter with hyperthyroidism, the treatment must be directed along different lines. The cases of this group might be called the "procrastination cases," that is, in most instances the patients do not seek medical relief until the disease has progressed to a stage in which vital structures have been damaged, often beyond repair. We are all familiar with the patient who has had a nodular goiter for many years, but does not seek medical relief, unless by chance the goiter causes choking or marked disfigurement. On an average of fifteen years after the appearance of the goiter, hyperthyroidism develops, but the onset of the symptoms is so mild and insidious, that the patient often does not realize any change in her condition, and hence does not seek surgical relief until there has developed evidence of visceral degeneration, with consequent high operative risk and diminished prospect for complete cure. Unlike exophthalmic goiter, the course of the disease is steadily progressive and, unfortunately, is not greatly influenced by preparatory surgical or medical measures. Obviously the operative risk is in direct ratio to the number of bad risk cases accepted for surgery. Therefore, the mode of attack to reduce the mortality and invalidism caused by this disease lies, not in the further development of surgical technic or preparatory measures, but rather in the general education of the public. All nodular goiters should be removed soon after the onset, or the patient should be under periodical observation medically, in order that symptoms of hyperthyroidism may be detected early.

SUMMARY.

The factors influencing the reduction of the mortality to 1 per cent in surgery of exophthalmic goiter are: (1) the patients are coming to operation earlier in the course of the disease, before the development of visceral degenerative changes; (2) by the combined medical and surgical preparatory management, the development of postoperative acute hyperthyroidism has been reduced to a minimum, and (3) clearer recognition of the

dangers involved in the injury of the recurrent laryngeal nerve has led the surgeon to greater care in its avoidance.

There has not been a concurrent reduction in the mortality rate in surgery of adenomatous goiter with hyperthyroidism, owing to certain facts: (1) because of the insidious onset of hyperthyroidism, these patients come to surgery late after the development of visceral degenerative changes when the operative risk is high, and (2) surgical and medical preparatory measures are ineffectual. Obviously, then, to reduce the mortality in this group, it is essential that the patient be operated on early, before the development of degenerative changes. Since often it is impossible for the patient to detect the beginning of hyperthyroidism in himself, we should urge all patients with symptomless nodular goiters who are not under close medical observation, to be operated on early, when the risk is less than one-fourth of 1 per cent.

MINUTES OF THE COUNCIL MEETING.

University Club, Milwaukee, 11:00 A. M.

January 24, 1924.

The council was called to order at 11:00 A. M. by Dr. Edward Evans, chairman.

The roll call showed Drs. Harper, Bock, Connell, Evans, Smith, Dodd and Dearholt and Secretary Crownhart present. Drs. Rogers, Cunningham and Mitchell came in subsequently.

Upon motion of Doctor Mitchell the reading of the minutes of the previous meeting was dispensed with.

Doctor Dearholt nominated Dr. Edward Evans, La Crosse, as chairman of the council for 1924 and moved that nominations be closed with instructions to the secretary to cast a unanimous ballot for Doctor Evans. Seconded by Doctor Bock and carried.

Doctor Bock moved that Dr. S. S. Hall, Ripon, be reelected as treasurer. Seconded by Doctor Dodd and carried.

Doctor Dearholt moved that Mr. J. G. Crownhart be reelected executive secretary-managing editor. Seconded by Doctor Harper and carried.

Upon motion of Doctor Harper, seconded by Doctor Dearholt, the committee on medical defense was reelected.

REPORT OF THE SECRETARY.

January 23, 1924.

Membership. On December 31, 1923, there were 1882 members in good standing for the year 1923. This is a falling off of 28 as compared to 1922 when the dues were \$4.00.

On January 23, 1924, there were 235 members who had paid dues for 1924 as compared to 315 on January 23, 1923. This is a decrease of 80 and while it is not taken to mean that there will be a substantial decrease in membership this year it does mean that every effort must be made to bring the total membership up to at least 1500 by April first. Only the paid up membership as of that date will be accepted in the 1924 reapportionment of the House of Delegates for the American Medical Association and Wisconsin must not lose one of her three delegates simply through delay.

The Secretary desires to state at this time that it now seems clear that the dues for 1925 can be reduced to \$7.00. For the majority of our members this will mean that a \$10.00 bill will cover their county and state dues and medical defense. In some counties the total cost will be more. It is possible some further reductions may be available in future years.

Respectfully submitted,

J. G. CROWNHART,

Executive Secretary.

The Secretary read the report and recommendations of the committee on public policy and legislation, discussing the main points. A discussion followed.

Moved by Doctor Dodd, seconded by Doctor Mitchell, that the council approve of the recommendations and appropriations of the committee on public policy and legislation and that the council hereby express its appreciation to the committee for the constructive report. Motion carried.

Report of the publication committee was read by the Secretary as follows:

REPORT OF THE PUBLICATION COMMITTEE.

January 23, 1924.

While no financial report is submitted as such at this time it may be said that increased advertising has brought the Journal to a basis where it more nearly pays for itself. For the first five months of the present fiscal year the Journal has lost but \$35.00.

With the resignation of Doctor Sleyster as Medical Editor, the Publication Committee has been acting as an Editorial Board for the selection of original articles for publication and for passing upon all editorials. Because of the importance of the assumed duties your committee feels that its selection should be made by the council. A proposed amendment to the by-laws to this effect has been prepared which specifies the election of the committee by the council and changes the name of the body from the Publication Committee to the Editorial Board. The approval of the council is respectfully requested for this proposal so that it may be presented to the 1924 House of Delegates as recommended by both bodies.

Respectfully submitted,

J. G. CROWNHART,
Managing Editor.
(For the Publication Committee.)

Moved by Doctor Smith, seconded by Doctor Connell, that the council send a memorial to the 1924 house of delegates requesting a change in the by-laws as suggested by the publication committee. Motion carried.

The secretary made a verbal report on group malpractice and automobile insurance. Moved by Doctor Dearholt, seconded by Doctor Bock, that two members of the society be appointed to investigate with the secretary automobile insurance and to make a recommendation to the 1924 house of delegates. Motion carried.

The secretary read a letter from the Surgeon General requesting the appointment of a committee to cooperate with the War Department to further the welfare of the Medical Reserve Corps. The chairman of the council appointed on this committee: Dr. Curtis Evans, Milwaukee, chairman; Drs. Rock Sleyster, Wauwatosa, Gilbert Seaman, Milwaukee, and the secretary; the secretary to act as secretary of the committee.

On motion of Doctor Smith, seconded by Doctor Mitchell, the council confirmed the mail ballot authorizing the presentation of 200 subscriptions to Hygeia as Christmas presents for state officers and prominent laymen.

The secretary pointed out the need of an additional council meeting during the year suggesting the date of June 8th, the day previous to the opening of the meeting of the American Medical Association at Chicago. Moved by Doctor Bock, seconded by Doctor Connell, that the council meet on June 8th, 1924. Motion carried.

A discussion followed relative to violations of the Medical Practice Act and the policy of the state society. This matter was left in the hands of the executive secretary and the secretary of the State Board of Medical Examiners.

Dr. S. S. Hall presented the report of the treasurer for the calendar year ending December 31, 1923. The report showed a balance on hand on December 31, 1923, of \$10,489.59, not including a separate savings account nor the medical defense fund. Upon motion by Doctor Dearholt, seconded by Doctor Smith, the treasurer was instructed to purchase United States treasury certificates in the amount of \$10,000. Upon motion of Doctor Mitchell, seconded by Doctor Harper, the report of the Treasurer was accepted. The report follows:

Ripon, Wis., January 4, 1924.

SIDNEY S. HALL, TREASURER, IN ACCOUNT WITH STATE MEDICAL SOCIETY OF WISCONSIN.

DEBTOR		CREDITOR.	
General Fund.			
1923			
Nov. 1.	Balance, as per Report.....		\$11,869.18
	Received from J. G. Crownhart, Executive Secretary:		
Nov. 1.	.....	\$161.75	
12.	Acct. Doerflinger Artificial Limb Co.	3.50	
Dec. 1.	.....	258.75	
21.	Account Annual Meeting.....	430.39	
1924			
Jan. 4.	.....	163.25	1,017.64
	Total		\$12,886.82
1923			
Oct. 9.	Executive Sec. Loan for his office, Meyer News Service Co., Sept. clippings	\$500.00	
	Wis. Telephone Co., Sec.....	8.15	
	Siekert & Baum Sta. Co., Sec....	8.80	
	Cannon Ptg Co., 500 Mem. Cards.	19.00	

Nov. 1.	J. G. Crownhart, expense Oct....	27.70	
	J. G. Crownhart, salary Oct....	300.00	
	Astrid Jurgens, salary Oct....	65.00	
	Wis. A-T Assn, expense.....	144.00	
	Siekert & Baum Sta. Co., Sec....	5.05	
	Meyer News Ser., Oct. clippings..	4.50	
	Howe Ptg. Co., Stamped Enve-		
	lopes, Treas.	13.50	
Dec. 1.	Executive Sec., expense Nov....	32.59	
	J. G. Crownhart, salary Nov....	300.00	
	Astrid Jurgens, salary Nov....	65.00	
	Cannon Ptg. Co., acct. Nov....	72.00	
	Wis. Telephone Co., Sec.....	2.00	
	Am. Med. Assn., Acct. Sec.....	2.00	
	Andrae Electrical Co., expense...	10.50	
	5. Siekert & Baum Sta. Co., Sec.		
	expense	31.20	
	Meyer News Service, clippings...	4.50	
	10. Am. Med. Assn., "Hygeia," 200		
	copies	300.00	
	18. Astrid Jurgens, salary Dec....	65.00	
1924			
Jan. 4.	J. G. Crownhart, Salary Dec....	300.00	
	J. G. Crownhart, expense, Dec....	63.24	
	Jack's Letter Service, Sec.....	20.50	
	Meyer News Service, clippings...	4.50	
	Cannon Ptg. Co., 2200 Certifi-		
	cates	24.00	2,397.23
	Balance		\$10,489.59
			\$12,886.82

A recess for lunch was taken at this point and during the lunch hour Messrs. Spooner and Quarles of the firm of Lines, Spooner and Quarles, presented an oral report to the council which they announced would be submitted in writing for action.

Dr. G. A. Carhart, chairman of the library committee of the Milwaukee Academy of Medicine, requested the appointment of a committee to open negotiations with the Academy with the view of obtaining a permanent home for the library of the Academy, which home would also become the headquarters of the State Medical Society.

The council was called to order at 2:00 P. M. by the chairman.

Doctor Mitchell declared that members of the Dunn-Pepin County Society felt that more could be obtained were they attached to other societies. Doctor Mitchell was instructed to submit a plan to this effect at the June meeting of the council.

Doctor Dearholt spoke on periodic health examinations showing a two reel film from the National Health Association. The association's plans were presented and upon motion by Doctor Connell, seconded by Doctor Harper, the council formally approved of the appointment of a committee to cooperate in this type of work; Doctor Dearholt to appoint the committee.

The council fixed the salary of the secretary for the year, February 1, 1924 to February 1, 1925, at \$4,200, one third to be paid by the Journal.

Doctor Dodd presented to the council a situation that had arisen as a result of the formal appointment of a new member to the Board of Medical Examiners succeeding Doctor Lotz. Upon motion by Doctor Dodd, seconded by Doctor Connell, the treasurer was instructed to pay the expenses of Doctor Lotz of the January meeting of the State Board of Medical Examiners should his expenses not be allowed by the state.

Upon motion by Doctor Dearholt, seconded by Doctor Dodd, a committee consisting of Drs. Sleyster and Arthur Rogers was appointed to open negotiations with the Milwaukee Academy of Medicine as had been requested. This committee was instructed to report at the June meeting of the council. There being no further business the council adjourned to June 8, 1924, at an hour to be fixed. Adjournment was taken at 4:50 P. M.

(Signed) J. G. CROWNHART, Secy.

MEDICAL INTEREST IN TAX REVISION

Legislation of outstanding importance to physicians is now before Congress through recommendations made by the Secretary of the Treasury for a downward revision of federal taxes. Physicians will share, of course, in the benefits conferred on the people generally by such legislation. They are, however, among those who will be further benefited by the proposed reduction of 25 per cent in the tax on earned income, as distinguished from income from invested capital, since the incomes of physicians are largely, and in many cases altogether, earned incomes. Obviously, then, we, individually and collectively, should interest ourselves in bringing about this reduction.

Secretary Mellon makes no specific recommendation that will entitle a physician to deduct as one of his professional expenses in computing his federal income tax the cost of attending meetings of medical societies and of postgraduate study. His recommendations, however, are necessarily general in character, and possibly no inference should be drawn from the omission. It may be that certain proposed changes in the phraseology of the law are intended to afford relief, but it will be better if phraseology is used that will make relief certain.

Unfortunately, the recommendations submitted by the secretary do not provide for a reduction to a pre-war basis of the now indefensible war tax exacted from physicians under the Harrison Narcotic Law. Physicians have never complained of the original levy, one dollar a year, submitting willingly to it and to the inconvenience imposed by the law, for the sake of the good sought to be accomplished. Nor did we complain when, during the war, the levy was trebled for revenue purposes only. We do, however, object to being compelled to bear this burden now that the financial necessity for it has gone, and we ask that the tax be reduced at least to the amount originally fixed. There is no time better than the present for urging our demands, and we must seize the opportunity.

Relief from some of our tax burdens is now in sight, through the proposed reduction in the tax rate on earned incomes, and through the opportunities that are open to procure a reduction of the tax under the Harrison Narcotic Law and statutory provision that will permit the deduction of professional traveling expenses and the expenses of postgraduate study in the computation of the physician's net income. However, if physicians want such relief, they individually and collectively must make their influence felt. Every physician should write to his representatives, both congressman and senator, urging favorable action. Every county society should adopt resolutions expressive of its views and send copies to the Committee on Ways and Means, House of Representatives, Washington, D. C., and to the more interested senators and representatives. These societies should authorize and direct their proper officers and committees to follow up such resolutions, to see that they are effective, and to report back the results of their work. Later, when the bill has passed the House of Representatives and has gone to the Senate, appropriate action can be taken to acquaint the Senate with the views of the medical profession concerning the bill as it then stands. Relief in this manner may be obtained through our concerted, prompt, whole-hearted action.—*Jour. A. M. A.*, Jan. 12, 1924.

THINK HARD!

And now comes one F. W. Pofahl, S.T. (Suggesto therapy) of Milwaukee and says in the press:

"I believe that many goiters have been cured by the iodine treatment, but I believe that the main remedy is thought and auto-suggestion. We do not know what the cause is but we know that thought vibrations will cure if trusted and undisturbed by unbelief."

THE WISCONSIN MEDICAL JOURNAL
OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

Mr. J. G. CROWNHART, Managing Editor
558 Jefferson Street, Milwaukee

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February 1924

No. 9

“LET GEORGE DO IT.”

Under this head we list each month definite offers of service available to our readers—the members of the State Medical Society of Wisconsin. Additions will be made from month to month but if you have a need not covered here your Secretary-Managing Editor will do his best to fill your needs. Address J. G. Crownhart, 558 Jefferson St., Milwaukee.

1. PACKAGE LIBRARIES are now available on Cancer, Schick Test, Vaccination, Periodical Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, and Control of Communicable Diseases. Address Package Library Dep't., Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. MEDICAL BOOKS will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. PHYSICIANS' EXCHANGE COLUMN is open to all members without charge.

4. NEW SCIENTIFIC PUBLICATIONS listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

5. STATE LAWS and departmental rulings can be secured through the Secretary's office.

6. LEGAL ADVICE upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

EDITORIALS

A GOOD APPOINTMENT

GOVERNOR Blaine's appointment of Dr. W. F. Lorenz to the State Board of Control will meet with the hearty approval of the medical profession of this state.

This Board's activities in many directions are based upon the scientific discoveries in the field of medicine and public health. We have long felt that one of the three members of such a board should be a physician. Dr. Lorenz fills this need.

But a physician member of such a Board must have had broad executive experience and a comprehensive view of the problems of the state. We feel that Doctor Lorenz has both these qualifications and we are happy to commend his appointment and assure him that he has not only the best wishes of his fellow workers in the medical profession but their active assistance in any way we may be of service.

AN OPEN LETTER

To Dr. Charles S. Sheldon,
Madison, Wisconsin.

Dear Charlie:

We note by press clippings that you were eighty-two years young on January fourteenth. And we also note with pride that you were too busy at your office to have any birthday party. We are glad of that for when you have a party, young man, we want to be there. Anybody who can make seventeen home runs in one ball game (or was it

eighteen?) as we are informed you did last summer has a long time to go before he can, with any regard to good taste, hold birthday anniversaries.

Cordially,
"The Old Men."

TRUTH IN ADVERTISING.

ASSOCIATIONS of advertising men and women in all lines of endeavor have adopted the phrase that heads this editorial as their aim. It is a worthy aim. Just as the public quickly loses confidence in the medium that carries untruthful statements as news or fact, so does the public lose confidence in that medium whose advertisers attempt to secure business by untruthful statements.

We venture to say that there is no type of advertising that more often violates the aim of reputable publishers than the so-called medical copy. And we believe that in the great majority of instances such untruthful statements are carried in medical ads without the realization of the facts by the publishers concerned.

With this in mind this Journal begins with the present issue a series of articles pointing out the untruthfulness in medical ads carried in publications in our own state. These articles will appear from time to time and while we may mention an advertisement appearing in but one medium it may be appearing in your local paper. To the end that these articles may accomplish the most good we ask the cooperation of each reader.

When an article appears that is applicable to a local publication, take in your Journal to the editor. Show him the article and when your editor is shown this cooperation in a spirit of friendly aid we venture the assertion that we will have his cooperation to the end that "Truth in Advertising" shall become a reality.

AS OTHERS SEE US

WE REPRINT the following from the editorial pages of the New York Times for two reasons. First, the subject itself calls for editorial comment. Second, we wish to show how intelligently, and how sensitively to our best traditions a daily newspaper can handle medical news which a less responsible editorial writer might make dangerously sensational.

TOPICS OF THE TIMES.

ANOTHER MEDICAL TRIUMPH.

Scarlet fever has been one of the most puzzling as

well as most dreaded of infective maladies—puzzling because the microbe causing it was unknown, and both its point of attack and its method of transmission were dubious, and dreaded, not because the direct mortality from it was large as compared with several other diseases, but because it so often left behind it sequelae that were life-long as well as serious. The news, therefore, that a serum for the mitigation of its dangers has been found is of high importance.

The claims in behalf of this discovery are made with reassuring caution and moderation. There is no assertion that a "sure cure" has been found, yet it is something more than the expression of a hope that has been given out, and the statement acquires its weight less from the words used than from the reputation of the investigator, Dr. A. R. Dochez, and that of the institutions with which he is connected, the College of Physicians and Surgeons and the Presbyterian Hospital.

After prolonged research, Dr. Dochez believes that the suspicions long directed against the streptococcus and repeatedly abandoned as unfounded are deserved, and that it is the causative agent of scarlet fever. This has been demonstrated to his satisfaction and that of his colleagues, and a serum has been prepared by means of which good effects already have been obtained in many cases.

In this instance, as in the case of diphtheria, it is the horse that has lent himself to the service of mankind, for again from his veins, after due preparation, is drawn the protective material—drawn, be it said for the consolation of the anti-vivisectionists, without the infliction of any pain worth mentioning.

If present expectations are realized, victory over another terror of childhood has been achieved.

CURE?

Two eastern medical experts, of high standing, claim they have discovered a way to inject a mercury compound into the blood and thereby double the number of white corpuscles which fight disease bacteria. We hope this is true. But we're increasingly impressed with the vast number of marvelous medical discoveries that never are heard of again.—La Crosse Tribune.

TRI-STATE TO MILWAUKEE.

Upon invitation of the Milwaukee County Medical Society the Tri-State Medical Association will meet in Milwaukee this fall. The dates selected are October 27th to 30th inclusive.

REAPPORTION DELEGATES.

A reapportionment of the House of Delegates of the American Medical Association will be made at the next annual meeting, June 9-13. The reapportionment will be made on the basis of members who have paid their 1924 dues by March 31st next.

The total membership of the A. M. A. is now 89,835 and Wisconsin with 1882 members has three delegates.

THE JOURNAL CLINIC

Edited and Published by

THE BUREAU OF POST-GRADUATE MEDICAL
INSTRUCTION

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The University of Wisconsin.

A CASE REPORT OF SPONTANEOUS SUBARACHNOID HEMORRHAGE?

FROM SERVICE OF D. L. DAWSON, M.D.,

LAKESIDE METHODIST HOSPITAL,

RICE LAKE.

Miss F., a young neurotic white female, thirty years of age, who acts as housekeeper for the family, was taken suddenly ill with violent headache in the back of the head and neck, and stiffness in the neck with vomiting. These symptoms gradually increased in intensity and became so severe that sleep was unattainable even with Barbitol in 10 grain doses repeated every four hours. Vomiting occurred once only. The past history reveals an operation for appendicitis ten years ago and a severe "cold in the chest" a few weeks ago, which had entirely disappeared before the onset of the present trouble. The patient has further suffered from attacks of hoarseness for many years. She has also had a chronic nasal catarrh with formation of crusts for many years. The father is living and well. The mother died three months ago at age 62 of Splenomyelogenous Leukemia. Two brothers and two sisters are living and well. One brother died in infancy and one sister died at the age of 16 of "kidney trouble." Physical examination at the onset showed a normal temperature and no other physical abnormality, except a slight rigidity of the neck, which was thought at that time to be voluntary. All reflexes were normal. During the next three days, during which time the temperature was normal at each examination, a positive Kernig sign developed. On the fourth day after the onset a marked rigidity of the muscles of the neck with a positive Kernig were the only abnormal physical findings, except for a furring of the tongue. During the afternoon of the fourth day there was a rise in temperature to 100.2 F. At this time the patient's mental condition was confused, probably due to Paraldehyde and Barbitol medication to induce sleep. On the afternoon of the fourth day a spinal puncture was made. The fluid was under very marked pressure and of a uniformly reddish tint. Two ounces of fluid were withdrawn which showed no Meningococci or Tubercle Bacilli. Culture showed a Gram positive coccus which probably had no etiological significance. Following this puncture there was marked relief. Forty-eight hours later another spinal puncture was made under high pressure, one and one-half ounces of fluid being withdrawn. This fluid was yellowish, containing a trace of globulin and 55 cells per cu.mm., practically all lymphocytes. The Wassermann and colloidal gold curve were negative. At this time, sensation was normal and the optic nerve head was normal. Marked improvement followed the second puncture and no further medication was required for sleep or head-

ache. The rigidity of the neck disappeared and the Kernig became negative. No other abnormalities of the reflexes appeared at any time. Three days later another spinal puncture was made. The fluid at this time was under normal pressure and perfectly clear. A tentative diagnosis of Spontaneous Subarachnoid Hemorrhage was made by the process of elimination. The two conditions which it seemed most necessary to eliminate were Epidemic Meningitis and Encephalitis. There was not the rise of temperature, the pathological reflexes or Meningococci in the spinal fluid expected in the former. The patient exhibited none of the peripheral phenomena or mental disturbances of the latter. Three weeks after the onset this patient is apparently completely recovered from her trouble. Credit for diagnosis of the case is due to Dr. E. M. Hammes who saw the patient in consultation with the writer.

VALUE OF LIGATION IN PSYCHOSIS OF EXOPHTHALMIC GOITER.

REPORT OF CASE.

BY ARNOLD S. JACKSON, M.D.,
SECTION IN SURGERY, JACKSON CLINIC,
MADISON.

Case 35059. Mrs. G. L. B., aged fifty-three years came to the Clinic complaining of loss of strength and, for three months, gradually increasing weakness, especially in the legs. She had been in the care of a physician who had treated her for stomach trouble. The appetite had been poor and she had lost thirty-eight pounds in six months, a loss of eleven pounds occurring in the past month. For some time several weeks before, the appetite had been ravenous, but in spite of this she lost weight rapidly. She had been distressed with pyrosis and was frequently nauseated. The week before examination at the Clinic vomiting had occurred several times, but no blood appeared in the vomitus. She had had no abdominal pain, nor had she been constipated. For ten days there had been a tendency to diarrhea. For some time she had been extremely short of breath. Her nervous system had been very unstable and for several weeks she had become progressively more irritable and emotional. Crying was induced at the least provocation. She had suffered with insomnia for several weeks. Her cooperation had been difficult to obtain for even trivial matters. There was a tendency to perspire freely, and she had suffered severely with the heat. Her daughter had noticed an unusual stare expression and a prominence of the eyes. Attention had not been directed to any enlargement of the neck. At night she had been disturbed by the pounding of her heart, and she had noticed a rapid heart beat and dyspnea on exertion.

Physical examination at once confirmed a diagnosis of exophthalmic goiter of advanced degree. Very little exophthalmos was noted, but the restless, anxious, stare expression so characteristic of these patients was present. Likewise, she appeared ill at ease, continually shifting her gaze about or moving her extremities. The thyroid appeared symmetrically enlarged to a slight degree. The thyroid gland felt firm and fibrous, a typical

hyperplastic gland. Marked thrills could be palpated over both superior poles. A marked tremor of the fingers was present; there was edema of the lower legs, and the skin was warm and moist. The tonsils were hypertrophied and septic. The heart was enlarged, 2, on a scale of 1, 2, 3, 4, to the left, acute dilatation being present. Physical examination was otherwise negative, save for weakness of the quadriceps, 3, the patient being able to mount the examining table only with assistance. The pulse rate was 120 and the temperature 99.6°. The blood pressure, 138 systolic and 68 diastolic; this blood pressure alone is so characteristic of exophthalmic goiter as to clinch a probable diagnosis. A normal systolic and a low diastolic pressure, producing a high pulse pressure are very significant.

Urinalysis showed albumin 3. The blood count was normal. The basal metabolic rate was 44 per cent.

Diagnosis was made of advanced exophthalmic goiter. The disease was of three and one-half months duration, the patient now in a pre-crisis stage, with vomiting, diarrhea and marked mental disturbance.

The patient was advised to enter the hospital at once for treatment but she delayed one week and during this time her condition became rapidly more serious. When she did submit to treatment the hyperthyroidism was temporarily checked, but the mental condition progressed to such an extent as to require constant attention. In the hope of abating the threatened crisis and mental collapse, it was decided to ligate the right superior thyroid artery without further delay, though it was fully appreciated that any operative interference at this late date was attended by great risk. Ligation of the vessel was performed under local anesthesia. We always attempt to expose the vessel rather than merely to place a ligature around the whole pole, which in our opinion does not achieve as satisfactory a result. The operation was followed by a severe reaction, the temperature rising to 102° and the pulse to 140. After forty-eight hours the reaction subsided, but the mental condition became more and more alarming. She was delirious most of the time so that she no longer recognized members of her family and the nurses and doctors were all strangers to her. At times she became so noisy and so greatly disturbed the other patients that the hospital authorities requested she be transferred to an asylum. As it seemed there was very little to lose by another operation ligation of the left superior pole was done. Twenty-four hours later there was a marked improvement in the patient's mental state; she was no longer delirious and quieted down for frequent naps. Two days later she recognized the nurse and doctors and in two weeks was convalescing at home without a nurse to care for her.

The patient continued to improve so rapidly that at the end of three months she had gained fifteen pounds and in spite of a very hot summer was better in every way. Although the metabolic rate had dropped to 29 per cent, she continued to be a severe operative risk. There was still a weakness of the quadriceps, 2, and her mental and physical state could not be considered favorable.

At operation, two-thirds of the right lobe and isthmus

were resected. The gland was very vascular and friable rendering operation tedious and difficult. The wound was packed wide open with gauze and forty-eight hours later the left lobe was resected. Both operations were followed by rather severe reactions, at least sufficient to indicate that anything but a two-stage operation would have proved fatal. Local combined with gas analgesia was employed for both procedures. The patient was dismissed from the hospital at the end of a week. Two weeks later the wound had healed and the basal metabolic rate was 8 per cent. The patient has now gained thirty pounds since her first ligation and is leading an active mental and physical life.

COMBINED MEETING OF SIGMA SIGMA AND UNIVERSITY OF WISCONSIN MEDICAL SOCIETY

Friday, January 18, 1924

RECENT ADVANTAGES IN PLASTIC SURGERY.

BY G. V. I. BROWN, M.D.,

MILWAUKEE.

Dr. Brown introduced his subject by a historic sketch dealing with the antiquity of methods of repair of the nose. He, furthermore, stated that the World War had given tremendous impetus to new methods of application of old procedures in plastic surgery. Considerable facility had, thereby, been developed in unusual operations.

By a very comprehensive series of slides, he proceeded to demonstrate his suggestions, showing first the differences in the healing reaction in various skins, the danger of keloids, etc. He advanced the relative merits and disadvantages of the Thiersch and Wolf grafts. In discussing the question of repair of hemangiomas and lymphangiomas, Doctor Brown insisted on the necessity for a many-stage operation. He next discussed the question of the repair of certain nasal and maxillary deformities, stating that implants of cartilage had proven infinitely more satisfactory and lasting than had bone, since the latter underwent rapid absorption unless real periosteal continuity was early reestablished. Cartilage, however, maintains its form and size in transplant practically constant. He particularly called attention to the short-comings of the so-called beauty specialist. The question of reparative and reconstructive procedures in the eyes and ears was discussed at some length. An unusual accident succeeding tonsillectomy, namely, adhesions between the palate and posterior pharyngeal wall, was discussed, showing clearly the simplicity of relief by ligature and the

impossibility of improvement by radical measures or dilatation.

Dr. Brown's more widely known work on the spread of the upper maxilla was briefly touched upon, and the prospect of relief to retarded mental and physical development in backward children suffering from contracted maxillae pointed out. The slides shown in this relation were most convincing. Deformities of the lower jaw, from ankylosis and fore-shortening, were discussed, and certain very ingenious plans suggested for their relief. The induction of a pseudo-arthritis was suggested in the case of ankylosis in the temporomandibular joint. In discussing and demonstrating the operations for harelip and cleft palate, Dr. Brown suggested certain departures from the usual plan, and showed the anatomic advantages from the circulatory standpoint of these methods. Dr. Brown's slides were especially clear, and his presentation both instructive and convincing.

PREVENTIVE MEDICINE

Edited by
W. D. STOVALL, Chairman
Section on Preventive Medicine, State Medical
Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

RABIES.

BY W. D. STOVALL, M. D.,
MADISON.

Since ancient times a disease, which is peculiar because of its method of transmission, its unusually long incubation period or latency, the terrifying train of symptoms which it produces, the intense suffering it causes, and the uniformly fatal result, has been recognized. This disease has been known to the public and the profession under many names. These names have usually indicated some prominent feature of the disease. The name which now is generally used in the literature is rabies.

Rabies is an acute infectious disease common to man and the lower animals. It is most frequently seen in dogs and other lower animals but human cases occur. It affects the central nervous system and is transmitted from the lower animals to man through abrasions and other wounds of the skin. Compared to the great scourges from which man has suffered, tuberculosis, smallpox, and so forth, it has relatively small importance. But when the

suffering it causes in actual pain and the great anxiety through which the exposed go is considered, its importance is realized. The loss in live stock has been considerable. Its importance is also made more apparent because it is a preventable disease. It is preventable both in lower animals and in man.

A great many superstitions and erroneous beliefs are prevalent concerning rabies. There is the old notion of dog days. The hot days of July and August are supposed to be favorable to the development of rabies. There seems to be no foundation in fact for this belief. It has no seasonal prevalence. When it does occur it apparently is a local coincidence. In the warmer climates the dogs are able to run at large for a large part of the year and this probably accounts for the greater prevalence of the disease in the southern states than in the northern. In Wisconsin our largest number of cases have occurred in January and March.

Rabies appeared first in the United States along the Atlantic coast. The first account appeared in 1768 in reports from the northern Atlantic states and spread southward rapidly. As late as 1908 it was confined chiefly to the eastern states. This was due largely to the fact that the domestic dog, the great disseminator of rabies, was unwelcome to the live stock industry, west of the Mississippi valley. However, in 1909 an outbreak occurred in California and spread eastward among the coyotes. This outbreak was met by a similar widespread occurrence of the disease starting in Texas and spreading northwest among the prairie dogs and coyotes. Utah and Oregon have suffered in the last few years from severe epizootics, and the disease is prevalent in the states of Idaho and Nevada. Its prevalence is greatest probably in the southern states while there are a few states in which it has not appeared. Sellers¹ in a recent article says that in 29 states a total of 5,558 heads were examined in 1921 and of this number 2,699 positive findings were reported. He says that in response to a questionnaire sent out by him fifteen states reported an increase and only four a decrease.

Human rabies is a comparatively rare disease. In 1921 there were reported in the United States 74 deaths, but this small number is undoubtedly due to the effectiveness of the preventive treatment. Sellers states that in 1921 there were administered 6,721 antirabic treatments. Many of those treated probably would not have had rabies

if they had had no treatment. Certainly half of them would have had the disease if no treatment had been administered. The invariable fatal result, once the symptoms have developed, indicates that at the lowest estimate without the preventive treatment the deaths in 1921 would have exceeded 3,000. The loss in live stock has been heavy.

RABIES IN WISCONSIN.

The State Laboratory of Hygiene was established in Wisconsin in 1902. The records of the laboratory show but few examinations for the first few years but beginning in 1908 there was a large increase in the number of specimens examined for the diagnosis of rabies and the positive results were high. The table shows these figures:

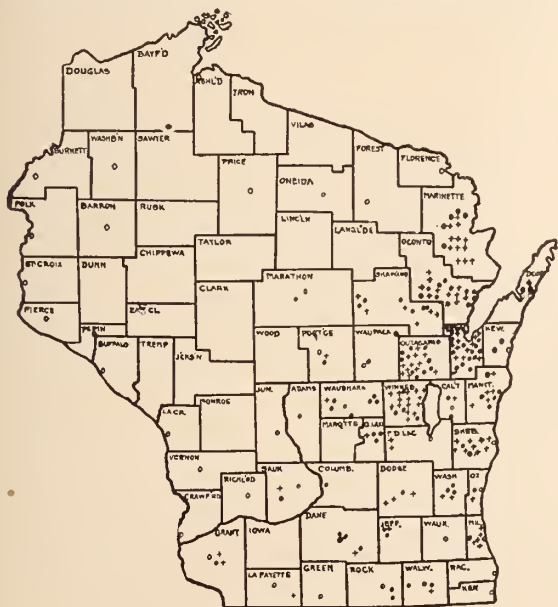
TABLE I.

Table showing the result and the number of examinations made for the diagnosis of rabies in the State Laboratory of Hygiene up to 1912.

Year	Number of Results		
	Examinations	Positive	Negative
1903	4	2	2
1904	12	6	6
1905	3	0	3
1906	1	0	1
1907	10	6	4
1908	47	35	12
1909	95	70	25
1910	124	78	46
1911	164	87	77

FIGURE 1.

Geographic Distribution of Rabies in Wisconsin from 1908 to 1911. Ravenel and Hamer, 1911.



Ravenel and Hammer² reporting on the outbreak, in 1911 say that no systematic examinations were made until the fall of 1907. During that year the disease began to be very prevalent in the neighborhood of Beloit. A number of heads were sent to the State Laboratory of Hygiene many of which were positive. The disease spread northeast along the lake shore, remaining more or less confined to the northeast section of the State, the greatest prevalence occurring in the neighborhood of Oshkosh, Green Bay and Marinette. The southern part of the State, as indicated by the number of positive heads received at the laboratory, had comparatively few cases. The spot map which they published and which is reprinted here shows the distribution during that outbreak.

In 1908 rabies was added to the list of diseases which are diagnosed by the State Laboratory. In 1909 the legislature was asked for \$3,500 to found a Pasteur Institute for the purpose of preparing the antirabic virus and administering it free of charge to people in the State. The legislature refused. The demand for the treatment, however, became so great that arrangement was made with the laboratory of the federal health service for securing the virus. Under this agreement the treatments were administered in the State laboratory at Madison. From that time up to March, 1911, treatment was administered to 126 patients. From the beginning of the outbreak of the disease to March, 1911, there were examined 173 specimens from suspected animals, 96 of which proved to be positive.

Since 1911 there has been a sharp falling off in the number of cases treated. In 1912 the records show that 37 cases were treated. There were no cases treated in 1913 and the largest number treated any year since then was four. In 1916 no cases came to the laboratory for treatment. Since 1919 no cases have been treated in Madison. The accompanying table shows the distribution of treated cases by years, since 1911.

TABLE II.

Table Showing the Number of Cases Given Antirabic Treatment in the State Laboratory of Hygiene Since 1911.

1912	1913	1914	1915	1916	1917
37	0	1	4	0	5
1918	1919	1920	1921	1922	1923
1	3	0	0	0	0

This is not, however, a complete record of all

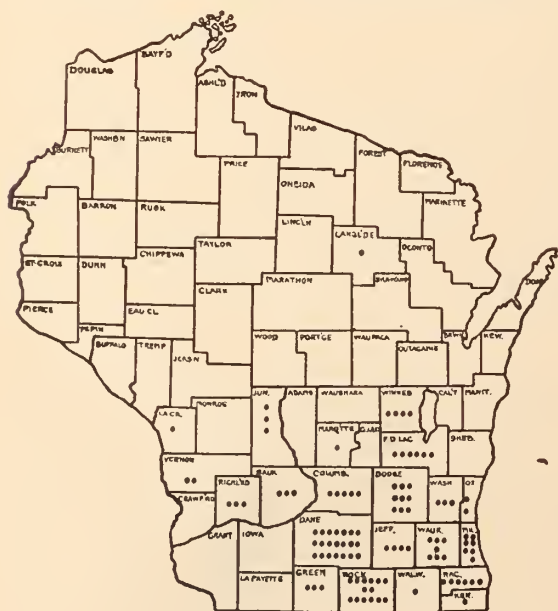
cases treated in the State since a few patients have been treated at home.

The arrangement with the laboratory of the United States Public Health Service was continued until 1921 when the Public Health Service discontinued the distribution of the virus. The demand was not large, and several years before the Public Health Service stopped the distribution of the virus patients were discouraged in coming to Madison for treatment but were advised to remain at home. This is still the practice. The treatment can be secured from the United States Standard Products Company with whom the State Board of Health has a contract to supply various biological supplies. The treatment comes prepared for inoculation at a cost of \$12 for the complete immunizing treatments. It consists of a hypodermic injection daily, and requires no special precautions other than those ordinarily used in giving subcutaneous inoculations. Because the State Laboratory and Board of Health have been recommending that the treatment be taken at home, no treatments have been given in the laboratory for the last four years. However, the number of treatments given in the State is always known. During the last four years at no time have there been more than two treatments given in any year. In 1923 there was no call for treatment.

In the report made by Ravenel and Hammer

FIGURE 2.

Geographic Distribution of Rabies in Wisconsin, 1918 to 1923, Based Upon Laboratory Diagnosis.



they show the spread of the disease to the northeast with the largest number of cases in the vicinity of Oshkosh and Marinette. Since January, 1917, the records of positive diagnoses show an entire absence of rabies in the northern and eastern counties with the exception of one case in Langlade, the disease being confined largely to southern and southeastern counties with a few scattering cases to the west. There is no explanation for the absence of rabies in the northeastern counties where in the first outbreak it was so prevalent. I can find no record of any special measures being used to prevent its spread in those localities.

A map showing the counties in which rabies has been prevalent since January, 1918, is given. This map shows very strikingly the difference in distribution in the outbreak reported by Ravenel and Hammer and the second outbreak which occurred in 1917 to 1921. It is clear from this map that the area in which the disease first became prevalent is still the most heavily infected part of the State and that while the outbreak of 1908 to 1911 spread northeast, the last one, which was not so severe, spread south and west.

The number of positive diagnoses does not nearly represent the number of cases of rabies in domestic animals in the State. We receive a very small per cent of the suspected cases for laboratory diagnosis. Still the number of examinations and number of positive results may be used as an index to the prevalence of the disease in the State. The table given below shows the number of examinations and the results of the examinations by years since January, 1912.

TABLE III.

Table Showing the Result and the Number of Examinations Made for the Diagnosis of Rabies In the State Laboratory of Hygiene Since 1911.

Year	Result		Total
	Positive	Negative	
1912	46	36	82
1913	7	48	55
1914	5	37	42
1915	1	19	20
1916	3	20	23
1917	29	30	59
1918	33	36	69
1919	30	30	60
1920	24	26	50

1921	20	21	41
1922	3	24	27
1923	0	33	33

This table shows that there was a relatively large number of positive diagnoses made in 1912 and that during 1913, 1914, 1915 and 1916 there was a very sudden dropping off both in the number of suspected cases examined and in the positive findings. Beginning in 1917 there was a sudden increase in the number of suspected cases examined and a high percentage of positive findings. This remained with but very little change until 1922 when there was again a sudden decline in the prevalence of the disease. In 1923 not a single positive diagnosis was made by the laboratory.

It is clear in the records of the laboratory that since 1903 there have been two periods in which rabies has made a sudden rise in prevalence. The disease first took on epidemic proportions in 1908 and continued until 1912. In the years from 1913 to 1916 inclusive there were few positive diagnoses made by laboratory examination. Beginning in 1917 the disease began again to be more prevalent and remained so until 1922 when there was another sharp decline. This is shown clearly by comparing Tables I and II.

The sudden decrease in the number of cases of rabies in domestic animals in 1913 is not explained in reports or information which is available. It is probable, however, that the high incidence of rabies in the few years before and during 1913 excited enough interest in the prevention of the disease to stimulate local community cooperation to prevent it. If such action was taken it appears that it was more effective in the northeast section of the State for they have had no recurrence.

The rise in the incidence of the disease in 1917 was in the neighborhood of the location of the outbreak in 1908 and spread principally in the southern counties. The explanation of the decrease following this outbreak may be attributed to the passage of a dog license law by the State legislature in 1919. In that year the legislature passed a law placing a license fee of three dollars on adult male dogs and five dollars on female dogs. This law was passed in response to the demand of flock masters and stock men of the State. In view, however, of the fact that in 1913 there was a similar sudden decrease in the prevalence of the disease when no licensing law was in force, it seems probable at least that the decrease in 1922 may be due, in part, to the operation of other factors.

The dog license law has no doubt accomplished something but how much other factors have influenced this result can not be said.

This much is certain. At present we are resting in a quiescent period, and unless we are active in the campaign, rabies will again become prevalent. There are many infected foci in the State from which an outbreak may be initiated when conditions are right. But, as is almost always the case, vigilance relaxes when danger seems to have passed. The legislature, upon the insistence of many people, in 1921 changed the "Dog Law" passed in 1919, reducing the license fee to one dollar for male dogs and three dollars for female dogs. From sections of the State where rabies is undoubtedly occurring, the laboratory is receiving no specimens for examination. This indicates an apathy which is certain to result in an increase in the prevalence of the disease. Sellers reports that the increase in rabies in the United States is worthy of concern, and that while fifteen States report rabies on the increase, only four report a decrease. Wisconsin is among the four reporting a decrease but we have foci of infection and should give careful attention to preventive measures.

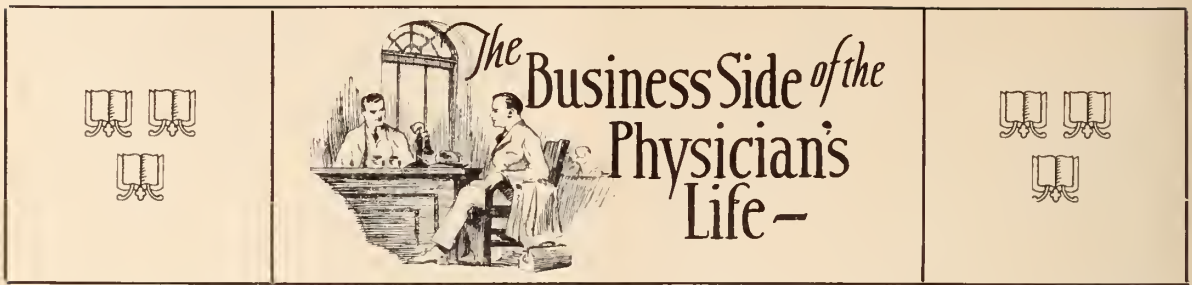
PUBLIC NEWS NOTES.

Only three deaths from anthrax have been reported in Wisconsin since Jan. 1, 1920.

There is no law nor fund under which an individual who is incapacitated from earning a livelihood on account of illness can be supported, either wholly or partially. Indigent persons can, however, receive medical or hospital treatment at public expense.

A lumberjack complaining of having contracted typhoid fever from drinking water at the camp where employed was informed that camp owners are responsible for the character of the water furnished and employes can be compensated for such illness.

In the matter of school attendance, coughs and colds are classed with communicable diseases in that the victims must be sent home as a protection to the well children as well as a safeguard to themselves. Although "only a cold," this may be the beginning of a dangerous communicable disease, and early treatment at home is held to be the best policy for all concerned.



A friend of mine down in Detroit is the proud and moderately successful owner of a physician's surgical instrument store. Business took me to his city around the first of the year, so I took the occasion to renew acquaintance, as I usually do when in Detroit.

The store had a fresh, scrubbed look quite unlike the dusty hallowed appearance that we have become accustomed to associate with businesses of this type. The stock was in place, the cabinets and surgical bags in neat array, and even an old skeleton which has haunted the place for the past several years—some of the dead stock no doubt—looked as if someone had wielded a feather duster around its grinning head.

"Well, well, Henry," said I, "why so orderly? Not getting any new fashioned notions, I hope."

"Nope," replied Henry, somewhat apologetically, I thought, "just taking inventory, and gosh how I hate the job. Been at it for more than a week, the whole bunch of us. I hope when I get to heaven they'll never put me to checking up on the angel's harps. I couldn't stand it."

"Do you know," my friend continued, "that we've got more than five thousand separate and distinct kinds of instruments in this place? Think of it, just in instruments alone, not to mention several thousand, yes, many thousands of other things from pink pills to that grinning old reprobate over in the corner that ought to be in his grave peacefully slumbering instead of tying up a hundred dollars of my good money waiting for some doctor to buy him and take him home to startle his patients with."

"And does it take five thousand knives and forks and hammers and saws to lure the high priced appendix from its lair?" I questioned. Not owning Henry's store, I could afford to view the matter calmly and dispassionately. But this matter is very close to Henry. It's his good money, one might say his life blood that's in this stock. It has taken Henry all his business lifetime to build up this magnificent array of merchandise, and

most of his profits lie sequestered in his inventory. Quite a bit of the profits have a tarnished look, too, suggesting that they've been there some little while.

"Naw, they don't," Henry exploded, "but pretty nearly every surgeon in the world thinks he has to invent something in the way of a new or an improved model of an instrument to make his life complete. So we have Somebody's forceps—a few hundred dozens of assorted Somebody's forceps—and Someone's elses knives galore. Just as politicians have cigars named after them, so doctors have knives and forceps named for them, and live in fond hope that after they die the family will have engraved on the tombstone, 'Henry Jones, born 1852, died 1922, inventor of the Jones Tissue Retractor.'"

By this time Henry was going good. All the pent up emotions of that week of knocking the dust off the stock to get down to the cost marks was coming to the surface, and his eyes bore a wicked gleam.

"If you think this is bad," he continued, "you ought to see some of the older houses down East. They've had more time to accumulate, and I tell you, some of them have done a marvelous job of it. Thousands and thousands of different kinds, and styles, and sizes and shapes—many of them rarely if ever called for. There they rest, forgotten mementoes, lost to fame, no longer honored or sung—just cussed over around inventory time.

"About this time of year when some doctor comes in to make a purchase and after asking the price tells me that the only difference between me and Jesse James is that Jesse had a horse, the clerks have to hold me to keep me from murder. If you ever hear of a Detroit doctor found wallowing in his blood around about Jan. 7th, you'll know that little Henry has been pulling off a mystery."

I'll spare you the rest of the details. The story has run long enough. Henry is probably incurable anyway. It wouldn't surprise me a bit if right this minute some physician is looking at

Henry sternly and protesting, "What, you haven't Ukenick's Speculum, and you call this a modern store," and Henry is feebly promising that he'll have it in right away.

Far be it from me to say. Perhaps the practice of medicine and surgery needs all this array of hardware. Perhaps the instrument that Jones uses to search out the wiley gall stone would be unthinkable for Smith.

But if that is so, it's at least fair to recognize the fact that the medical profession pays a handsome price for its love of variety. Someone has to pay the piper for the investment and effort devoted to carrying these enormous stocks of merchandise, and that someone is the man who buys the stuff. He pays the price in everything he buys, whether it be one of the uncommonly called for instruments or a gallon of castor oil. All must help to carry the burden of that slumbering load of slowly moving stock.

I have always suspected that a great deal of money could be saved the medical profession by standardization of the wares that it employs in its practice. It isn't the surgical dealer's fault, to be sure. He is simply a source of supply, reflecting the demands of the clientele he serves. Probably it isn't anybody's fault. Perhaps physicians like to have a variety and are willing to pay the price. Perhaps they are able to pass it all along to their patients.

Perhaps it's good business, and perhaps it's not.

BOARD OF HEALTH MEETS.

The disapproval of some local plans for the introduction of iodine in the water supplies featured the annual meeting of the State Board of Health at Madison on January 30th. The Board's action was based on the facts that the dosage cannot be regulated; because it is questionable whether enough iodine can be introduced in this manner to do any real good; and because it would necessarily be taken by those people with hyperthyroidism who should not have iodine. The Board recommended that the treatment of school children for the prevention of goiter be made through the schools under the direction of physicians.

Dr. W. F. Whyte, Madison, was reelected president of the Board, Dr. E. S. Hayes, Chippewa Falls, reelected vice-president, and Dr. C. A. Harper, Madison, continued as Secretary of the Board.

Preliminary arrangements were made for the Biennial Conference of Health Officers to be held at Madison in September or October. All local health officers attend this conference with expenses paid by their municipalities.

A code was adopted for sanitary engineering practice with minimum requirements for the public water supply, sewage and waste disposal. Periodical reports will be required.

A set of rules were adopted to govern the certification of private laboratories desiring to do public health work. No applications will be accepted unless a competent laboratory worker is engaged who is not in the private practice of medicine.

The resignation of Dr. Louis Dorpat was accepted and the appointment of Dr. A. V. deNeve, Wyocena, to fill the vacancy was approved.

A new rule was adopted which provides that "when it is necessary to transport a person suffering with a dangerous communicable disease from one town, village or city to another, the consent of the health officer where the patient lives, and also the health officer of the town, village or city to which the patient will be transported must first be obtained. Transportation must be made by private conveyance and proper precautions exercised to prevent the needless exposure of all persons who may come in contact with the patient during transit."

DELEGATES APPOINTED.

Five delegates to represent Wisconsin at the Congress on Medical Licensure and Education were appointed on January 31st by Governor John J. Blaine. Those appointed are: Dr. O. B. Boek, Sheboygan; Dr. Adolph Gunderson, LaCrosse; Dr. R. W. Monk, Neillsville; Dr. J. J. Seelman, Milwaukee; and Dr. F. H. Ferguson of Elroy.

The Congress convenes at Chicago on Monday, March third, and continues until Wednesday evening.

FREE BLOOD TESTS

Blood tests will be made free of charge for any Wisconsin physician by the Wisconsin Psychiatric Institute, according to preliminary press announcements. Attorney General Herman L. Ekern ruled that the State Board of Control had authority to render this service without charge. Formal announcement of the service and its details is expected shortly.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1924

ROCK SLEYSER, Wauwatosa, President
M. R. WILKINSON, Oconomowoc, 1st Vice President
JOHN MINAHAN, Green Bay, 2nd Vice President

C. D. BEEBE, Sparta
3rd Vice President

S. S. HALL, Ripon, Treasurer
Mr. J. G. CROWNHART, Executive Secretary
558 Jefferson St., Milwaukee

Councilors

TERM EXPIRES 1929

1st Dist., A. W. Rogers - Oconomowoc
2nd Dist., G. Windesheim - Kenosha

TERM EXPIRES 1925

5th Dist., O. B. Bock - Sheboygan
6th Dist., F. G. Connell - Oshkosh

TERM EXPIRES 1927

9th Dist., Joseph Smith - Wausau
10th Dist., R. E. Mitchell - Eau Claire

TERM EXPIRES 1924

3rd Dist., C. A. Harper - Madison
4th Dist., W. Cunningham - Platteville

TERM EXPIRES 1926

7th Dist., Edward Evans - LaCrosse
8th Dist., T. J. Redelings - Marinette

TERM EXPIRES 1928

11th Dist., J. M. Dodd - Ashland
12th Dist., Hoyt E. Dearholt - Milwaukee

Delegates to American Medical Association

H. M. BROWN, Milwaukee

ROCK SLEYSER, Wauwatosa

JOSEPH F. SMITH, Wausau

Alternates

W. E. BANNEN, La Crosse

F. G. CONNELL, Oshkosh

R. E. MITCHELL, Eau Claire

Committee on Public Policy and Legislation

O. B. BOCK, Sheboygan, Chairman

GEO. RUHLAND, Milwaukee

EDWARD QUICK, Milwaukee

Committee on Medical Defense

OSCAR LOTZ, Milwaukee

F. P. KNAUF, Kiel
S. S. HALL, Ripon
A. J. PATEK, Secretary, Milwaukee

A. E. BACHHUBER, Mayville

Committee on Cancer

J. P. McMAHON, Milwaukee

C. H. BUNTING, Madison
EDWARD EVANS, La Crosse
W. K. GRAY, Secretary, Wells Building, Milwaukee

W. E. GROUND, Superior

Committee on Health and Public Instruction

W. D. STOVALL, Madison

W. H. WASHBURN, Milwaukee

I. F. THOMPSON, Milwaukee

SECTION ON PUBLIC HEALTH AND PREVENTIVE MEDICINE

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The Wisconsin Medical Journal, Official Publication

EYE, EAR, NOSE, THROAT SECTION

S. G. HIGGINS, Milwaukee, Chairman
W. E. GROVE, Milwaukee, Secretary

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists medical society officers for all Wisconsin counties from Ashland to Wood.

SOCIETY PROCEEDINGS

ACADEMY OF MEDICINE

Dr. Oscar Lotz was elected president of the Milwaukee Academy of Medicine at its annual dinner meeting on January 9th. Other officers elected were: First vice president, Dr. J. L. Yates; second vice president, Dr. J. S. Gordon; secretary, Dr. L. G. Sykes; treasurer, Dr. J. P. McMahon; librarian, Dr. C. H. Davis; custodian, Dr. E. A. Smith. The last four were re-elected.

Dr. C. A. Evans was appointed chairman of the membership committee. Council members are: Drs. R. W. Blumenthal, C. A. Evans, H. R. Foerster, O. R. Lillie, F. B. McMahon and A. J. Patek.

A special meeting was held at the Health Service Building on January 26th to hear Prof. David Marine, associate professor of Pathology at Columbia University. Doctor Marine gave a most interesting talk on "Physiology of the Adrenal glands; and the Relation of the function of the Adrenals to the function of the Thyroid gland."

ASHLAND-BAYFIELD-IRON COUNTY

The annual meeting of the Ashland, Bayfield and Iron Counties' Medical Society was held December 20th.

The officers elected for 1924 were: Dr. J. V. Wenzel, president; Dr. A. H. Axley, vice-president; Dr. M. L. Young, secretary and treasurer; and Drs. A. O. Shaw and C. J. Smiles, censors.

BROWN-KEWAUNEE COUNTY

The annual meeting of the Brown-Kewaunee County Medical Society was held Thursday, January 3, at the Beaumont Hotel.

The following officers were elected for 1924:

President, Dr. J. J. Robb; vice-president, Dr. E. S. Knox, secretary-treasurer, Dr. F. J. Gosin; delegate, Dr. J. R. Minahan; alternate, Dr. E. G. Nadeau; and censor, Dr. W. C. Comee.

THE CLINICAL SURGICAL CLUB

The Clinical Surgical Club met with Dr. Victor Marshall at St. Elizabeth's Hospital, Appleton, Wisconsin, on January 23, 1923. Dr. Arthur Dean Bevan was present as guest of honor and gave a short talk on "The Present Status of Gastric Surgery" after which Dr. Marshall showed a large number of postoperative cases both ambulatory and those recently operated and still confined to bed; many of these were cases of unusual interest. After the clinical cases had been shown, the X-ray and clinical laboratories of the hospital were visited. Luncheon was served at the Hotel Conway.

DANE COUNTY

The Dane County Medical Society met at Madison on Tuesday, January 15th. Dr. William J. Ganser related his observations and experiences during a fifteen months' visit abroad. Dr. John K. Chorlog gave a report of a case of paralytic ileus. Dr. Robert E. Burns read a paper on "Some surgical conditions affecting the knee joint." Discussion followed by Doctors Arthur G. Sullivan, Joseph Dean and Thomas W. Tormey.

JEFFERSON COUNTY

The annual meeting of the Jefferson County Medical Society was held at Jefferson on December 20th. The following officers were elected for 1924: J. F. Dennis, Waterloo, president; Dr. L. H. Nowack, Watertown, vice president; Dr. A. C. Nichols, Watertown, secretary-treasurer.

LA CROSSE COUNTY

Members of the La Crosse County Medical Society had an enjoyable meeting at La Crosse on January 24th, when Dr. J. A. L. Bradfield provided the members with a moose banquet. The usual program was varied to include lantern slides on nostrums and quackery from the A. M. A.

Officers elected for 1924 were: Dr. W. A. Henke, president; Dr. W. J. Jones, vice president; Dr. Jens Rosholt, secretary-treasurer; Dr. D. S. MacArthur, censor for three years.

MARINETTE-FLORENCE COUNTY

Members of the Marinette-Florence County Medical Society met at Marinette on January 18th. Dr. Albert Jenner, Milwaukee, gave an interesting talk on venereal diseases with a special reference to world war experience. Dr. H. F. Schroeder presented an interesting clinical case for discussion. Dr. M. D. Bird read an extensive paper on cancer, reviewing the late authorities on its causation.

Dr. J. T. Redelings, Marinette, president of the society, is visiting his son, Dr. Leslie Redelings at San Diego, Calif.

MILWAUKEE COUNTY

The first regular meeting of the society in 1924 was held at Hotel Pfister on January 11th. This was a clinical meeting with the following cases presented:

1. Three cases of Congenital Absence of Vagina. By Dr. C. M. Echols.
2. A case of extreme Osseous Metastasis in a case of Carcinoma of the Breast. By Dr. B. Oberembt.
3. A case of Primary Carcinoma of the Caecum in a young man. By Dr. E. Miller.
4. A case of Cardio-Renal disease with complicating gall bladder obstruction. By Dr. P. F. Rogers.
5. A case of Pernicious Anemia with multiple blood transfusions. By Dr. F. B. McMahon.

The February meeting of the society was held at the Pfister on Friday evening February 8th. The following program was presented:

1. Some Surgical infections and their treatment. By Dr. Dean Lewis, Chicago.
2. The Intramuscular Injection of Sodium Citrate, a Method for the Control of Bleeding. By Dr. S. G. Higgins and Dr. David A. Fisher.

MILWAUKEE OTO-OPHTHALMIC

The annual meeting of the Milwaukee Oto-Ophthalmic Society was held at the University Club on January 16th. Dr. Franz Pfister was elected president; Dr. W. E. Grove, vice president; Dr. Jeffrey J. Brook, secretary-treasurer. Members of the council elected were: Drs. C. Zimmerman, N. M. Black, and R. J. Muenzner.

Dr. J. Hollinger, Chicago, presented an interesting

paper on experimental stimulation and irritation of the Labyrinth.

OUTAGAMIE COUNTY

New officers of the Outagamie County Medical Society are: Dr. E. F. McGrath, president; Dr. W. H. Towne, vice president; Dr. E. E. Bolton, secretary-treasurer.

RACINE COUNTY

The annual meeting of the Racine County Medical Society was held December 20th in the Class Room at St. Mary's Hospital, Racine, Wis., at 4:00 P. M. sharp.

Dr. James C. Sargent, Milwaukee, addressed the meeting on the subject of "The X-Ray Diagnosis of Diseases of the Kidney." The lecture was illustrated.

The following officers were elected for the ensuing year: Dr. H. J. Brehm, Racine, president; Dr. H. B. Keland, vice-president; Susan Jones, secretary; W. P. Collins, censor; Dr. J. S. Keech, delegate; Dr. C. O. Schaefer, alternate.

The attendance was good.

ROCK COUNTY

The annual meeting of the Rock County Medical Society was held at Beloit on December 28th. The following officers were elected: Dr. J. C. Smith, Janesville, president; Dr. W. T. Clark, Janesville, vice president; Dr. G. K. Wooll, Janesville, secretary-treasurer; Dr. W. A. Munn, Janesville, delegate for two years; Dr. W. J. Allen, Beloit, alternate.

At this meeting Dr. E. B. Brown, Beloit, retired as secretary after ten years' service in that office.

SHAWANO COUNTY

Election of officers constituted the meeting of the Shawano County Medical Society at Shawano on January 16th.

WAUKESHA COUNTY

The first meeting of 1924 was held Wednesday Jan. 2nd, at 3:30 P. M., with Doctor Nicely at The Spa, Waukesha. The paper was given by Dr. W. M. Kernes of Milwaukee; and his subject was Genito-Urinary disease. The address was accompanied by lantern slides.

WINNEBAGO COUNTY

Dr. H. A. Williamson, Neenah, presented a paper on Dyspepsia at the January meeting. Officers elected for 1924 are: Dr. J. M. Hogan, Oshkosh, president; Dr. J. W. Loekhart, Oshkosh, vice-president; Dr. R. H. Bitter, Oshkosh, secretary; Dr. J. F. Stein, Oshkosh, censor for three years; Dr. R. B. Rogers, Neenah, delegate; Dr. J. M. Hogan, alternate.

NEWS ITEMS AND PERSONALS

Dr. C. S. Sheldon, Madison, for many years Secretary of the State Medical Society, celebrated his 82nd birthday on January fourteenth.

One of the fifteen travel scholarships offered by the American Child Health Association has been awarded Dr. W. W. Bauer, health commissioner of Racine.

The University of Wisconsin Medical School has re-appointed the following as lecturers in clinical medicine

and surgery: Homer Carter, Joseph Dean, H. P. Greeley, R. H. Jackson, T. W. Tormey, Harry Kay and George H. Robbins. The following physicians were appointed associates in clinical medicine and surgery for the second semester: Damon Brown, J. P. Dean, A. R. Tormey, J. A. Jackson and E. F. Schneiders.

The resignation of E. F. Schneiders, instructor in clinical medicine, was accepted.

An application for a pardon for Dr. Emil C. Schoene, Milwaukee, was denied by Gov. Blaine in January.

Dr. A. J. Bebmstiet, formerly of Howells, Nebraska, has taken over the practice of the late Dr. C. G. Schwalbach of Juneau.

Joseph H. Scholler, Janesville, was appointed as a member of the state board of examiners in optometry by Gov. Blaine on January fifteenth. He is a former president of the Wisconsin Association of Optometrists and succeeds A. E. Harte, Evansville.

A partial paralysis of the left side has confined Dr. W. T. Sarles, Sparta, to his home. Dr. Sarles is a former member of the Board of Trustees of the American Medical Association.

Dr. J. B. Cargan, Cambridge, is seriously ill with pneumonia.

Dr. L. W. Hipke, Milwaukee, has left for Vienna where he will take postgraduate work in medicine.

W. E. Griggs, Fond du Lac chiropractor, is under arrest charged with having performed an illegal operation upon a Lomira girl. Griggs has been released on \$5,000 bail pending trial.

Dr. Merle R. French, formerly of Iowa City, has taken up his new duties as epidemiologist for Milwaukee.

Dr. Carl H. Davis, Milwaukee, has been appointed a major in the medical officer's reserve corps.

"The Progress of Medical Science" was the subject of a talk given by Dr. George H. Williamson, Neenah, before the Neenah Noon Lunch Club.

Dr. S. C. Mason, Marinette, was re-elected president of the staff of St. Joseph's hospital of that city. Dr. H. A. Vennema was elected vice-president and Dr. W. S. Jones, secretary-treasurer.

The right of a chiropractor to advertise as "Dr." will be decided in a test case now before Judge Page's district court of Milwaukee. The defendant, Ferdinand Wischer, contends that so long as he uses the word "Chiropractor" in connection with the title "Doctor," that he is not violating the law. He also contends that the meaning of the law was changed by a revision bill at the last session of the legislature. This test case will probably go to the Supreme Court for final decision.

Dr. H. P. Greeley, Madison, has been granted a leave of absence from the medical school at the University of Wisconsin.

Dr. A. A. Pleyte, Milwaukee, is taking a vacation trip by automobile through western states. Doctor Pleyte has been a member of the medical staff of the Anti-Tuberculosis Association.

Dr. Rock Sleyster, president of the State Society, addressed the quarterly meeting of the Milwaukee County Health Society on January 31st.

Purporting to be in position to purchase Dr. M. Iversen's hospital at Stoughton, a young man giving his name as Paul Goodman of Milwaukee, went into a detailed transaction for the purchase of the hospital and then left town. Goodman went so far as to call a meeting of all local physicians to whom he announced that the hospital would be open to all. Plans were discussed for extensive improvements and Goodman gave an \$8,000 draft on a Milwaukee bank to close the deal.

Investigations disclosed that Goodman was unknown in Milwaukee, had no account at the bank, and that he had, in the meantime, left Stoughton.

MARRIAGES.

Dr. Martin J. Koch, Milwaukee, to Miss Hilda Gasper, Milwaukee.

DEATHS.

Dr. Herman Reineking, Milwaukee, former president of the State Medical Society of Wisconsin, died at his home on January 20th. Doctor Reineking was born at Franklin, Wis., in 1856. He was a graduate of Rush Medical College, Chicago, and Heidelberg University of Germany.

Following graduation, Doctor Reineking practiced medicine at Sheboygan for 24 years, moving to Milwaukee 20 years ago. He was one of the founders of the Wisconsin Physicians and Surgeons College and later was associated with the Marquette Medical School. For the past 20 years he has been on the surgical staff of the Milwaukee railroad.

Doctor Reineking was a member of the Milwaukee County Medical Society; the State Medical Society, of which he was a former president, and of the American Medical Association. He was an honorary member of the American College of Surgeons and the Milwaukee Academy of Medicine. He was also a Knight Templar, a past Grand Master of the Knights of Pythias and a member of the Macabees and Royal Arcanum Lodges. He is survived by his wife and six children.

Dr. William H. Budge, Marshfield, died at his home on January 1st at the age of eighty-two. Doctor Budge was born in Cornwall, England, November 8, 1841, and came to the United States with his parents in 1845. He was a graduate of the old Physicians and Surgeons Surgeons College at Keokuk, Iowa, in 1882.

For many years he operated a drug store in connection with his medical practice at Marshfield. He retired from active practice in 1911.

Dr. Miles H. Clark, Ripon, died at his home on January 11th after several weeks illness. Doctor Clark was born at Ripon August 28, 1863, graduating from William's College in 1883 and from Ann Arbor Medical College in 1887.

Doctor Clark practiced medicine in Milwaukee for twenty years, moving to Ripon fifteen years ago. He was a member of the Green Lake-Waushara-Adams County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

Dr. Alien S. Watson, Glen Ellyn, Ill., was instantly killed when struck by a train on January 4th. Doctor Watson was the son of Mr. and Mrs. I. R. Watson, Madison, Wis.

Dr. F. C. Werner, Watertown, died at his home on January 11th. Doctor Werner had practiced in Watertown since 1879.

Dr. W. B. Webb, Beaver Dam, died on January 24th. Doctor Webb was a graduate of Hahnemann College, Chicago, and had practiced medicine in Beaver Dam for the last forty years. He was a member of the Dodge County Medical Society, the State Medical Society and the American Medical Association.

Dr. John Beibesheimer, Milwaukee, died on January 30th. He was born October 29, 1869, at Milwaukee and was a graduate of Marquette University School of Medicine.

Dr. Mary Alice Downer, St. Paul. She was born on a farm near River Falls, Wisconsin, Sept. 19, 1868, and died in St. Paul, Minn., on January 20, 1924. Her girlhood and much of her later life was spent in the vicinity of River Falls. She graduated from the River Falls Normal School and from Northwestern University Women's Medical School. She practiced her profession in River Falls, Wis., from 1898 to 1903, in Seattle, Wash., from 1903 to 1910. She spent nearly three years in recuperating her health and in graduate study and in 1913 she opened an office in St. Paul, where she continued to practice until a few days before her death.

Dr. Henry Carville Cotton, St. Paul. He was born on a farm at Bowdoin, Maine, on Oct. 17, 1840. He received his early education in the country schools and academies and then taught school in New Jersey. He was attending the Albany Medical College at the time of the outbreak of the Civil War. He enlisted as a private in a New Jersey regiment, was promoted to the rank of sergeant, and was discharged from this regiment in July, 1863. He then completed his course in medicine at the Albany Medical College, and on the receipt of his degree, in January, 1864, enlisted as a medical officer in the 29th Maine Regiment. He rose to the rank of Captain in the Medical Corps and was honorably discharged in June, 1866.

On August 13, 1866, he married Emily Kilgore Edgecomb of Lisbon Falls, Maine, and immediately came west and settled in New Richmond, Wisconsin, where he practiced medicine for one year. He then moved to Prescott, Wisconsin, where he continued to practice until advancing years compelled him to give up active work.

To his union with Emily Edgecomb two sons were born. The elder, Henry, followed his father in the study of medicine and practiced in Minneapolis, Minnesota, until his death in January, 1901. The younger, Charles Edgecomb, survives.

Mrs. Cotton died in March, 1888. On November 26, 1894, Dr. Cotton married Adelaide M. Havens, who died on June 30th, 1923.

Dr. Cotton died at the home of his son in St. Paul on January 5, 1924. Besides his son he is survived by one grandson, four granddaughters and by a sister, Mrs. J. W. Combs, of Marlboro, Mass.

Dr. Cotton was a charter member of the R. P. Converse Post, G. A. R., and only three members survive. He was the last surviving charter member of the Odd Fellows Lodge, I. O. O. F., of Prescott.

Dr. Cotton has endeared himself to the entire community by his tender and sympathetic services. Every one who knew him, old and young, will mourn the loss of a kind, faithful friend. It can well and truthfully be said that he has lived a full and complete life, and that mankind has been benefited by that life.

CORRESPONDENCE

Chippewa Falls, Wis.,
Jan. 2, 1924.

J. G. Crownhart, Editor,
Wisconsin Medical Journal,
Milwaukee, Wis.

Dear Sir:

Am mailing herewith the result of five years experiment and careful observation for public benefit in prophylaxis of scarlet-fever.

Very truly yours,

F. T. MC HUGH, M.D.

A PROPHYLACTIC FOR SCARLET-FEVER.

For the past five years the writer has used diphtheria antitoxin as prophylactic in scarlet-fever and in every case with apparent success when used as follows:

When called to see a patient who has erupted within the previous twelve or sixteen hours all the other members of the family are given subcutaneous injections of one thousand units of diphtheria antitoxin.

This treatment I have used in nineteen families and was much impressed and more so when about two years ago I had occasion to use this treatment in a group of about twenty-five girls living together in a hospital annex who were always in close contact with each other and one of whom became ill with scarlet-fever. On this occasion all were given the above prophylactic except one who was overlooked and all escaped the disease except the one who had not had the treatment.

Since using this treatment as advised above I have never had but one case of scarlet-fever in a family, therefore quarantine has in all cases been lifted at the end of four weeks and earlier at three weeks.

Taking into consideration the avoiding of long periods of quarantine as usually necessary in scarlet-fever where repeated cases, the dangers of complications in prevented cases, the expense and worry saved the parents as well as the saving of life in many instances, I consider the treatment worth while.

In using this for scarlet-fever I advise repeating the one thousand units at the end of ten days where the family are living closely and cannot be kept from later contact with the one ill with the disease believing that immunity subsides at the end of ten days in some cases because in one instance in my experience a child was exposed to scarlet-fever in same family, was given diphtheria antitoxin one thousand units, was then isolated in another home of relatives. After three weeks she was again exposed to the same child who then had a

purulent otitis and within five days became ill with scarlet-fever.

Because of one failure with giving the injections full twenty-four hours after the eruption appeared I do not feel that the other members who are early infected will escape having the disease if given the treatment after about twelve hours following eruption of carrier, however knowing that in a family very often infection is not contracted within the first few days it is advisable to use this treatment as late as desirable.

Am of the opinion that this treatment will overcome scarlet-fever infection incubation contracted from a patient suffering with scarlet fever from the premonitory stage to including twelve hours after eruption.

Why or how this treatment furnishes immunity is probably due to foreign protein. Equally good results may be had with the use of normal horse serum.

THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER.

December 26, 1923.

Dr. F. Gregory Connell, President,
State Medical Society of Wisconsin,
Oshkosh, Wisconsin.

Dear Dr. Connell:

It again becomes our privilege to address you as has been done for several years past, with reference to the campaign against cancer and to solicit the cooperation and stimulation which your organization has given in the past and which we hope may continue and strengthen from year to year.

This society is most humble when it exhorts the organized profession to renew efforts against this disease, for it realizes that no public health problem can succeed without the hearty and whole-souled cooperation of the medical fraternity. It also appreciates to the fullest the part played by the profession, particularly in the more recent years, in this important fight and its only justification in calling for a repetition of past efforts is that the recorded cancer death rate continues to go up and that the only hope of arresting it and heading it downward is education—and more education. The medical man alone has the facts. He only is heeded by the public and it is therefore confidently expected that he will lead in the attack on this disease.

May we request that the movement being conducted by this society again have the formal endorsement of each state and provincial medical association at its next meeting and that such encouragement as may be brought to bear upon the affiliated county societies be exerted at that time? Most county societies will readily conform to any action taken by the parent organization and without such endorsement and without real assistance from the county units the campaign cannot but fail to reach its ultimate goal, namely, the united effort of every man in the ranks of the regular profession.

I am on behalf of the Society,

Very sincerely yours,

F. J. OSBORNE.

Executive Secretary.

Council Authorizes Lay Educational Program; Will Make Basic Health Information Available To All.

Editor's Note—This is the third of a series of articles outlining the problems and work of the Committee on Public Policy and Legislation. Previous articles appeared in the December and January issues.

"The problem of securing and maintaining adequate health legislation is essentially the problem of securing a better informed laity. And that involves the question of how best to give our fellow citizens a realization of the responsibility that is theirs. Our solution lies along conservative lines in which sensationalism finds no place."

So declared Dr. O. B. Bock, chairman of the Committee on Public Policy and Legislation, in epitomizing the basis for the report of his committee at the meeting of the Council, January 24th.

"There is no need nor call for any attempts to educate all the people along pre-medical or scientific lines," continued Dr. Bock. "But there is a need for the organized medical profession in this state to present more clearly to the citizens the extent of the responsibility that is theirs. A law providing standards of sanitation resulting in a material decrease in typhoid fever can hardly be said to be in the interest of the medical profession but so long as we fail to point out the results of such a law, just so long will the public fail adequately to support its enactment. Exactly the same situation is present in securing the enactment and maintenance of any law designed to protect the people and further the work of preventive medicine.

"It is with this thought in mind that this Committee presents its recommendations to the Council for approval."

The answer of the Council was to approve of every recommendation made. This means that the Society, for the first time, has a definite and carefully prepared program for its endeavors in this direction. The program as authorized includes four important fields of work.

The Council approved of the presentation of subscriptions to *Hygeia* to those who deal with public health problems. This work will be continued.

A small Speaker's Handbook to contain essential details of the accomplishments of public health laws and of preventive medicine in this state will

be published. This will be assembled as soon as possible and placed in the hands of each member as a reference book for public health talks. A second edition will be published in the late fall.

Approval was given to the recommendation that one issue each year of the JOURNAL be made a Lay Issue. The first of these special numbers will be published this spring. An extra run will be made and each member will be asked to forward names as suggested recipients.

Fourth, the Council authorized an extensive survey to determine what, if any, legislation is needed to further the work of preventive medicine and best to protect public health in this state. This survey will be made with the invited cooperation of every recognized branch of the healing art.

The program as approved has been placed under the direction of the Executive Secretary and its accomplishment calls for the active cooperation of every member.

"It well has been said by the American Medical Association," declared Dr. Bock, "that it is far from the duty of the organized medical profession to assume the responsibility for health law enforcement. May I add to that statement that neither is it the duty of the organized medical profession to assume responsibility for the passage of public health protective measures.

"But it is clearly the duty of this Society and of the organized profession to act in the capacity of the intelligent guide; to designate clearly the road on which the public may travel, if they choose, with the least danger to their health; and to designate clearly the road on which the science of preventive medicine may accomplish that which it is capable of doing.

"When we as a profession have designated that road to the greatest public and individual safety we have accomplished all that can be said to be our duty. At that point our fellow citizens and their representatives must take the responsibility for making their choice.

"Seventy-eight years ago those far-seeing men who framed the constitution of our Society declared: 'The purposes of this Society shall be * * * to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable

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"Cancer Cure" Advertisements Mislead Public: Violate Truth In Advertising Ethics.

There is appearing in the "Personal" columns of a large northern Wisconsin daily a "cancer cure" advertisement, a cut of which is on this page.

Cancer is a curable disease while it is still a local growth. The early diagnosis or recognition of the disease becomes, therefore, absolutely imperative. The present high death rate from cancer is probably due to two causes; the patient failing to consult a reputable physician for early examination or postponing proper treatments after intelligent advice has been obtained.

The authentic known forms of treating cancer that have been accepted by the medical profession are (1) excision, or removal of the lesion by surgery, (2) the destruction of the disease either by some form of heat or radiant energy in the form of X-ray or radium, and (3) at times a combination of the two forms mentioned. The more extensive, advanced, or long-standing the disease, the less is the chance of effecting a cure. This is because of the danger of the disease spreading to other parts of the body by the blood and lymph channels.

In the advanced or extensive cases of cancer, surgery or radio therapy or a combination of the two invariably arrests the progress of the disease and temporarily relieves certain symptoms but unfortunately never cures.

And since most of our cancer cases are coming in the advanced stages, advertisements using the term "cancer cure" are false and delusive. No reputable physician or surgeon employs the term "cure" in a cancer case until at least five years have elapsed after the apparent disappearance of the disease.

And no reputable physician or surgeon would think of advertising a "cancer cure."

There are three dangers that beset the way of an afflicted person who answers a "cancer cure" advertisement. The first of these dangers is mistreatment; the second is loss of time, and the third extortion.

What happens to a man who has a cancer and answers a "cancer cure" advertisement? The story of possibly hundreds can be told as the story of one. And that story we take from the records of the Supreme Court of Wisconsin in an opinion handed down no later than last spring.

Thomas B. Lee of Deer Park, St. Croix County,

PERSONALS

CANCER AND TUMORS SUCCESS-
fully treated and removed without
knife or pain. Free sanatorium book.
Dr. Williams' Sanatorium, 525 Uni-
versity Ave. S. E. Minneapolis, Minn.

CURTAINS FOR THE WINDOW

had a cancer of the mouth. It was pronounced as inoperable and incurable by the Mayo Clinic. Now Lee, poor man, saw an advertisement of the sanitarium of one Dr. R. C. Seaman of Cherokee, Iowa—the usual "cancer cure" advertisement. He went to that sanitarium and before he even received a treatment he entered into a contract to pay so much a week for board and room, "\$5 a bottle for blood purifier," \$200 down, and signed a promissory note for \$1800 more with interest at 8 per cent with attorney's fees if collection was necessary. In return Seaman agreed "to do his very best to effect a permanent cure * * * by the first treatment." Money does not matter when life is at stake.

And now we let a Justice of our Supreme Court finish this pitiful story.

"A hard contract, indeed! What happened? The sinking man, grasping at straws, signed the note and contract, stayed on at the sanitarium two months, and died. It seems to me too plain to admit of controversy that the plaintiff took advantage of his patient's unfortunate condition to make an unconscionable and overreaching contract."

Thomas B. Lee of Deer Park is dead. His little estate will be the less by \$2,000 plus for his "cancer cure."

It remained for a Justice of our High Court to write a sentence that sums up the pitiful side of quackery—"The sinking man, grasping at straws, signed the note and contract * * * and died."

That is the cure quackery offers to the innocent and the credulous.

We do not believe any paper in this state desires to be the cat's-paw for quackery. The delusive straw offered the credulous—offered the man who is dying and wants to believe a cure can be effected—is not "Truth in Advertising."

In probably no other disease is it so important for the afflicted to place himself in the hands of

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State Board of Medical Examiners Conducts January Examinations For Twenty-eight

Twenty-eight applicants for licenses as physicians in Wisconsin were examined at the January meeting of the State Board of Medical Examiners, held at Madison January 8th to 10th. Thirty-two applied for reciprocal licenses at this meeting. Sub-committees of the Board conducted examinations for ten applicants to become masseurs; three to become chiropodists; and three to become midwives.

The questions for the examinations follow. A complete list of the successful candidates will be printed in the March issue of the Journal.

SURGERY

J. M. DODD

1. Discuss varieties of wounds and give treatment for each.
2. Differentiate hemorrhage and shock and give treatment.
3. Give treatment for burns.
4. Give varieties of goitre. (a) What cases should be operated and what cases are amenable to medical treatment? (b) What cases should be ligated? (c) Give technique of operations of ligation and excision. (d) What are the dangers in operations on the thyroid?
5. Differentiate inguinal adenitis, inguinal hernia, and femoral hernia. Discuss means of reduction when strangulated.
6. Describe Pott's fracture and give treatment.
7. Describe treatment and management of a case of erysipelas in the hospital.
8. What are the essential differences between benign and malignant tumors?

GYNECOLOGY

J. M. DODD

1. Differentiate ectopic pregnancy, salpingitis, and appendicitis.
2. Give causes and treatment of ileus following abdominal operations.
3. Describe operation for restoration of pelvic floor in a case of complete rupture of the perineum due to child birth.
4. Discuss radium in the treatment of cancer of the uterus.

PATHOLOGY

G. H. RIPLEY

1. Give the pathology of the secondary lesions of syphilis.
2. Name the natural agencies by which the body protects itself from disease.
3. Give the sequence of pathological conditions developing in chronic interstitial nephritis.
4. What pathological conditions are usually present in angina pectoris?
5. What pathological conditions cause fluid in the abdominal cavity?
6. Give the kidney pathology in acute parenchymatous nephritis, chronic parenchymatous nephritis, and chronic interstitial nephritis.
7. Give gross and microscopic appearance of epithelioma. Where is it most often located?
8. What conditions other than trauma favor cerebral hemorrhage? From what vessel does it most frequently occur? Why?

EYE, EAR, NOSE AND THROAT

G. H. RIPLEY

1. Under what conditions would you puncture the tympanic membrane?
2. Give symptoms and treatment of chronic otitis media.
3. Under what conditions may removal of an eye be necessary? What symptoms would decide the removal necessary?
4. Give causes, diagnosis, and treatment of aphonia.

HYGIENE AND SANITATION

C. W. RODECKER

1. What is meant by personal hygiene? What relation does it bear to a physician's work?
2. Name five modes of transmission of diseases.
3. How would you dispose of garbage when the community makes no such provision?
4. Name two diseases caused by impure water, milk and canned goods.
5. What is the latest idea in regard to disinfection of contagious diseases?

PHYSICAL DIAGNOSIS

C. W. RODECKER

1. Diagnose puerperal eclampsia.

MEDICAL JURISPRUDENCE

C. W. RODECKER

1. In what diseases does the law require quarantine?
2. What is required of a physician in attendance on cases of infectious diseases?
3. How does a physician prepare himself in attendance upon cases of infectious diseases?

TOXICOLOGY

C. W. RODECKER

1. What are the active poisons of opium? Of nux vomica? Of belladonna?
2. How does chloroform destroy life in its administration as an anaesthetic?

MATERIA MEDICA

J. B. BREWER

1. Define materia medica, therapeutics.
2. Describe bromism and state how it is produced.
3. What is the physiological action of veratrum viride on the circulation?
4. Define (a) expectorants, (b) carminatives, (c) astringents, (d) diaphoretics, (e) emollients.
5. Give the common name and the therapeutic uses of potassium bitartrate.
6. Give the source, physiological action and the therapeutic uses of oleum ricini.
7. Give the physiological action of morphine.
8. State the official name and the minimum poisoning dose of (a) strychnine sulphate, (b) morphine sulphate, (c) chloral. State antidote for each.
9. What doses of antitoxin are used for a child five years old ill with diphtheria? What would be the prophylactic dose for the same child?
10. Give synonyms and doses of the following drugs: (a) aconite, (b) gelsemium, (c) nux vomica, (d) digitalis, (e) crataegus, (f) ipecac.

CHEMISTRY

J. B. BREWER

1. Why does the chemist use distilled water in making solutions, rather than filtered water?
2. What essential constituent of the air is found in larger amount in manufacturing districts than in the open country?
3. Give definition of an acid.
4. What is specific gravity?
5. What are the general states in which matter may exist? Give example of each.
6. Give the usual laboratory procedure in testing for borax.
7. Is air a mixture or a chemical compound?
8. What does an abnormal quantity of Chlorin in drinking water indicate? Give test for organic matter in drinking water and simple way of rendering it harmless.
9. Give the symbol, valence, physiologic action, properties, commercial uses of Phosphorus.
10. Give test for purity of chloroform.

PHYSIOLOGY AND DIETETICS

R. B. CUNNINGHAM

1. Describe the means and methods employed by the human organism in protecting itself against infectious disease.
2. Under what circumstances may the quantity of urine, in health, fall considerably below normal?
3. In what way does the movements of the large intestine differ from the movements of the small intestine? Name the parts of the small and large intestine.
4. How is urine secreted, and name its physiological constituents.
5. Name the substances necessary for the formation of fibrin in blood clot. From what substances are they derived?
6. Describe fully the danger of transfusion of blood from lower animals to man.
7. How is the Humerus bone developed? How is the Temporal bone developed?
8. Describe the portal circulation and tell what is accomplished physiologically by the portal circulation.
9. Describe the digestion of fats.
10. (a) What are the advantages of a mixed diet?
(b) How is metabolism affected by a purely protein diet?
11. How is the development of the teeth affected favorably and unfavorably by dietary conditions?

ANATOMY

E. C. MURPHY

1. Name the branches of the subclavian artery.
2. In an amputation of the forearm 3 inches above the wrist, what arteries will it be necessary to tie, and of what are they branches?

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The Hospital Proposition—An Independent Survey. State Architect Reviews Present Needs.

BY ARTHUR PEABODY,
STATE ARCHITECT,
MADISON.

Editor's Note—Arthur Peabody, state architect, graduated from the University of Illinois in 1882 and in 1891 had charge of the plans for the Horticultural Building, Machinery Hall and Annex; Railway Terminal Station; Pennsylvania Railway Building, Stock Pavilion and other structures at the World's Columbian Exposition. From 1906 to 1915 he was architect for the University of Wisconsin, designing fifty-three of its present buildings. Among these are Lathrop Hall, the Forestry Products Laboratory, Barnard Hall and the Physics Building.

From 1915 to the present he has been state architect of Wisconsin, designing buildings for the University, State Normal Schools, penal, charitable and hospital buildings and other state institutions. In this capacity he designed the Bradley Memorial Hospital and the Wisconsin State Hospital. He has made extensive study here and abroad of hospital buildings. He is a member of the American Institute of Architects and secretary of the Board of Examiners of Architects of Wisconsin.

Hospitals comprise in a certain fashion all institutions intended for the care and cure of human beings. They are of several types. First, the hospital proper, intended for quick restoration to health. After this comes the sanitarium for more extensive treatment, and the asylum, for permanent care. Closely allied to the hospital are the reformatory, the house of correction and the penitentiary.

The end and aim of the entire number of these institutions is the assistance and protection of persons and of the community. It must not be taken that criminals are simply patients. There is, however, a connection in a good number of cases between illness or imperfection and wrong doing. The hospital reacts upon the physical body and in some cases, indirectly, upon the will. Places of detention are expected to cure the diseased will. Where this is incurable the office of confinement is similar to that of the asylum.

People do not go to hospitals to be pampered. In fact, the hospital regime is in most cases as drastic as one could wish. A parallel regime administered to violators of law would be of equal

value provided the science of penology were advanced to the same point as medicine. This will be impossible so long as the connection between the hospital and the prison remains to be created.

HOSPITAL PROJECTS. (A)

Modern hospital undertakings are most fortunate if they begin with the creation of a medical and surgical staff for the purpose of serving a community with modern scientific treatment of disease. The creation of such a staff may be contemporaneous with the selection of a hospital site and the erection of buildings for housing patients and attendants. This may be carried out in conjunction with a school for the education of physicians which will give courses in the various branches of medical science.

Other hospitals sometimes grow out of the necessities of some unusually talented physician. Beginning with a single building of small size, the demand increases so that in time the project takes on the character of an institution. During the period of activity of the original leader it acquires fame and prestige. It becomes too large for his personal supervision and requires the services of assistants, a business manager, a staff of clerks, nurses, general employes, an ambulance service, and the rest. The work of the originator then becomes altogether administrative. His special skill as a diagnostician, operating surgeon and personal observer of patients is swallowed up in the mass of routine work. From this time on the institution loses in efficiency, and with the declining powers of the man at the head it gradually expires. The other hazard accompanying this type of institution, and no less formidable, is that of running expenses. Curiously enough, a very small clinic and hospital can be operated at less cost per capita than a great one. For this reason the project is open to



ARTHUR PEABODY

the danger of becoming more or less commercialized or, failing to make ends meet, is compelled to stop).

Both of these origins of hospital service depend on private initiative and self-sacrifice. There is no intention to load anything onto the community. They are benefactions to the city, in money, time and skill and as such are deserving of the highest recognition. Institutions, however, outlive their originators whether they be few or many and must in time become the burden of the city or state.

Hospital service is not like other amenities of our civilization. The persons needing its ministrations are in many cases the very ones who on account of their condition are not able to pay what the service is worth. But to limit hospital care in all cases to those who can pay in adequate measure would result in filling our cities again with cripples, invalids and non-supporting individuals of every sort, just as it used to be a hundred years ago. From invalid to criminal is only a step, so that the thieves' quarters of old time cities would probably be revived. From these parts infections spread, and the professional beggar and robber takes his rise.

DISTRIBUTION OF SERVICE.

The hospital therefore is as much a civic matter as the sewer system. From this standpoint it is a matter of public interest rather than of benevolence. The creation and location of hospitals therefore should not be left to the accident of circumstance, but should enter into every city plan as one of its necessary and inevitable elements.

As a routine facility for picking up and salvaging unfortunates the hospital just like the police department should have stations at frequent intervals in every quarter of town. Besides first aid, the work of these stations should consist primarily of a clinic, with an accessory out patient department where less important ailments may be treated without recourse to one of the main hospitals. This leaves the fixing of hospital points to be studied from a really scientific and economic view. It does away with the necessity and the desirability of planting them in the central part of the city, where land is expensive and difficult to obtain in large units, and makes it possible to use locations several miles distant.

With the motor ambulance and other means of transportation, patients can be taken to a hospital on the outskirts of town quite as easily as to one so

situated as to require passing through the congested streets of the center.

To make the matter short, hospitals should be located on some properly digested program in conjunction with a common sense city planning study. They should not be placed in a casual manner arising because of a particular reason as that some certain piece of land is obtainable by donation or otherwise.

Gifts of money for hospital building, etc., should be viewed with circumspection. However promising the project appears in the beginning it is nearly always destined to become one of the institutions of the city, for which support must come out of the city budget. But even in the unusual case that a sufficient endowment is made, beside the money for building, the hospital should be coordinated with the general system of hospitals of the city as a whole. This would vary with every town but as a general proposition ordinary hospital facilities should be obtainable as readily in one section as in another.

It goes without saying that the patients' first step should be the visit to the clinic. As soon as the nature of the trouble is there determined and hospital treatment is decided upon he can be sent to the particular institution where cases of his kind are best accommodated. This indicates that all hospitals of a city need not be duplicates one of another. Without excluding other work, one hospital may be equipped particularly for pediatrics or for obstetrics, another for general medicine or surgery.

THE HOSPITAL PRECINCT. (B)

One of the charms of a great estate is the retirement of it. Outside the garden walls the streets of the city are filled with the business of every day life. Within the enclosure, everything is quiet. It is another world. That is the condition which should be created for hospitals. It is not obtainable in some of our cities. That is to say, the hospital buildings already erected are close to the street and there is no enclosure. A sign board set on the curb line reads "Quiet Zone;" a poor substitute for the actual zone of quiet created by a sufficient ground space about buildings.

Hospital properties are nearly always too small. The grounds are contracted, the buildings outgrow themselves and one unit crowds another. This is not altogether due to lack of reasonable vision on the part of the founders of the institu-

tion. Since their day the world has changed so radically that what once was large now is small and what was distant is right at hand. But old precedents should not influence new projects. Conditions and reasonable expectations of the old days are no longer to be depended upon. What was in years past a fairly quiet neighborhood occupied by humble cottages each with its more or less depressing backyard, has become perhaps a light manufacturing district, cut through by a line of trolley cars and noisy with the never ending sound of industry.

To overcome this difficulty, buildings are being thrust up into the air. This is fine for patients on the tenth story, but does not benefit those on the second. Land values also increase rapidly so that the problem of enlarging the hospital grounds is not practicable. The right solution, however, is more ground and still more ground.

This all points to locations on the outer portions of the city. Here considerable areas can be acquired and provision made for creating an enclosure of good size, shut away from undesirable sights and sounds. An interior landscape can be developed, on which the several buildings of the institution may be grouped and about which convalescent areas can be arranged. Buildings may be comparatively low. They can be disposed so that patients of different types may be segregated.

Even on the outskirts, however, an eye should be kept on the probable necessity for expansion. For this reason a location hemmed in on all sides is less desirable. There should be at least one direction in which enlargement may take place without excessive cost and without running into insuperable obstacles, such as railway right of way, a river, or a principal thoroughfare. The ordinary building committee is not prepared to pass judgment on a matter of this kind without the assistance of the architect and the city engineer or in some cases of certain members of the city council acquainted with the intention of the city as to future development of the neighborhood.

Right here the value of a zoning law is apparent. What class of structures may be admitted into the vicinity, what improvements of a general nature are to be anticipated may be inferred from the terms of the zoning ordinance. Even here circumspection is needed. It would be an error to locate a hospital immediately adjacent to certain types of asylums as for incompetents or dependents. It is repellent to ordinary people to pass time in the

neighborhood of institutions for the insane. On the other hand, a hospital is not welcome in residence districts. It is desirable therefore to look out for places not particularly popular for residence use. An ideal property would be one of good size in some spot where it will be dominant if not the exclusive occupant. It should be convenient to ordinary transportation and reasonably near to the main automobile routes. It should have access to public utilities such as city water, gas, electricity, the sewer system, etc., directly or by reasonable extension. The ground should be well drained and easy of use, so that transportation from one portion of the grounds to another will not involve too much hill climbing. Among the promising areas outside the city are old market gardens, disused private parks, and other tracts of good dimensions which for one reason or another have not been subdivided into building lots.

THE GROUND LAYOUT. (C)

Once a property is acquired, the immediate problem is to discover how it will answer the requirements of the hospital project. In fact this element should have been pretty well studied into before final acceptance of the location. In a general way, it may be said that a property twice or three times the size required for present purposes would be satisfactory and not too large an area to allow for future enlargement. Such a property may be anywhere from two acres to two hundred according to the anticipated volume of business coming to the hospital. Taking a project for housing say 1500 patients as an ultimate maximum, a tract of forty acres would not be excessive. Upon this area the various buildings of the institution will be grouped, in the architect's design, into a pleasing and efficient ensemble.

In the general case certain of these buildings will be erected in the immediate future, the rest to follow as occasion demands. Right here is one of the pitfalls into which architects and hospital boards sometimes fall. The institution may not be completed, or even the major part of it, in anything like the period of time originally contemplated. It may be arrested by a hostile board of public works. A depression in business generally may make it difficult to procure the necessary funds. The outbreak of war would put a quietus on all building projects for the period and perhaps for a considerable time afterward. The volume of business coming to the hospital may never become

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Wisconsin Physicians Discuss the Problems of the Country Doctor In Several Sections of State.

As this issue goes to press, the State Society has requests for physicians from Potosi, Grant county; Withee, Clark county; and Dalton, Green Lake county. Information regarding these communities may be obtained by addressing the Journal.

Following the series of articles by Dr. N. P. Colwell of the American Medical Association on the problems of the Country Doctor, this Journal wrote to members situated in different sections of the state asking for their views. We had thought of publishing but one article containing extracts from all. The material forwarded, however, is so excellent that we are printing it in full. This necessitates carrying over part of the material for our March number.

BETTER COOPERATION AN AID.

BY A. DENEVUE, M.D.,

DEPUTY STATE HEALTH OFFICER.

Why have the young physicians deserted the country practice? In reviewing this most important topic it will be found that not one but many are the causes that leave our rural communities without medical attention. I will attempt to enumerate a number of these causes and also a possible remedy for this unfortunate condition.

The first, and one of the principal causes, can be attributed to the trend of the times, which is a steadily increasing desire of the young men, and also women, to seek the city and with the present condition of our rural districts from an industrial and financial standpoint we can find little encouragement or an immediate promising outlook. The young physician, after spending time and money to attain the desired efficiency which is required of the profession, is loath to enter into the so-called hardships of the country doctor and possibly forgetting the humanitarian side of his profession, desires an easier and less laborious location in a city or larger town.

Another reason for this condition is the increasing number of medical centers in the cities. While this formation of medical centers, with the improved clinical, surgical, obstetrical or hospital service, is meeting a demand that has a tendency to uplift the standard of medical efficiency, it is creating a desire of not only residents of the city

but of the country district for this service, thereby taking many of the more progressive country patients away from the service of the country doctor.

The improved highways connecting the small centers with the cities where not only hospitals can be of service but also where a more diversified and greater variety of merchandise can be purchased has a tendency to take the trade from the small country community. With this, and increasing this tendency, the automobile is one of the principal factors.

COOPERATION LACKING?

Another, though not the least important, is the lack of cooperation of the doctors of the rural communities, thereby leaving an impression among his patients of the inferiority of the country doctor in comparison with his city competition, which may or may not be justified, depending on the individual case or parties involved.

Lack of better country medical societies and cooperation of the various medical men in the smaller communities, cause the loss of many opportunities toward the improvement mentally and in an ethical way of the physicians so associated. There have been various attempts in different localities in states of the United States to control this tendency and in some instances is meeting with success. One of the Eastern states is offering \$1,000 annually to physicians locating in rural communities which are without a physician. Other communities have subscribed or voted a sum of money or physician's equipment sufficient to be an attraction for the young physician, the practice he may have being extra. For the present it does not seem possible to make much headway by these methods but there is one remedy which would go a long way toward making the practice of the country doctor more tenable and help to fill a gap that is felt by many rural centers and that is the country society where cooperative work in clinics or lectures, with local members taking part, would be of great benefit to all of its associates. Also a closer and less suspicious association of the country doctor with his neighboring professional brother would create a much improved condition and have a tendency to encourage the young men to enter the field.

TOO EARLY SPECIALIZATION?

BY L. H. PELTON, M.D.,
PAST PRESIDENT, STATE SOCIETY,
WAUPACA.

The subject, "The Decline of the Country Doctor," so ably and graphically portrayed in last issues of the *Journal* leaves little for comment or suggestion. The facts are that every branch of science and industry is in a deplorable state of chaos and to suggest a remedy that might bring about a change or restore the Country Doctor to his place would be futile in that a change could not possibly be wrought in a short period of time. It will take patience, and a more efficient preparation of the mind of the public to the situation for as the Doctor in one of his articles suggests, there are too great a variety of subjects crowded in a short term.

Let us go back to the earlier preparatory school. Now to become accredited they needs must crowd into their curriculum many branches that should be left to the academies and colleges. Results show that when the students are graduated there is great confusion of ideas and very little practical knowledge. Of course there are a few bright students who are always looking to practical application. As an illustration, many years since, while attending a clinic held by one of our successful oculists, there was with us a young graduate who was quite conspicuous, asking many questions, many not at all applicable to the operation (removal of an obstinate lens). When after careful manipulation and great patience the operator succeeded without rupturing the capsule, the young doctor remarked, "Doctor if I could remove a lens as successfully as you I would give a great deal."

The doctor replied, "When you have ruined as many eyes as I have, possibly you can."

I once visited President VanHise, of our State University and asked why so many matriculants failed. He replied, "There is a stepping stone lacking from high school to university but we cannot change our curriculum to accommodate high school graduates." His remedy was for the graduate to take a course at some academy. There is too much, in my opinion, crowded into what should be a foundation for future advancement. Doctor Colwell has stated that there are so many specialists. This is true, and I have observed the young men, many of them, go into medicine thinking it affords a lucrative field, and that a specialty is

much easier than a general practice. I agree there, but I also am firmly convinced no one who takes a specialty directly after he graduates is safe.

SPECIALIZE TOO EARLY?

My experience from observation and contact with specialists leads me to believe that the safe, careful, conservative ones are those who have spent at least ten years in general practice. Then they are prepared to study and meet emergencies as they occur. There is no place to acquire the careful knowledge and application better than in the country practice where one has to be thrown on his own resources. They learn to make use of that which is at hand, and not to rely entirely on machine made thought and appliances. It is the resourceful, studious man that makes a success.

In gaining this practical knowledge one must constantly refer to his text books and *Medical Journals*. These latter are often of great assistance in active practice.

When I had a severe case I always took up the last *Journals* and found ideas that were of material help to me and I am sure in many instances, a great benefit to my patient.

There is no limit to acquiring knowledge. That is where many fail. They do not think it necessary to continue their studies. Those who succeed best as specialists are those who continually study and compare what they read with their own experience. This applies to all who enter the field of medicine and there is no class of physician who is more bent on excelling or gaining reputation than the successful ones. And there is no place better to bring this out than a country practice.

It is a lamentable fact many go into the field thinking only of the commercial part, and not so much interested in human ailments. Then, too, there are many, as in other callings such as law, music and ministry, who never will succeed for they are not adapted nor can they learn the science. I have known a few without special instruction from an experienced operator, after witnessing a few operations by a surgeon to whom they had taken a patient, suddenly to blossom out into a surgeon—most unfortunate for their patients.

Right here allow me to quote the great late surgeon, John B. Murphy, "If I had my life to live over knowing what I do now, I would not specialize in surgery. I would take up internal medicine, for here is a great field."

I believe he had in mind what many have, that

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Pureair Is One of Three Public Sanatoriums In State Having Full Time Medical Service.

BY MRS. RUTH MAC MILLIN.

Far "up north" in the wilds of Wisconsin, amid virgin forests of evergreens and white birch, blanketed with snow at this time of the year, lies Pureair sanatorium. Here a small colony of seventy Wisconsin men, women and children are making the fight to regain their health. Located two miles from Bayfield, and near the Salmo fish hatchery, one of the best known in the state, Pureair is situated high up on a bluff overlooking the waters of Chequamegon Bay, Lake Superior. The charm of the view afforded the patients from the windows of the sanatorium is, summer and winter, surpassed by few if any of the tuberculosis sanatoria of the United States. Far down the hill, at the foot of the bluff, the railroad track runs along the edge of the lake; and it is a fascinating diversion for the patients to watch the faint curls of smoke, visible long before the trains themselves can be seen, wind in and out along the ragged shore line; for trains carry adventure and suspense, and may always deliver surprise packages of some sort.

Pureair was erected in 1920 by Ashland, Bayfield and Iron counties, the first sanatorium to be built under the new law permitting several counties to combine in the building and maintenance of a tuberculosis sanatorium. So keenly was the need for a sanatorium felt in northern Wisconsin that when a vote upon the proposition of erecting such an institution was taken, not one member of the three county boards concerned dissented. That the need was a real one and that the meeting of it well conceived and executed has been clearly demonstrated by the fact that there is always a waiting list although the bed capacity of the sanatorium has been doubled since it was first erected.

The sanatorium was built to serve Ashland, Bayfield and Iron counties, first, but so great has been the demand for beds by patients from other northern counties that whenever there has been a vacancy such patients have been admitted. Vacancies, however, do not occur frequently, and at the present time Pureair has a waiting list of some 20 patients. Patients from other counties who are unable to pay for their care, are admitted to the sanatorium under the usual inter-county financial arrangements.

When the sanatorium was erected, the bed capacity was 35, but in less than a year it was



found that the demand for beds so far exceeded the supply that an extension was added and the new wing opened in 1923. The extra beds, making a total of 70, were also quickly filled. Much of the credit attaching to the institution is due to Dr. M. S. Hosmer, of Ashland, who worked untiringly that the sanatorium might be realized. Dr. Hosmer was the first medical director and is now one of the trustees.

Pureair is manned by a staff of one full-time resident physician, Dr. W. E. Fawcett, formerly of Pennsylvania, who has had much experience in tuberculosis work, and five nurses. With the exception of the state sanatorium at Wales and the Milwaukee county sanatoria at Wauwatosa, Pureair is the only public tuberculosis sanatorium in Wisconsin to have a full-time medical attendant.

While no special cottage has been provided for them, children are willingly accepted at Pureair, and are kept apart from the adult patients, on a floor by themselves. Some effort is made to give them systematic instruction as they would have in school, although no regular teacher is employed.

In addition to his sanatorium work, Dr. Fawcett conducts free chest clinics in various parts of the three counties. These clinics are a part of the prevention and follow-up program in the fight that is being made by the sanatorium not only to cure the patients in the institution itself, but to see that those needing sanatorium care get it early.

A legal resident of Ashland, Bayfield and Iron counties is eligible for care at Pureair sanatorium. Patients who can pay are required to do so. The charge is \$18 a week, which must be three or four dollars less than the actual cost of maintenance.

(Continued on page XXII)

THE JOURNAL BOOK SHELF

NEW BOOKS WORTH WHILE

- Principles of Vital Statistics.** By J. S. Falk, Ph.D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.
- Medical Biometry and Statistics.** By Raymond Pearl, Ph.D., Professor of Biometry and Vital Statistics in the School of Hygiene and Public Health and of Biology in the Medical School, the Johns Hopkins University. Octavo of 379 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$5.00 net.
- A Text-Book of Anatomy and Physiology for Schools of Nursing, Normal Schools and Colleges.** By Jesse Feiring Williams, M. D., Professor of Physical Education, Teachers' College, Columbia University, New York City. W. B. Saunders Company, 1923. 523 pages. Price, \$3.00.
- A Premier for Diabetic Patients.** By Russell M. Wilder, Ph.D., M. D., Mary A. Foley, Dietitian, Daisy Ellithorpe, Dietitian, Mayo Clinic. 119 pages (illustrated). W. B. Saunders Company, Philadelphia and London. 1923. Cloth.
- Physical Examination and Diagnostic Anatomy.** By Charles B. Slade, M. D., New York City Department of Health. Third Edition. W. B. Saunders Company, Philadelphia and London. 179 pages (illustrated). Cloth.
- The Dance of Life.** By Havelock Ellis. Boston and New York. Houghton, Mifflin Company. 1923. Price, \$4.00.
- Pediatrics by Various Authors.** Edited by Isaac A. Abt, Professor of Diseases of Children, Northwestern University Medical School. Vols. I and II. Published by W. B. Saunders Company, Philadelphia. To be published in 8 vols. Illustrated. Price, \$10 per volume.
- The Note Book of an Electro Therapist.** By Niel R. Waggener, M. D. Published by McIntosh Electrical Corporation, Chicago. 173 pages (illustrated).
- Cures.** By James J. Walsh, M. D. Cloth. 291 pages. D. Appleton & Company, New York. 1923. Price, \$2.00.
- Sex and the Senses.** By James S. Van Teslaar, M. D. Richard G. Badger, The Gorham Press, Boston. 1923. Price, \$6.00.
- Doctor Nye.** By Joseph C. Lincoln. First edition. Cloth. Appleton & Company, New York City. 1923. Price, \$2.00.
- Blood Chemistry Colorimetric Methods for the General Practitioner.** By Willard J. Stone, M. D., New York: Paul B. Hoeber, Inc. 1923. Illustrated. Price, \$2.25.
- Psychoanalysis.** By Ernest Jones, M. D. Third edition. New York: William Wood & Co. 1923. Price, \$8.00.
- Nutrition and Clinical Dietetics.** By H. S. Carter, M. D., P. E. Howe, Ph.D., and H. H. Mason, M. D. Third Edition. Philadelphia and New York: Lea & Febiger. 1923. Price, \$7.50.
- Life and Confessions of a Psychologist.** The autobiography of G. Stanley Hall, Ph.D., LL.D. New York: D. Appleton & Co. 1923. Illustrated. Price, \$5.00.
- The Examination of Patients.** By Nellis B. Foster, M. D., associate physician to the New York Hospital; associate professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages. Illustrated. Philadelphia and London: W. B. Saunders Company. 1923. Cloth, \$3.50 net.
- An Introduction to the Study of Mental Disorders.** By Francis M. Barnes, Jr., M. D. Second Edition. St. Louis: C. V. Mosby Company. 1923. Price, \$3.75.
- Gynecology.** Third Edition (Publ. Oct., 1923) by William P. Graves, A.B., M.D., F.A.C.S., Professor of Gynecology at Harvard Medical School; Surgeon in Chief to the Free Hospital for Women, Brookline, Consulting Physician to the Boston Lying-in Hospital. Third Edition, thoroughly revised. Large octavo of 936 pages with 388 half tone and few drawings by the author; 146 microscopic drawing; 103 illustrations in colors. 1923. Cloth, \$9.00 net. W. B. Saunders Company, Philadelphia, London.
- Habitual Constipation: Its Causes, Consequences, Prevention, and Rational Treatment** By Ismar Boas, M.D. Translated by Thomas L. Stedman, M.D. 12mo. Cloth. 299 pages. \$2.00 net. Funk & Wagnalls Company, Publishers.
- A Manual of the Practice of Medicine.** By A. A. Stevens, A.M., M.D. Eleventh Edition. W. B. Saunders Co., Philadelphia. Price, Cloth, \$3.50.
- The Chemical Basis of Growth and Senescence.** By T. Brailsford Robertson, Ph.D., D.Sc., University of Adelaide, South Australia. J. B. Lippincott & Co., Philadelphia and London. 389 pages (illustrated), cloth.
- Alcohol and Prohibition in Their Relation to the Civilization and the Art of Living.** By Victor G. Veeki, M.D., San Francisco, California. Published Philadelphia and London. J. B. Lippincott Co., 165 pages, cloth covered. Price \$2.00.
- The Dietary of Health and Disease.** By Gertrude I. Thomas, Instructor in Dietetics, University of Minnesota. 210 pages (illustrated). Lea & Febiger, Philadelphia and New York. 1923. Cloth.
- Diathermy and Its Application to Pneumonia.** By Harry Eaton Stewart, M.D., Paul B. Hoeber, N. Y. 210 pages, cloth, \$3.00.
- Pierre Curie (including Autobiographical Notes).** By Marie Curie; translated by Charlotte and Vernon Kellogg. 242 pages. The Macmillan Co., New York. Price, \$2.25.
- Rhus Dermatitis from Rhus Toxicodendron, Radicans and Diversiloba (Poison Ivy), Its Pathology and Chemotherapy.** By James B. McNair. The University of Chicago Press, Chicago, Ill. 1923. 298 pages, cloth.
- International Clinics.** Vol. III, 33rd Series, 1923. Edited by Henry W. Cattell, A.M., M.D. Published by J. B. Lippincott Co. 312 pages.
- Diagnostic Methods.** By Herbert T. Brooks. Fourth Edition. published by C. V. Mosby Co., St. Louis. 108 pages, cloth, 52 illustrations.

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BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,

Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Pennington's "Disease and Injuries of the Rectum, Anus and Pelvic Colon." By J. Rawson Pennington, M.D., F.A.C.S., Proctologist to the Columbus Hospital, Veterans' Hospital No. 30, and the United States Marine Hospital. Chairman of the Scientific Assembly, Section on Gastro-Enterology and Proctology, American Medical Association. 679 illustrations, including 2 plates, cloth, \$12.00. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia.

We welcome such an excellent treatise on a subject which usually receives insufficient and superficial consideration by the diagnostician.

Students of medical history will be pleased to find this well treated in the text—in most instances, in the beginning of the chapter. A number of portraits of authors who have contributed to the knowledge of the subject are included. Illustrations are plentiful and some instances extremely interesting and instructive.

Part I (69 pages) deals with the general principles of Proctology. The splanchnosomatic funnel is discussed at length. The author calls this "the key to this work." Rectal diseases in general, preparation and examination of the patient, constipation and allied diseases are treated.

Part II (560 pages) covers the "Diseases and Injuries of the Rectum and Anus." The common diseases are considered from the standpoint of etiology, pathology, diagnosis and treatment. Technic of operative procedures is given in the two last chapters.

Part III (166 pages) embraces a consideration of the "Diseases and Injuries of the Pelvic Colon." The last chapter is devoted to operative technic.—*R. C. B.*

Clinical Diagnosis. By Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, M. D., Professor of Clinical Pathology, University of Colorado. Fifth Edition, Enlarged and Reset. Octavo of 762 pages with 325 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, Cloth, \$6.00 net.

Every medical student and physician will welcome the fifth edition of Todd's Clinical Diagnosis. All of the virtues of the fourth edition are retained and much of interest by virtue of recent advances is added. It is gratifying, for instance, to be able to turn to Chapter 4 and find the technic of extraction and examination of the duodenal contents. It is convenient, furthermore, to have in this laboratory manual technic for determination of the usual blood chemistry as well as the more modern liver function tests.

Parts of the text are rewritten without actually a great deal of change, but altered to conform to modern

laboratory phraseology. The book has been considerably enlarged and the number of pages have been increased.

—*R. C. B.*

Sexual Problems of Today. By William J. Robinson, M.D. Published by The Critic & Guide Co., 12 Mt. Morris West Park, New York, 1923.

This book contains a discussion of some of the sex problems which all physicians come in contact with during the course of their practice. The book might be interesting and instructive to the layman but is of little value to the practicing physician.

—*C. P. B.*

Neurologic Diagnosis. By Loyal E. Davis. Chicago, 1923, 173 pages. W. B. Saunders Co., Philadelphia.

The author has very successfully attempted to bridge the gap between pure neurologic anatomy and physiology and the clinical application of these subjects. The fundamental information is well presented and the clinical inferences are admirably drawn. In the latter respect the utilization of characteristic case presentations and the coordinate diagrams proved most illuminating. For its expressed purpose one might desire that the author had devoted a section to the question of the general plan of neurologic examination and the specific manner of pursuing the same. To no type of medical examination is more meticulous care and precision essential.

Minor errors are inevitable in covering such a broad field in so small a volume. Omission of the functions of the oculomotor nerve other than those connected with the extrinsic musculature of the eye-ball is a notable example of this fault. The blood picture given in connection with the case (VII) showing evidences of postero-lateral sclerosis is unconvincing although the clinical picture leaves little doubt of the underlying pernicious anemia. The author would have been justified in his conclusion without the typical blood picture, had he pointed out the fact that achylia gastrica and spinal cord changes frequently antedate the blood changes. These criticisms are of minor importance; the important point is that the author has produced a highly creditable text and one which should prove valuable to practitioners as well as students of medicine. The illustrative cases are an excellent addition. It is hoped that subsequent editions will include the routine plan of neurologic examinations.—*W. S. M.*

The Boston number of the Medical Clinics of North America, Vol. 7, Number 3, November, 1923, published by W. B. Saunders Co., Philadelphia, contains many interesting clinics. The clinic of Don S. King on Twort D'Herelle Phenomenon (Bacteriography) is especially good, giving a resume of the work and opinion thus far on this subject. The Treatment of Diabetic Coma by E. P. Joslin is another very interesting clinic. The Clinical Management of School Medical Work by H. G. Rawels and many other good clinics compose this volume.—*C. P. B.*

The Annual Report of the Rockefeller Foundation for 1922 covers 420 pages and is of decided interest to both layman and physician.

President George E. Vincent presents a review of the various activities conducted by the Foundation. This with the reports of the General Directors of the Inter-

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national Health Board, the China Medical Board and of the Division of Medical Education gives a comprehensive insight into the truly wonderful work which has been instituted and is being carried on through the generosity of one family.

Few physicians even have but slight conception of the painstaking investigations undertaken by the various Boards in all parts of the world or of the practical assistance by gift or endowment given for the benefit of medical education and nursing.

Two of the reports are profusely illustrated which adds much to the interest of the reader.

In the opinion of the reviewer the considerable time spent reading this report has been well worth while.

—W. A. M.

The Care of the Baby. A Manual for Mothers and Nurses, containing practical directions for the Management of Infancy and Childhood in Health and Disease. By J. P. Crozer Griffith, M.D., Professor of Diseases of Children in the University of Pennsylvania. Seventh Edition, thoroughly revised. 12 mo. of 478 pages with 104 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.

This book is full of information of the type that mothers and nurses will find practical and useful. Beginning with a short chapter on pregnancy and prenatal care, the author then takes the infant at delivery and follows it through to childhood discussing, under separate chapter headings, the normal characteristics of the baby, its feeding, toilet, growth, clothes, sleep, training, nurses, rooms and illness. There is scarcely a detail with which the mother is concerned in the management of her baby, in sickness or in health, but what receives some attention. Such points as how to care for the infant's mouth, how to prepare milk mixtures, the kind of shoes a child should wear at the different ages, how much air space is necessary for the nursery and how to estimate it, why parents should avoid "baby talk," how to make a child take pills—such points as these are indicative of the type of information that the book contains. A good deal of space is given to a discussion of the various ailments to which babies are subject, and of the home remedies that may or may not be used, with special emphasis upon the necessity of having the physician assume responsibility upon all except the most trivial complaints. The chief criticism of the book—which to some will appear as no criticism at all—is that it recommends the use of top milk formulae instead of the simple whole milk dilutions that most pediatricists advise for artificially fed infants.—*J. E. G.*

Report from Pathological Department and the Department of Clinical Psychiatry, Central Indiana Hospital for Insane. Vol. VIII, 511 pages.

This report covering the years 1917-1918 and 1918-1919 should be of interest alike to the Clinical Psychiatrist and the Pathologist.

The two reports by Dr. Max A. Bahr present the usual general statistical tables followed by an analysis of the Clinical groups into which the various psychoses were divided. The analyses are simple, concise discussions of the morbid conditions and are valuable reading for any medical man.

Dr. Ernest D. Martin in his two reports on post mortem pathology divides each into three parts as follows: Part I. A general summary of the pathological findings; Part II. A summary of the findings in each individual group of psychoses; Part III. Reports of the individual autopsies.

Several interesting papers by staff members are appended.—*W. A. M.*

Diseases of the Skin. By R. L. Sutton, Kansas City. C. V. Mosby & Co., St. Louis. Fifth Edition, 1200 pages, illustrated. Cloth, \$10.00.

The fifth edition of Sutton's "Diseases of the Skin" is a volume of nearly 1200 pages. The general plan of presentation is the same as in former editions but part of the subject matter has been revised to include the more recent ideas which have been advanced concerning some of the conditions described. The illustrations also have been revised, new ones added and more characteristic ones substituted for some of the others.

The diseases themselves are described as being in eleven large classes according to a modified Crocker's classification. While such a plan is probably satisfactory, it might be less confusing to the student if the number of classes were to be reduced to ten or even less. There is no great advantage, for example, in separating the hyperemias from the inflammations in a work of this nature. It might be advantageous to go even further in combining the different classes.

The descriptions of the symptomatology, diagnosis and treatment of the several diseases are clearly and interestingly written and valuable references are given in each case. Students and practitioners should find the work valuable as a reference.—*R. L. Mc.*

International Clinics. Vol. IV. Thirty-third Series. 1923. J. B. Lippincott Co., Philadelphia and London. Cloth, 308 pages. Illustrated.

The International Clinics Series are so well known that a review of any particular volume is almost superfluous.

This number as usual contains several papers of outstanding interest to the general practitioner and others which appeal particularly to the so-called specialist.

The Symposium on Gastro-Intestinal ulcers consisting of four papers covering the morbid anatomy of Gastric and Duodenal ulcer by Mather J. Stewart of Leeds, England; the Early Diagnosis of Gastric and Duodenal to its Co-existence with Gastric Ulcer and Cancer by Dr. Ulcer by Dr. Seale Haries of Birmingham, Ala.; Remarks on Epigastric Hernia with Particular Reference Samuel Damon of Geneva, Switzerland and Roentgen Examination of the Esophagus, Stomach and Duodenum by Drs. Groover, Christie and Merritt, all of Washington, D. C., is especially good. Gastro-Intestinal ulcers are frequently met with and often unrecognized in private practice and these papers offer valuable aids in the diagnosis. The Symposium would have been more complete had there been a paper or papers describing the medical treatment of ulcer as well as the indications for either medical or surgical treatments.

A paper "Acidosis" by Samuel A. White of the U. S. Army Medical Corps describes in concise, simple words the cause of a condition little understood by many physi-

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ORIGINAL ARTICLES

CERTAIN MEDICAL AND SURGICAL ASPECTS OF DISEASE OF THE BILIARY APPARATUS*

WILLIAM J. MAYO, M.D.
ROCHESTER, MINNESOTA

The modern doctrine of focal infection, while it has achieved a permanent place in medical literature, has not yet become crystallized, and many aspects of the subject are still under discussion. We are ready to accept the hypothesis that the entrance to the alimentary tract, in the nature of things, harbors pathogenic bacteria against which the individual is not always adequately protected, but unfortunately, we do not always know how adequately to protect him. While our hopes for the cure of diseases that are the result of focal infection have not been fully realized, we have at least justified the doctrine of prevention. The teeth, tonsils, and other areas of chronic focal infection are now regarded as matters of public as well as of private health.

Perhaps the most serious reason for failure to relieve many conditions having their origin in focal infection is that while the original focus may be removed, the secondary infections, that have gained a foothold elsewhere in the body as a result of the primary lesion, continue their manifestations either through chronic bacterial infections, or, possibly, bacterial protein reactions. It is hoped that further investigations will develop measures to insure more complete immunity.

THE RELATION OF INFECTIONS OF THE GALLBLADDER TO CARDIAC DISEASE

We are just beginning to realize that, in concealed situations in the body, there are areas of possible foci of infection; of these, the gallbladder stands out distinctly, the following case being a striking example. About twenty years ago a woman, with pronounced cardiac incompetency of

the mitral type, came under my care. She had cardiac dyspnea and considerable edema, and was confined to bed. Besides the cardiovascular manifestations there was definite infection of the gallbladder, and a history of severe and prolonged gallstone colics. The patient was a poor surgical risk and operation was not considered advisable, but with proper management it was expected that the cardiac incompetency might be relieved. The patient improved markedly under digitalis, but when she was about ready to go home a sudden, severe attack of gallstone colic ushered in a pronounced exacerbation of the cardiac symptoms. The history was now properly developed. The first cardiac attack had been associated directly with gallstone colic, and thereafter each recurrence of acute gallbladder infection was followed by an increase in the cardiac damage, the condition resembling that with which we had become familiar in connection with acute relapsing tonsillitis, initiating the cardiac complications of so-called inflammatory rheumatism. When the patient had recovered sufficiently, the gallbladder, which contained stones, was removed. Her recovery was uneventful and she lived for many years in good health. There were no further exacerbations of the heart disease, although the evidences of permanent cardiac crippling remained. Following this experience, I operated on the gallbladder, in spite of cardiac symptoms, in a number of instances. The results have not always been as striking as in this case, but in the main have been good.

It must be recognized that, without sufficient evidence of disease of the gallbladder, great abuses would follow the reckless assumption that a given heart lesion may have its origin in the gallbladder. Operations on the gallbladder in such cases should not be performed, unless the clinical signs and symptoms warrant operation in the absence of cardiac symptoms, but we should not allow ourselves to be deterred from a necessary operation on the gallbladder because of such a heart complication.

Cardiology has become so highly specialized that one almost fears to tread on this sacred ground, but we cannot all be cardiologists or have at hand a competent advisor in cardiac cases. I have found

*Read before the Inter-State Assembly of the Tri-State District Medical Association, October 29 to November 1, 1923, Des Moines, Iowa.

a classification of cardiac syndromes, based on Richard Cabot's useful, and compatible with clinical experience.

The first type of heart disease begins usually in the adolescent period, often follows so-called inflammatory rheumatism and tonsillitis, and is seen in the course of chorea. Its incidence is greater in females; it affects the right side of the heart, and the mitral orifice and valves, and is easily detected by the harsh murmurs, the heart's heaving impulse, and its increased size. Because the heart is noisy, many practitioners advise against any operation, no matter how necessary. In this type of case I have never known death to occur that could be truly charged to surgical procedure, provided the heart was well compensated. It is this particular variety of heart lesion which I have noticed a number of times in connection with gallstone disease.

The second type might be called cardiorenal; the entire vascular system is involved, characterized by high blood pressure, cardiac hypertrophy, and evidence of chronic vascular nephritis (Bright's disease No. 2). This is more common in middle-aged men. I have not seen it directly connected with gallstone infections.

The third type is the syphilitic, again more common in middle-aged men; it involves the base of the heart and the aortic valves, and develops aneurysms, and aortitis limited to the arch. The history, the development of the Wassermann reaction, and the X-ray afford valuable diagnostic information. Angina pectoris often develops as a later manifestation of the aortitis. Gallbladder disease is at least of average incidence in the syphilitic patient, and acute exacerbations of infection may usher in an attack of angina. The removal of gallstones in the syphilitic patient may be indicated in spite of the angina, and the relief afforded may be great.

In the fourth type, disease of the coronary vessels causing anginal attacks is sometimes complicated by disease of the gallbladder, and this complication may initiate changes in the coronary vessels. I have followed several such cases to post-mortem, and the only pathologic changes to be found were in the coronary vessels and gallbladder. Willius, in a recent study of eighty-seven cases coming to necropsy in the Clinic, found that coronary sclerosis and disease of the gallbladder were associated in twenty-one (24 per cent).

The fifth type of heart disease which may possibly be related to focal infection is more vascular than cardiac. Essential hypertension is common and due to many causes. In women of overweight especially, gallstones are common, and after removal of the diseased gallbladder, the general condition often improves remarkably, the blood pressure is lowered, and if a suitable regime is instituted to overcome the overweight, such improvement is maintained. I have operated on many patients suffering from hypertension from various causes, and if death has followed, I have never been able to trace a connection between the death and the hypertension. There is still much to be learned with regard to the metabolism of fats. In the average case, cholesterol, which is a lipid stored in fat, is one of the chief constituents of gallstones and may have some relation to adiposity. It has been shown that in pregnant women, the cholesterol blood content is twice the normal. During or after pregnancy the first manifestations of gallstones frequently develop. Moynihan carefully observed a series of cases of gallstone disease, and found that while the normal cholesterol content is 0.133 to 0.162 per cent, in gallstone disease it is, on the average, double, confirming the observations of Aschoff and Rothchild.

The sixth type of cardiac disease is the toxic, seen often in cases of exophthalmic goiter, but not sufficiently often in gallstone disease to permit the belief that it commonly originates in infections of the gallbladder. Willius reports that in 1918, in 290 surgical cases complicated by heart disease, there were three cardiac deaths (0.1 per cent). The cardiac disease included the more serious types, such as auricular fibrillation, auricular flutter, complete heart block, delayed auriculo-ventricular conduction, arborization block, mitral stenosis, and aortic disease.

THE RELATION OF LESIONS OF THE GALLBLADDER TO CHRONIC ARTHRITIS.

The arthritides can be classified rather simply. Barker places first the arthritis of acute rheumatism, which often damages the heart, but never leaves a permanent residue in the joints in the nature of chronic arthritis. This type is most common in young women. The second is the so-called rheumatoid arthritis of the atrophic type, in which the smaller joints are affected first, with claw-like contracture; there is gradual progression

to the larger joints, until the crippling is complete. The cause apparently is a change in metabolism, and not a direct infection. The third are the hypertrophic types of rheumatoid arthritis which more commonly involve the large joints and progress to the smaller, but sometimes remain confined to the phalangeal joints or to one large joint, such as the hip, following traumatism. While there is no direct evidence connecting the manifestation with the gallbladder, it seems possible that its causative agent, direct or indirect, may be some form of unidentified microorganism.

It should not be forgotten that manifestations in joints may occur with blood dyscrasias, and as a result of neurologic diseases. When there is sudden, purplish enlargement of a joint from distention with blood, the history of the case should be developed, and the blood examined for hemophilia. Angioneurotic edema may be confused with arthritis, as may also the joint manifestations of chronic hysteria, and the Charcot's joint of tabes which, in the rare case, is painful. The specific joint infections due to the bacilli of tuberculosis are recognized as white swelling. Syphilis should be thought of in chronic arthritis especially in those suffering from congenital syphilis.

All the remaining forms of arthritis may be regarded as generally having origin in a focal infection of which the infected gallbladder may act as a focus, and this is true of the various forms of the muscular rheumatism. Rosenow has demonstrated many pertinent facts in this connection. Remarkable relief occasionally follows operation for gallstones in obscure types of painful affections of the joints and muscles, which are more or less without physical evidences.

THE RELATION OF ACUTE INFECTIONS OF THE GALLBLADDER TO ACUTE APPENDICITIS.

Of extreme importance are the coincident acute infections of the gallbladder and the appendix, as in the following case:

About fifteen years ago a woman, five months pregnant with her fourth child, was brought into the hospital with perforation of the gallbladder and spreading peritonitis, after seventy-two hours of acute illness. I opened the abdomen, and evacuated foul pus of fecal odor, and gallstones in the vicinity of the gallbladder, which had ruptured into the free peritoneal cavity at the necrotic fundus. I rapidly removed the stones and septic

material, introduced a drain into the gallbladder at the site of the perforation, and placed considerable iodoform gauze in the infected area. For a few hours the patient was relieved of symptoms, which shortly returned and continued unabated until death. Postmortem examination revealed coincident perforation of the appendix, and progressive peritonitis, to be the cause of death. The unfortunate death of this mother and child emphasizes certain pertinent facts: (1) the history of gallstone disease, with numerous attacks; (2) in the final attack the pain was first in the region of the appendix, and (3) the pus coming from the gallbladder was of exactly the type found in abscesses of appendiceal origin. That this patient with a stone-infested gallbladder was overwhelmed with an acute infection from the appendix, which was carried through the liver, and that both gallbladder and appendix had perforated simultaneously, cannot be doubted. In the presence of an acute infection of the gallbladder from colon bacteria, the appendix should be examined. In a number of cases of acute infections of the gallbladder I have coincidentally removed an appendix acutely infected, which would presumably have caused death, had it remained.

THE RELATION OF INFECTIONS OF THE GALLBLADDER TO PANCREATITIS.

Our knowledge of pancreatitis is very largely owing to the pioneer work of the late Reginald Fitz, whose discovery of the relation of the appendix to acute infections of the abdomen, and whose investigations of intestinal diverticula as a cause of peritonitis, and of acute pancreatitis as a cause of fat necrosis, give him a permanent place in medical history. The symptoms of acute pancreatitis are classical. The patient, usually an elderly, adipose man, has a sudden seizure of extreme pain in the upper abdomen, vomiting, pallor, anxious expression, and shock. Tympanitis promptly develops, and a condition at first appearing to be acute obstruction high in the intestinal tract. Enemas produce evacuations, and gas is expelled without relief. In the milder types of acute pancreatitis, operation discloses a greatly swollen, edematous pancreas, with fat necrosis due to the escape of lipase, a fat ferment which causes saponification of the fat, or a moderate hemorrhage pancreatitis, caused by the escape of proteid ferments, of which trypsin is the best understood and which

affects especially the blood vessels causing hemorrhages, or both hemorrhages and fat necrosis. In malignant types, death ensues in from twenty-four to seventy-two hours. Postmortem examination discloses generalized fat necrosis with hemorrhagic infarctions into the pancreas, and often necrosis of the substance of the gland. When our knowledge of pathologic conditions was derived entirely from the postmortem room, it concerned individuals who had died from a certain disease and led to an exaggerated idea of the fatality of that particular disease. For instance, fat necrosis does not necessarily end fatally, and in the so-called hemorrhagic-apoplexy type of acute pancreatitis, a considerable deposit of encapsulated blood in and around the pancreas may be found, which later can be opened and evacuated, with recovery of the patient.

In this connection an experience of long ago illustrates a pertinent fact: A doctor of nearly three-score and ten years, a friend of my father, became violently ill, and was brought to the hospital about two weeks after the initiation of severe, upper abdominal symptoms. This illness had been preceded by several attacks of gallstone colic. Evidence of a localized infection in the region of the gallbladder was marked, and, as soon as the patient had rallied somewhat, an abdominal incision was made. The pancreas was found to be greatly enlarged and soft. The gallbladder was full of stones, and there was extensive fat necrosis with considerable serous, peritoneal exudate. The stones were removed and the gallbladder was drained, and the patient made an unexpectedly good recovery. I have since seen many patients with the subacute type of pancreatitis and fat necrosis, operated on while in the course of recovery, who undoubtedly would have recovered from this particular attack without operation.

In some instances, secondary pyogenic infections cause abscesses, and even necrosis of a large area of the pancreas. A considerable percentage of these patients are successfully operated on, and recover permanently; at least so far as I have observed, they do not show evidence of pancreatic insufficiency later. Acute pancreatitis is usually associated with cholecystitis and stones; the stones should be removed, and the gallbladder drained.

In the chronic types of pancreatitis the head of the pancreas is usually enlarged and thickened, sometimes feeling like the handle of a pistol, or,

the whole pancreas may be involved, feeling like half of an ear of field corn. It has been my experience that patients with chronic pancreatitis without jaundice recover after the removal of the gallstones and cholecystostomy. At least they have no further symptoms to indicate failure of either the internal or external secretions of the pancreas. In 60 per cent of subjects, the common duct passes through the head of the pancreas, a condition which makes jaundice probable. In the other 40 per cent, the duct passes behind the pancreas and is not compressed by pancreatitis. If, associated with chronic pancreatitis, there is jaundice and other evidence of obstruction of the biliary tract, the gallbladder should not be removed, as it may be useful later in case cholecystoduodenostomy or cholecystogastrostomy is necessary for permanent biliary drainage. In some cases without jaundice, however, cholecystectomy is necessary to cure relapsing cholecystitis causing recurring exacerbations of a chronic pancreatitis without biliary obstruction. Some years ago a Jewish rabbi came to the Clinic, giving a history of peculiar attacks in the upper abdomen for which cholecystostomy had been performed three times for the relief of subjective symptoms. Since nothing could be found to justify further operation I advised against it, in spite of the insistence of the patient who had come a long distance, hoping to be relieved. He remained in town and at frequent intervals had manifestations of severe pain, cried out, was hysterical, and at night frequently sent for a member of the staff to relieve him. Finally I was induced to perform the fourth operation, and found typical, chronic pancreatitis and an adherent, infected gallbladder. Inasmuch as the patient had never been jaundiced I removed the gallbladder. He recovered perfectly, and every year since has never failed to send me an anniversary letter telling me of his continued good health. Reflection on this case brought out a sequence of events which a more careful history might readily have shown in advance. Each time cholecystostomy was performed the patient was relieved as long as the gallbladder continued to drain to the outside. After one operation he had insisted on keeping the drainage tube in place for two months. The gallbladder contained bacteria which, becoming acclimated to the pancreas, had produced recurrent attacks of pancreatitis.

THE RELATION OF INFECTIONS OF THE GALL-
BLADDER TO CIRRHOSIS OF THE LIVER

Adami described so-called obstructive biliary cirrhosis as the result of infections usually originating in infections of the gallbladder. Often there are antecedent stones which have passed from the gallbladder into and become lodged in the common duct, causing obstruction which leads to dilatation of the smaller biliary ducts, and infections extending even into the finest ramifications, which sometimes result ultimately in the formation of pigment stones in the biliary ducts. In biliary cirrhosis there are deposits of connective tissue around the small biliary ducts, eventually causing contraction and interference with bile drainage, which produces chronic jaundice, an enlarged liver, and a train of symptoms that lead to death. The direct relationship of infections of the gallbladder to biliary cirrhosis is easily established. There are two types of cirrhosis of the liver; the biliary, briefly referred to, and the portal, in which the infection is carried to the liver through the portal circulation and deposits connective tissue around the smaller portal vessels, causing interference with hepatic circulation, as shown in the typical portal cirrhosis of Laennec. It should be remembered, however, that the liver in portal cirrhosis is not always atrophic. It may be enlarged, due to the deposits of fat with the connective tissue. Biliary cirrhosis is easily identified by the early persistent jaundice, and portal cirrhosis by early and persistent gastro-intestinal hemorrhages and ascites.

Gallstone disease is the most common cause of biliary cirrhosis, but there is no evidence to show that the gallbladder is a common cause of portal cirrhosis. Not uncommon, however, is a mixed type of cirrhosis in biliary infections, that is, general biliary cirrhosis with localized areas of portal cirrhosis. In biliary cirrhosis, even in late cases, prolonged drainage of bile to the surface by cholecystostomy, and removal of gallstones if they are present, may prove beneficial. I have seen good results, following such drainage, at least the patients suffering from obstructive biliary cirrhosis have been able to return to work and have enjoyed fairly good health, although the greater number still have sufficient interference with circulation of bile in the smaller ducts of the liver to cause the continuance of a certain amount of jaundice.

DIFFERENTIATION BETWEEN THE
QUICK AND THE DEAD*

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Daily the physician is called to see patients prostrated by accident, by hemorrhage, by wasting disease. Daily in the hospital wards are encountered patients whose shrunken, dejected faces, depressed circulation, failing respiration, cold clammy skin, extreme muscular and mental weakness betray the fact that unless some immediate method of restoration is applied, the prostration will progress to dissolution.

As the physician views these prostrated patients he is unable to visualize the mechanism that is failing. He has no premise on which to base a conception of the true cause of the picture before him. He does know that whatever the original or the continuing cause of the prostration certain fundamental measures are required to accomplish restoration—rest and sleep, water, relief from pain, restoration of the per-minute circulation of blood through the master organs, and the return of the depressed or elevated temperature to the normal level. But in spite of his knowledge of methods of restoration, the physician cannot identify the fundamental mechanism which has been restored.

The processes of exhaustion may be so overwhelming as to overcome every effort to restore the patient. Thus, a patient with an acute hemorrhage may die shortly after his admission to the hospital; the hemorrhage does not explain the mechanism of death, it explains the cause of death. A patient may enter the hospital with acute hyperthyroidism and die; the cause of death is hyperthyroidism, but that fact does not explain the mechanism of death. Daily we see patients die from every kind of traumatism and from every type of disease; but whether the individual who dies is young or old, whether death is sudden and unexpected or is the result of protracted disease, in no instance does the cause of death give any clue to the mechanism of death.

What is the true pathology—what is the physiology of death? What is the physiology of restoration? The pathologist can describe ac-

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curately the organic changes which are associated with death, but he can tell us nothing about the mechanism whose failure has been the immediate cause of death. The physiologist can describe the functional changes which are present in exhaustion and the progressive functional variations during the processes of restoration, but he cannot describe the processes themselves.

An analysis of the causes of this limitation in the knowledge of the pathologist and the physiologist makes it appear that while they have apparently reduced the structure of the organism to its lowest possible factors, the unit cells, the progress of their investigations has been checked by the assumption that the ultimate basis of the energy shown by each living cell is unknown and perforce must remain unknown. It would appear, therefore, that our understanding of the fundamental difference between the quick and the dead upon which any final interpretation of the operation of the organism must be based has been hopelessly checked by our failure to attack efficiently the problems presented by the transformations of energy—the life cycle—within the unit cells themselves.

In an attempt to solve this fundamental problem—to discover the method of operation of the unit cells of the organism, the fundamental basis for its vital activities, researches have been in progress in my laboratory for many years. The problem has been attacked successively by physiological, histological, physico-chemical, and biophysical methods. The findings have been constantly checked by clinical observations and each group of studies has been correlated with those which have preceded it.

As a result of these investigations, especially with the crowning evidence presented by the application of the exact methods of the physicist, we have been led to the belief that the unit cells of the organism are electro-chemical mechanisms; and that therefore the organism as a whole is an electro-chemical mechanism. The life and function of an electro-chemical mechanism depends upon the maintenance of a difference of potential between a part of highest potential and a part of lowest potential, with parts of varying potentials within the circuit, whereby selective activities may be effected. We have accumulated evidence which tends to support the conception that in the animal organism the brain is the part of highest potential

—the positive pole—and the liver the part of lowest potential—the negative pole. If this conception be sound, then it would follow that the mechanism of life and death could be interpreted in electro-chemical terms—variations in vitality being in direct relation to variations in potential.

In accordance with this conception, therefore, exhaustion is the result of a diminution of the difference of potential between the poles of the organism, this diminution being due primarily to a decrease in the potential in the brain, which in turn results from a decreased difference in the potential in its constituent cells. This conception explains the identity of the phenomena of exhaustion and the progressive stages of exhaustion to "shock." When the difference in potential reaches zero, the organism is dead.

In accordance with this conception we have adopted certain fundamental principles as our guide in the protection and restoration of our patients. The maintenance of the integrity of electric cells of the type of these which constitute the animal organism require the following elements:

1. Abundant water.
2. Abundant oxygen.
3. Maintenance within a normal range of the permeability of semi-permeable membranes.
4. Maintenance of an optimum temperature.
5. Avoidance of prolonged continuous activity.
6. Rhythmic periods of comparative negativity for recharging.

In the human electro-chemical mechanism these requisites may be supplied by the following measures:

1. The administration of abundant water by mouth, by rectum, by hypodermoclysis.
2. The promotion of oxygenation by increasing the amount of blood in circulation by means of transfusion and by promoting the heart action by means of courses of digitalis.
3. The maintenance of the permeability of cell membranes within the normal range by the avoidance of lipoid-solvent anesthetics—ether or chloroform; by the use of nitrous oxid-oxygen anesthesia only to the stage of analgesia, placing the main reliance upon local anesthesia; by the infliction of minimum trauma; by the utmost possible avoidance of every physical and emotional disturbing factor.
4. The maintenance of an optimum tempera-

ture by the selective internal and external use of heating or cooling agents.

5. The avoidance of prolonged continuous activity and the production of a state of negativity by environmental control and by narcotics.

As concrete illustrations of the practical application of these principles in the human electrochemical mechanism, I wish to discuss the management of certain acute crises such as those suggested by our opening paragraph—patients who on their admission to the hospital have a thready pulse and an abdomen either distended and rigid or filled with fluid—pus or blood.

Contrary to the usual order of consideration, in such a case it is imperative first to be sure what not to do. Such a patient should not be operated upon immediately after admission to the hospital; he should not be taken from the admitting room to the operating room; he should not be given a general anesthetic; he should not be taken to the X-ray laboratory; he should not be subjected to physical examinations which might lead to further exhaustion.

All of these procedures may properly be employed in the case of a patient seen before the crisis has developed—in whom there still remains a fair margin of safety; but for the patient with a thready pulse, a rigid distended abdomen and cold moist extremities they are imperatively contraindicated.

Such a patient is sent at once to his bed; he is immediately given a quarter grain of morphin with $1/50$ of a grain of atropin; he is immediately given large quantities of water—2000 to 4000 c.c. by hypodermoclysis through two needles in the pectoral muscles; his blood is grouped immediately and he is given a blood transfusion without being moved from his bed; he is immediately placed in a modified Fowler's position; large hot abdominal packs are applied immediately; and if he is vomiting he is immediately given a gastric lavage.

If the patient is already in the early stage of dissolution, his condition will not be improved by these emergency measures. The pulse will become continuously fainter; the anxious psychic state will pass on to delirium, the delirium to unconsciousness, the unconsciousness to death.

On the other hand, if the process of dissolution is not initiated and the pulse and general condition of the patient shows improvement within the first hour, then a decompressing operation is performed

in the patient's room without moving him from his bed.

Within this crucial first hour, certain observations which may be made are of special import. A subnormal rectal temperature or a leucopenia is ominous. In a case of hemorrhage, leucocytosis is of high importance as it appears earlier than a lowering of the blood count or of the hemoglobin estimation.

It is to be borne in mind that in these cases of course we have no previous estimation as a guide. The blood picture, the pulse, and auscultation of the abdomen, together with the history and the general picture presented by the patient are our only guides.

The limited objective of this decompression operation depends upon the primary cause of the crisis, the imperative caution in each case being to quit the moment that objective has been achieved. Thus in a case of gangrenous appendicitis make no attempt to search for the appendix but establish drainage, and quit. In the case of a gangrenous gall bladder, make an incision over the center of the most tender and most rigid area, disturbing the new adhesions as little as possible, open the gall bladder, provide the simplest drainage, and quit. In a case of acute pancreatitis, establish drainage and quit. In the case of a perforating gastric or duodenal ulcer, suture the perforation, establish a suprapubic drain if there is much fluid, and quit—without performing a gastro-enterostomy. In the case of an extra-uterine pregnancy, evacuate the blood, excise the tube and quit. In the case of a ruptured spleen, if it is at all safe to do so, excise the spleen—otherwise use a mattress suture to prevent a recurrence of the hemorrhage. At any cost, a visceral perforation must either be closed or brought into the wound. In a case of grave intestinal obstruction, in accordance with the plan of Summers, decompress the small intestine at a high point to minimize absorption of the toxins, and quit.

Pursuant to the decompressing operation with its limited objective, the management of the patient is in accordance with the general plan briefly outlined above, viz.:

1. Modified Fowler's position.
2. Hot packs over the entire abdomen extending well down over the sides.
3. From 2000 to 4000 c.c. or even more of

water — Bartlett's solution — by hypodermoclysis each 24 hours.

4. Transfusion of blood, repeated if required.

5. Excepting in gall bladder lesions, and unless there is cyanosis, morphin in repeated doses until the respiratory rate is reduced to from 10 to 14 per minute.

6. Maintenance of utmost possible degree of negativity.

To these positive points the following cautions should be added:

Avoid every needless disturbance of the patient.

Avoid any attempt to move the bowels in the acute stage of peritonitis. Use small enemas, not cathartics, after the acute stage has passed.

Avoid the continuance of morphin beyond the critical stage—but do not hesitate to give enough morphin until the critical stage has passed.

The importance of the time factor in these acute crises should be emphasized. It was noted in our war experience that with most abdominal wounds contamination progressed to infection in 10 hours; that the recovery rate of all operations performed within 10 hours was practically uniform; but that the mortality rate of operations performed more than 10 hours after the wound was received rose in geometric progression.

In cases of perforated gastric or duodenal ulcer, in particular, the most important single factor is the time factor.

In cases of ruptured appendix or ruptured gall bladder the time factor is of even more importance since in these cases pus is discharged into the peritoneal cavity.

Certain special points regarding the further control of certain specific emergencies may be added:

In a case of internal hemorrhage as from a gastric or duodenal ulcer its immediate arrest may be accomplished by utilizing the following principle in biologic adaptation:

As a defense against death from hemorrhage a mechanism has been evolved for increasing the coagulation of the blood as the death point approaches. It is logical, therefore, to utilize the fainting point clinically as an indication that the blood pressure is sufficiently low for the hemorrhage to be arrested by coagulation. The patient being kept under continuous observation and control, an attempt is made to bring him to the fainting point by having him propped up nearly upright in bed. If the upright position does not

produce blanching, a thready pulse and a moist forehead, then the blood may be sequestered in the extremities by adjusting a tourniquet around the thigh just tightly enough to block the venous but not the arterial flow. In this way enough blood may be tentatively removed from the general circulation to reduce the blood pressure until the fainting point is reached. The length of time this point should be maintained is empiric, but a brief period is sufficient to assure the formation of a secure clot at the bleeding point. Not only are the open vessels plugged but the patient has left in his body plenty of blood to flood the blanched brain when the bandages are released and the posture altered.

In a case of deep jaundice from biliary obstruction, if the gall bladder contains bile, its decompression should be accomplished slowly by an intermittent unclamping of the rubber drain. As noted above, morphin is contraindicated in jaundice for the reason that the function of the liver is depressed by narcotics, especially morphin.

In contrast with the limited objective attained by the primary treatment of these grave cases, if the patient is presented at a sufficiently early stage, he is taken at once to the operating room and a definitive operation for complete cure is performed.

In the presence of the slightest uncertainty as to the outcome, however, the patient should be given the advantage of the protective measures we have described, thus increasing his reserves *in advance* of the emergency.

An analysis of these methods of restoration will show that in each, aside from the operation indicated by the specific cause of the condition the fundamental requirements for the maintenance of the difference of potential as outlined above have been the basis for our treatment.

The theory upon which the plan of management we have outlined is based was suggested by histological physico-chemical and bio-physical researches; our conviction as to the value of these procedures is based upon the experience of my associates and myself in 16,652 abdominal operations. During the past three and one-half years, the surgical mortality of 14,949 operations at Lakeside Hospital has been 1.8 per cent; of all operations performed during 1922 the mortality was 1.6 per cent. A separate statistical study of operations for acute abdominal conditions, acute appendicitis, gastroenterostomy and resection of

the stomach, cholecystectomy and cholecystostomy, colostomy and resection of the large intestine, shows a mortality of 3.8 per cent as compared with a former mortality of from 6 to 9 per cent. In the above group are included 141 operations for cancer of the large intestine including 51 resections with a mortality of 2.8 per cent. The former mortality in this group was 5.3 per cent.

The diminution in the post-operative morbidity which is even more striking than the diminution in the post-operative mortality cannot be stated in figures. It should be added that whereas formerly it was necessary to select patients according to their probable ability to withstand the operation, we now accept every patient in whom operation is anatomically possible unless the process of dissolution is actually initiated.

OXYGEN THERAPY IN LOBAR PNEUMONIA—A REVIEW*

BY SARAH I. MORRIS, M.D.

MADISON

Oxygen inhalation in various conditions of oxygen-want has been used for many years but it had to a considerable degree fallen into disrepute prior to the war because of the haphazard or ineffective methods used for its administration and because of a lack of scientific knowledge of its action, resulting in a general lack of faith in its efficacy as a therapeutic measure of value. No doubt, to some degree at least, this state of affairs was due to the lack of knowledge of blood chemistry and the consequent inability to present convincing scientific explanations of beneficial results which were obtained, relegating its use to the field of empirical medicine. Tice states "the evidence concerning the value of oxygen in the treatment of lobar pneumonia is contradictory. Certainly open air treatment is more helpful generally and oxygen fills only an occasional need in cases of circulatory asthenia and restlessness." True it is that prior to the war the literature, though extensive, records both favorable and purely negative results from its use.

With the war and the necessity for prompt care of poison-gas cases, which presented striking examples of acute oxygen-want through injury to the respiratory apparatus, notably in cases of phosgene

and chlorine gas poisoning, came a hurried demand for efficient treatment and effective methods of administration of oxygen which brought this therapeutic measure from obscurity again to the attention of the clinician and stimulated more careful and thorough study of its possibilities in disease as well as in gas-poison cases, and efforts to secure more efficient methods of administration.

The work of various physiologists, such as the method of safe arterial puncture of Huerter, gas-analysis methods of Van Slyke and Haldane and clinical investigations of Stadie, Harrop, Meakins and others in the use of these methods made possible a normal standardization of the oxygen-saturation of arterial and venous blood and thus the quantitative demonstration of the amount of anoxemia not only in acute cases of oxygen-need as in gas-poisoning but in the pathological conditions found in pneumonia, heart disease, etc.

An understanding of the present status of oxygen therapy in clinical experience involves therefore a brief consideration of various steps in the clearing up of hazy ideas and contrary theories formerly associated with its use. To understand oxygen therapy we must first have a comprehensive understanding of its need and what is meant by anoxemia.

Haldane defines anoxemia as "that state existing when the rate of supply of oxygen is insufficient for the normal carrying on of life." Barcroft analyzes the term and draws attention to the fact that various types of anoxemia exist dependent on certain etiologic factors and their results. His classification makes clearer some of the confusion which exists in the statements in the literature on this subject. He groups them under three heads as follows:

1. Anoxic or arterial anoxemia, due to respiratory embarrassment, characterized by a low oxygen pressure in arterial blood with arterial oxygen-saturation below the normal 95%, designated in terms of arterial oxygen-saturation and exemplified in such diseases as pneumonia, mountain sickness, etc. This type is indicative of an inability to get into the body the requisite quantity of oxygen.

2. Stagnant or venous anoxemia, due to a slowing of the blood stream with a diminution in the quantity of blood reaching the tissue per unit of time, characterized by a lowering of the oxygen of the venous blood below 65%, designated in terms of venous oxygen-saturation and exemplified in

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cardiac failures of various kinds and degrees. Here the condition is one of exhaustion of oxygen from the blood by too long contact with the tissues.

3. Anemic anoxemia, due to diminished hemoglobin, characterized by a lowered oxygen carrying power of the blood resulting in the conversion of hemoglobin to methemoglobin or its monopolization by carbon monoxid, designated in terms of definite reduction of hemoglobin or red blood cells in the blood, and exemplified in the various anemias. There is here an inability to get the oxygen to the tissues.

This classification shows anoxemia possible therefore through pulmonary, cardiovascular or blood abnormalities or failing function respectively.

These anoxemias, of any type, may be either acute or chronic, the dwellers in high altitudes showing a low degree of chronic arterial anoxemia, the chronic cardiac cases with occasional periods of partial decompensation showing a chronic venous anoxemia and the slowly progressive anemia the chronic form of tissue oxygen deprivation of the anemic type as contrasted with the acute forms in gas-poisoning, acute heart failure and hemorrhage exemplifying respectively the acute forms of the three types.

Consideration of oxygen therapy in pneumonia must take into consideration to some degree the general scope and utility of the therapeutic administration of oxygen to meet the needs of the various anoxemias. Chronic anoxemias may exist for many years with few noticeable symptoms although it is questionable whether the low grade cyanosis of chronic heart disease or that shown in dwellers in high altitudes may not be indicative of a slowly damaging process as surely as the more rapid damage of the more acute anoxemias. Usually the acute anoxemias are characterized by cyanosis and this serves as a rough clinical estimate of the amount of the anoxemia, although in certain states of low carbonic acid deficiency the hemoglobin may be saturated with oxygen which it will not give up because the carbon dioxide demand is insufficient, and no cyanosis result.

It is safe to assume, however, that cyanosis always means anoxemia even though the converse be not always true, and since "man may live weeks without food, days without water but seconds only without oxygen" the need for the artificial supplying of oxygen is in proportion to the degree and

acuteness of the anoxemia. Haldane states "one of the most important effects of prolonged or extreme anoxemia is a partial failure of the respiratory center." The effect of anoxemia on the tissues may be drastic and permanent and they may be fatally deranged or destroyed dependent on the degree of the anoxemia. Especially is this true in the effect of acute anoxemia on the tissues of the central nervous system, so well exemplified in carbon monoxide poisoning. Clinically cyanosis indicates a state of anoxemia and calls for the administration of oxygen.

Meakins believes the cyanosis due to the rapid shallow breathing possibly secondary to the effect of the anoxemia itself on the respiratory centers which would seem to be corroborated by the experiences of Barach and Woodwell in their observations on the lethargic encephalitis terminal-stage-anoxemia and cyanosis when there occurs an unusual and very marked type of shallow breathing. Hoover believes the cyanosis is in proportion to the area of lung involvement and due to the unrespired blood from the effected lung, as does also Haldane, while Stadie notes that the cyanosis in pneumonia runs parallel to the degree of oxygen-saturation.

In the cardiac and pneumonia cases observed, more constantly the former, an increase in the circulating hemoglobin and erythrocytic count was noted in anoxemia with a decrease on administration of oxygen, representing a response of the blood-forming organs to the oxygen-want and its relief. In Stadie's studies of influenzal cases variations occurred from day to day as high as 20% to 30%, the hemoglobin increasing with the progression of the disease and decreasing with a betterment of the patient. Slight cyanosis in anemic cases therefore may be of graver import than in other cases.

Those working at the front with gas victims seem unanimous in their reports that the use of oxygen in these conditions was perhaps the method which rendered greatest emergency relief, but various reporters disagree as to the actual way in which relief was obtained, and the amount of permanent good accomplished. Agreement is general in that the essential need for oxygen is the acute anoxemia and the chief clinical manifestations of same cyanosis and air hunger, but as to the relation of these manifestations all are not in agreement. Hoover in his observations on phosgene and chlorin gas victims in Flanders in 1917 was impressed by the

disproportion between the marked cyanosis and air-hunger and by the fact that the relief from cyanosis by oxygen therapy was not associated with change in volume or rate of the respirations and subjectively the patients not relieved of air-hunger. He rejects as an explanation of this the theory that since carbon dioxide is 25 times more soluble in water than oxygen the carbon dioxide escapes through the film of moisture over the respiratory membrane faster than oxygen can be absorbed, since relief from the cyanosis indicates a correction of the anoxemia which should if this were true give the patient comfort at once. Furthermore a film of moisture does not exist but rather the extreme edema in these cases results in the filling of the bronchial tree with foam which during inspiration is aspirated into the air spaces unevenly filling some and leaving others relatively clear. When pure oxygen is breathed this air-foam becomes converted into oxygen-foam and the entire respiratory membrane exposed to oxygen absorption and anoxemia correspondingly relieved, but there has not been provided an escape for the carbon dioxide in the foam-filled air spaces, the high blood carbon dioxide content continuing the air-hunger.

In pneumonia the superventilated air from the uninvolved parts of the lung compensates for the carbon dioxide contributed from the consolidated lung but does not compensate for the anoxemia from the hepatized portions; hence air-hunger is less evident than the anoxemia unless complicated by edema, passive congestion, etc. He observed that in pneumonia the cyanosis was in direct proportion to the area of lung involvement, and that if no moisture were present in the uninvolved lung cyanosis without air-hunger existed but that with much moisture there was air-hunger which was not effected favorably by oxygen although the cyanosis was relieved. This may serve to explain some of the variation in reports on oxygen therapy in pneumonia.

Haldane and Barcroft carried on separately studies on the effect of oxygen want on the human mechanism by subjecting themselves to several days' tests in atmospheric chambers with oxygen pressure below that of atmospheric air and closely simulating that found in certain diseases such as pneumonia, cardiac failure, etc. Objectively Barcroft showed a lowered arterial oxygen-saturation of 88% at rest and 83.8% on exertion (normal 95%) with subjectively the development of head-

ache, occasional vomiting, blurred vision, faintness on exertion, faint rapid pulse, cyanosis and nervous instability. Haldane's experiences were similar, headache going on eventually to impairment of mental faculties (judgment, self-control and memory impairment and finally fixed delusion), nausea, vomiting and diarrhea, rapid shallow and periodic breathing, with cyanosis and rapid feeble pulse.

In addition Haldane studied the effect of anoxemia at high altitudes and in carbon monoxide poisoning and found the objective and subjective symptoms to be very similar to those observed in artificial deprivations of oxygen. Means and Newburge found abnormal oxygen-unsaturation of the venous blood in cardiac disease. Lundsgaard corroborated these findings and established the normal venous oxygen saturation at 65%. Stadie demonstrated diminished arterial oxygen-saturation in pneumonia and Harrop determined the relation of cyanosis to the amount of reduced hemoglobin and established the oxygen-saturation of a normal resting individual at 95-98% in arterial and 65-75% in venous blood. Barcroft's personal experiences were augmented by studies on pneumonia and heart disease and anoxemia determined in each.

Since the results, objectively and subjectively, of the experiments of patients in air chambers with low oxygen percentage are similar to those noted in diseases associated with oxygen-want such as pneumonia, cardiac insufficiencies, carbon monoxide poisoning and mountain sickness and definite anoxemia can be demonstrated by blood analysis in both conditions it is safe to assume that a common cause for the symptoms and signs similarly encountered lies in the lowered oxygen content of the blood, the so-called anoxemia.

The conditions in which oxygen therapy has been used, the methods of its administration and the demonstration of its efficiency represents a summary of the experiences of the war in treatment of gas-poisoning and observations of conditions found in the influenza epidemics of 1918-1919, augmented by laboratory studies and clinical observations in pneumonia, cardiac insufficiencies, mountain sickness, carbon monoxide poisoning, asthma and allied cardio-respiratory conditions prior to and since the war.

The various methods used for oxygen adminis-

tration are not wholly satisfactory. Briefly stated they are:

1. *Funnel method*, prior to the war practically the only method but now largely abandoned, makes impossible a stronger than 2% administration and is inaccurate, wasteful and disagreeable to the patient.

2. *Mask method* of Haldane, used extensively in emergency work at the front in poison-gas cases, is accurate and efficient when applicable, but very disagreeable to the patient and not very practical in conscious excited cases.

3. *Intra-nasal tube method*, also used at the front, consisting of soft rubber catheter introduced into posterior naso-pharynx via nares, while less objectionable to the patient was wasteful and inaccurate.

4. *Air Chamber method*, while ideal for chronic cases and from standpoint of accuracy and efficiency, is a luxury found only in certain hospitals and not practical for emergency work nor in private practice.

5. *Bed-tent method of Hill*, a modification of the air-chamber, is still also somewhat of a luxury and not any too agreeable to the excited patient.

6. *Tongue depressor method of Meltzer*, providing for oral administration via a hollow tongue depressor augmented by rhythmic opening and closing of valves by attendant, provides a known supply of oxygen but requires constant attendance.

7. *Mouth piece rebreathing bag method* of Barach and Woodwell, a modification of the Haldane, substituting the mouthpiece of the metabolic apparatus for the mask and introducing a rebreathing bag with flow of expired air over soda lime to purify from carbon dioxide, eliminates waste and by allowing breathing through nose dilutes oxygen to 40-60% strength which is efficient for therapeutic results and agreeable to the patient.

The diversity of methods simply proves that nothing ideal has been provided but the last named seems to combine the minimum of discomfort with an economically practical and clinically efficient method.

Barach and Woodwell, working in the medical service of the Massachusetts General Hospital in a series of studies on physiology and pathology of the blood conducted for the Harvard Medical school made a very comprehensive study of a series of cases of cardiac insufficiencies and pneumonias,

with two cases of lethargic encephalitis, in relation to oxygen therapy. They made determinations of arterial and venous oxygen-saturation by gas analysis methods and correlated these with the subjective and objective symptoms prior to and after oxygen administration. The cases were selected because of cyanosis as an indication of a state of anoxemia. While their series is not large, the scope of the study gives data which, added to the evidence obtained in the treatment of anoxemias of gas-poisoning and clinical observations and previous laboratory investigations gives rather definite information on which to base our estimation of the value of this type of treatment in clinical experience in such conditions as pneumonia, cardiac insufficiencies and other cardio-respiratory disturbances, and the best methods for its administration.

The study of the results obtained by oxygen therapy in the anoxemias of gas-poisoning both by the Haldane mask and the nasal tube methods at the casualty stations in treatment of acute cases and the oxygen-chamber method at the base hospitals in the chronic cases, shows a relief of the anoxemia and with it the cyanosis, slowing and deepening of the respirations, slowing of the pulse, improvement in the nervous conditions, and, although air hunger was not instantly relieved, a noticeable degree of increase in comfort after repeated or prolonged treatments.

Barach and Woodwell, in their series of cardiac insufficiencies report that both arterial and venous anoxemia was noted prior to treatment due to the fact that pulmonary complications existed (edema, passive congestion, etc.) in most of the cases observed which were cyanotic or decompensating cases. Under treatment they all showed, an increase in the oxygen-saturation of the arterial blood after short periods of inhalation, when the passive congestion or edema was in the bases the relief being comparatively prompt but more prolonged use being necessary in wide-spread edema. The venous saturation was also increased in all but one case of auricular fibrillation and in a few cases a permanent increase in venous saturation seemed to result possibly by improvement in the blood flow by the slowing and strengthening of the pulse. Subjectively the results were not striking although breathing was slowed and deepened and most patients seemed more comfortable and less nervous.

In their pneumonia series they found an arterial anoxemia prior to treatment which was relieved by

oxygen therapy and in several cases brought back to normal line, together with relief of the cyanosis, slowing of the pulse, and a lessening of the nervous symptoms of restlessness or delirium. The greatest degree of anoxemia and cyanosis seeming to be just prior to or during the crisis the rational time for the intensive treatment by oxygen would seem to be at the time of greatest need to tide the patient over the emergency and conserve his strength to cope with other manifestations of the disease.

Stadie in a study of a series of influenzal and lobar pneumonias found the degree of anoxemia to be a point of valuable prognostic significance, the graver anoxemias usually being found in cases which ended fatally.

Almost consistently the clinical changes in treatment by oxygen of anoxemias of pneumonia, as well as other conditions of oxygen-want, are relief of anoxemia, clearing of the cyanosis, slowing of the pulse, slowing and stabilizing of the respiratory rate, and improvement in the mental and nervous conditions but rarely a relief of the dyspnoea except after repeated or prolonged administration.

While many minor points as to the exact cause of the phenomena attendant on oxygen-want still remain to be cleared and while there is some doubt as to the mode and degree of relief obtained by administration of oxygen directed toward the relief of the anoxemia and although the methods of administration are not yet wholly ideal, enough evidence would seem to be available to warrant the conclusion that its use is worth a fair trial in every case characterized by anoxemia. In acute cases it surely gives some degree of relief and in some cases may prove life-saving by tiding the patient over a crisis and in the sudden or very profound anoxemias preventing the degenerative effect on the central nervous system of the anoxemia itself which may be permanently damaging to the organism.

Its use therefore in pneumonia, especially in the presence of cyanosis indicative of anoxemia seems wholly rational and its value, especially during the crisis such as to warrant its prompt treatment to prevent grave degenerative changes, resulting in cardio-respiratory failure Haldane states:

"It may be argued that such measures as the administration of oxygen are at the best only palliative and of no real value since they do not remove the pathological condition. I cannot agree for a

moment with this reasoning. The living body is no machine but an organism constantly tending to maintain or revert to the normal, and the respite offered by such measures as the temporary administration of oxygen is not wasted but utilized for recuperation."

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RESIDENCE NOT REQUIRED

A physician can legally qualify as health officer of two adjoining towns though they may not be his place of residence, according to an opinion of the Attorney General.

THE ROLE OF RADIUM IN BENIGN AND MALIGNANT TUMORS OF THE UTERUS*

BY THOMAS E. JONES, M.D.

Cleveland Clinic

CLEVELAND, OHIO

Considerable confusion still exists in the minds of many physicians as to the choice of treatment for uterine tumors, both malignant and benign. Should radiation or surgery be used, or both? The general practitioner generally sees the case first. If he refers the patient to a radium therapist who is convinced that his is the method of greatest value, she will probably be treated with radium. If he refers her to a surgeon who believes that surgery is the method of choice she will probably be operated upon. It follows that if the treatment—whether surgery or radiation—is not successful, a goodly share of the responsibility must be borne by the family physician. It is therefore urgent that every effort be made to formulate certain definite indications for the choice of the method to be used in the treatment of a given pathological condition of the uterus. One of the best ways to reach a definite conclusion is by the study of properly collected and properly analyzed statistics of the results of each method of treatment.

CARCINOMA OF CERVIX

In considering the relative values of surgery and of radiation in the treatment of carcinoma of the cervix, it is essential to know first what has been accomplished by surgery in the past, and second what is now being accomplished with radium. If radium is to supplant surgery it must show that it gives better results.

An analysis of the results of the surgical treatment of cervical cancer shows that out of each one hundred cases which consult a surgeon the operability will not exceed 40 per cent. Among these 40 cases an operative mortality of 10 per cent is not excessive. Among the remaining 36 cases the average number of reported cures—25 per cent—shows that 9 cases will be cured. That is, the surgeon may expect 9 per cent of final cures from among all cases of carcinoma of the cervix that

consult him. It follows that the radium therapist must be able to cure more than 9 cases out of a hundred before he can take carcinoma of the cervix out of the field of surgery.

TABLE I.

End Results of the Surgical Treatment of Carcinoma of the Cervix in Relation to the Cases which Present Themselves for Operation and Treatment.

Consecutive cases presenting themselves for examination	100
Operability	40
Operative mortality	4
Surviving cases	36
Cures—5 years	9

Our own experience thus far has been quite encouraging. At first we treated only the inoperable cases with radium. Then gradually we included the borderline cases and at the present time in the Cleveland Clinic all cases of carcinoma of the cervix are being treated exclusively with radium and X-ray. The cases which have been subjected to radium therapy during the past four years can be roughly grouped as follows:

1. Inoperable cases treated with radium alone.
2. Cases subjected to treatment with both surgery and radium.
3. Cases treated with radium and deep X-ray therapy alone.

We have adopted the following arbitrary classification of our cases:

Class 1. Cases in which the disease is limited to the cervix.

Class 2. Cases in which there is either an extension on the vaginal wall or a thickening of the broad ligament.

Class 3. Cases in which there is both an involvement of vaginal wall and a thickening of the broad ligament.

Class 4. Long standing cases in which there is an extensive involvement in the pelvis.

In the last cited group no attempt is made to cure, but the bleeding or discharge may be relieved by small doses of radium.

Among the inoperable cases treated with radium alone, 9 cases have been under treatment for more than three years. Among these, 4 cases—45 per cent—are living and apparently well.

*Read before the Inter-State Assembly of the Tri-State District Medical Association at Des Moines, Iowa, Oct. 29, 1923.

TABLE II.

Cases of Carcinoma of Cervix Treated with Radium Alone for More than Three Years.

Case	Age	Dur. Symp.	Type	Diag.	Living	Dead
1.....	35	6 mo.	II.	Sq. Ca.	43 mo.	
2.....	45	12 mo.	III.	Sq. Ca.		16 mo.
3.....	63	6 mo.	II.	Sq. Ca.	41 mo.	
4.....	38		III.	Sq. Ca.		n. h.
5.....	42	12 mo.	II.	Sq. Ca.	37 mo.	
6.....	45	4 mo.	III.	Sq. Ca.		8 mo.
7.....	50	12 mo.	II.	Sq. Ca.	36 mo.	
8.....	42	2 mo.	II.	Sq. Ca.		7 mo.
9.....	45	6 mo.	III.	Sq. Ca.		8 mo.

In the second group—those treated by surgery and radium combined—very bad results were secured and this combined treatment has been discarded.

needles) inserted at various points in the cervix, the treatment being continued for periods varying from 12 to 16 hours (Fig. I). The vagina is packed tightly with gauze and a catheter is placed in the bladder to prevent distension and a resultant too close approximation to the radium which might cause a fistula. In from three to four weeks the patient is treated again by placing 125 mg. screened with 1 mm. of brass against the cervix for from 12 to 15 hours. Generally this can be done without anesthesia with the patient in the knee-chest position. Thus, each case receives a total dosage varying from 4000 to 4800 mg. hours. After the second treatment the patient is discharged but reports for observation three months later.

We have not seen a single fistula, either rectal

TABLE III.

Cases of Carcinoma of Cervix Treated with Both Surgery and Radium.

No.	Age	Location	Operation	Comp.	Duration of Life
1	28	Cerv.	P. C. & T. H.	V. V. Fist.	11 mo.
2	31	"	P. H.	None	15 "
3	29	"	P. C. & T. H.	Faecal	
4	60	"	T. H.	Fist. Abd.	8 "
		Ut.		None	4 " (Living)
5	57	Vag.	Supra vag. H. Attempted	"	13 "
6	67	Ut.	V. H.	V. V. Fist.	4 "
					Av. Life 10½ mo.

*P. C. signifies Percy Cautey; T. H.—Total Hysterectomy; and V. H.—Vaginal Hysterectomy.

In the third group, in the treatment of which both radium and deep X-ray therapy have been used, the best primary results have been secured, although since this combined method of treatment has been in use for only one year, we have no available statistics upon which to base a discussion of final results—three or five year "cures."

Methods of treatment: For the first treatment nitrous oxid anesthesia is given to all cases. The method of application of radium is individualized for it is impossible to treat all cases alike. I think, however, that needles should be inserted whenever possible because by their use a more homogeneous radiation is secured.

It has been our custom to place 75 mg. in the cervix screened with ½ mm. silver and 1 mm. of brass, 50 mg. against the cervix and 75 mg. (in 9

or vesical, in the cases treated with radiation alone. They have occurred only in the cases treated with both surgery and radium. Proctitis with a slight stricture has occurred in only one case.

An acute hydronephrosis was seen in one case four months after the treatment was begun, but in this case there was a recurrence of the growth which involved the lower end of the ureter.

It should be borne in mind that in discussing the relative merits of surgery and of radiation in the treatment of carcinoma of the cervix the basis of comparison must be the morbidity and the end-results—three and five year "cures"—as immediate mortality in these cases pertains practically only to surgery. No immediate mortality can be attributed to radium therapy. We are convinced of the value of radium in inoperable cases of

carcinoma of the cervix; we believe that accumulating data will give equally positive evidence of its value in early cases, as compared with surgery.

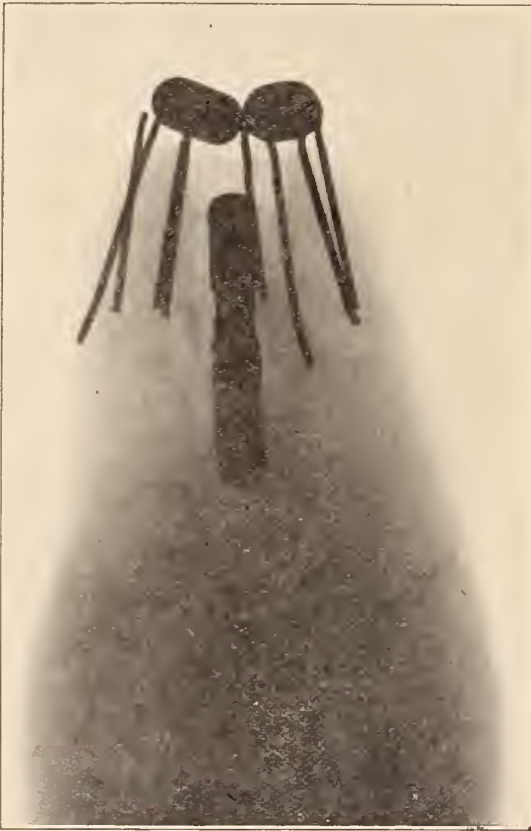


Fig. 1. Technique of Radium Application in Carcinoma of the Cervix.

CARCINOMA OF THE FUNDUS

On account of the excellent results of the surgical treatment of carcinoma of the fundus, up to the present time I have not advocated radiation in these cases. During the past year, however, in three cases I have seen a recurrence in the upper end of the vagina six months after a complete hysterectomy and all three of these patients died less than one year after operation. This fact suggests that further investigation is demanded—perhaps a trial of radiation in cases of carcinoma of the fundus, in which there may be some contraindication to operation, such as old age, or cardiovascular disease, or objection to operation on the part of the patient.

BENIGN TUMORS OF THE UTERUS

To my mind it is more difficult to decide whether

a fibroid tumor should be radiated or treated surgically than it is to determine the proper procedure in a case of cancer of the cervix, and unless scrupulous care is taken in the selection of cases for radiation a great many failures will result from the use of radium and X-ray therapy.

In the majority of cases surgical treatment has yielded good results—the mortality is low, the convalescence is usually quite rapid. It becomes necessary to consider very carefully whether or not any cases can be more beneficially treated by radiation. Are there any cases in which radiation is definitely contraindicated? Are there others in which it is as definitely preferred?

In our judgment radiation is definitely contraindicated under the following conditions which are related to the size of the tumor and its location, the age of the patient and the presence of pain or discharge.

1. *Size of the tumor and its location:* Radium is contraindicated in any case in which the tumor is palpable above the symphysis. A large enough dose of radium to reduce the size of this tumor would cause destructive local effects and therefore radium would have to be supplemented by X-ray therapy. I believe that in such a case the patient will be better off without radiation. If a fibroid is sub-peritoneal or sub-mucosal, or if it is pedunculated, radiation is contra-indicated because it cannot produce a cure. Accuracy of diagnosis, therefore, is of the utmost importance.

2. *Age of the patient:* In a woman in the child bearing age a fibroid tumor should not be treated with radium or X-ray unless there is a definite contraindication to pregnancy. In such a case myomectomy is the treatment of choice.

3. *The presence of pain:* In the great majority of cases pelvic pain is a contraindication to the use of radium. The pain may be due to an old salpingitis or hydrosalpinx which often cannot be felt even by the most thorough examination. In these cases heavy radiation undoubtedly makes the pain worse and it becomes necessary finally to resort to surgery. A pedunculated submucous fibroid in the fundus gives rise to pain. Such a tumor cannot be successfully radiated both because it is impossible to place a sufficient amount of radium adjacent to it and because it may become deprived of its blood supply and remain in the uterus as a foreign body with consequent discharge and continued pain so that eventually surgery will

be required. If pain is due to pressure, then obviously the fibroid is too large to be treated by radiation.

In the following groups of cases radium is of value:

1. *Menorrhagia at any age.* Cases of menorrhagia in the past have been cured—often without relief while radiation almost uniformly gives good results. The dose depends on the age of the patient. Excellent results are obtained from the use of radium in the large group of cases in which at the menopause there is a slight enlargement of the uterus and excessive bleeding. I believe that in these cases radium therapy surpasses surgery on account of the absence of mortality and morbidity and the ease with which it can be applied. Also in these cases radium is preferable to X-rays because its chief action is on the endometrium and not on the ovaries.

2. *Fibroid tumors of moderate size* without bleeding or other complications are amenable to radiation.

3. *Fibroid tumors* in the treatment of which surgery is contraindicated by such complications as general invalidism, heart disease, pulmonary disease or diabetes, should be radiated. These cases can be relieved and the growth can be checked so as not to cause a great deal of discomfort as long as the systemic disease allows the patient to live. It is possible, however, that the use of iletin may make it possible to operate safely upon diabetic patients with better results than can be obtained with radium.

CONCLUSIONS.

1. In the Cleveland Clinic at the present time all cases of carcinoma of the cervix are being treated with a combination radium and deep X-ray therapy.

2. Carcinoma of the fundus should be treated by surgery.

3. Fibroids associated with pain in the pelvis or with discharge from the uterus, the cervix being normal, should not be radiated.

4. Radium is the treatment of choice for menorrhagia at any age; it is especially indicated in cases of menorrhagia at the menopause with slight enlargement of the uterus.

FORTY STATES ACCEPT ACT

Forty states have now accepted the terms of the Sheppard-Towner maternity and infancy act of the federal government, according to a report issued by the Children's Bureau of the United States Department of Labor. Illinois and Kansas

are the two western states that have not accepted the federal aid.

In Wisconsin the 1923 legislature appropriated \$23,000 annually for 1923-24 and 1924-25 to the Bureau of Child Welfare and Public Health Nursing of the State Board of Health. Of this total \$17,951.62 is used annually to match the funds available under the Sheppard-Towner act. While the total federal aid to be matched is \$22,751.62 the state funds for silver nitrate and birth registration are considered as an expenditure to meet federal aid, making up the total of \$22,751.62. The remainder of the annual state appropriation to the bureau of \$5,048.38 is devoted to some work with school age children and to advisory service for public health nurses employed throughout the state.

A series of nine prenatal letters are forwarded all expectant mothers by Mrs. Mary P. Morgan, director of the bureau, when names are submitted for this purpose. During 1923, 130 physicians sent in names of 567 expectant mothers for these letters. Mrs. Morgan declares that the bureau will send slips to any physician for reporting names and that the bureau can handle a much larger list during the present year.

CHIROPRACTOR CONVICTED

A sentence of one year in the House of Correction was given Charles G. Pallotta, Fond du Lac and Princeton chiropractor-tailor, as result of a prosecution begun by District Attorney M. J. Paul of Berlin. Pallotta was charged with practicing medicine as a result of the District Attorney's investigation.

"Medicines" given patients by Pallotta contained carbon, sugar, bicarbonate of soda, witch hazel, and similar ingredients according to the state toxicologist. Witnesses declared that they had paid \$10 to \$20 a pint for these "medicines."

"Pallotta was a tailor for twelve or fifteen years before he became a chiropractor six years ago," declared the Berlin Evening Journal. "He told the Court that when he was not busy as a chiropractor he engaged in the tailoring trade as a side line. After taking a correspondence course in chiropractic for about three years, Pallotta testified he was in actual attendance at a chiropractic school in Chicago for six months."

He was given a year sentence after the jury declared him guilty and a motion for appeal was denied.

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"LET GEORGE DO IT."

Under this head we list each month definite offers of service available to our readers—the members of the State Medical Society of Wisconsin. Additions will be made from month to month but if you have a need not covered here your Secretary-Managing Editor will do his best to fill your needs. Address J. G. Crownhart, 558 Jefferson St., Milwaukee.

1. PACKAGE LIBRARIES are now available on Cancer, Schick Test, Vaccination, Periodical Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, and Control of Communicable Diseases. Address Package Library Dep't., Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. MEDICAL BOOKS will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. PHYSICIANS' EXCHANGE COLUMN is open to all members without charge.

4. NEW SCIENTIFIC PUBLICATIONS listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

5. STATE LAWS and departmental rulings can be secured through the Secretary's office.

6. LEGAL ADVICE upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

EDITORIALS

SANE DIGITALIS MEDICATION

DIGITALIS is probably the most useful and at the same time the most abused of cardiac drugs. Its value lies in its ability to slow the cardiac rate, thereby prolonging diastole. The increase in the diastolic, or rest, period of the heart cycle is generally a power in building cardiac reserve. To secure maximal results an adequate amount of the drug must be retained in the system at all times during its administration.

To determine what constitutes an adequate amount the following factors must be taken into consideration: (1) The desired ventricular rate to be induced; (2) the various toxic symptoms arising from overdosage; and (3) the average rate of elimination of the drug.

The desired ventricular rate is, within certain limits, known for each individual. The toxic symptoms arising from overdosage are nausea, vomiting, headache and greatly reduced ventricular rate: later, cold, clammy perspiration, subnormal temperature and signs of collapse. The average rate of elimination of the tincture of digitalis is 1.3-1.4 c.c. (19.5-21. minims) per 24 hours.

Admittedly, no definite rule for the dosage of any specific digitalis preparation can be evolved which will apply for each individual condition. It should be remembered that we are dealing with a drug which when properly handled may lead to marked cardiac benefit, but which may also give

rise to definite symptoms of a deleterious nature. Taking these facts into consideration, let us henceforth administer digitalis preparations intelligently rather than empirically.—*M. F. R.*

A FINAL CALL

A THIRD of the membership of our Society has forwarded names of prominent laymen as suggested recipients of the annual Lay Issue to be published next month. While this is a highly satisfactory percentage of return, members who have not answered the letter are neglecting an opportunity.

This issue is but a part of a lay educational program designed to give facts that will aid in promoting better public health and in securing adequate public health laws and their enforcement. This issue is comparatively small in numbers but large in that it is an essential part of the program.

Suggesting the names of those who would be interested in its contents is an opportunity to do a service for your friends and community that cannot be done for you. If you have overlooked this request, will you not forward your answer now?

DUES ARE DUE

Some pay their dues when due,
Some pay their dues when overdue,
Some never do.
What do you do?

—*J. C. S.*

TREATMENT OF THE OBVIOUS

THE treatment of symptoms by quacks without thought of the causes of disease has long been an object of just ridicule by physicians. Indeed, it has occupied such a position that we wonder if it has not obscured another potential danger. We refer to the treatment of the obvious without investigation of conditions that may not be so evident.

There was recently brought to our attention a case in which a conscientious physician had advised an operation for toxic goiter. The patient hesitated at the thought of an operation although the seriousness of the condition was realized. A year went by during which time the patient gradually grew worse. A colleague saw the case in consultation.

The toxic goiter was apparent. But a thorough physical examination disclosed the fact that tuber-

culosis had completely involved one lung and the apex of the other. That an operation was contraindicated at this time was, of course, evident to all concerned.

While in this particular instance it might have been difficult to make a correct diagnosis of the lung condition twelve months ago, it serves to illustrate the thought. Every patient is entitled to a complete physical examination even though one definite pathologic condition is immediately apparent.

THE COUNTY SOCIETY DELEGATE

BY this time the various county medical societies in the state have elected officers for the coming year or should have done so.

There is no officer elected by the county society whose office is more important than the delegate from the county society to the House of Delegates of the State Society. He should be pledged to attend the State Society meeting and to represent his county society and its wishes and policies in all matters coming before the House of Delegates of the state organization. The office of delegate is not an honorary position. A live, active man who takes an interest in his county society, in the State Society and in medicine in general should be chosen for this position and he should be pledged at the time of his election to exercise the important duties of his office.—*J. F. S.*

CHARACTER ASSASSINS.

THE average individual is not given to the consideration of the perils connected with the practice of the leading professions. But perils there are. These dangers are not so much directed to the safety of life, but to the greater danger, the assassination of character, and in many instances death is sweet compared to the living on, under the suspicions and condemnation of family, friends and the community. To this class of assassins belongs the scandal monger, the liar, and the poison tongue and pen experts.

The lawyer, the physician and the minister are the bright and shining marks of these assassins. The jury lawyer is frequently under fire, the physician, in daily contact with sick bodies and minds, must be ever alert lest his speech and conduct be misinterpreted and even the man of God, be he

ever so just and upright, is only too often the unsuspecting victim of an unforunate affair.

These character assassins may be sane but malicious and vindictive, but the greater danger arises from the activities of borderline mentalities, the insane and the hysterical woman. The unforunate feature of these affairs is the little understanding on the part of the public as to the true nature of the mentalities perpetrating the tragedy.

Very recently the columns of the Chicago newspapers were overflowing with the nauseous details of one of these affairs, and but for the fact that the defense was supported by able and dependable psychiatric advice, the career of an able minister would have terminated and he and his family shunned for all time.

A woman confessed to her husband that she had been on intimate terms with her pastor, whereupon the husband hailed the minister into court. The testimony brought out that the wife and husband had not lived as man and wife for some time. The woman, a distinct psychopath, developed a passion for her pastor and experienced sexual gratification in the mere touching or kissing of his hand. An hysterical complex was established in her unstable mind which, dwelt upon sufficiently long, became beliefs if not delusions. Her dreams and visualizations became to her true entities to which she testified under oath, yet upon careful analysis of her testimony her statements were readily proven untrue and the wish fulfillment complex established. The husband, infatuated with another woman, was but too willing to be relieved of his wife and started divorce proceedings on the strength of his wife's confession whether he believed it or not. The minister, supported by his entire congregation, won his case, but only after much unforunate publicity and the injuring of his health and the reputation of himself and family.

So long as these hysterical and poorly balanced and erotic women walk the earth these things will happen and it is eminently essential that the medical profession have a clear understanding of such possibilities and in turn illuminate the minds of the public.

One may be vindicated by a jury in these unforunate affairs, but things are never again quite the same because human nature is so constituted that too many people seem to prefer to believe the evil instead of the good of suffering humanity.

A. W. R.

AN APOLOGY

IN our last issue a portion of an original article by Dr. Charles E. Ide was transposed into a paper by Dr. Arnold Jackson. The matter transposed was so foreign to Dr. Jackson's paper as to be readily noticed by the reader.

The management of this JOURNAL expresses its deep regret that such an error should have occurred. The transposition was made in the mechanical work of make-up after the usual proofs had been carefully corrected and then approved. Responsibility has been acknowledged by the printers and no similar error will again occur.

THE JOURNAL CLINIC

Edited and Published by

THE BUREAU OF POST-GRADUATE MEDICAL INSTRUCTION

UNIVERSITY EXTENSION DIVISION

The University of Wisconsin.

AN UNUSUAL CASE OF SPINAL ABSCESS.

BY F. C. CHRISTENSON, M.D.,

RACINE.

As I have not been able to find any definite records of a spinal abscess in so young a child I feel that I ought to give a report of this case.

The patient was a male child, seven weeks old. At birth the baby weighed ten pounds and was to all appearances normal. Delivery was spontaneous, the baby being born before the attending physician arrived. The parents were farmers. The mother and father, age 23 and 25 respectively, gave a history of never having been sick. At the time I saw them, they were in good health. There were no cases of tuberculosis, nor had there been, in the home of this child. No history could be obtained of prenatal or postnatal injury.

When the baby was about four weeks old it grew restless, cried a good deal and nursed poorly. It began to lose weight, and later vomiting set in. At six weeks it was thought that probably the mother's milk was at fault, and the child was given diluted cow's milk.

Upon examination I found a male infant, weighing about eight pounds, with a temperature of 103, pulse 180, and respiration 80. The child was cyanotic and in a "cold sweat." The eyes and ears were normal; the tongue was very much coated and there was a pronounced acid odor to its

breath. There was no opisthotonos, no Kernig sign, and the reflexes were normal. The abdomen was distended and tympanitic. Examination of the chest revealed moist crepitant rales in the dorsal region. Between the scapulae there was present a swelling covering an area of about eight centimeters in diameter. The swelling was of a dusky red hue and seemed to expand with each respiration. There was no palpable softening of the spine. The mother had noticed this swelling for about ten days. Just above the coccyx there



Plate A.

was a soft mass, about two or three centimeters in size. When the child was turned either by a leg or an arm, the other half of the body did not follow and the child would cry louder—it was constantly crying.

The child was placed upon a large pillow and removed to a hospital. An X-ray of the body of the child showed a marked circular shadow—X-ray A—centering about the ninth dorsal vertebra. I felt that I was dealing with a primary abscess of the spine and that the swelling at the

lower end of the spine was a secondary abscess. Consequently, I opened the secondary abscess and about two hundred c.c. of thick grayish pus escaped. I inserted a gauze drain and applied moist dressing. Following this the child slept for several hours and retained some nourishment, but the temperature rose to 105, pulse about 200, and respiration 90. The drainage was profuse for several hours, after which there was less drainage. The child became weaker and died on the following day, about thirty-six hours after I first saw it.

As I was curious to ascertain where the primary focus of the disease was, I obtained permission to do a partial autopsy. I injected a bismuth paste into the wound and the X-ray shows very clearly—



Plate B.

X-ray B—how the pus had burrowed along the spinal canal before it finally forced its way to the surface of the coccyx. On opening the abdomen I found a rather large spleen. The other viscera were normal. The lungs showed about twenty per cent atelectasis, and marked terminal-pneumonia, especially in the posterior portion of the lungs. There was a boggy mass covering the lower dorsal vertebrae. This mass proved to be a thick walled abscess, extending from the sixth to the eleventh dorsal vertebrae, with the body of the ninth, and the inter-vertebral discs above and below it, entirely gone, also marked involvement of the lower part of the body of the eighth dorsal vertebra. The bismuth-paste entered this abscess

cavity from below thru a very small opening in the spinal canal.

The pus from this case showed a few Gram negative intra-cellular diplococci. A guinea pig was inoculated with some of the pus, but the pig remained well.

I have not been able to find any reports in the literature of abscesses of the spine in so young a child. A. B. Johnson of New York City says he found less than one hundred cases reported under one year of age; one was three, another was four months old. He found that boys were more commonly afflicted than girls.

The United States Bureau of Vital Statistics, during the six-year period ending with 1920, report a mortality of 135 deaths from Pott's disease in children less than one year old; 70 of these were males and 65 were females. While these statistics are gathered from reports the veracity of some of which may be questioned, they, nevertheless, indicate that tuberculosis of the spine in young infants is not uncommon. The Bureau of Vital Statistics does not record cases of osteomyelitis of the spine, but reports of such cases are found in the literature.

MARKED INCREASE OF BASAL METABOLIC RATE IN HYPERTHYROIDISM: A CASE REPORT.*

BY A. R. TORMEY, M.D., AND H. M. COON, M.D.,
MADISON.

In dealing with hyperthyroidism the determination of the basal metabolic rate is of importance, for diagnostic and prognostic purposes, and to aid in selecting the type of treatment to be followed. Thus Frazier¹ divides his patients into four groups—depending on their basal metabolic rates—and bases his treatment on this grouping. The first group, showing an increased rate of 10 to 20% may be treated by a bilateral lobectomy, while, with the fourth group, with a rate increased above 65%, a more conservative plan of treatment is followed, including rest, unilateral polar ligations and unilateral lobectomy, in as many stages as may be necessary.

*From Bradley Memorial Hospital, University of Wisconsin, Madison.

¹Frazier and Adler: American Journal Med. Sc., Vol. xxxii.

The case which follows falls into Frazier's fourth class:

P. H., male, age 38, admitted to the surgical service 2-21-23 with the chief complaint of "loss of weight." Patient states that until a month before admission he had been free of symptoms. Since that time, he has lost 36 to 40 pounds. Has noticed increasing fatigue and nervousness, the latter denoted by a coarse tremor of the hands when attempting writing or any fine movements with his fingers. Perspiration is profuse and nearly continuous. Eyes feel as if the lids were being drawn tightly shut, and there is a continuous although slight headache located across the forehead. Slight exercise produces a paroxysm of coughing, ending in emesis. For



Fig. 1. Taken before first lobectomy.

this reason the dietary has been restricted to milk and soft articles.

Because of the increasing fatigue, patient has not been able to do any work for the past month.

Past medical and family histories are of no import.

Patient is married, his four children and wife are living and well. Is a shoemaker by occupation. Born in Finland. Has been in this country about eleven years.

Physical examination: Patient is a dark skinned, very nervous male. Signs of emaciation. Eyes have a startled, frightened look. Papillary reactions are normal. No marked widening of palpebral fissure. Marked tremor of lids. Lagging of lids not marked. There is a humming sound heard over the eyeballs.

Mouth: Teeth in poor condition. Pharynx hyperaemic. Fine tremor of the tongue is present.

Neck: Thyroid gland enlarged. The left measures 3" by 1.5", and right is slightly larger. Gland is firm. No evidence of cystic formation. Pulsation within the

gland is palpable and a distinct bruit is heard over both lobes.

Chest: Lungs negative. Heart is within normal limits as to size. Muscle sounds of good quality. Apical first is prolonged. Pulsation of the entire epigastrium with each systole.

Abdomen: Liver extends 1.5" below costal border. Spleen not palpable. Pulsation of epigastrium, as noted above.

Extremities: Blood pressure—Systolic 136, Diastolic 68. Radial pulse is water hammer in character. Rate 84. Reflexes are normal.

Impression: Evidence of increased metabolism; nervousness, profuse perspiration and tremor; presence of



Fig. 2. Taken six months after discharge.

von Graefe's and Stellwag's signs, neither of which are particularly marked however; evident thyroid enlargement, and marked loss of weight are the basis for the diagnosis of toxic hyperthyroidism. The acuteness of the condition is perhaps responsible for the lack of any evidence of a disturbed cardiac action.

Clinical examination: Of no importance except for the basal metabolic rate of 180.9% plus according to the calculation of Benedict and 165.2% plus according to that of DuBois.

Subsequent notes:

3-5-23. Subjectively the patient appears to be improved. Has been treated by rest, morphine and bromides. States that he feels better and is not so shaky, but the basal rate at this time is 113% plus Benedict and 95% plus DuBois.

3-6-23. Under local anesthetic, superior pole of right thyroid ligated.

3-13-23. No trouble following primary ligation. No marked effect on metabolic rate. Left superior pole ligated under local anesthetic.

3-23-23. Basal metabolic rate, 96% plus Benedict, 81% plus DuBois. Patient discharged to home. To return 5-15-23 for further treatment.

5-15-23. Upon readmission, patient states he has not been so nervous during the interval since his discharge. He has gained about 30 pounds and his strength is gradually increasing. Physical status at this time unchanged except for some increase in the size of the thyroid and the presence of a marked loud blowing systolic murmur, heard all over the cardiac area. Radial pulse is 102, and water hammer in character. Only slight quadriceps weakness demonstrable.

5-23-23. Basal metabolic rate, 159% plus Benedict, 137% plus DuBois.

5-28-23. Right thyroid lobe removed under local and nitrous oxide anesthesia. No closure. Bartlett incision.

5-29-23. Hypodermoclysis. 800 c.c. given because of continued emesis. Cardiac sounds of good quality. Blood pressure—124 systolic, 84 diastolic.

6-7-23. Basal metabolic rate, 69% plus Benedict, 52% plus DuBois.

6-8-23. Left thyroid lobe removed under local and nitrous oxide anaesthesia. Bartlett incision.

7-13-23. Recovery from last lobectomy has been uneventful. Patient gaining weight and strength rapidly. Marked reduction of tremor. Discharged with instructions to return in three months for further observation.

DISCUSSION.

The case presented, of a rather severe hyperthyroidism, offers the following unusual features.

(1) The marked increase of the basal metabolic rate—upon admission as high as 180% plus—the highest that has been observed in the metabolic laboratory of the University.

(2) The rapid onset of the condition, according to the history, only a month in duration.

(3) The freedom of the myocardium from evidence of toxic effects.

The type of treatment used—rest and sedatives—followed by unipolar ligations preceding the more radical surgical procedures, offered the only means of avoiding the more or less common catastrophes often occurring in such severe cases.

LIQUOR TAX DUE

Applicants for federal permits for the use of alcohol or intoxicating liquor in any form, are reminded that they must also secure the state permit, in a notice from the State Prohibition Commission. A check is made between the federal and state authorities and those who fail to secure both permits are liable for prosecution.

The state department has also announced that prosecution is waived where back payments are made promptly where it appears that the permittee overlooked taking out both permits.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical
Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

ANTHRAX.

BY W. D. STOVALL, M. D.,

MADISON.

Anthrax is an unusual disease. It is caused by a bacterium which produces a spore and therefore is very resistant to unfavorable conditions. The disease does not occur spontaneously in man but always results from infection taking place through the skin or mucous membranes. It manifests itself into forms, the malignant pustule and malignant oedema.

The malignant pustule begins as a small papule at the sight of the injury, which later becomes vesicular. Inflammatory induration extends around this vesicle and within thirty-six hours there is a dark brownish eschar in the center, a little distance from which there may be a number of small vesicles. The induration is extreme and oedema of the part is common. The usual location of these pustules is the exposed parts of the hand, arms, face and neck. Lesions on the face and neck are the most fatal. In most cases fever is absent. Some cases, however, have a very sudden rise of temperature and the febrile phenomena is marked throughout the disease.

Malignant anthrax oedema occurs in the eyelids, also the head and neck and sometimes the hands and arms. It is characterized by the absence of the pustule and by a most extensive oedema. The oedema may occur so extensive that gangrene results; it is usually fatal.

Infection usually takes place on the exposed skin surface but internal anthrax does occur in the form of intestinal anthrax and pulmonary anthrax, wool-sorters disease. The intestinal anthrax is said to be caused by eating raw, or rare meat from infected animals, and from handling hides and hairs which bear the spores of the anthrax bacillus. The records of human cases have been among people who are employed in handling hides and hairs. The pulmonary infection is most common in people who are engaged in the sorting and cleaning of wool and hair, and results from the inhalation of

dust particles contaminated with anthrax spores.

Anti-anthrax serum has been used in the treatment with favorable reports. It is also reported that the plain serum is just as efficacious. The anti-serum has been used in 100 c.c. quantities intravenously every twelve to twenty-four hours until the patient is definitely improved.

Up until the beginning of the war in 1914 the usual mode of infection for anthrax was as described above. However in 1916 in England there were reported cases of anthrax which resulted from the use of shaving brushes, the hairs of which were found to be contaminated with the spores of anthrax bacilli. In 1918 the Surgeon General of our Army reported a similar occurrence of anthrax, and this matter was taken up in the July issue of the Public Health Reports of that year. A review of the English report was published. The following is a quotation from this publication:

"The Public Health Service has been informed by the Surgeon General of the Army of the occurrence of several cases of anthrax, apparently due to infected shaving brushes. In this connection it seems desirable that the English experience, as reported by the Local Government Board 1, 2, 3, 4, be reviewed.

"Among civilians in England, 19 cases are included from June, 1915, to October, 1916, 14 of which were proved to have originated from infected shaving brushes, the evidence being that a new brush was used in each case just before the malignant pustule appeared, and that virulent anthrax was found not merely on the patient's brush (in which case the patient might have infected it), but on similar brushes obtained from the same shops or wholesalers. The other five cases were suspected of having originated in the same way, though evidence was not conclusive.

"Among the English troops in France, 28 cases of anthrax occurred from 1915 to February, 1917, but although the site in 23 of them was in the shaving area, and it was known that some of the infected lots of brushes were distributed to troops, proof of infection in this manner is lacking.

"From the beginning of the war up to February, 1917, 18 infections with anthrax occurred among the troops in England, at least 12 of these being on the shaving area, and 4 almost certainly being due to shaving brushes.

"Of the 33 cases with known outcome, 21 died, a mortality of 64 per cent. In this connection it

may be remarked that except in endemic locations, such as tannery districts, many mild cases probably recover without diagnosis, the case mortality appearing higher on that account. Coutts' report is concerned with epidemiology rather than with the clinical or pathological findings, but the cases were as a rule of the usual malignant pustular type, with edema. One reason for the high mortality may lie in the site, infections of the neck being more serious than those elsewhere on the body. In one case the pustule developed within 24 hours of an accidental razor cut on the first day of using the infected brush. In another case the infected brush was used only once and the pustule developed about six days later. Two of the patients had fatal anthrax meningitis without any local lesions other than the apparently noninfected razor cut. Meningitis due to the anthrax bacillus has been reported from Holland and England, and one of the recent American cases has been of this type.

"Fifteen of the civilian cases were due to 12 different types of brush, but 6 of these were from one manufacturer, the hair used coming from different lots. It is disconcerting to learn that some of the infected brushes were made from hair which had presumably been disinfected in accordance with requirements. Six other manufacturers were implicated, at least two of them being New York firms and one an Osaka firm. Four of the fatal cases were due to New York brushes. The brushes had gone through the hands of various wholesalers, retailers, and brokers, and much credit is due those who traced the origin of the infection in spite of the lack of method in storing and dealing with these cheap brushes in commerce. In the very heavily infected Japanese lot about 75 per cent of a shipment of 43,200 were traced and destroyed; an indication of the low human susceptibility to anthrax is found in the fact that only one case is known to have originated from the remaining 10,000, though all samples of this lot examined were infected. The horsehair from China and Siberia seemed to be principally involved, especially the gray or yellowish hair and imitation badger hair; some of the dirty, infected Chinese hair had been incorrectly invoiced as 'goats' hair.' Hog bristles, which are stiffer, seem to be free from anthrax, though much of this material comes from Siberia. Previous experience with occupational anthrax had made English and German manufacturers wary of Russian, Siberian, or

Chinese horsehair, but the great demand for brushes and the interference with usual trade channels for the raw material led to a letting down of the bars on the part of the older manufacturers, and carelessness on the part of the new manufacturers who knew little of the danger of horsehair. Black or thoroughly dyed hair seems to have been disinfected satisfactorily, but there is a tendency to avoid high temperatures in the disinfection of the white hair and of that colored to imitate badger hair. The thorough and repeated washing in hot soapy water which a shaving brush receives in use appears to rid it of the dangerous infection mechanically, since most of the cases occurred soon after the new brush was used, and in two brushes which had caused anthrax the free portion of the hair showed no infection, while anthrax bacilli were found on the ends of the hair imbedded in the handle; in the corresponding unused brushes, the anthrax bacilli were found on the free portion of the hair."

In January of this year at Neenah, Wisconsin, there occurred a fatal case of anthrax traced to a contaminated shaving brush. The brush was part of a shaving outfit which was a Christmas present. The malignant pustule occurred on the face over the shaving area four days after using the brush for the first time. Anthrax bacilli were recovered from the wound. The brush was sent to the State Hygienic Laboratory in Madison and anthrax bacilli were recovered from the brush. The State Board of Health made an investigation and were able to trace the manufacturer who made the brush and a report was made to the Federal Health Service.

I believe that the method of handling hairs used for shaving brushes is not generally known, nor is it generally known that the shaving brush, especially the cheaper sort, should always be looked upon with grave suspicion, and that no new shaving brush should be used without first treating it to kill anthrax spores.

The spread of anthrax by shaving brushes had grown to such menacing proportions by the spring of 1919 that the Surgeon General of the United States Public Health Service issued a circular letter to state and local health authorities. In this letter he suggested a method by which all new shaving brushes should be treated before they are used. The letter follows:

"The continued occurrence of cases of anthrax

due to infected shaving brushes leads this bureau to believe that the suggestion contained in Bureau Circular Letter No. 136, dated July 31, 1918, recommending the sterilization of all brushes in trade channels, is not being complied with. Attention is therefore again called to the fact that there are still undoubtedly in trade channels shaving brushes made from material contaminated with anthrax.

"Any brushes found in the market which do not bear the name or the trade-mark of the manufacturer should be regarded with suspicion, and should be returned to the source from which they were secured, or should be disinfected.

"For the sterilization of brushes the following procedure is believed to be effective:

"The brush should be soaked for four hours in a 10 per cent solution of formalin (by formalin is meant a 40 per cent solution of formaldehyde). The solution should be kept at a temperature of 110° F. and the brush so agitated as to bring the solution into contact with all hair or bristles."

At the same time that this letter was published in the Health Reports, there was printed a report of an investigation into the shaving brush industry of this country which is very interesting because it illustrates what a varied activity is necessary to protect human life. The report follows:

Through Col. F. F. Russell, in charge of the Laboratory Division of the Office of the Surgeon General, United States Army, reports were received of the occurrence of anthrax among soldiers. The lesions appeared on the face, and suspicion was at once directed to shaving brushes, as there had been similar outbreaks among the British military forces, which had been traced to shaving brushes. Later, several cases of facial anthrax, undoubtedly due to shaving-brush infection, were detected among the civilian population. No cases have been reported from the Navy.

Shaving brushes used in the United States are, with unimportant exceptions, made from badger hair, horsehair, or pig's bristles. With the Russian market closed the quantity of badger hair used is negligible. The large majority of the so-called badger-hair brushes now on the market are really clever imitations made by treating white hair or bristles by secret processes.

Until the war disturbed the usual commercial channels, all or nearly all of the horsehair and pig bristles used in the United States came from

Russia, China, or Japan, after having been submitted to cleaning or disinfecting processes in France or Germany. When the war started in 1914 the material began to come direct to the United States via the Pacific route. Through ignorance of the danger, or through an unwarranted confidence in certificates of disinfection that accompanied the importations, some American brush manufacturers took no pains to insure the safety of the material going into their products, though suspicion as to the safety of imported horsehair was rather general among importers and dealers.

Horsehair, which is the most frequent source of shaving brush anthrax infection, is of both foreign and domestic origin. The largest part of that used in the manufacture of shaving brushes comes from Oriental sources—China and Siberia furnishing by far the greater portion. This imported hair is notoriously dirty, and likely to be anthrax infected. It reaches this country in wooden cases which hold usually about 125 pounds. The hair is put up in bundles known to the trade as "drafts." The drafts vary in length from about 3 or 4 inches to perhaps 15 inches, and in diameter from less than 2 inches to about 3.

These drafts are always said to have been cleaned and disinfected, but they bear no indication as to the manner or methods of treatment, and results of their use have shown that the methods employed are inadequate to sterilize the hair.

Horsehair put up by the domestic dealers comes chiefly from the Argentine or is collected by hair dealers locally, principally in Chicago. The hair is washed with soap or lye, and often with warm water, but it is not submitted to any process which may be regarded as making it safe from the anthrax viewpoint. A number of these hair-dressing establishments have been visited, the various processes seen in operation, and it is certain that they do not afford a guarantee of safety.

At present the only pig bristles coming into the American market are what are called "China" bristles. They all come from the Orient, but they do not all necessarily originate in China. These bristles are said to have been boiled before shipment from the countries in which they are prepared, but there is no assurance that this has been done. On the other hand there is no direct evidence associating them with any of the cases of anthrax due to shaving brushes.

The pig bristles come in bundles ranging from

1 to 4 inches in length and usually about 1½ inches in diameter. The manufacturer of brushes buys his hair or bristles direct from importers or through a broker or wholesaler.

The manufacture of shaving brushes is confined to about 20 establishments in the United States. The only point in the process of manufacture that needs to be mentioned is that bearing on the safety of the product. It was found that some establishments made no pretense of sterilizing hair or bristles, while others conducted the process in a very thorough manner. There were all grades between these extremes.

The treatments employed were, briefly, boiling for periods varying from half an hour up to 9 or 10 hours; steaming in streaming steam for from 1 to 8 hours; treatment in an autoelave for from 15 minutes to 3 hours; subjecting to dry heat for varying periods up to a total of 24 hours. In one establishment, in addition to boiling, the material was soaked in alcohol. The boiling was done in metal containers over a free gas flame, or by leading steam into a tank or kettle of water, or by means of coils of steam pipe carried through a tank.

After a careful survey of the industry and the performance of a few tests under conditions approaching those in manufacturing establishments it was decided that either boiling or steaming afforded a satisfactory means of treating the hair.

Thermometric tests were made and it was found that when the drafts were immersed in boiling water or exposed to steam the temperature in the center of the bundles rose rapidly, reaching that of the fluid or vapor within a few minutes.

A number of shaving brushes were secured in the open market and submitted to bacteriological examination. Some were found to be anthrax-infected, but they could not be traced to any particular manufacturer, as neither the brush nor the package in which it came bore any mark to indicate its origin. Without doubt there are now in the market many brushes which are potentially dangerous.

PUBLIC NEWS NOTES.

"As soon as a child is named," wrote the State Board of Health to a local registrar, "parents are required, under penalty of a fine, to return the supplemental reports to the local registrar. We

do not, of course, have any way of compelling parents to name their children within any specified time. If parents realized that this registration is for the purpose of safeguarding the civil and property rights of their children and that the certificate without the Christian name is of little value, they would see to it that this matter is promptly attended to."

Dr. Arthur V. De Neveu, Wyocena, was appointed deputy state health officer for the northern district, to succeed Dr. Louis Dorpat, resigned. Dr. De Neveu assumed the work Jan. 1 with headquarters at Rhinelander. Dr. Dorpat becomes health officer of Ironwood, Mich.

City nurses when designated as employes of the local board of health are clothed with police powers and have right of entry into any home when investigating disease conditions or for other lawful purposes.

It is not necessary to obtain a license or permit to operate a general hospital. Provisions of the state building code must be followed. A maternity hospital license (no fee) must be taken out if obstetrical cases are received.

The Board's policy regarding mausoleums is to require that detailed plans and specifications be submitted to it, with the assistance of the state architect and state engineer. The maintenance fund needed depends upon the type of building, but it is required that the fund be adequate to take care of the building in perpetuity.

The regular annual session of the state board of health was held on Jan. 30th in the Board's offices.

It was stated there is no law that requires the keeping of pathological specimens in a hospital for any definite period of time, this being for the governing board of each hospital to decide for itself. It was recommended, however, as a safe practice to follow.

The Chicago health department was supplied with detailed data upon the incidence of communicable disease in the milk-producing territory for Chicago, and was advised that, although scarlet fever is prevalent in certain sections, it is not above the average and nowhere is it in epidemic form.

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The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists medical society officers for all Wisconsin counties including Ashland, Barron, Brown, Calumet, Chippewa, Clark, Columbia, Crawford, Dane, Dodge, Door, Douglas, Dunn-Pepin, Eau Claire, Fond du Lac, Grant, Green, Green Lake-Waushara-Adams, Iowa, Jefferson, Juneau, Kenosha, La Crosse, La Fayette, Langlade, Lincoln, Manitowoc, Marathon, Marinette-Florence, Milwaukee, Monroe, Oconto, Oneida-Forest-Vilas, Outagamie, Pierce, Portage, Price-Taylor, Racine, Richland, Rock, Rusk, Sauk, Shawano, Sheboygan, St. Croix, Trempealeau-Jackson-Buffalo, Vernon, Walworth, Washington-Ozaukee, Waukesha, Waupaca, Winnebago, Wood.

SOCIETY PROCEEDINGS

ACADEMY OF MEDICINE

The Milwaukee Academy of Medicine met in the Assembly Hall of the Health Service Building, 558 Jefferson St., February 12, when the following program was presented:

1. Presentation of Cases, Specimens, and interesting Roentgenograms.
2. Polyuria caused by recurrent Bladder Carcinoma. Report of a case with study of the effects of Pituitrin and deep X-Ray Treatment. By Dr. Walter M. Kearns. Discussion opened by Dr. E. A. Fletcher.
3. Insulin-glucose Treatment of Pre- and Post-Operative Acidosis. By Dr. David Fisher. Discussion opened by Major W. Snell.
4. Insulin Treatment of Toxic Vomiting of Pregnancy. By Dr. William Thalhimier.

An extraordinary meeting of the Milwaukee Academy of Medicine was held at the Health Service Building, 558 Jefferson St., February 26th. The program consisted of the presentation of Cases, Specimens and interesting Roentgenograms and a discussion of The Treatment of Neuro-Syphilis by Dr. W. F. Lorenz and Dr. A. S. Loevenhart of Madison, Wis. Dr. Lorenz and Dr. Lovenhart each presented one phase of work in the treatment of syphilis.

DANE COUNTY

A joint meeting of the Dane County Medical Society and the University of Wisconsin Medical Society was held February 19 in Science Hall, Madison. Dr. William S. Miller gave a paper on The Reticulum of the Lung and Dr. C. H. Bunting discussed Lymphoid Resistance and Susceptibility.

FOND DU LAC COUNTY

A dinner meeting was held by the Fond du Lac County Medical society at Fond du Lac February 13th with Dr. R. W. Roethke of Milwaukee as the principal speaker. His subject was "Atypical Late Tosaemias."

MARINETTE-FLORENCE COUNTY

The Marinette-Florence Medical Society met at the home of Dr. M. D. Bird in Marinette, February 15th, and enjoyed a very interesting program. Dr. H. T. Heeley of Chicago delivered a most interesting address on diabetes, illustrated by tables and charts. Dr. Henry Sethney of Menominee, Michigan, read an exhaustive paper on fractures. The society now boasts of a hundred per cent membership, every physician in the two counties being a paid up member of the society.

MILWAUKEE ROENTGEN SOCIETY

Milwaukee county roentgenologists have organized and formed the Milwaukee County Roentgen Society, with headquarters at Milwaukee. The organization meeting was held February 1, and following the adoption of a constitution the following officers were elected: Dr. F. W. Mackey, president; Dr. H. B. Podlaski, vice-president; and Dr. C. W. Geyer, secretary-treasurer. The object of the society is not only to place Roentgenology

as a specialty, but to promote the science by educational propaganda and closer relationship with the entire medical profession. The society's membership will consist of the Roentgenologists of Milwaukee county and associate and honorary members. Meetings will be held on the first Friday of each month.

NEURO-PSYCHIATRIC SOCIETY

The regular February meeting of the Milwaukee Neuro-Psychiatric Society was held February 28th, members being the guests of Dr. A. F. Young at the Milwaukee County Hospital for Mental Diseases. The following was the program:

1. What Milwaukee County is Doing for its Mental Patients. By Dr. Young.
2. Some Manic-Depressive Psychoses. By Dr. F. F. Fowle.
3. General Paresis. By Dr. A. B. Magnus.
4. Dementia Praecox. By Dr. A. F. Bonar.

ROCK COUNTY

More than forty members of the Rock County Medical Society attended a dinner meeting at the Beloit Y. M. C. A. on February 26th. Following the business meeting Dr. Earnest E. Irons, Professor of Clinical Medicine at Rush College, gave a most interesting paper on "Symptoms and Treatment of Chronic Infections." Mr. J. G. Crownhart, Secretary of the State Medical Society, gave a short discussion on the problems and policies of the society.

WAUKESHA COUNTY

The Waukesha County Medical Society was entertained at its February meeting by Dr. Chester L. Carlisle, officer in charge of U. S. Veterans' hospital No. 37, Waukesha, and Dr. W. H. Oatway and Dr. F. J. Woodhead, consultants on the hospital staff. Papers were read by Dr. Carlisle on The Mechanisms Motivating Neuro-Psychiatric Conduct and by Dr. John C. Rogers, executive officer of the hospital on Interpretation of Electro-Cardiographs. Following the business meeting the members made a tour of the hospital after which they were guests at a dinner arranged by their hosts.

WINNEBAGO COUNTY

An excellent paper on the Cause of Infant Mortality During the First Month of Life was presented at a meeting of the Winnebago County Medical Society February 15 by Dr. J. M. Hogan. Special attention was given to the subject of birth injuries as one of the chief causes of death. Dr. H. Meusel spoke on the abuses of Pituitrin. Dr. F. Brockway gave an interesting report on six monstrosities which he delivered during the past six months. An interesting talk on Cesarean Section concluded the evening's program.

WOOD COUNTY

The Wood County Medical Society, which was discontinued during the war, was reorganized at a meeting at Marshfield, February 19th. Dr. John C. Haywood of Marshfield was elected president; Dr. F. X. Pomainville of Wisconsin Rapids, vice-president; and Dr. V. A. Mason of Marshfield, secretary-treasurer. Dr. L. A.

Copps, Marshfield, was one of the speakers at the meeting. The next meeting of the society will be held about March 15.

NEWS ITEMS AND PERSONALS

Dr. W. W. Johnston, former health officer of Racine, has been appointed director of public health for McKinley County, New Mexico, and has left for Gallup, N. M., which will be his headquarters. There has been no health work whatever in the 6,000 mile area that comprises McKinley County.

A complete industrial hospital will be opened this month at the Nash Motors plant, Kenosha. Dr. Thomas Dobbins, former commissioner of American Relief in the Balkans under the Hoover administration, will have charge. Two trained nurses, Miss Alma Patzke and Miss Olga Jacobsen, will be on duty at all times. The hospital ward is to cost about \$40,000.

Dr. S. S. Stack, medical director of the Sacred Heart sanitarium, Milwaukee, has returned from a two months' trip to California.

Dr. L. W. Berry of Trego has gone to Tacoma, Washington, where he will make his home.

Dr. A. O. Shaw of Ashland is regaining his health in the South this winter. Dr. and Mrs. Shaw are staying at Melbourne Beach, Fla.

Dr. George M. Smith of Chippewa Falls has accepted a position on the surgical staff of the Travellers Insurance company of Hartford, Conn.

Leonard J. Liest, West De Pere, a junior in the Marquette University Medical School, has been elected president of Phi Beta Phi, honorary medical fraternity of that school.

Dr. W. D. Harvie of Fond du Lac, who has been taking special work in Milwaukee during the past year will return to Fond du Lac to practice. Dr. Harvie was a captain in the world war.

Drs. W. M. Nesbit, R. T. Cooksey and Ira R. Sisk, Madison, will leave the Jackson clinic of that city this month and form a partnership for the practice of medicine. They will occupy offices in the First Central Building.

Dr. Dean Lewis, Professor of Surgery, Rush Medical School, conducted a dry clinic at the University Hospital, Marquette University, February 8th.

Dr. William Turner Fletcher of Salem has been appointed roentgenologist at St. Catherine's hospital in Kenosha.

Dr. Gustave A. Hipke and Dr. Philip Kauth, Milwaukee, won their cases in the Wisconsin supreme court recently. These were cases alleging malpractice. In an opinion by Justice Rosenberry the lower court decisions were reversed with directions to dismiss the complaint.

More than \$18,000 has been paid into the state treasury so far this year from permits issued physicians, druggists and others under the Severson prohibition act, according to the state prohibition commissioner.

An uncontrolled epidemic of scarlet fever in the Unity School district of Ashland in the town of Eileen made it necessary to summon Dr. A. V. DeNeveu, state deputy health officer to the district. Nearly every family in the district either had cases of scarlet fever or had been exposed to it. The condition was discovered by the county nurse. Dr. DeNeveu found a teacher at the Unity school at work while she was peeling from the disease.

A plea for maintaining high standards in state institutions for the care of social inadequates and for enlightening public opinion on the subject was made recently by Dr. W. F. Lorenz, newly appointed head of the state board of control. The importance of attracting to the institutions workers of promising personality and wide experience was emphasized by Dr. Lorenz, who pointed out that for this reason the matter of conditions under which they work and the salaries they receive are of the utmost importance.

Dr. Frank I. Drake, head of the Mendota hospital for the insane, has resigned. Dr. M. K. Green has been appointed to take Dr. Drake's place.

Dr. Emil Schoene, serving four years in the house of correction for manslaughter, was refused a parole by the state board of control recently. He was convicted a year ago in connection with the death of the unborn child of a Wisconsin Rapids girl.

Mrs. Elizabeth Kading of Watertown has resigned from the state board of control. Her resignation is said to be due to ill health.

Dr. Philip R. Fox, Madison, was absolved from the charges of malpractice brought against him by James L. Dawson. The jury found him not guilty and Judge E. Ray Stevens confirmed this judgment by denying a motion for retrial.

Twenty-five farmers in the vicinity of Bay Settlement, Green Bay, came to the aid of Dr. R. M. Burdon following the recent snowstorm, shoveling away huge drifts which obstructed his path to the home of a very sick patient. The neighbors were summoned to help the doctor get through by the husband of the patient.

The appointment of a visiting physician for a county asylum must be made by the superintendent of such asylum after being authorized by the county board and not by the board of trustees of the institution, the attorney general's department held recently in an opinion to the district attorney at Merrill.

Dr. A. A. Pleyte, Milwaukee, member of the Wisconsin Anti-Tuberculosis Association's medical staff, has returned from a trip through the west.

A boost for the Wisconsin Medical Journal was received last month in a letter from Dr. A. W. Akerley of St. Louis, Mo., to Dr. E. L. Tharinger, Milwaukee:

"Enclosed find my cheque for dues for coming year. Wish to congratulate the Wisconsin Medical Society and my old friends in the Milwaukee Medical Society on the great improvement in the Medical Journal of Wisconsin. Of course the University of Wisconsin Medical Staff as well as the staff of Marquette helps wonderfully. In old days the manager of the Journal had great difficulty in filling the Journal by date of issue. I am still in government service but hope to visit my old friends in Milwaukee the first chance I have."

MARRIAGES

Dr. Thomas L. Tolan, Milwaukee, to Miss Alice K. Flanagan, Chicago, on Tuesday, March fourth.

DEATHS

Dr. J. P. Dysart, Milwaukee, died February 1st at the age of eighty-three years. He was founder of the Children's Home Society of Wisconsin.

Dr. F. A. Wright, Fond du Lac, passed away at the home of his brother February 14th as result of a stroke of paralysis. Doctor Wright was born Oct. 17, 1868 in Onandago County, New York, came to Oshkosh in 1894 and practiced osteopathy at that city for twenty-five years. He was affiliated with the district, state and national osteopathic associations and served as president of the state association for a time.

Dr. H. B. Crommett, Amery, died at his home February 6th. He was born at Cottage Grove, Ramsey County, Minn., on June 14, 1873. After graduating from the University of Minnesota in 1896 he practiced one year at Montivideo, Minn., and came to Amery where he has lived and practiced continuously since. Doctor Crommett is survived by his wife, his mother and three sons.

He was a member of the Barron-P-W-S-B County Medical Society, the State Medical Society and American Medical Association.

SOCIETY RECORDS CHANGES IN ADDRESS

L. G. Nolte, 365 Third St., to 747 Cass Street, Milwaukee.

A. L. Curtin, 320½ Twentieth St., to 2027 Grand Avenue, Milwaukee.

C. F. Shafforziok to C. F. Spencer, Spokane, Wash.

E. J. Stone, 602 Mitchell St., to 510 Mitchell St., Milwaukee.

D. F. Downing, 80 Beekman St., New York City, to 57 Berwyn St., Newark, New Jersey.

NEW MEMBERS AND REINSTATED

A. C. Nickels, Watertown.

Hans Lee, Watertown.

Fred J. Hodges, Madison.

E. F. Schneiders, Madison.

A. M. Cox, Madison.

W. L. Finnegan, Madison.

Ray Nystrum, Medford.

H. M. Coon, Stevens Point.

R. W. Adams, Barron.

L. S. Dietrich, Medford.

A. Echternacht, Janesville.

G. W. Coon, Milton.

W. J. Fahrner, Wisconsin Rapids.

Erich Wisiol, Marshfield.

C. S. Brewer, Waukesha.

N. Mandelos, Statesan.

C. L. Carlisle, Waukesha.

F. M. Scheele, Waukesha.

Franz Sedlmair, Bowler.

CORRESPONDENCE

Ripon, Wis.

Feb. 12, 1924.

The Wisconsin Medical Journal,
J. G. Crownhart, Secretary-Managing Editor,
Milwaukee, Wisconsin.

Dear Mr. Crownhart:

I wish to inform you that the recent articles which were published in the various state papers February 11 and 12, 1924, relative to some accident which occurred on the C. & N. W. Ry., here at Ripon were published without our consent and knowledge. We are therefore not responsible for the publication of the report. In justice to Dr. W. C. Nason, I. B. Riefenrath and myself, who cared for the injured ones, I wish you would put this notice in The Wisconsin Medical Journal.

Very respectfully,

C. U. SENN, M.D.

Feb. 7, 1924.

Mr. George Crownhart,
Milwaukee Wisconsin.

Dear Mr. Crownhart:

Thinking that perhaps you might be interested in receiving the disconnected and rather isolated thoughts and opinions of a member of the State Society I am taking the liberty of writing you this evening.

In the first place, that you are doing great work is beyond question; this seems to be the comment of all county meetings. Never before in my opinion has the Wisconsin Medical Journal been so well gotten up, contained so much and so readable as since you have taken hold of it. I was very gratified to see the balance in the treasury due to the increased dues and think this a fine thing. Personally I would be in favor of continuing the dues at this figure for several years or until we have a very substantial fund raised for a reserve. While I was very sorry to have missed seeing you at our county meeting at Barron this summer, from the comment at the next meeting it could be plainly seen that visits of this kind, better than anything else, would stimulate interest in the county society and in a way keep us linked up with the nucleus at Milwaukee.

Most every man has his objections and opinions as to how things ought to be run, naturally I have mine and I want to air mine to you. Along with many more physicians I was urged by mail and Journal to attend the state meeting at Milwaukee in October last. Not having attended for some years I felt that I owed it to

myself to drop things and make the trip. My expense for attending this meeting, outside of some small social obligations while there and minus the money I lost in practice at home was probably \$100. Contrary to your statements in the Journal as to the success of the meeting—my opinion is that it was practically a failure—so was the opinion of those traveling with me homeward bound. To complain of the program and the papers is perhaps unfair from one who has attended so seldom but my way of judging is by comparison—that of contrasting our state meeting with that of Minnesota, our neighbor state, for instance. The fraternal or social atmosphere of the general assembly room at the auditorium was frigid—about 20 below.

I saw surprisingly few Milwaukee medical men in attendance—this certainly was too bad. Milwaukee was formerly my home, I attended the old P. & S. and I was in position to know a few of them at least. Unable to figure it out I made the rounds of their offices and found out the reason and here is what they told me. “———, you have made a mistake, wasting your time coming down here for this—that Tri-State meeting is the one you want to attend. Why I haven’t time to run over and listen to that stuff. No they never have any kind of a meeting, but say, run down to the Tri-State meeting—we have some time there, *boy*.” So it went. A number of them had gone bird shooting, some who were not in the East were in the West.

As I say, perhaps I have attended so few meetings that I am not in a position to judge, the chances are that I am wrong, also perhaps I am not getting my point of view over to you. What I want to say is that to me it was the feeling of “a strange rooster in a strange barnyard.” There was something indescribably lacking in the meeting.

The sentiment from the few that I talked with seemed to be that they would like to be let in on a discussion of the business side of the profession; that they wanted to talk over matters which affected each one of them. Not that they wanted to dictate the policy of the Society at all but they thought that at a central gathering they could discuss and hear discussed the problems that affect the practice and the profession as a whole. Certainly this would have been more useful, instructing and entertaining than the speakers whom we listened to.

The banquet was a success after the song leader took hold of things.

It would seem to me that after this we ought to run the annual meeting on a “truth in advertising” basis—either have a worth while meeting or let’s dispense with it entirely and if the Tri-State meeting is the coming thing, let’s have that and do it right.

Of course things that would please me might not please the other fellow. Personally I would like some live papers, discussions, general business discussion, clinics at local hospitals and a social program. The recent publication and circulation among members of the A. M. A. of the “American Medical Association Bulletin” has awakened an interest in that organization that it never had before. The office of the average physician in the past contained heaps of A. M. A. Jour-

nals with the wrappers still upon them—a discussion of the business side of the practice has awakened an interest and the Journal is read as it has never been read before.

I stated when I started this that my thoughts were rambling and of course they are but what I want to get across to you is that the bulk of the members of the State Society are willing to dispense entirely with a poor program if we can get together and discuss and hear discussed medical problems of today. We can travel around elsewhere and get the scientific material.

Mr. Crownhart, I want to say again in closing that we all appreciate your efforts and your work. It’s the best ever, but I thought that you might like to hear an individual member’s opinion and perhaps that if you had more of them we might get together and have a 100% perfect state meeting.

Thanking you, I am, respectfully,

A MEMBER.

CONSULTATION REQUESTED Help! Help!

Milwaukee, Wis.

Feb. 19, 1924.

Mr. J. G. Crownhart, Sec.-Managing Editor,
The Wisconsin Medical Journal,
558 Jefferson St., Milwaukee, Wis.

Dear Sir:

I am enclosing a copy of a “pome” which came in my mail today. This heart rending request was written by a layman who I suspect is not telling the truth and I am withholding the prescription he so eloquently asks for. I send it to you for publication, perhaps some of the readers of The Wisconsin Medical Journal can tell me what course to pursue in this matter.

Very truly,

D. K. S.

Oh Doctor, lend a listening ear,

I pray, to my afflictions—

Which run, alas, from Housemaid’s knee

To youthful derelictions.

All ailments of the Human Race

From African to Nordic

Combine to give me awful pain

In regions pericardic.

Pellagra, Ankylosis, pip—

Ah me, I’m sure I’ve gottum

With intermittent pangs that thrill

My Os Innominatum.

Dementia Praecox lifts its head

I’m sure I have cirrhosis.

Sure, all this wealth of detail, Doc,

Should help your diagnosis.

With data such as this right here

You have a fine description,

And even Volstead would agree

That I need a PRESCRIPTION.

In fact, to bring me back to health,

To make me gay and frisky—

Requires about one legal quart

Of good old Bourbon Whiskey!

Yours to down Rum.

State Society to Present Discussions on Preventive Medicine as Part of Public Health Program

Editor's Note—This is the fourth of a series of articles by the Committee on Public Policy and Legislation describing the work of the committee. The series started with the December number.

Through the cooperation of three Wisconsin radio broadcasting stations, weekly health talks will be commenced this month under the direction of the State Society. With the exception of the first address by President Rock Sleyster, all the talks will be broadcast under the name of The Family Physician of the State Medical Society.

News stories based on these weekly health talks will be sent every Wisconsin daily paper for use the day following the broadcasting. The talks will be based upon the underlying principles of preventive medicine and will be devoid of any technical language or terms. Every effort will be made to make them timely.

No one physician will write the weekly talks but different subjects will be assigned members in all parts of the state. The material will all be edited at the office of the Society before being forwarded to the radio stations. The news stories will be based upon the radio talks.

Stations that are cooperating with the Society in furthering the work of preventive medicine are WHAD, Marquette University, Milwaukee; WHA, University of Wisconsin, Madison; and WPAH, State Department of Markets, Stevens Point. It is believed that these three stations will effectively cover the radio audience of the state. The talks will be broadcast on the Wednesday evening schedules of the three stations and the news stories will be released for Thursday of each week.

Members of the Society from all parts of the state have responded to the call for suggested recipients for the first Lay Issue of the Journal. As a result close to 4,000 copies of the issue will be mailed to laymen who are interested in the vital public health questions.

The April number has been decided upon for this special Lay Issue. The number will go to press shortly after the first of the month and by the fifteenth all copies will be in the mails.

Subjects to be discussed in this special number include the State Medical Society, Typhoid Fever and Sanitation, State Board of Health and its work, Cancer, Diphtheria, the Anti-Tubercu-

losis Campaign, Smallpox and Vaccination, the Periodical Physical Examination, Why a Seven Year Education for Physicians, Health Laws of Wisconsin, Nostrums and Quackery, the Prevention of Goiter, Nutrition and its Relation to Health, and Public Health from a Layman's Viewpoint.

All statistics used will be obtained from the official records of the Wisconsin State Board of Health and every effort will be made to prevent readers obtaining any erroneous impression. Likewise no statements will be made that do not represent the group opinion of the medical profession of this state.

All regular sections of the Journal will be suspended for this issue with the exception of Book Reviews, Oh, Doctor, Doctor, and Therapeutic Notes. The issue will probably run ninety-two pages and many illustrations will be used.

Hereafter the committee plans to make the annual Lay Issue the January number. Because of the necessarily limited space many subjects under the head of preventive medicine have been eliminated from this first issue and will appear in the January, 1925, number.

Members who have forgotten to forward names as suggested recipients for this number are urged to do so at once. In sending in such names the request is made that the home address be given instead of the office address. Such information should be sent to the Secretary, 558 Jefferson Street, Milwaukee.

The committee desires to acknowledge at this time the many helpful suggestions that were offered by the members in answering the general letter. One of every six answers brought with it a suggestion. Many have been embodied in the plans for material in this issue while others pertained to many other subjects. These suggestions will be carefully worked over by the committee at a meeting in March.

In connection with the Lay Educational program, editors of all daily papers in Wisconsin were forwarded a reprint of the Cancer Cure article appearing in the February Journal. A letter accompanying the enclosure told briefly of the desire of the Society to be of service and explained the object of the series of articles appearing on forms of quackery and nostrums.

Tuberculosis "Cures" Endanger Public Health in Offering "Short Road to Recovery"

Only one safe and authentic method of curing tuberculosis is acknowledged by the medical profession today. That method consists of giving the patient rest, fresh air and nourishing food under the constant supervision of a competent physician who knows tuberculosis. Any other "cures" whether they come out of bottles sold at the drug store or are administered in other ways by quacks or even occasionally licensed but unscrupulous medical men are dangerous. They but lead to progression of the disease and often to death.

Tuberculosis is a curable disease, especially when discovered in its early stages and properly treated. It is therefore of the utmost importance that early diagnosis be made. The high death rate from tuberculosis is due largely to two causes; the failure of patients to go to a reputable physician early enough; and the postponing of proper care after an intelligent diagnosis has been made.

The danger of tuberculosis cures is perhaps greater than of any of the other manifold advertised "cures" with the exception of cancer cures. So much depends upon early discovery and promptness of treatment that every hour wasted in taking patent medicine gives the disease an added hold on the patient while, of course, no good is done by the medicine itself. A large percentage of the advertised tuberculosis cures are in themselves harmless, but some contain drugs which, except in the hands of skilled physicians, may do untold damage.

No reputable physician would advertise a cure for tuberculosis. Tuberculosis is curable. But only after months of treatment for the early cases, and years for the more advanced types, will a physician pronounce his patient even an arrested case. A period of five years after a case has been arrested is regarded as necessary before a patient can be definitely said to have been cured.

What happens to a man who has tuberculosis and responds to a cure advertisement or to some "new and sure" treatment advertised by quacks? The stories of such cases may be told in one and that taken from the records of the Wisconsin Anti-Tuberculosis Association's clinic files.

E. J. Rambow, a young man living at Lyndon Station, Juneau County, had pulmonary tuberculosis. He placed himself in the care of Dr. T. S.

Lawler, a reputable physician, who attempted to induce Rambow to take the approved tuberculosis treatment. Rambow agreed, but after a few days in bed decided to try another treatment of which he had heard.

It was while Rambow was still taking these other treatments that he came to a free chest clinic of the Wisconsin Anti-Tuberculosis Association held in Reedsburg January 25, 1921. Active tuberculosis in both lungs was diagnosed by the clinic physician. He was advised to go to a sanatorium. But he was still convinced that these "other" treatments would help him and refused to consider sanatorium care. For nine months Rambow visited a nearby town for treatments—stayed at a hotel—and was a menace to all with whom he came in contact.

"I suppose after the eight or nine months of treatment and failure to improve, Rambow got tired of it," said Dr. Lawler. "He came back to Lyndon Station and came to see me. I wanted him to go to a sanatorium, but his wife thought they could do more for him by taking him to live on a farm. Rambow told me at this time that his treatments had cost him about \$1,800 and that he had almost no money left. He was a married man with one young child."

During the summer of 1921 Rambow lived on a farm, but his condition grew steadily worse and late in the following autumn he was found living in a garage under wretched conditions. Dr. Lawler then tried once more to persuade the man to take sanatorium treatment, this time with success, for Rambow was at the end of his resources.

Rambow was admitted to Oak Forest Sanatorium, La Crosse County, early in January, 1922, too late for successful treatment, and died there about two months later. That there would have been a good chance for the man's recovery had he had the proper treatment as soon as his ailment was discovered is evident from an extract from a letter written by the Wisconsin Anti-Tuberculosis Association to Dr. George Lueck, head of the Oak Forest Sanatorium, concerning Rambow when he was admitted to the sanatorium: "He was examined at the clinic last year in Reedsburg and at that time was an advanced case. Dr. Pleyte felt that he had a good chance

Medical History Collection at State Museum Includes Many Interesting Relics of Pioneers

BY CHARLES E. BROWN,
CHIEF STATE HISTORICAL MUSEUM,
MADISON.

In the year 1908 the State Historical Museum at Madison began the collection of specimens illustrating the medical history of Wisconsin. The desire of the Museum to possess such a collection was quite widely advertised in state papers and a correspondence was entered into with the descendants of many of the early physicians of the state. Its growth was very slow at first, only a few specimens being received from various donors.

With the gift to the Museum in the year 1911 of the medical instruments and appliances in use by the late Dr. Solon Marks during 37 years of medical practice in Milwaukee, the collection received its first real impetus. Among the many interesting specimens included in this gift are his fine set of surgical instruments contained in a walnut case, a Paquelin's Thermo Cauter, an Arnold & Son's Aspirator, a Molesworth's Climax Dilator, a Davis & Kidder's Magneto Electric Machine, a Combined Acme Dilator and Intra Uterine Syringe, an Allen Surgical Pump, a Russell & Haines Tracheatome and a Molesworth's Cervical Straightener, all of them instruments no longer in use.

With this collection came his fine library of medical works now in the library of the University of Wisconsin.

Other notable gifts followed the receipt of the Mark's collection. Dr. J. J. Davis retiring from years of medical practice in Racine added to the collection in October of the same year a Sage Urethral Powder Applier, a De Vilbiss Atomizer, a vibrator, aspirator, nasal and throat speculums, bone chisel and mallet, rectal and uterine forceps, a set of urethral dilators and other interesting instruments. An antitoxin syringe in a nickel plated case is a reminder of the fact that he was the first physician to suggest the use of a syringe container for antitoxin.

A fine cupping set in a velvet-lined wooden case was used by Dr. Sheel, an early physician of Milwaukee, being brought by him from London in 1849. Another set nearly as fine and a set of surgical instruments were used by Dr. James T. Reeve, an early practitioner of Appleton. A pocket surgical case and other instruments be-



Scarificator used in blood letting. Note number of small knives released by spring.

longed to Dr. George W. Jenkins, an early Kilbourn physician. He carried it with him on calls made to many parts of Columbia and Adams counties. Another pocket case belonged to Dr. Charles H. Harney in 1861, a prominent doctor of Grant county. In the collection there is also his red morocco leather-covered medicine case. This is 14 inches square and 6 inches thick and is provided with leather grips.

A leather-bound medicine chest was used in a Wisconsin home in 1850. A third medicine chest belonged to the late Dr. O. M. Twitchell of Madison. He used it in 1849 when he began his medical practice in New Hampshire. Among other specimens used by him was a small brass drug scale. This is mounted on a small block of painted wood. In it there is a small recess fitted with a slide cover and which contained the brass and lead weights used by him in weighing drugs. The Museum also has the small wooden-framed, shoe-string bound slate which hung on the door of his Madison office. A similar brass scale, in a case, was used by Dr. S. A. Pearse, an early physician located at Packwaukee.

Leather saddle-bags were used by Dr. A. Belkap of Whitewater in his early medical practice which covered nearly the whole of Walworth and Jefferson counties. The country roads were few and



Favorite scalpel used by Dr. Senn at his Rush College clinic.

very poor and his visits to his patients, often many miles distant, were made on horseback.

A fine set of dissecting instruments was the former property of Dr. A. B. Lynde, of Milwaukee. A cranioclast and a trephine, the former made in Vienna, Austria, belonged to the late Dr. J. F. Pritchard of Manitowoc; a tin ear trumpet, a hundred or more years old, was brought to Wisconsin from the Colonial Stephen Robbin's homestead at Lexington, Mass. An amputation saw, cranial saw, obstetrical forceps and other instruments belonged to Dr. George W. Fay in 1852, a medical practitioner at Menasha.

CIVIL WAR PERIOD.

The service of Wisconsin medical men in the Civil War is remembered by the presence in the state collection of a stethoscope and tourniquet used by Dr. James T. Reeve when assistant surgeon of the Tenth Wisconsin Volunteer Infantry and later surgeon of the Twenty-first Wisconsin. The tourniquet is a woven strap which was tightened by means of a brass screw. He commenced his medical practice at Depere in 1856. A copy of Knights' Medical Adviser was taken by Union troops from the home of a Confederate physician at Liberty, Tennessee, in May, 1863. The donor, Dr. B. C. Brett, of Green Bay, was at that time assistant surgeon of a regiment which took part in a foraging expedition of the 1st Brigade, 1st Division, 14 Army Corps, into this region.

A box of "Chlorinium or The Common Salt Mixture" was used as a disinfectant at Camp Randall, at Madison, during the Civil War. It is contained in a large paper box on the front of which are pasted printed directions for the use of the mixture. There are also specimens of the lint and bandages supplied by Wisconsin women for use in the great struggle.

An interesting printed handbill dated at Huntsville, Alabama, September 7, 1864, and which came with the Marks' collection, gives an idea of the difficulties under which physicians residing in the South labored during the latter years of the war.

MEDICAL NOTICE

"To meet the constantly increasing price of everything we purchase or have done, we are compelled to

make an advance in the rates of charge—and to adopt strictly Cash System of practice. Cash is required of us for every purchase. No one can complain if we ask prompt settlements.

"From this date our charges will be as follows:

For Single Visit in the Day in Town.....	\$5.00
For Each succeeding Visit and Prescription.....	3.00
For Visits and Prescriptions	6.00
For Office Examination and Prescription	2.00
For Attendance in Natural Labor	30.00
For Mileage to be added to Visit (Day)	1.00
For Mileage to be added to Visit (Night)	2.00

"In all other cases—Medical, Surgical or Obstetrical—the same ratio of increase in charge will be observed.

H. A. Binford, M.D.,

H. M. Robertson, M.D.,

A. R. Burritt, M.D.,

L. B. Sheffey, M.D."

Dr. Marks went to the front as surgeon with the Tenth Wisconsin Volunteers in 1861. In 1862 he was in charge of the government military hospitals at Huntsville.

Another handbill reads:

Preserve Your

TEETH

The undersigned would respectfully announce that he has taken Rooms at _____.

Where he will hold himself in readiness to perform all operations in Dental

SURGERY

In a manner he flatters himself that will be perfectly satisfactory to all who may honor him with their patronage.

CHLOROFORM will be administered if desired.

Isaac Howe, M.D.

OTHER NOTABLE SPECIMENS.

Among other notable objects in the state collection is the favorite scalpel used by Surgeon General Nicholas Senn in his world famous clinic at Rush Medical College, Chicago. There are also a crusher and other surgical instruments used by him when he began his medical practice at Elmore, Fond du Lac County, in 1867. A bronze replica of a gold medal presented to him on the occasion of his sixtieth birthday by the medical profession of the United States, bears the inscription, "Nicholas Senn, the Master Surgeon. Memorial from his fellows, November 11, 1902."

A set of obstetrical instruments were used by Dr.

Charles Gorst, when necessary, in the care of two thousand childbirth cases in Baraboo, Wisconsin, in the years 1884 to 1904. He was later superintendent of the State Insane Hospital, at Mendota. He presented to the Museum an interesting set of dental instruments in use in that institution in 1860.

An interesting trephine was made by Dr. William F. Fox, of Oregon, and used by him in 1845, in operating upon a man who had fractured his skull. Not knowing the exact nature of the man's injury he had neglected to bring his trephine. Going into a blacksmith shop he made this implement with which he successfully performed the operation. It has the general appearance of a corkserew. The lower portion consists of an iron cylinder nearly one inch in diameter with a serrated edge, inserted in which is a short iron stem with a wooden cross-piece at its top.



Trephine made by Dr. Fox for emergency operation.

A card 3x4 inches in size, made of glazed paper, and having a fancy printed border advertises the office of Evans and Strong (J. M. Evans and C. G. Strong), physicians and surgeons of Union, Rock County, who "will attend promptly to the various branches of their profession."

There is a catalogue of the Vermont Medical College, Woodstock, Vermont, for the year 1848, a college where some early Wisconsin Physicians obtained their medical training. An admittance card to this college bears the following:

"Admit Mr. Isaac Howe to the lectures on the Prin-

ciples and Practice of Surgery, by Edward M. Moore, M.S., Woodstock, March, 1847."

A curious little book of about 150 pages, by Dr. Joseph Green, dated 1821, is dedicated to:

The Gentlemen Studying Medicine
and

Preparing for their Examinations

Examination in Anatomy, Physiology, Surgery,

Practice of Physic, Materia Medica,

Chemistry and Pharmacy.

For the Instruction of Students.

The heroic labors of Father Joseph Damien who devoted his life to the leper colony at Molokai, Hawaii, are remembered in the collection by several medical instruments and a medical work



When doctors were dentists as well: an "instrument" for extraction.

"Physician for Ships," by Usher Parsons, M.D., Boston, 1851. These were used by him in treating the ordinary ailments of members of the colony, before the days when regular physicians were employed. The cover of the small book, a real treasure to him no doubt, is protected with a calico-cloth cover sewed over its paper cover. These specimens

are the gift of his worthy successor, Brother Joseph Dutton, a Wisconsin man.

All of the foregoing specimens, and others of nearly equal interest, are installed in a large wall case in the north hall of the State Historical Museum. On its walls are photographs of a number of early Wisconsin physicians including Drs. Orlin Oatman, Port Washington; Israel Green, M. H. Fisk and Horace O. Crane, Green Bay; George W. Harrington, Ashland; W. H. Fox and C. B. Chapman, Madison; Lewis Sherman, and Solon Marks, Milwaukee, and James T. Reeve, Appleton. A fine bronze bust of General Senn stands on a pedestal beside the case.

In a nearby table case is the medical and other equipment used by Dr. Smiley Blanton of the University of Wisconsin, when a member of the U. S. Medical Corps of the A. E. F., in the recent World War.

Directly opposite the medical history collections is a fine representation of a pioneer drug store. It is complete in every detail with a prescription case, counter, showcase and shelving made of butternut and walnut. There is the inevitable mortar, a drug mill, a Wolff furnace, distilling outfit and a fifty-inch shelf of books, the druggist's working library. This drug store and the hundreds of specimens which it contains are the gift to the Museum of the members of the Wisconsin Pharmaceutical Association.

Wisconsin history informs us that there were in the state in pioneer days many efficient and estimable physicians "who nobly bore the hardships of no roads and poor roads and long distances of travel." All honor should be paid to them.

"The first physician in Wisconsin was Dr. William Beanmont, who came to Green Bay from Mackinac in 1826, under government orders. He was known the world over for his researches in the processes of digestion. The first medical man in actual practice in Milwaukee was Dr. Jesse S. Hewitt, who settled there in 1835. He was closely followed by Drs. Proudfit, Woleott and Castleman. Drs. Russell and Tobey were practicing at Platteville at about the same time, while in the vicinity of Kenosha were Drs. Samuel McClellan and Frances Paddock. Dr. H. A. Tiffany was the first physician to locate at Madison. He came in 1841 or 1842." The museum has the iron mortar which he brought with him. Dr. Chandler B. Chapman was the next to establish himself.

The state medical history collection contains at the present time about 500 specimens. This number, with the help of Wisconsin physicians, the Museum hopes to greatly increase in the coming years as a fitting memorial to the services of the early medical profession in our state.

TRI-STATE TOUR PLANS COMPLETE

The Inter-State Post-Graduate Clinic Tour to Canada, British Isles, and Paris in 1925 is now being arranged under the supervision of the Managing-Director's office of the Tri-State District Medical Association. The time for leaving will be about the middle of May, 1925.

The tour will consume, approximately, two months' time and the total cost from Chicago and back to Chicago again will be less than \$1,000. This will include all clinic arrangements and admissions and all traveling expenses, except meals on pullmans in America and tips on the ocean steamer. First-class hotels will be used everywhere and the ocean passage will be on the largest and finest of the new one-cabin ships.

Clinics are being arranged in Dublin, Belfast, Liverpool, Manchester, Leeds, Edinburgh, Glasgow, Newcastle, London and Paris and other points of clinical interest. The clinics will be conducted by the leading clinicians of these cities. The opportunity will be given, subsequently, to visit the clinic centers in other parts of Europe.

This tour is open to members of the profession who are in good standing in their state or provincial societies and their families and friends.

Sight-seeing programs will be arranged practically every day abroad, including the most scenic part of the countries visited, without extra cost.

On account of the great demand for reservations, applications should be made as early as possible to Dr. William B. Peck, Managing Director, Freeport, Illinois. Preference in the assignment of hotel and steamship accommodations will follow in the order in which the applications are received.

CENSUS BUREAU CHECK

Officials of the U. S. Census Bureau will make a check on the completeness of vital statistic registration in this state during the spring. The State Board of Health urges all physicians to report birth registration promptly as well as all other required statistics.

The Hospital Proposition—An Independent Survey. State Architect Reviews Present Needs.

BY ARTHUR PEABODY,
STATE ARCHITECT,
MADISON.

Editor's Note—This is the second of a series of articles by Arthur Peabody, State Architect. Because the April number will be the Lay Issue, the third of this series will appear in our May number.

HOSPITAL GROUPS.

In large institutions on extended plots of ground, the program of separate buildings offers advantage in that patients requiring treatment of a certain sort may be segregated in this way from others. In locations where separation must be made on account of race differences the same thing applies.

The principal divisions of hospital treatment are, general medicine and surgery, psychiatrics, pediatrics, obstetrics, etc., each being advantaged by separate buildings, which, however, may be connected by covered corridors. This classification is equally valuable in smaller hospitals where ground space permits and leads naturally to the construction of buildings of less cost than the standard hospital unit.

Quite recently the adoption of single storied units for a psychiatric hospital for Wisconsin soldiers has met with so much approval that the plan is being followed by the United States at Great Lakes, Illinois, and at Perryville, Maryland. These buildings are sufficiently fireproof for practical purposes, having masonry walls, concrete floors and ceilings of wire lath supported on metal ceiling joists. The roofs are covered with asphaltum shingles finished with ground slate surfaces. On the whole, the buildings are quite safe.

A principal advantage with this class of buildings is low first cost, about \$1,200 per patient as compared with \$3,000 to \$4,000 per patient in standard hospital buildings. Whether the life of the buildings will compare favorably remains to be proved. Another advantage is the convenience with which necessary changes in the institution can be made. A single storied building may be remodelled without disturbance to patients in adjacent buildings, whereas the same work in a standard hospital building will involve noise, dust and disturbance throughout the entire structure. New units may be added at will, and obsolete buildings

removed at a comparative low cost. One story buildings again require no stairs, elevators, clothes chutes and fire escapes. There are no incidental dark spaces. Patients may be readily moved out of doors for the benefit of fresh air or on account of any trouble which may occur. Where the surroundings are pleasant, so that patients will enjoy being out of doors, the convenience of one story buildings is plain to be seen.

The element of ground cost is of course important. Whether it is better to invest money in low cost ground or in expensive buildings is the problem to be determined.

HOSPITAL CONSTRUCTION.

The difference in cost between buildings with wooden floors and those with concrete floors, which marks the essential difference between fireproof and non-fireproof structures, is so small that there is no argument for buildings with wood interiors. This does not mean that fires will not occur in fireproof hospitals. The difference lies between a local blaze and a conflagration in which the building is destroyed. The one item of interruption of service by the loss of an entire building is sufficient to demand fireproof construction. Hospitals of the first class are built, as the saying is, for all time. However, this in modern days means nothing. Buildings over thirty years old are now obsolete. The progress of medical science is so rapid and so revolutionary that the poorest expenditure of money might be for a building which would actually endure for two hundred years. Certainly, the rigid methods of construction common to fairly recent building practice are no longer desirable. The ideal hospital building is one capable of radical remodelling and adaptation from top to bottom. For this the steel frame and the concrete frame buildings come nearest to answering requirements.

The structure consists of a system of posts and girders supporting the floors and roof. It is quite independent of supporting walls. The exterior enclosure of stone, brick or tile, is placed upon and outside of the frame and may be entirely stripped away, together with the windows and doors, should occasion require. Dividing partitions also may be

taken out in part or in whole, leaving the building frame standing by itself. Such a building may be counted as suitable for all time. That is to say, it is capable of being adjusted to any contingency short of increasing the height to an extent greater than the foundations will endure. It may be extended in any direction. The interior may be wholly rearranged. The amount of window surface may be increased or diminished in accordance with demands. It will never become necessary to tear everything down and begin over again because of such elements as fixed bearing walls.

It will occur to some that this may be all very well for large buildings, but for small hospitals it would be better to hold to the old methods, on account of first cost. There is argument for this, but it is only the one that poor people cannot afford to economize. The complete concrete frame for low buildings is a distinct addition to cost, but the amount is not large. With larger buildings the difference in cost may not apply.

Another item in hospital building is to see to it that modern utilities such as water and drain pipes and those for gas, air and brine, together with all conduit pipes for electric lighting and power, are placed so that they may be removed and reinstalled conveniently. This does not mean leaving them exposed. Nothing more serious than a coat of plaster, however, which may be cut into and replaced, should cover them. Under this program wards may be divided into rooms, small rooms thrown together to make larger, corridors modified, etc.

One other general condition should be observed, that buildings should not be planned with the ordinary basement. So many utilities enter into the standard hospital building such as boilers, heaters, pumps, return pipes, elevator pits and the like, that a story by itself, not intended for other uses and certainly not for human occupation is necessary. This story, comparable to the cellar or sub-basement common with the high buildings of the country, may be left without window lighting and in most cases without special ventilation. It may contain dead storage spaces for materials, storm windows, screens and the like, but its primary office is access to heating and lighting mains, drain pipes and so forth, which intrude on the use of the ordinary basement. It is not necessary that the basement story as such should be abandoned. That will depend upon circumstances. In many build-

ings it is advantageous to raise the floor to the ground level, making a low story, in which offices and service rooms of various kinds can be located. This will raise the first floor level two feet or more over what is customary, but it permits the main entrance to be level with the sidewalk, thereby avoiding all exterior steps, and suggests the location of the concourse and clinic below the principal floor. The elevators, rising from the ground floor, eliminate all stair climbing inside the building or out, which is an advantage in every way. Finally there is no question of the value of a ground story as compared with the best possible basement, in point of light, ventilation, dryness and convenience of access. These values apply to small buildings as well as large. The regular hospital rooms begin with the first story instead of the second. In short, the building might almost be a whole story lower, on account of the improved use of the basement. In the ordinary case, that is, with hospitals of medium size, there will be the single building. This will contain the concourse, the visitors' waiting room, etc., clinical examination rooms, ambulance suite, and in some cases a mortuary chapel. Above these are the patients' rooms, large and small, and the open wards, with accessory utensil rooms, sterilizing, linen and storage rooms and the operating suite. The kitchens, diet kitchens and dining rooms for physicians, nurses and employees complete the list.

THE CONCOURSE.

If there is anything more tiresome than waiting for a train, the time passed until your physician is at liberty may be that. The usual concourse is not particularly adapted for making this enjoyable. The room is usually too small and the different sections of our American society are not sufficiently segregated. It is of advantage to have more than one entrance to the concourse and sometimes more than one waiting room. It is desirable especially to provide for the very poor or the people of different races in sections by themselves. Frequently the concourse is merged with the lobby, using the hotel term, and contains the business counter, information desk, telephone, signal desk, pharmacy counter, etc. Retiring rooms for both sexes are provided. The concourse often serves for out patients waiting for treatment.

The ambulance entrance is most convenient when placed at a point removed from the concourse. Here the emergency suite of rooms is arranged in

which the patient may be prepared directly for admission to the wards. It is advisable to have visitors entrance separate from the other two, so that visitors may be directed by the shortest route to the patient whom they wish to see, and contact with other patients and with the waiting groups in the concourse is avoided.

The clinic, immediately adjacent to the concourse, consists of a sufficient number of examination rooms to permit of scientific diagnosis and the assignment of cases to the particular quarter of the hospital suited for their treatment.

Where the institution is of considerable size, the concourse and clinic may occupy an entire building. There are several arguments for this, one being the protection of the hospital proper from exposure to miscellaneous infections from the outside world.

The office of the clinic is so important that it has been expanded greatly in recent times and become the scene of the most important steps in hospital practice. Accessory to it is the X-ray laboratory, by which further exploration into the nature of troubles is effected.

From the clinic the patient passes to the treatment section of the hospital. This consists of the medical and surgical areas and as accessory to them, the patient rooms and wards.

Incidental to the housing of patients is the dietary and service function, similar to that of the hotel. The main difference obtaining here comes out of the fact that hospital patients are not free agents. They may not have what they fancy but must receive what is administered. In other respects the customs and traditions of the hotel obtain in nearly every respect, and the closer these are followed the better the results.

Patient rooms are commonly arranged on the basis of two bed spaces. That is to say, a single room is made of a size to contain one bed under ordinary circumstances or two beds when required. This operates to advantage, giving the patient ample space ordinarily and making it possible to double the capacity of the hospital on occasion. A standard room eleven feet by sixteen feet will permit this arrangement. Very large wards are undesirable, the sixteen bed size being the desirable maximum.

Beside patients, the hospital contains three groups of persons, nurses, interns and employees. How far provision must be made for housing these persons will depend upon the location and sur-

roundings of the institution. Unless the neighborhood is one where living quarters may be found they must all be accommodated on the hospital grounds. It is less desirable to place dormitories within the hospital building, except for interns who are liable to be called upon at all times. Even these will be benefited by regular periods of absence from the scene of duty. The classification of the hospital staff into physicians, interns, nurses and employees falls out evidently from the nature of the duties of each. These differences are insisted upon in the matter of lodging, feeding and social relations and the best program for the architect is to fall in with traditions. At all events one can be sure of disapprobation if in the arrangement of things standard hospital codes and customs are neglected.

FINISH OF THE BUILDINGS.

There is no particular advantage in creating so much perfection in the fireproof and sanitary character of hospital buildings as will result in an inhuman and repellent atmosphere. Hospital patients are affected for good by pleasant surroundings not excruciatingly proof against everything in the world. The evidence of fire protection is to a certain extent comforting, especially in gigantic buildings and the daily attention to neatness is an assurance of another sort of care. But these elements may be too obvious. There is nothing against a wooden door, for example, in an otherwise perfectly safe building. With all these evidences, however, the hospital may be actually not safe. It is not so long ago in Germany, at that time admitted to be the pink of perfection in everything that is excellent, that the obstetrics wards, as statistics showed, were nothing less than a menace to the prospective mother. The same thing may apply in other branches of hospital practice in the absence of intelligent thought and resulting precautions. Ordinary dirt may be quite harmless. How far it may be necessary to carry protection against it requires the exercise of common sense. The question turns on what actually promises to create a menace. There is nothing essentially clean about a tile floor for instance nor certainly filthy about one of wood. It depends upon the methods of cleaning employed for each. Certainly the means taken for keeping tile in condition are not those which are suitable for wood.

But why wood anyhow when one can have tile? The answer is that human beings are not cliff

dwellers, accustomed to stone. In ordinary life they inhabit houses where everything that is hard, cold, noisy, and generally uncomfortable is modified to suit their habits and preference. To be cast suddenly into a world in which these elements are emphasized, with the very best intentions of course, is a shock. In so far as it conduces to a cure, it is justified. To a certain extent also the element of labor saving is to be considered. Beyond what good judgment confirms, however, it is a mistake to follow theoretical programs to their ultimate conclusion. Especially it is unjustified to follow the crowd and make the building more cruel and more inhuman than the most recent examples for the simple satisfaction of being in the front rank. It would be unfair to charge the designers of hospitals with deliberate intention to do this. The tendency of building committees to follow precedent, which after all may be wrong headed, and the effort of persistent salesmen to add a multiplicity of excellent and automatic devices has the tendency to overload an already adequate building with expensive fittings and fixtures. Elaborate systems of ventilation and the like are introduced where the question of their necessity is too often decided upon the basis of preferring to be safe rather than sorry. This is the refuge of the ignoramus, not to say worse. In the observation of the writer there have been found great fans, for example, that have stood idle for a period of years simply because the effect without them was found to be absolutely sufficient, while the noise and discomfort produced by their operation was quite objectionable. Meanwhile, the opinion on forced ventilation has changed so much that the system as constructed would not be installed in any modern building. It is a fortunate thing in these days of preposterous prices to be able to turn to old time and well founded simplicity. Certain things, fresh air taken directly from outside, for example, is now regarded as most excellent. The same thing may be said of many old fashioned items, which falling out from common sense procedure cost relatively nothing but are none the less efficient and reliable.

One other principle in hospital construction needs to be emphasized, or rather two of them. First, that materials and workmanship even in the plain and homely end of the building should be excellent. Fanciful and short lived expedients to create effects or to obtain results have no place in

the hospital. The other is that purely temporary construction is the most extravagant form of economy. The structures so built remain always far longer than would be imagined, serving as impediments to obtaining what should have been provided in the first instance.

The equipment and furnishing of hospital institutions is a long story, much of it being standardized and not necessary to recount. Reliable makes of appliances, good furniture, the furnishing of kitchens and dining rooms, etc., require patience and a certain acquaintance with what will be best suited to the particular case.

In regard to modern utilities, heating and ventilating systems, plumbing and lighting, there remains something to be said.

HEATING AND VENTILATION.

These two necessities are so closely bound together that it makes little difference which one is considered first. Cities are credited generally with a smoky atmosphere, not fit for human breathing. To overcome this trouble, quite complicated and expensive apparatus for purifying air have been installed, and pure air raised to a temperature of about 70 degrees is supplied to the rooms of the buildings. There is no doubt of the necessity of this method provided hospitals are improperly located as most of them are in our great cities. Smoke in itself is harmless from a sanitary point of view, but it smells bad and the black color of the soot is objectionable. The most practicable remedy, of course, is to move the hospitals away from points where the smoke is thickest. This being done, the next thing is to return to the open window for ventilation. Fresh air, not previously passed over steam radiators is the most invigorating as well as the pleasantest accessory to hospital treatment. It may be introduced into patient rooms without danger provided it is admitted without creating drafts. Several forms of windows will do this. The sashes are arranged to open in such a way as to throw the air upward, mixing with the heated air at the top of the room and arriving at the patient at a comfortable temperature. The foul air must, of course, be removed in order to allow the entrance of fresh. This is managed in several ways according to the necessities of the case. With a patient room of ample size, however, the change of air may be quite slow. In ordinary wards the same thing is true.

Wisconsin Physicians Discuss the Problems of the Country Doctor In Several Sections of State.

Editor's Note—This is the last of a series of articles on the Country Doctor. The series began in the December issue.

COUNTRY LACKS FACILITIES.

BY OTHO B. FIEDLER, M.D.,

SHEBOYGAN.

In seeking an explanation for the failure of the young physician to select a rural community as a field of activity for his work, I am led to review the causes that influenced me to leave the small village for the larger field in the city.

While some of these factors lay in the social life, school facilities, cultural opportunities, the most potent factor was the handicap to efficient and scientific practice with the facilities available, the associations possible, or the time obtainable for study. Dissatisfaction with one's self, one's methods, and one's progress were the chief causes.

The young physician trained in a modern Class A college recognizes the great advantage, really the necessity, for means of employing laboratory investigations in reaching a differential diagnosis in many of his cases—the necessity for quantitative chemical analysis of secretions and excretions, of bacteriological examinations of blood, pus, tissues; microscopic examinations of tissues in order to do really efficient work and earn the fee which his clientele pay.

To practice medicine and surgery in a locality not having hospital facilities is like practicing law in the absence of the court. There are a certain number of cases which can be properly handled in the house, in the home, but most major surgical cases, and many of the more severe medical cases will receive the best treatment and the physician will be able to render such treatment only in the hospital.

To be sure, such patients can be sent to the hospital of some city, but they cease to be the patients of the rural physician, when they are thus transferred. The result is, that the doctor in the country loses the practice and the training incident to the care of the severely ill patient and must content himself in doing the lesser work.

He finds it difficult to treat his diabetic patients in the absence of a laboratory, in which he can determine blood sugar, or make quantitative urine

analysis. How is he to determine donors or transfuse his patients with the primary anaemia—how really to diagnose these in the early stages without laboratory facilities?

NO LABORATORY.

The young doctor may be able to do the technical laboratory work, when he first goes into such a community. He then probably has not the means of providing the equipment, and later when he could afford to purchase the apparatus and supplies, he has lost his technique, so that he no longer has confidence in his own findings.

The best interests of the patient do not justify the performance of major operations in the home, and the conscientious physician does not feel that he has a right to give his patient anything less than the best that is obtainable.

Moreover a general practice in the country covers too large a field to enable one to be proficient in his work. The most valuable knowledge in medicine today is not extensive but intensive in nature. "Know one field well, and confine yourself to that field." The tendency today is to group men to secure limitation of the field of activity, to secure a greater proficiency.

The absence of libraries, the paucity of current medical literature available is another handicap to professional efficiency. Yes, it may be received from a neighboring library, but by the time it arrives, the necessity for its use is gone in that particular case.

I would not emphasize too strongly the hardships of the life of the country doctor. It is all very easy and well in the summertime when roads are good and the automobile can be used, but in the spring and the autumn, when in many localities roads are almost impassable, and one should remember in most cases the patient does not live on a state highway, but on the country crossroads, and in the wintertime, when snow is deep and drifts are high, the life of the country doctor affords more hardships than fall to the lot of any man in any business that I know of.

These are a few of the reasons on the professional and personal side of the doctor's life, that cause one to pause before going to the country and make him ready to fly to other difficulties that he knows not of, when he leaves the rural district for the city.

ARE YOUNGER DOCTORS GOING INTO
COUNTRY PRACTICE IN WISCONSIN?
IF NOT, TO WHAT CAUSE MAY BE
ATTRIBUTED THEIR FAILURE
TO DO SO?

BY P. E. RILEY, M.D.,
EAU CLAIRE.

The managing editor of this Journal has asked me to write my impressions on the above subject, hence the heading of this article. I wish my words to be interpreted merely as a discussion of the able articles on this same problem by Dr. Colwell, in the December and January numbers of this Journal, with a few of my own conclusions added. I write only from what I have learned from observation and experience and not from a statistical study of the situation.

The younger doctors are not going into the country to locate in such numbers as they did fifteen years ago, at least they are shunning, whenever possible, the small town which has no hospital of any sort. They do this chiefly, I believe, for the reasons set forth by Dr. Colwell. There are a few other reasons to be spoken of later.

Whether or not the failure of these young men to start practicing in small towns constitutes a problem which is a menace to the country districts, at least in this reasonably well settled part of Wisconsin, is a question with many merited points of argument on both sides. The cry for more doctors in the country is not coming from very many doctors and from a lesser number of lay citizens than one might believe on giving it serious thought. One dissatisfied individual makes a louder cry than a large number of satisfied persons, when he or they suffer a temporary or minor inconvenience. I believe that the young physician avoids the small town, particularly the one within twenty or twenty-five miles from a hospital point, because he realizes that the means necessary to make a complete diagnosis are, according to the at present accepted standards, both time consuming and expensive; that many of them require trained technicians at high salaries. He sees also that the population of such villages and the territory surrounding them, is not sufficient to keep such apparatus and such trained technical help busy, enough of the time to pay but a small percentage of their expense. Furthermore, he sees that were he able to pay the "Ready to Serve" charge for the means and help in diagnosis, that when it came to treat-

ment, it, too, has with the advance of scientific methods, become so exacting and complicated that much of it can no longer be trusted to people in their homes, but must be under the daily supervision of trained assistants.

LAYMAN'S VIEW.

Now let us look at the situation from the layman's point of view. The cry for help in rural districts does not so often come from forward-looking people who see the changed conditions and requirements due to the advance in Medical Science. They see what Science has done for the dairy industry and know its value. They know that pneumonia requires close observation by the physician, and if they happen to live eight or ten miles from their village doctor, it is plain to them that it is economy of a high order to take the member of the family so afflicted to the nearest hospital at once. This is not only on account of the eight or ten dollars per trip that the doctor will charge, but because the home will be free from the worry and strain, and the business of carrying on the farm work can go on without interruption, while at the same time, the patient is having better care than he could possibly receive in the home. This line of reasoning in the layman's mind is becoming very common. Fifteen years ago, when an individual in the rural district was afflicted, sympathizing neighbors would flock to that home to help in any way they could. Time was not so valuable then and people were more neighborly and generous. Today the up-to-date farmer has become a specialist in his line and his time is very valuable. He prefers to have others care for his family's illnesses and believes that his neighbors should adopt the same policy.

One other factor that has much to do with people going to the city much more than in former years, is that they have learned that very ill patients can be moved without much danger. The rural communities of Wisconsin and all other states are well sprinkled with young men who saw service in the World War, in France, and these men know from what they saw of transportation of sick and wounded men that the danger is small; thus fear in the lay-mind in this matter is dying out. Twenty years ago it often took a real argument to get many of the people in rural districts to submit to being moved at all. It was fear that held them back. They know so much more about it now that it is not at all uncommon to see people making a

very good guess at a diagnosis of many surgical conditions, and coming direct to a surgeon in a hospital town in order to save time and the expense of a preliminary examination by their local doctors.

CONDITIONS CHANGED.

It is not the purpose of these comments to criticize either the above mentioned doctors or laymen. There should be no criticism of such attitudes. It is changed conditions of living, reasoning, working, and human relationship that have caused it. Means of rapid transportation have increased so much more rapidly than the rural population, that we might logically expect the present situation. I am not very optimistic as to remedial means. In some sections of the country, it undoubtedly is a serious problem. In this section of Wisconsin, it would seem that the rural districts are fairly well served, particularly as there are very few points far enough away from towns having a hospital to render it dangerous to transport patients to such hospitals, and the small towns (most of them at least) have doctors who are amply able to make good diagnoses, and who, if they are not in territory large enough to warrant the upkeep of technical means of completing diagnoses, are always ready to refer such patients to towns large enough to have such means always at hand with trained technicians to assist in the work.

Concerning permanent restoration of the country doctor in places that feel his absence keenly, there is not likely to be any real, satisfactory, permanent restoration until the population of such areas becomes much more dense than now. The well-to-do family can get to the city easily, and are not inclined to help their less fortunate, and often less thrifty neighbors, to subsidize a doctor to stay in the community. It is rather doubtful if the *very small* hospital, or outlying clinical station, will, in the very near future, be able to maintain X-ray or other technical apparatus for diagnosis. To be worth very much in the matter of service, such stations must be ready to treat not the obstinate, chronic case so much as the serious emergency, and to do this, they must be ready to serve at all times, and the cost of being thus ready to serve would prove a heavy drain on any sparsely populated section.

TOO TECHNICAL EDUCATION?

I believe that the young doctors will refuse, in increasing numbers, to locate in small places so long as Medical Colleges educate him to depend so

much on mechanical means and so little on the use of his five unaided senses for his diagnosis, and even a change there will not entirely remedy the matter, although it will help, for however keen may be the doctor in the use of his natural senses, he still needs the X-ray, the laboratory, and other mechanical means to help him in differential diagnosis. Always the advance of science means multiplicity of detail and complexity of technique. We will not go back to the old way, nor will we stand still. Communities will gradually adjust themselves to the new way by means of better education along health lines, as outlined in the publicity program of state societies, keener reasoning, the dropping of prejudices, and as they advance in this direction, the roads will improve, the population increase and automobiles will become even more common than they are now. The change will be gradual, but the above means will send sick people to points where several doctors and all the advantages that science has given medical men will be at their service. The next generation will see fewer men alone in small places, wearing out their lives in hard, and often unappreciated, labor for the sick, than was the case in the past generation or is in the present. Time will solve the problem, and a generation hence, our posterity will wonder why we worried over it.

WISCONSIN'S NEEDS FILLED?

BY A. J. WIESENDER, M.D.,

BERLIN.

Are the country districts in Wisconsin in need of doctors? This question is asked repeatedly. We find all over the state small country towns without a country doctor. In nearly every instance the old physician has retired and no young man has come to fill the vacancy.

The past ten years has brought about several important factors that we must reckon with in considering this situation. Here in Wisconsin, as elsewhere, ease of travel made possible by good roads and the automobile with the resultant tendency of people to go to larger towns for better service has had its effect on the distribution of physicians. We find a gradually diminishing number in the outlying country districts, while on the other hand in many of the larger towns are well equipped hospitals and a sufficient number of physicians to meet the demands of the entire district. A doctor at the present time is able to care

for a patient twenty or thirty miles from town as easily as his predecessor of ten or fifteen years ago could take care of a patient one quarter of the distance away. Of course the rural telephone has been another great factor in making this possible. We must take into consideration also the fact that there has been a great increase in the number of trained assistants in laboratory and office work who are able to lighten the work of the physician and in that way make it possible for him to care for a larger number of country patients.

In looking over the records of our Green Lake, Waushara, Adams County Society I find that the membership has remained about the same since the beginning of the organization. This brings out the fact that there has not been a falling off of the interested members of the profession. To my mind Wisconsin at the present time is well enough supplied with physicians.

THE HOSPITAL PROBLEM

(Continued from page 494)

It is contended by some physicians that air in motion is nearly as efficient as absolutely fresh air. Different patients again require various amounts of air depending upon temperament, personal idiosyncrasy and so forth. With the open window all such variations in supply may be obtained by adjusting the aperture to suit each case.

Heating cost is obviously dependent upon the amount of air introduced into the room. Where a hot blast system is employed the quantity of warm air necessary to maintain a reasonable temperature is out of all proportion to the amount necessary for adequate ventilation, so that radiators in the rooms are required to supplement the heating effect of the fresh air. The question then arises as to whether it is not economical to heat the room entirely by radiators admitting fresh air directly from the outside. It appears that the same amount of fuel is required no matter how the air is brought up to satisfactory temperature. With the hot blast system, however, the air must be overheated to take care of waste in ducts, etc., and other heat losses and finally come to the room at 70 degrees. This overheating is thought to be detrimental to the condition of the air. Assuming the system of heating by radiators, the advantage of steam is to be compared to hot water heating, and the opinion is held that a hot water system is the

simplest and most uniform in operation. The temperature of the water may be regulated at the heating plant to correspond with mild or severe weather, in this way effecting considerable economy of fuel. The regulation of steam heating systems is more complicated and expensive, and is especially troublesome in very mild weather.

The plumbing in hospitals is elaborate and expensive, but does not offer any particular problem other than that of a safe water supply.

Electric lighting, on the other hand, is less reliable on account of the tendency of the current to "go off" at inconvenient moments. For this a duplex system is advantageous. This may be effected in various ways, among them being connection to more than one power station. Storage batteries located within the hospital building, or privately operated generators are other expedients, either of which has its advantage.

QUACKERY DELUDES TUBERCULOUS

(Continued from page 486)

for recovery. He will have to go as a county case since he has spent all his money. His wife and child are now living with her mother."

Eighteen thousand lives have been saved in Wisconsin in the last fifteen years from death by tuberculosis. But they have not been saved by quackery. The State of Wisconsin officially offers proper care for the tuberculous; the work is furthered by the establishment of many county sanatoria, and thousands of Wisconsin's citizens contribute each year to provide this treatment and early diagnosis. There should be no tuberculosis "cure" advertisements appearing in the press to delude the reader, bleed him of his money, endanger his life and keep him in public life where he is a menace to all who come in contact with him.

CHIROPRACTOR QUARANTINED.

George H. Regan, chiropractor at Cornell, Wis., has been placed in quarantine as result of his treating a serious case of diphtheria. When the child became cyanosed, the parents called Dr. Foster, city health officer. The chiropractor refused to have cultures taken and was promptly placed under the usual quarantine.

SOCIETY OFFERS AID.

The Milwaukee County Medical Society have formally offered their services to the District Attorney in any action he may take to suppress quackery.

Sunny Rest Sanatorium in Racine County One of First County Sanatoria in State

BY MRS. RUTH MacMILLIN.

Four miles from the heart of Racine, in a rolling meadowland country studded with orchards, lies Sunny Rest, one of the older of the county tuberculosis sanatoria in Wisconsin. The first county sanatorium in the state was Greenfield, Milwaukee county's institution, which was opened in 1911.

Although the need for a sanatorium in Racine county had been considered pressing for some time, a good deal of difficulty was experienced in filling the original 37 beds when Sunny Rest was opened two years later in November, 1913. To the educational propaganda for sanatorium treatment for tuberculosis may be laid much of the credit for the popularity of sanatorium treatment today.

Sunny Rest was built primarily to serve Racine county and in accordance with this purpose, the policy of the sanatorium board is to give the preference to residents of the county. It occasionally happens, however, that a vacancy occurs which has no prospect of being filled in the immediate future, and in that case out-of-county patients are admitted. When the institution was erected the capacity was 37 beds and accommodations in the same building for the superintendent and the nursing staff. With the growth of the institution these quarters have proved entirely inadequate. An appropriation was therefore voted by the county board late in 1922 and last year a separate building to house the superintendent, nurses and domestic help was erected. The new home was formally opened February 13, 1924, and the moving of the sanatorium employes into the new building has made room for about eleven additional patients, bringing the total capacity up to 48. It also has made possible the conversion of some sleeping rooms into a sun parlor for ambulatory patients.

Because Sunny Rest is one of the older, well-established institutions and has found a definite place in the life of the surrounding communities, its patients are unusually well cared for with respect to permitted amusements, a feature of sanatorium life that often presents a considerable problem to the physicians and nurses in charge. During the past year funds were raised to purchase for the sanatorium a radio set and many a contented hour is spent by the sanatorium radio fans "listening



Sunny Rest Sanatorium.

in." Amplifiers make it possible for every patient in the institution to enjoy the radio. Moving pictures, concerts, talks and parties are staged at the institution by its friends from the neighboring towns as frequently as is permitted by the attending physician.

That Sunny Rest is always filled to capacity can probably be attributed in part at least to two factors: its location in Racine county which has the second largest population of any Wisconsin county (a very large proportion of that population is industrial) and to the fact that the Wisconsin Anti-Tuberculosis Association, under the auspices of its local branch, conducts at Racine twice each month a free chest clinic for the discovery of unsuspected and early cases of tuberculosis. Numerous patients have gone to Sunny Rest via the clinic, many of them patients in the first stages of tuberculosis with every chance for a rapid and permanent recovery.

While Sunny Rest has no special cottage for children, the institution welcomes child patients and has made provision for them in one section of the building. In an effort to give them systematic mental training as well as physical care and to keep them occupied, it has employed a part-time teacher, a young woman who is still "taking the cure" at the sanatorium.

Sunny Rest is manned by a staff of one part-time physician, Dr. Carl A. Schaefer of Racine; the superintendent, Miss Maud Harvey, and six nurses, including a head nurse and a night nurse. Daily visits to the sanatorium are made by Dr. Schaefer and the institution also has the consultation service offered by the Anti-Tuberculosis Association.



THE JOURNAL BOOK SHELF

- Gynecology.** Third Edition (Publ. Oct., 1923) by William P. Graves, A.B., M.D., F.A.C.S., Professor of Gynecology at Harvard Medical School; Surgeon in Chief to the Free Hospital for Women, Brookline, Consulting Physician to the Boston Lying-in Hospital. Third Edition, thoroughly revised. Large octavo of 936 pages with 388 half tone and few drawings by the author; 146 microscopic drawing; 103 illustrations in colors. 1923. Cloth, \$9.00 net. W. B. Saunders Company, Philadelphia, London.
- Habitual Constipation: Its Causes, Consequences, Prevention, and Rational Treatment.** By Ismar Boas, M.D. Translated by Thomas L. Stedman, M.D. 12mo. Cloth. 299 pages. \$2.00 net. Funk & Wagnalls Company, Publishers.
- A Manual of the Practice of Medicine.** By A. A. Stevens, A.M., M.D. Eleventh Edition, W. B. Saunders Co., Philadelphia. Price. Cloth, \$3.50.
- The Chemical Basis of Growth and Senescence.** By T. Brailsford Robertson, Ph.D., D.Sc., University of Adelaide, South Australia. J. B. Lippincott & Co., Philadelphia and London. 389 pages (illustrated), cloth.
- Alcohol and Prohibition in Their Relation to the Civilization and the Art of Living.** By Victor G. Veeki, M.D., San Francisco, California. Published Philadelphia and London. J. B. Lippincott Co., 165 pages, cloth covered. Price \$2.00.
- The Dietary of Health and Disease.** By Gertrude I. Thomas, Instructor in Dietetics, University of Minnesota. 210 pages (illustrated). Lea & Febiger, Philadelphia and New York. 1923. Cloth.
- Diphtheria and Its Application to Pneumonia.** By Harry Eaton Stewart, M.D., Paul B. Hoeber, N. Y. 210 pages, cloth, \$3.00.
- Pierre Curie (including Autobiographical Notes).** By Marie Curie; translated by Charlotte and Vernon Kellogg. 242 pages. The Macmillan Co., New York. Price, \$2.25.
- Rhus Dermatitis from Rhus Toxicodendron, Radicans and Diversiloba (Poison Ivy), Its Pathology and Chemotherapy.** By James B. McNair. The University of Chicago Press, Chicago, Ill. 1923. 298 pages, cloth.
- International Clinics.** Vol. III, 33rd Series, 1923. Edited by Henry W. Cattell, A.M., M.D. Published by J. B. Lippincott Co. 312 pages.
- Diagnostic Methods.** By Herbert T. Brooks. Fourth Edition, published by C. V. Mosby Co., St. Louis. 108 pages, cloth, 52 illustrations.
- Pennington's "Disease and Injuries of the Rectum, Anus and Pelvic Colon."** By J. Rawson Pennington, M.D., F.A.C.S., Proctologist to the Columbus Hospital, Veterans' Hospital No. 30, and the United States Marine Hospital. Chairman of the Scientific Assembly, Section on Gastro-Enterology and Proctology, American Medical Association; 679 illustrations, including 2 plates, cloth, \$12.00. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia.
- Clinical Diagnosis.** By Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, M.D., Professor of Clinical Pathology, University of Colorado. Fifth Edition, Enlarged and Reset. Octavo of 762 pages with 325 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company. Cloth, \$6.00 net.
- Sexual Problems of Today.** By William J. Robinson, M.D. Published by The Critic & Guide Co., 12 Mt. Morris West Park, New York, 1923.
- Neuralogic Diagnosis.** By Loyal E. Davis. Chicago, 1923; 173 pages. W. B. Saunders Co., Philadelphia.
- The Boston number of the Medical Clinics of North America,** Vol. 7, Number 3, November, 1923. Published by W. B. Saunders Co., Philadelphia, contains many interesting clinics.
- The Annual Report of the Rockefeller Foundation for 1922** covers 420 pages and is of decided interest to both layman and physician.
- The Care of the Baby.** A Manual for Mothers and Nurses, containing practical directions for the Management of Infancy and Childhood in Health and Disease. By J. P. Crozer Griffith, M.D., Professor of Diseases of Children in the University of Pennsylvania. Seventh Edition, thoroughly revised. 12mo. of 478 pages with 104 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.
- Report from Pathological Department and the Department of Clinical Psychiatry, Central Indiana Hospital for Insane.** Vol. VIII, 511 pages.
- Diseases of the Skin.** By R. L. Sutton, Kansas City. C. V. Mosby & Co., St. Louis. Fifth Edition, 1,200 pages, illustrated. Cloth, \$10.00.
- International Clinics.** Vol. IV, Thirty-third Series. 1923. J. B. Lippincott Co., Philadelphia and London. Cloth, 308 pages. Illustrated.

BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,

Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Infection, Immunity and Biologic Therapy. John A. Kolmer, M.D., University of Pennsylvania. W. B. Saunders Co., Philadelphia and London. Cloth, \$12.00.

The new (Third) edition of *Infection, Immunity and Biologic Therapy* by Dr. John A. Kolmer of the University of Pennsylvania is a remarkably complete manual of the laboratory technique in immunology as well as the practical applications of this science to preventive medicine and therapy. There is considerable needless repetition, however, especially in the first part of the book which is devoted to General Immunologic Technique, and the author gives directions in extreme de-

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tail trusting very little in the general intelligence of the reader.

The chapter on Complement Fixation in Syphilis is especially good including as it does a digest of Kolmer's work in standardizing the Wassermann Reaction. The chapters on Anaphylaxis and Allergy have been largely rewritten and will be found both critical and practical. A large portion of the book is devoted to the facts and theories in clinical allergy and biologic therapy which the practitioner will find admirably adapted to his needs. Applications to veterinary medicine have not been neglected, and the improved bibliographies throughout the book will aid the careful student in further investigation.

I have used the earlier editions since their publication, and can cordially recommend this larger brother of the former volumes.—*Paul F. Clark.*

American Illustrated Medical Dictionary (Dorland). A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with the Pronunciation, Derivation, and Definition. Twelfth Edition, revised and enlarged. Edited by W. A. Newman Dorland, M.D. Large octavo of 1296 pages with 338 illustrations, 141 in colors. Containing over 3000 new words. Philadelphia and London: W. B. Saunders Company, 1923. Flexible Leather, \$7.00 net; thumb index, \$8.00 net.

A CORRECTION.

In our January column a review appeared of Stewart's "Diathermy and Its Application to Pneumonia." In this review we said, "If we consider Dr. Stewart's cases separately we find that five deaths are reported in twenty-four treated cases as compared with two deaths in twelve controls."

We regret that a division in the publication led us to make this statement which, upon a more careful study, we find to be in error. The statement should have been that there were 36 cases of lobar pneumonia treated by diathermy with 7 deaths and the control group includes 21 cases of whom 9 died.

Fighting Foes Too Small to See. Prof. Jos. McFarland, Prof. of Pathology, University of Pennsylvania. F. A. Davis Co., Philadelphia. Price, \$2.50.

"Fighting Foes Too Small to See" is the story of the prevention of Communicable Diseases, well told by Dr. Joseph McFarland, Professor of Pathology in the University of Pennsylvania. The book is unusually readable yet accurate and not too emotional.

The general reader will especially enjoy the liberal use of direct quotations from the writings of the men who have made outstanding discoveries in preventive medicine. For example, Sir Ronald Ross tells part of his remarkable story of the discovery of malarial parasites in the stomach of the mosquito. A quotation from the Vallery-Radot Life of Pasteur gives the reader the tense and dramatic tale of the first successful vaccination against human rabies. Samuel Pepys tells vividly of the seventeen to eighteen hundred dead of the Plague in one week of the epidemic year and of the frantic efforts of the people to escape from the city. It is a vital

human story vividly told with a liberal use of illustrations to aid in tying the facts to the men who discovered them.

Not only is the book interesting, but it emphasizes the essential facts about the modes of spread of infectious diseases and the methods of prevention and I cordially urge physicians to recommend it to any intelligent layman. It is a good gospel.—*P. F. C.*

Practical Local Anaesthesia and its Surgical Technic. By Robert Emmet Farr, M.D., F.A.C.S. Large Octavo, 529 pages with 219 engravings and 16 colored plates. Cloth, \$8.00 net. Published by Lea & Febiger, Philadelphia and New York, 1923.

The wide repute which has attended the author's extensive experience in the field of surgery stamps him as a Master Craftsman in the Art. The universal success which has attended his efforts in the field of Local Anaesthesia amply entitles him to promulgate his views and teachings. Seeing both sides of each case—the surgical as well as the anaesthetic—with a thorough knowledge of the problems to be met enhances greatly the practicability of his book, in that it teaches a successful technic.

Great stress is laid upon the personal factor because the methods used determine to a great extent the success or failure of surgical procedures under local anaesthesia. Hence, many of the finer points in surgical technic, assistance, operating room armamentarium and deportment, et cetera, are entered into in great detail.

Illustrations in the form of drawings and reproductions are used to advantage in clarifying the text. The liberal use of case reports are both instructive and of interest.—*E. F. S.*

Management of the Sick Infant. By Langley Porter and William E. Carter. Second edition. Published by C. V. Mosby Co., St. Louis.

The second edition of so popular a book as this is naturally received with much interest. As its title indicates, it is essentially a practical work, most of the space being devoted to diagnosis and treatment while pathology is scarcely touched. Some of the treatment recommended, especially in the acute respiratory conditions seems more strenuous than is really necessary.

The section on Methods is well illustrated and the exact technic of almost all procedures in Pediatrics is given in detail. The most notable addition to the second edition is a very good chapter on Prematurity.—*H. K. T.*

Intravenous Therapy: Its Application in the Modern Practice of Medicine. By Walton Forest Dutton, M.D., Medical Director, Polyclinic and Medico-Chirurgical Hospitals, Graduate School of Medicine, University of Pennsylvania. 542 pages with 59 illustrations. F. A. Davis Co., 1924. \$5.50 net.

In this work the author has arranged under one cover many of the outstanding facts, and a few of the fancies, connected with intravenous therapy.

Part I is devoted to the general technic of intravenous therapy. In this, there is a full discussion, with careful attention to detail, of the subjects of venesection,

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transfusion of blood and normal salt solution, and the administration of arsphenamin and allied arsenicals. Five chapters are given to blood transfusion with its associated factors, such as its indications, special applications, dangers, blood grouping, technic, and different methods. The general technic of intravenous injections with relation to the preparation of the patient, the selection of the vein, the selection of instruments, method of entrance into veins, preparation of solutions and care of apparatus is described in detail. A special chapter deals with intravenous therapy as applied to infants with special attention to the technic of puncture of the superior longitudinal sinus. Part I ends with a short chapter on intravenous anaesthesia.

In Part II the author has condensed the symptoms and treatment of over a hundred diseases into a manual arrangement. A brief description is followed by a short discussion of the treatment of the disease. The diseases considered are those that lend themselves to intravenous medication, and the author has collected together a great deal of information that is otherwise to be found only in scattered places. Particular attention has been given to tropical diseases but the majority of diseases dealt with consist of every day conditions, such as arterio sclerosis, arthritis, dermatitis, migraine, syphilis, etc. For the most part the recommendations for intravenous therapy in the various diseases are of proven value. But in a few instances the worth of recommendations are questionable. That the intravenous injections of triple distilled water for asthma or pruritus, of fibrolysin for keloid, of salvarsan for pellagra, of calcium for tuberculosis, of patients' own serum for tuberculosis, will effect relief or cure certainly has not been conclusively proven. Luminal is not mentioned in the treatment of epilepsy. In suggesting the intravenous use of soda bicarbonate for acidosis and other conditions nothing is said of the danger of alkalosis. Noma is given as a synonym for encephalitis lethargica, and ergotism for pellagra. In the main the author's suggestions for intravenous therapy are well chosen but in places the reader feels that the author has attached an exaggerated importance to the intravenous route of medication.—J. E. G.

Cancer—A Practical Quarterly Journal Devoted to the Best Interests of Cancer. Vol. I, No. 2, January, 1924.

It is impossible to recommend a journal, the Editor of which stands responsible for the following paragraph in his own leading article for the month:

"9. It is rarely necessary or best to operate on cancer, X-ray and radium rightly used, are often of value, the disease can be made to disappear and remain absent under careful and efficient dietetic, hygienic, and medical measures alone, without operation, or other means."—C. H. B.

Practical Chemical Analysis of Blood. By Victor C. Myers, Ph.D., Professor and director of the Department of Biochemistry, New York Post Graduate Medical School and Hospital. 2nd Edition, revised and enlarged. C. V. Mosby, St. Louis, 1924. 232 pages.

This volume is an excellent guide for any laboratory engaged in blood analysis. It will be found of value to

the clinician who desires to know how blood analysis is done and who cares to take the necessary pains to do it accurately. The book does not attempt to present methods that are so simple that they are available for use without the ability to do accurate quantitative work. But in each determination the author has attempted to give the simplest method which is compatible with the degree of accuracy which good clinical work demands. It is gratifying to see that the author, who has made so many contributions to the technique of these methods, has in the new edition seen fit to include as an alternate series of methods the complete "Folin-Wu system of blood analysis" which is so widely gaining in favor. There is on the whole a very impartial discussion of methods and their advantages. The book gives an adequate discussion of the types of apparatus, and a good appendix on reagents.

To the clinician and the student of medicine the book is made more valuable than most of the other books with similar titles because it contains in concise manner paragraphs on the significance of each test and definite presentation of normal standards and the types of fluctuation in disease. This text material is also organized about the different diseases, and indexed so as to be useful for clinical study. The original work on which statements and methods are based is all cited.—E. L. S.

Geriatrics, A Treatise on the Prevention and Treatment of Diseases of Old Age and The Care of the Aged. By Malford W. Thewlis, M.D. 2nd Edition. C. V. Mosby Co., St. Louis, 1924.

The author makes an excellent case for the independent and thoughtful care of the aged and their ills. He points out the processes by which an individual almost imperceptibly drifts into the pathologic-physiologic state of senility. His treatment of the hygienic life of the aged is particularly logical and useful. Especial attention is directed to the psychology of the senile which translates inactivity into invalidism. The reiteration of the dangers of keeping these individuals bedfast is a well taken note.

In general the polytherapy of the author will find little support, valuable though the detailed information may be. The reviewer takes decided exception to the use of extract of myocardium, liver and kidney for their several corresponding pathologic processes at any period of life. The insistence on a proper evaluation of blood pressure before applying drugs to influence its elevation for reduction is an example of the wisdom of the text. Care in the medication of the senile is a too frequently overlooked detail, which may spell disaster. A rearrangement of the text to bring together related portions is suggested. An excellent bibliography is appended.—W. S. M.

The Medical Clinics of North America. Jan., 1924. University of Kansas. Vol. 7, No. 4. Published by W. B. Saunders Co.

This issue contains the usual number of interesting articles. A few of the articles might be mentioned: Hypertthyroidism and Focal Infection, Care of Premature Twins and Triplets, Prevention and Control of Accidents in the Treatment of Syphilis, Prognosis and Treatment of Lobar Pneumonia, etc.—C. P. B.



SUCCESS DEPENDS ON YOU.

By Rock Sleyster, M.D.
President, 1924.

State Medical Society of Wisconsin.

Public health is but the sum total of our individual health. And to a large extent our individual good health depends upon the health of others. Medical science along the lines of sanitary engineering has given us relief from the great plagues of yesterday such as yellow fever, typhoid fever, and malaria. The diseases due to bad sanitation have been discovered and to a very great extent prevented. But all germ diseases are preventable.

Here medical science has found an enormous problem. The water supply of your community may be made safe at its source. But the source of the spreading of germ diseases is not in one place. The source of danger is potentially in every person. Here again medical science in the great field of prevention of disease has accomplished much. But the work is infinitely more difficult for it means not only the discovery of the cause and a means for prevention, but it means active cooperation of all the citizens if the maximum in results is to be obtained.

Thus we have quarantine laws aimed to prevent the spreading of smallpox, of scarlet fever, of measles, and other communicable diseases. We have a medical practice act which requires those who propose to practice medicine in this state to give evidence that they possess ability to use the usual care and skill in diagnosing or detecting with what disease the patient is afflicted. These so-called public health laws are not for the protection of physicians—they are for the protection of all of the state's citizens. Just as it was the members of this Society that secured the establishment of our State Board of Health so do they, from time to time, propose other laws. This is only because these men are in position to sense a need before it becomes apparent to others through increased death rates.

But the time is present when medical science faces some of its greatest problems if it is to continue on the road of most success in the prevention of disease. The solution of these problems rests but partially in the hands of medical men. To a far greater extent it rests in the hands of the public. Public health will be protected; preventive medicine will accomplish most, and comfort and years will be added to your life and mine just as all of us demand it. As citizens we have a right to all this—to a great extent even now it is ours to be had. Its attainment but needs the voice of all which will be raised as we acquire a more general understanding of the fundamental problems.

Public Health Work Pays

"No Department of Government, Local, State or National, can make a showing that is equal to or approximates the showing the Health Department makes."*

BY W. A. EVANS, M.D.,

HEALTH EDITOR, THE CHICAGO TRIBUNE, FORMER HEALTH COMMISSIONER OF CHICAGO.

I contend that public health work pays for the public better than moneys that they spend for any other work.

Just read right close and see if I do not prove it to you. I talk in Chicago figures because I am most familiar with them. But if I could use figures for Milwaukee, or for the state of Wisconsin, they would be equally as true and effective and they would furnish an argument that would be as logical as the one I am going to make using Chicago as an illustration. We have not done any better in Chicago than anybody else. I use Chicago figures because my experience has been there. This is by way of apology because I am going to use the word "Chicago" several times, and of course you know the modesty of the people and the hesitation which people of Chicago speak about Chicago.

I am using a series of six charts that represent the official figures for the city of Chicago, approved of by the United States Census Bureau during those years that the United States Census Bureau has been passing upon vital statistics.

The first chart represents the gross death rate, year by year, of the city of Chicago for practically the last eighty years. The up and down line represents the yearly gross death rate of the city of Chicago, beginning about 1846 and coming up to 1921. Notice over at the left and see what the death rate was in the forties. One year it went to 76 and a fraction. That year about one-thirteenth of the entire population of the city died. Had that death rate continued for thirteen years, the entire population would have died out. You will note that while there is no death rate of any year that is as high as the one I have cited, it was over 30, sometimes over 40, and the one was up pretty close to 80, as I have indicated.

Now for the last three or four years the death rate has been in the vicinity of 11 and for the past six years, leaving out 1918, under 12. Note that. At the present time about one-ninetieth of the population die each year. In the forties, one-thirteenth of the population died in the year mentioned. Suppose we put it this way. At the present rate it would require the population 90 years to die out, and that would mean that a good many unworthy people would hang around here longer than they have any business hanging around. I call your attention to that bit of accomplishment. The gross death rate has been reduced from, let us say 73, down to 11, in about 70 years. So much for that.

TYPHOID FEVER RATE JUST
"ONE"

The second chart represents the death rate from one disease—typhoid fever. The typhoid fever death rate reached its maximum of 173 per 1000 population in 1873. Keep that figure, 173, in mind a moment. Now see where it is, over at the right, just 1. And it

has been 1 for about six years. In other words, in the year of the World's Fair, only about thirty years ago, the typhoid fever death rate of the city of Chicago was more than 170 times as high as it is now. This low is not the low for a single year. It is not an accident. It has been that low for five years and therefore may be considered an established rate of prevalence. It represents a very material reduction.

The third chart shows what has been done with tuberculosis. Chicago had a maximum tuberculosis death rate of about 225 only twenty-five years ago.

An effort was made to educate and interest people in tuberculosis, to raise the standard of living, the sanitary standards, and the health stand



W. A. EVANS, M. D.,
Health Editor, The Chicago Tribune.

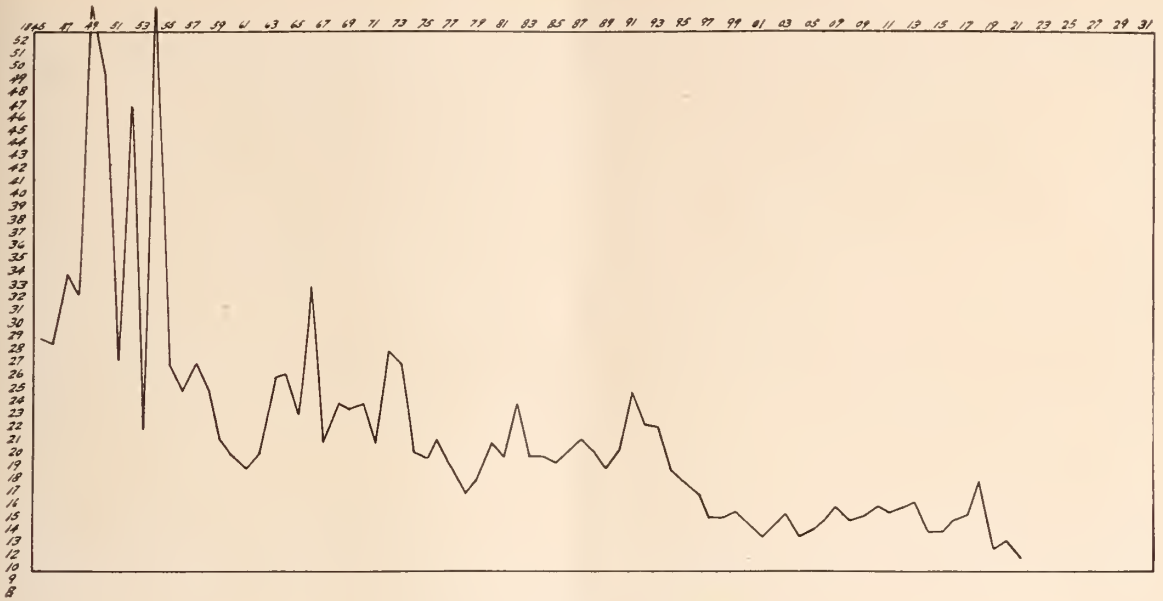


CHART 1.
Gross Death Rate by Years for Chicago.

ards. The death rate dropped to 170. Then we began fighting the disease with sanitary measures, visiting nursing service, clinics, district divisions, and with the modern machinery for fighting the disease plus the old educational machinery. The rate has dropped to 68. Now it is 65. Of course 65 isn't 1. It is 65 times as high as the typhoid fever is but nevertheless note that drop from 225 to 185 to 170 and now to 65.

When I became health commissioner of Chicago I said to my predecessor, Dr. Reynolds, "I am going to try to do something about consumption."

"Don't you do it," he said.

"Why not," I asked.

"Well," he replied, "there is nothing to be done. Why agitate the people? Why disturb the people? Why upset the people by causing them to report tuberculosis or to think about tuberculosis when you can not tell them what to do?"

PUBLIC INTEREST BROUGHT RESULTS

And frankly, we did not know what to do. But I said to him, "We are going to do something. We are going to find out what the facts are. And when we discover just how much of a mud hole we are in—just how great is the extremity—a way out will be found. We will let the condition of affairs reveal itself to the community, and then the community will cure the situation."

That conversation took place in 1907. Since 1907 the death rate has dropped from 170 to 65.

Let me say just a word here on the particular point that I have just made. Today we are con-

fronted by situations where health departments hesitate to undertake to control certain diseases because they do not know what to do. And whenever a health officer says that to me, I remember my conversation with Reynolds in 1907. I remember also that I spoke before the Illinois State Federation of Women's Clubs a number of years ago, and I asked the women of Illinois to make a survey through their local clubs of the amount of tuberculosis in their respective communities, and to report back to me. I was then president of the State Anti-Tuberculosis Society. I told somebody



CHART 2.
Chicago Typhoid Fever mortality rate per 100,000 population by years.

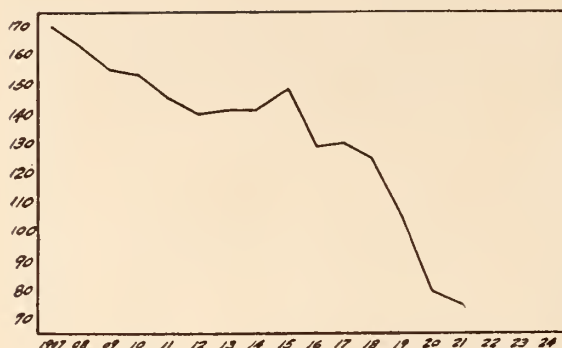


CHART 3.

Chicago Pulmonary Tuberculosis mortality rate per 100,000 population by years.

what I had done, and was told that it was a perfectly foolish thing to do.

"The reports that you get back—" he said—well he was a man and he said, "They won't be worth a damn."

Being somewhat profane myself, I said, "I am sure they won't be worth a damn—as statistics—but they will be worth while for one reason. They will acquaint the women of the local women's clubs with the fact that amongst their neighbors, their friends, here, there and yonder, in the shade of their homes, and by their own fire-sides there are people who are suffering from consumption; there are children who are being exposed to the disease, and who almost inevitably will contract it by reason of that exposure to a neglected person, they will discover cases of heart-rending neglect, as well as the fact that in the communities which they now believe to be free from the tuberculosis problem, there is not only a tuberculosis problem, but an acute one. I grant you that the statistics that we will get will be worthless and valueless, but we will reveal to the women's clubs of this state the fact that consumption is an ever present and everywhere present problem in the state of Illinois. And out of that revelation to the people there will come procedures for meeting the situation."

Much of the improvement in the consumption situation in the state of Illinois as it is today, compared with that situation as it was a decade or more ago, is the result of the fact that the women became interested in the consumption problem.

SAVING LIVES OF BABIES

The remaining charts relate to the infant mortality rate. The fourth chart shows the drop in the infant mortality rate, or in other words, the baby death rate, during the last sixty years. You

see the drop. You see where it was fifty years ago and over on the right you see the rate at which babies are dying in Chicago now. And the present rate, again, has continued long enough so that we may safely say that it is not a passing condition, but that it has come to be the established order.

Now as part of the same question, relating to the same point, a very considerable percentage of the work that health departments undertake relates to summer diseases. And if those activities result in improvement, we would naturally expect that the result of such activities would show in summer death rates rather than in winter death rates. And so it is.

SUMMER RATE FALLS

In the middle seventies the ordinary summer death rate, the death rate for June, July and August of the city of Chicago, averaged around 40, usually a little over 40. It now averages under 10, rarely going that high. There has been practically no improvement in the winter death rate. The people die from the diseases of the winter time at almost the same rate that they died from those diseases 50 years ago. But health departments have not been exerting themselves, spending their energy, their money, their thought, their planning or their brains on controlling the winter diseases. Think a moment of what they have been doing. Milk Commissions, protection of the water supply, sewage disposal, garbage disposal, Fly Commissions, Baby Commissions, Typhoid Commissions—these all relate to summer conditions, do they not? And you cannot think of a great dramatic campaign ever being conducted by a health department that related to winter diseases—not one. You can think of many dramatic campaigns conducted by local and other health departments that were aimed at summer conditions. And note this. The winter death rate is practically where it was 50 years ago; the summer death rate has fallen from 40 and over, to 10 and under.

The fifth chart shows the distribution of death by months and by decades. The first decade shown over to the left is the 70's, the next the 80's, the next the 90's, and so on. I want to call your attention to those graphs, those little diagrams, showing a year's distribution. Look at them closely. Note how low the death rate was, relatively speaking, in the winter time, January, February and March; note how very high it was in the summer time; see the summer peak; and then it

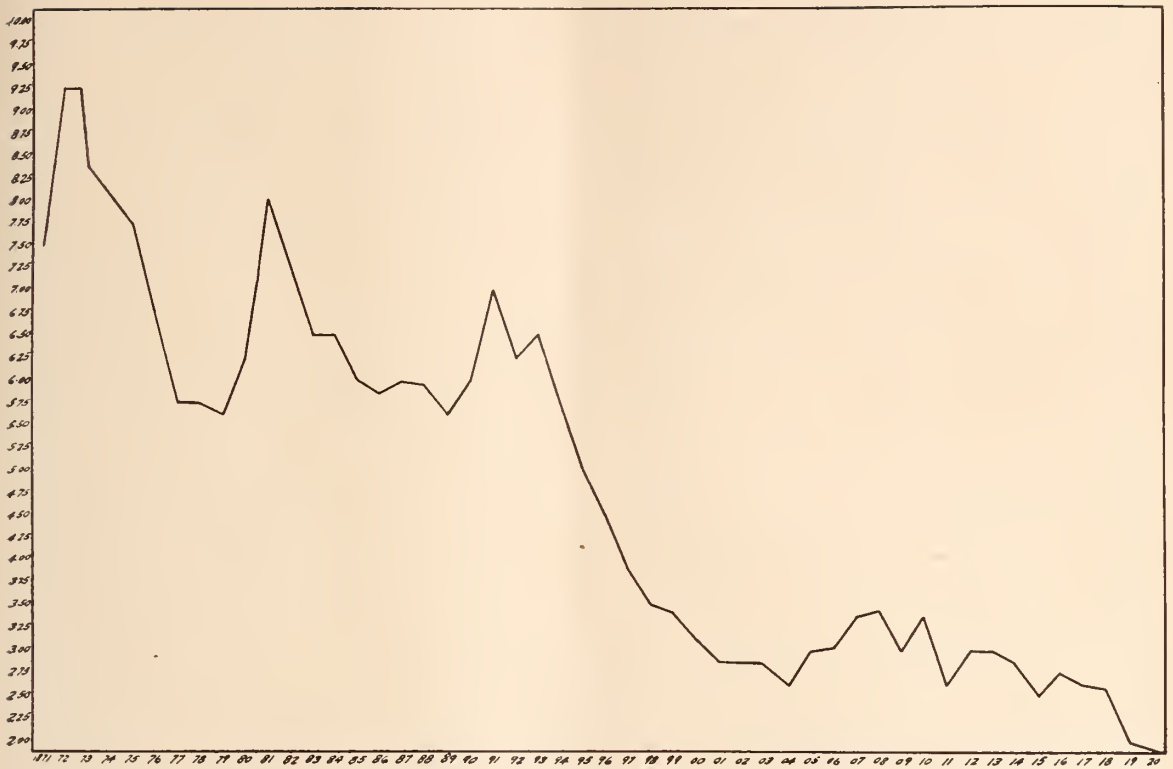


CHART 4.

Chicago mortality rate for Children under One Year, from all causes, by years.

drops for the fall, and begins to go up again in November slightly, but very slightly; the great peak is the summer time peak. Now come across the chart and notice how decade by decade the summer peak drops, and the winter peak rises, until when you get over there in the last decade you will see that there is but a very low summer peak, whereas there is a very high winter peak. The last chart shows the same thing.

The sixth chart shows a comparison of the distribution of deaths by months in the decade, the 70's, 71 to 80, with a solid line, and the broken line shows the distribution of deaths by months in the year 1922.

I want to call your attention to the fact that in the last four years even the slight summer peak that you see has entirely disappeared. There is some increase in diarrheal diseases in the hot months of the year; there is some increase in baby death rate in June, July, August and September; but the increase is so very slight that it does not now modify the distribution of deaths at all. That broken line, as you see, shows a valley, a depression, which begins about May, perhaps in April, and which continues as a broad general

valley, without any peak whatsoever, throughout June, July, August, September and October; and the winter rise beginning in November mounts gradually, month by month, through November and December.

Now, I have given you some statistical proof of the fact that whatever health departments start out seriously to do they do; that the work that they undertake, they accomplish; what they start they finish; and when they spend money, they show results. There are the figures as related to the total death rate and the death rate from three diseases, tuberculosis, typhoid fever and infant mortality, putting special stress upon infant mortality because of the fact that the very great improvement in infant mortality has so radically changed the distribution of deaths throughout the year. The older physicians remember very well when the doctors were very busy in the summer time. That was their busy season. Their horses were going all throughout the summer until their tongues were hanging out. Now a doctor loafs all summer, or fishes, and works hard in the winter time. That summer mortality has been reduced almost to the irreducible minimum.

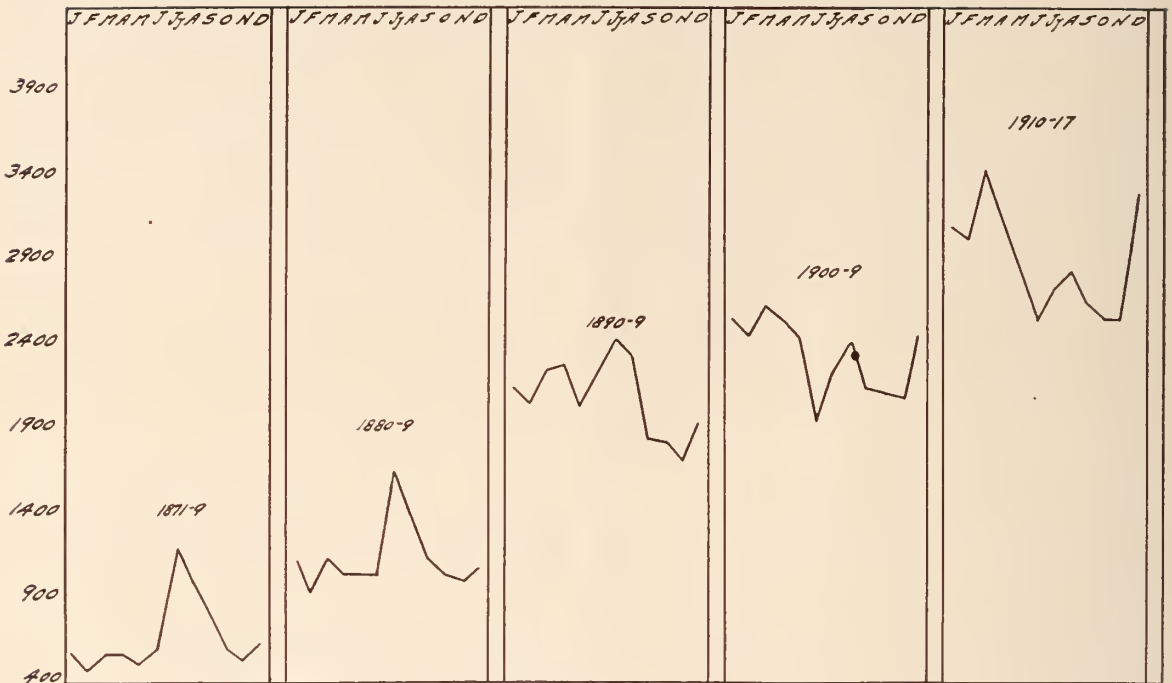


CHART 5.
Seasonal distribution of deaths in Chicago by months and by decades.

LIFE PROLONGED TWENTY YEARS

One other illustration along the same general line, although it cannot be portrayed as well as can the subject that I have just been touching upon. Something over 30 years ago the average age at death was not far from 33 years. Now the average age at death is about 58 years. And we are told that within a very few years, perhaps within the span of my lifetime, the average age at death will be 75 years. Never mind about that. The average age at death is now 58 years. Now let us see what that means. Think about it this way, if you please. When the average age at death was 33 years, the man at about 20 was an active producer. Prior to about 20 he had been a community liability. At 20 he became a community asset, and for the remainder of his life he was an asset to his family and to the community at large. For 13 years thereafter the average citizen remained a community asset.

What now? It has been said that the working man is at his maximum earning capacity at 18 years of age. Let us say 20. The average age at death is 58. In other words, that man is a community asset and a family asset for 38 years as compared with 13 under the old order some 20 or 30 years ago. Men are worth something to the community, or are community assets for 38 years, as compared with 13 years. Now is it any wonder

that we have got all the money in the world? Is not that an explanation of the fact that we have so much more of resources, collectively and individually than we ever had before in the history of the world? Let us think of it in another way. Under the old order the man commenced raising his family at somewhere about 18 or 20 years of age. The average age of death was 33. The average age therefore, of the oldest child was 15 years, 13 to 15 years, the other children were younger and they ran right down to six. We are now speaking of the average family. Is it any wonder, under those circumstances, that under the old order the first thing that a state did, a town did or a city did was to put up an orphan asylum. An enormous percentage of the children were orphaned by reason of the early death of the average man, that is early in the lifetime of the progeny of that man. Fortunately for society, under that dispensation, there was a great reservoir or receiving capacity. Children were apprenticed out, or other members of the family took care of the orphan children. A comparatively small percentage found their way into homes, in spite of that fact that there was that habit of adoption, almost a universal habit at that time. In spite of that habit of adoption, let us say that reservoir capacity, every state found that it was necessary, as one of the first community activities, to build an orphan asylum.

COMMUNITY REAPS BENEFITS

Now the first children are born when the man is maybe a little bit over 20 years of age. The average age at death therefore means that first child has an average age of 38 years. It represents an enormous difference from the standpoint of the family or of the community to have the average age of the oldest child at the death of the parent raised from 13 years to 38 years.

I might talk to you about lessened sickness rates; I might talk to you about lessened sickness absentee rates from industry; I might talk to you about the greater working efficiency of the man of the present day, as compared with the man of 50 years ago, but it would be difficult for me to reduce such statement that I might make on those subjects to figures, or to chart them. At best it would be nothing more than opinion testimony. I think it would be good testimony, but people have a way of discounting this opinion testimony; and therefore, I am going to rest my case upon the demonstration of these two points, on points that can be set forth in figures, and can be displayed in charts and diagrams.

AN UNEQUAL SHOWING

There isn't any question at all, friends, but that it is true that Health Department work pays; that there is no work that is done by or for the community that pays anything like as well as does Health Department work. Let us compare it, if you please. Compare it with Police Department work. Take the decreasing prevalence of disease, as we interpret it in the light of the death rate, or in other words, the decreasing death rate of Chicago from 75, let us say, to 11. Can the police show any such decrease in crime—any kind of crime? And they get dollars where the Health Department gets cents. Take the Fire Department work. And do not understand me that I am saying that Fire Department work and Police Department work are not worth while, because they are; but I am saying this—that no department of government, local, state or national, can make a showing that is equal to or approximates the showing that the Health Department makes. Can the Fire Department show a decreasing prevalence of fires that is comparable with that showing of decreasing prevalence of disease? Can the Fire Department show a decreasing fire loss year by year through a term of years comparable to the showing that is there made? Or, if you do not live in

an organized community like a city, can your sheriff show an increase in safety in your rural community in 1922 compared with 1872, that is at all comparable with the increase in safety from the health or disease standpoint that is shown in that diagram? It cannot be done.

Let us take your judges and your courts trying criminals and sending men to jails and penitentiaries as means of controlling crime. Can they make any showing that is comparable to that showing? They cannot do it. There is a showing that

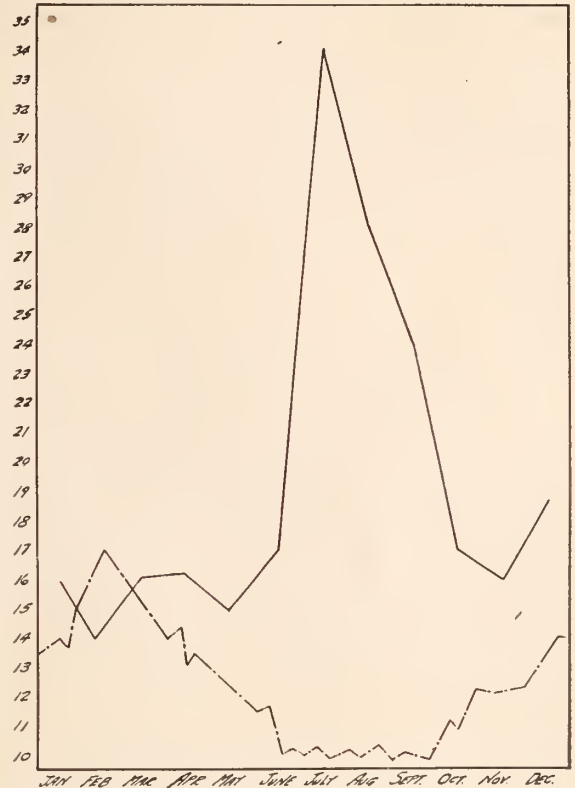


CHART 6.

Distribution of deaths by months: 50 years ago and now.
Solid line—the decade 1870-1880.
Broken line—months in 1922.

cannot be approximated by any other division of government, as I have said, local, state or national. And I challenge anybody to show or to claim or to prove that any other department of government can make the showing that is in the class that approximates that showing, a showing of which we all have a right to be proud. And yet, it is easily understood. What is the reason? To begin with, we took care of end products. And in that line the Health Department of the state of Illinois started as a department to take care of end products. That was all we did. Or in other words, caring for those who, as the result of individual

sins or community sins had been made sick, giving them what might be termed custodial care. That was all the Health Department did. At least 50 years ago we saw the shortcoming of that procedure; we saw the error, if you please, of that procedure. We saw that it was necessary, if there were to be results, to go to causes and to eradicate those causes. We found a young science of bacteriology. We commandeered that science and put it at the service of health; we found a young science of sanitary engineering and we commandeered that science and put it at the service of health; we found a young science of genetics so we commandeered that science and put it at the service of health; we found a young science of immunology and we commandeered that science and put it at the service of health; wherever in the broad domain of human knowledge there was something which could be justly employed for bettering the conditions of human health that something was commandeered, that something was made use of; and the result is as I have shown you.

CARING FOR END PRODUCTS

And now think about it a moment. The Fire Marshal is right where we were 50 years ago; the Police Department is right where we were 50 years ago and your judge sitting on the bench is right where we were 50 years ago. They are still taking care of end products. And they will never make a showing that is comparable with the showing that health departments can make until they, while still caring for end products, as we do, have that as one of their activities only, taking care of that as best they can, proceed up stream and find the rivulets of mud that are flowing into the waters and befouling them, and protecting the streams against that defilement. When your fire departments and your police departments and your judges on the bench have learned their lesson—from whom?—from the Health Department—then some quarter of a century later some speaker will arise on a platform and will show where the fire department, or the police department, or the judicial department has done a job that is comparable in results with the job done by health departments.

With the lay reader I rest my case right here. I say that there is no expenditure of money, nor expenditure of resources, that you may make, of any sort or kind, that can and will return as much to you per dollar expended, or per unit of support, as that money or support given your health depart-

ment—of your community—of your state. There is no expenditure that can be more fully justified to the tax payer than the appropriations to the health department. None other can be so well defended from the standpoint of dollars and cents.

YOUR MORAL SUPPORT NEEDED

And we may include not only expenditures of money, but giving to the department and health laws our moral support—permitting the department, when it is found necessary for the general good, to have some of those individual liberties that you have cherished for yourself. A yielding up, if you please, something of your individuality, something of your so-called liberty, and doing it freely because of the fact that the people into whose hands you are passing it can prove so logically, so clearly and so definitely that their stewardship will be one well worth while to you.

* * *

And now this is my final thought—a message to the physicians. The people want health and progress in this field as they want it in every field. Our profession have been the leaders in that progress. Our profession have carried the banner in that great onward movement, and by reason of the fact that we have lead this procession—that we have carried this burden in the onward march of human betterment—we stand well with the people. We have their confidence. They believe in us and they respect us and they put up with some of our shortcomings. And so to you I plead for a continuation of our fight so that we will not forfeit the position which is ours through centuries of right acting and right leadership.

Presented at the 77th Annual Meeting of the State Medical Society at Milwaukee, Oct. 3-5, 1923.



South Hall, University of Wisconsin, in which is located the State Laboratory of Hygiene. Here hundreds of tests are made to aid in the prevention of disease.

The "Patent Medicine" Game: Gambling on Fear

"The most virulent epidemic of modern times has never brought to the physician's office as many patients as does the exploiter of secret nostrums."

BY ARTHUR J. CRAMP, M.D.,

DIRECTOR OF PROPAGANDA DEPARTMENT AND BUREAU OF
INVESTIGATION OF THE JOURNAL OF THE AMERI-
CAN MEDICAL ASSOCIATION

When physicians point out the menace of the "patent medicine" to the public health, the manufacturers of these concoctions are immediately ready with the retort that the medical man opposes "patent medicines" because it hurts his business. They say in effect that they, the manufacturers of "patent medicines," are competitors of the medical profession. Nothing is farther from the truth. Instead of being the physician's competitors they are, on the contrary, his most efficient business agents. The "patent medicine" industry brings more work to the medical profession than all other agencies combined. The most virulent epidemic of modern times has never brought to the physician's office as many patients as does the exploiter of secret nostrums.

If the "patent medicine" business were destroyed tomorrow three classes of people would be hurt financially—the nostrum exploiters themselves, the newspaper proprietors who share largely in the profits of that business, and the medical profession. A hundred people read a "kidney pill" advertisement and are frightened into the belief that a pain in the lower part of the back means kidney disease. Fifty of these will go to the family physician rather than to the drug counter. The most serious indictment against the "patent medicine" business is not that these products may and frequently do contain poisonous or habit-forming drugs, but that the method of promotion is such as to make a nation of hypochondriacs. The advertiser of "patent medicines," like the advertiser of any other line of commodities, does his best to create a demand for his products. That is the method of modern advertising. No longer does the advertiser attempt merely to fill a demand already created; he goes out to create a demand for the products he has for sale.

PLAYING ON FEAR

A few years ago a "patent medicine" maker who professed to sell a cure for appendicitis unwittingly disclosed a trade secret in a circular that he sent to the druggists. This circular was intended primarily to persuade the druggists to carry this man's preparation on their shelves. In its

"appendicitis cure" friend pointed out that unless the druggists stocked his preparation, they would not only have nothing to sell to the man who had appendicitis but they would not have anything to sell "to the vast multitude who THINK they have or are going to have, this dreaded disease."



Playing on fear. Here we have reduced reproductions of a common series of advertisements so designed as to make the public believe that pain in the lower part of the back is an indication of kidney trouble. It is nothing of the sort. Advertisements of this kind create patients for the doctors as well as customers for the drug store.

Then as a clincher he added: "Fully 75 per cent of all cough and kidney remedies are bought by people who THINK they have consumption or some serious kidney ailment, and not by people who actually have them." In other words, it is the business of the "patent medicine" advertisement to play on the fears of those who are temporarily indisposed and make them think that they have some serious trouble which can be cured by taking the product advertised.

It will be noticed that the phrase "patent medicine" is put in quotation marks; this is because the term is really a misnomer. For reasons about to be explained there are practically no true patent medicines on the market today. First, Uncle Sam will not grant a patent on any product unless it represents something new and useful. As the vast majority of so-called "patent medicines" are merely ordinary mixtures of well-known drugs, they lack the elements of both newness and usefulness and they could not be patented even did their maker so desire. But the average manufacturer of "patent medicines" would not patent his product even if he could. First, a patent gives the patentee a monopoly on the manufacture of the patented article for seventeen years only. At the end of this time the preparation becomes public property; any one may make it. Second, and

more important, when a patent is granted on a medicine there is no mystery about the composition. Patent means open, and the composition of any patented medicine is open to the public. By sending a few cents to the Commissioner of Patents at Washington, one can get what is known as the patent specifications, giving in detail all the information necessary to permit any one else to make a similar product.

The maker of the modern "patent medicine" knows a more profitable way than patenting. He gives his mixture of drugs a fancy name and obtains a trade-mark on this name. Henceforth, the name is his property for all time. It is unnecessary for him to furnish any information at all regarding the composition of the thing to which he has given this name; nor is it even necessary that he keep the composition unchanged. There are any number of instances of "patent medicines" whose composition has been changed to suit the whim of the manufacturer or the exigencies of the market. Should one ingredient become expensive, he substitutes another; if the public awakes to the dangers of a certain ingredient, he puts in its place another one that may be just as dangerous but about which the public knows nothing.

THE PURE FOOD AND DRUGS LAW

The National Food and Drugs Act was passed in June, 1906, and went into effect January 1, 1907. Many people have supposed that, since the passage of this law, the public is pretty well protected against the "patent medicine" evil. It is true that this law has given a marked degree of protection, but, because of its weaknesses, it still largely fails to safeguard the public against the nostrum dealer. The federal law applies only to the products that enter into interstate commerce, that is, those that are made in one state and sold in another. A "patent medicine" made in Milwaukee, for instance, and sold strictly within the confines of Wisconsin is not subject to the control of the federal Food and Drugs Act.

The law prohibits "false or misleading" statements made on or in the trade package regarding the composition or the origin of a "patent medicine"; it also prohibits "false and fraudulent" statements regarding the curative effects of a preparation. Notice the distinction just mentioned between the types of falsehoods that constitute misbranding. The "patent medicine" maker can be prosecuted under the law if he makes either a false or a misleading statement regarding

the composition or origin of his product. When, however, he goes into the realms of curative claims, the law will not touch him unless the statements he makes are both false and fraudulent.



Before the passage of the Federal Food and Drug Act the "Piso" product was a "Cure for Consumption." After the passage of the law made false and fraudulent claims on the label illegal, it became a "Medicine for Coughs and Colds." Further the public was advised that the preparation contained cannabis indica and chloroform.

The original law prohibited, in the case of drugs, any statements that were false or misleading "in any particular." The officials who had to enforce the Act assumed that this meant just what it said and most "patent medicine" makers believed that it did also. A quack who was being prosecuted under this section of the law, however, put up the defense that the law was not intended to refer to curative claims, but only to claims made for composition and origin. Unfortunately, the court sustained this narrow view and the view was upheld—in a divided opinion—by the Supreme Court of the United States itself. The decision, of course, made a vital breach into the law. The unscrupulous "patent medicine" seller cares nothing about restrictions regarding the claims made

for composition or origin. He simply makes no claims along these lines. He is, however, vitally interested in being able to lie to his heart's content regarding the alleged curative effects of his preparation.

As a result of the Supreme Court's decision, the President, in a special message, urged that the law be amended so as to prohibit specifically false statements regarding curative effects. The amendment was fought bitterly by the "patent medicine" interests but finally was passed in a compromise form by substituting for the broad term "false or misleading" the narrower phrase "false and fraudulent." The federal officials, therefore, cannot secure a conviction of a "patent medicine" faker on the charge of falsehood alone; they must also prove him guilty of deliberate intent to defraud.

ADVERTISING IN PRESS UNRESTRICTED

The real weakness, however, of the law, in its present interpretation, is that it is limited in the scope of its prohibitions to the claims made on or in the trade package. The most outrageously false claims of any kind or description made for "patent medicines" are not penalized if those claims appear in newspaper advertisements, circulars, billboards or any other avenue of publicity, in fact, except the trade package. Yet it is the newspaper advertisement or the circular that sells the stuff. The law in its present form allows a manufacturer to falsify in those avenues of publicity in which lying will be most profitable and do the maximum amount of harm and merely restricts the statements he may make on or in the trade package. A good way to determine the truthfulness of the claims made for "patent medicines" is to compare those made in newspaper advertisements and circulars with those made on or in the trade package. Subtract the claims made in the trade package from those made in the newspapers. What you have left is falsehood.

Before leaving the subject of the Food and Drugs Act one additional power that it carries should be noted. It requires the disclosure, to a limited extent—a very limited extent—of the formula of the "patent medicine." If any one of eleven specified drugs or their derivatives are present in a product, the name and quantity of each drug must be plainly printed on the label. These drugs are: Alcohol, morphin, opium, cocain, heroin, alpha-eucain, beta-eucain, chloroform, cannabis indica, chloral hydrate and acetanilid. The insufficiency of this feature of the law is obvious

to anyone. The "patent medicine" maker can, if he wants to, put into his products such deadly poisons as carbolic acid, arsenic, strychnin, prussic acid, aconite and a score of others equally dangerous and give no hint to the public either of the amount or even of the presence.

THE TESTIMONIAL

The testimonial plays a prominent part in the sale of "patent medicines." There is a popular idea that most "patent medicine" testimonials are pure fiction manufactured in the office of the com-

Holyoke Daily Transcript.

HOLYOKE DAILY TRANSCRIPT, FRIDAY, MAY 11, 1917—TWENTY PAGES.

THREE IN ONE FAMILY MAKES UNUSUAL CASE

South Hadley Falls Man Relieved
of Stomach Trouble Since
Taking Tanlac the Na-
tional Tonic.

"I HAVE GAINED 10 POUNDS"
Says Fred Wick, and My Wife
and Son Are Also Taking Tan-
lac and Have Been Greatly
Benefited."

Health is wealth. Health is the
greatest wealth in the world—the
soundest capital, the biggest asset.
Without health the blessed food holder
is a pauper. With health the glodding
laborer is rich. All the money in the
world cannot buy this asset of health
that is absolutely necessary for suc-
cess of any kind. The man without
health is beaten before he begins his
fight. He does not even qualify for a
fight. He is barred from ever trying.
Mr. Fred Wick of 82 Granby Road,
South Hadley Falls, Mass., has been re-
lieved of stomach trouble and has gain-
ed 10 pounds in weight since taking
Tanalac. His wife and son are also tak-
ing it and have been greatly benefited.
Mr. Wick made and signed the fol-
lowing statement at George
D. ...

FUNERALS

Wick—The funeral of Fred Wick
was held this morning, from his home,
Granby Road, South Hadley Falls, fol-
lowed by a high mass of requiem in St.
Patrick's church. Rev. J. E. Schleg or-
ficiated. The bearers were Jacob and
John Miller, Charles Todd, Charles P.
O'Connor, John St. John and James
Kelly. The burial was held in the St.
Jerome cemetery.

Here is a testimonial that appeared in the Holyoke Daily Transcript, May 11, 1917. It was written by Fred Wick and was a boost for "Tanalac". In the same issue of the paper was a notice of Mr. Wick's funeral. This testimonial was, doubtless, written honestly and in good faith. The alcohol in "Tanalac" is responsible for a temporary feeling of well-being.

pany that sends them out. Investigation proves that such is only occasionally the case. There are, it is true, some testimonials that are obviously fraudulent; still others are purchased. Most of the testimonials used in the "patent medicine" industry today are, however, genuine to the extent that they have actually been written. By following up many hundreds of these testimonials some interesting facts have been brought out. In the case of testimonials for such diseases as cancer and consumption, it has only been necessary to wait some months and, if the giver of the testimonial actually had the disease, it has been possi-

ble to obtain his death certificate. In the case of testimonials for the alleged cure of deafness, rupture, epilepsy, etc., by waiting a year it has invariably been possible to obtain a statement from the writer of the testimonial that he was mistaken and that he wrote the testimonial soon after starting the "treatment" in the belief that he really had been benefited. In the case, however, of the testimonial for preparations of the "cure-all" type, the testimonial giver insists until the end of the

DRUGS IN A SPECIAL CLASS

This fact brings up another point that is frequently lost sight of. Because the tendency of the human body is usually toward health rather than toward disease, the seller of medicines is in a class entirely distinct from that of the dealer in other lines of merchandise. You may not be an expert judge of pianos, clothing, automobiles, etc., but you learn by experience whether you have been swindled in the purchase of a piano, a suit

5, FRIDAY (MARCH 15), 1918

A TRUE COPY. CERTIFIED. STATE OF MARYLAND REGISTERED DEATH

PLACE OF DEATH: County Allagoany, MAR 15 1918, Village or City Cumberland

FULL NAME: Alfred Lenahan Wingert

PERSONAL AND STATISTICAL PARTICULARS: Sex Male, Color White, Birth Feb 16 1853, Occupation Merchant, Grocery Store

MEDICAL CERTIFICATE OF DEATH: Date of Death Mar. 9, 1918, Cause of Death Chronic Interstitial Nephritis, Chronic Endocarditis

Signature: John Wingert, Ellie Wright, Mollie Wingert

Attest: Bob Hill, Louis Stein

FOOD REPELLED FOR MANY YEARS

Cumberland Grocer Says Tanlac Brings Back His Lost Health

A. L. Wingert, 171 North Centre Street, in the grocery business for fifteen years in Cumberland, prior to his recent retirement because of ill health:

"I have not felt as I should in many years, declared Mr. Wingert. 'I had absolutely no desire for food. Pains in the stomach and a dull listless feeling after eating were not uncommon. I went for a bottle of Tanlac and began using it, according to directions. Tanlac has done me a wonderful lot of good. My health is surely coming back to me. I have a ravenous appetite and everything I eat digests early—thanks to Tanlac. I can recommend Tanlac to anyone in Maryland who suffers as I did.'

Tanlac is now being specially introduced and explained in Cumberland at Eichenstein's drug store, by Mr. Rivenburgh, the Tanlac Man.—Advertisement.

Here is another testimonial for "Tanlac" by A. L. Wingert. It appeared in the paper March 15, 1918. Note by the death certificate that A. L. Wingert had been dead nearly a week when this testimonial appeared. He died of kidney disease. A mixture like "Tanlac" containing 18 per cent alcohol is extremely dangerous in cases of kidney disease.

chapter that he received real benefit from the medicine.

The reason for this is simple. We all suffer at times from some passing indisposition from which we recover in a few days whether we do anything for it or do nothing for it. This is due to the healing power of nature. Should we, during the first few hours that we are ailing, be persuaded, through a lurid advertisement, to use some "patent medicine," we are fairly certain to credit our recovery to the medicine. We are slow to admit that nature has helped us but are always willing to give credit to some artificial agency. Thus it is that the "patent medicine" maker finds no difficulty in obtaining testimonials. They may be written honestly and in good faith but they are without value as evidence.

of clothes, an automobile or some similar product because nature, through the operation of wear and tear, is all the time working against those who sell such merchandise. Not so in the case of medicaments. Here nature is working, not as an opponent of the seller, but as an assistant. The average man is utterly incapable of determining whether his recovery from a given illness has been due to the medicine he has taken or to the reparative processes of nature. And, unfortunately, he is much more likely to give credit to the medicine than he is to give it to nature.

THE REMEDY

What, then, is the remedy? Are we to assume that no medicine should be sold for the self-treatment of simple ailments? This is the attitude that is frequently charged against the medical

profession but without justification. No one knows better than physicians the dangers that are inseparable from self-treatment. Nevertheless, as a practical fact, the amount of damage that would be done the public health by the self-administration of some of the simpler drugs would be very small if the evils inseparable from the "patent medicine" business could be abolished. There is today a legitimate place on the market for home remedies for the self-treatment of simple ailments. All that the medical profession asks in the interests of public health and safety is that these remedies should contain no dangerous or habit-forming drugs; should be non-secret in composition and, most important of all, should not be so advertised as to foster self-drugging and make a nation of hypochondriacs.

No "Short Courses" to the M. D. Degree: Why Your Doctor Had to Study Medicine for Seven Years

BY LOUIS F. JERMAIN, M.D., F.A.C.S.,
DEAN AND PROF. OF MEDICINE, MARQUETTE UNIVERSITY
SCHOOL OF MEDICINE.

Prospective medical students not infrequently ask this question: "Why should I spend seven years, at great expense, in a medical school in order to become a regular practitioner of medicine when my neighbor can get a certificate of chiropractic, or some other cult, in from three months to two years?" The answer to this question is quite simple if you know what is expected of the regular medical profession, what the regular medical profession stands for, and what it is striving to do.

There are, in the main, three reasons why a man or woman entering the regular medical profession must have had seven years of training in the medical sciences and medical practice.

BASIC KNOWLEDGE FIRST ESSENTIAL

The first reason is that regular medical and surgical practice is based upon a thorough and comprehensive knowledge of the sciences of anatomy, chemistry, physiology, pathology, and bacteriology, the sciences of the normal and diseased human body. These are the fundamental sciences upon which must be based the knowledge of disease, of its cure or alleviation, and its prevention. The first four years of the regular medical school are spent in instructing your doctor in these fundamental sciences.

"Why," you ask, "is so much time necessary?"

Before answering, let me in turn ask this question: "Would you knowingly allow a man to re-

There are already in existence drugs and drug combinations that fill this need. They are to be found among the official products in the Pharmacopœia or the National Formulary. Every pharmaceutical house can make them and most pharmaceutical houses do make them. The margin of profit in their manufacture and sale is so small because of free competition that no manufacturer would be justified in spending large sums in trying to stimulate the sale of these preparations. When the public has learned what official preparations to call for in order to treat its simpler ailments, the "patent medicine" business with its fraud, its drug doping and its hypochondriac-creating tendencies will be a thing of the past.

pair your automobile who knew absolutely nothing about the construction of the engine, the carburetor, the ignition, or the principles of gasoline combustion?" Assuredly not. And what sensible housewife would knowingly permit a man to repair her valuable piano who knew nothing about the construction of the delicate instrument? Now the human body is at once the most intricate and the most delicate machine ever constructed. Why should you employ a man to care for or repair this machine who knows nothing about its structure, about its various parts and organs, who knows nothing about their functions, knows nothing of the changes that occur in the diseased state of this body, knows nothing about the innumerable factors that produce disease in this beautiful and complex structure? The knowledge required to cure or alleviate disease, as well as the knowledge required for the prevention of disease, in fact, all honest, efficient medical and surgical practice, must be based upon the knowledge of the fundamental sciences just as much as the competent repair of a machine must be based upon a knowledge of the construction of the machine and the principles of its operation. All this is but plain common sense. And yet our great State of Wisconsin stands idly by, and, by its inaction, tacitly consents while the care of the sick and the attempt to restore health to their diseased bodies are entrusted to men who have absolutely no knowledge

of anatomy, the science which deals with the structure of the body, no knowledge of physiology and chemistry, which treat of the functions of the organs, no knowledge of bacteriology, the science which deals with the microscopic agents that produce disease.

In order to comprehend fully the complex structure of the human body and all its organs, a knowledge of biology and anatomy is necessary; in order to comprehend the chemistry of digestion, assimilation and absorption, a knowledge of physics and chemistry is absolutely necessary; in order to understand and recognize disease, a knowledge of the pathological changes which occur in disease and of the microscopic agents which produce disease is essential; in order to protect you and your children from disease, a knowledge of the causes or agents which produce disease and a knowledge of their methods of entrance and of their control is essential. Your doctor, if he is a member of the regular medical profession, spends four years of his life in acquiring this knowledge which is absolutely essential and indispensable before human life, health and happiness can with any security be placed in his hands.

DIAGNOSIS AND TREATMENT

The last three years of the regular medical course are devoted to a study of disease, its symptoms, the accurate diagnosis of the same, the prevention of disease, and, if disease does occur, its scientific and rational treatment. The last two years, and a large part of the fifth year, are spent in the hospitals and dispensaries where the student is brought in the closest of contact with disease in all its forms and manifestations. No intelligent and scientific management of disease is possible unless accurate diagnosis be previously made.

Much study and contact with the sick is necessary in order to acquire this ability. No man can intelligently and scientifically manage disease unless he has a thorough knowledge of the fundamental sciences and is able to distinguish the abnormal from the normal, unless he knows disease and is able to use skill and care in recognizing it in all its forms.

No man, whatever cult or "pathy" he may profess to follow, should be permitted to care for the sick unless he possesses the above qualifications, certified to by a competent board of examiners. The particular system of practice a doctor adheres to is of much less importance than the fact that

he is well trained in all essential branches of scientific medicine and is honest in his dealings with his patients. I desire to cite only a few of the many illustrations I might give to show how necessary it is for your doctor to be well trained, both in the sciences and in the diagnosis of disease.

EDUCATION IS PUBLIC PROTECTION

A beautiful young woman, aged twenty-two, came to the office of a regular practitioner, complaining of stiffness and pain in the back. She was losing in weight, appeared

pale and was easily fatigued. Physical and X-ray examination showed that she was suffering from tuberculosis of the backbone. Absolute rest and a plaster cast were advised. Instead of following this advice, she consulted an irregular who proceeded to adjust her spinal column. forcible adjustment resulted in a decided displacement of the affected bones, a compression of the spinal cord, complete paralysis of the entire body below the seat of the disease, rapid development of bed sores, which became infected, and death within the short period of two weeks!

The only child of a prominent citizen developed



MARQUETTE HOSPITAL AND DISPENSARY,
MILWAUKEE.



SCIENCE HALL, MEDICAL SCHOOL, UNIVERSITY OF WISCONSIN, MADISON.

Courtesy Photoart House, Madison

a sore throat. An irregular practitioner, who knew nothing about the cause, the clinical manifestations and the dangers of diphtheria, was consulted. Spinal adjustments were given for a condition whose cause, recognition, and cure are as certain as the rising and setting of the sun. This child died from diphtheria, a sacrifice on the altar of ignorance.

TAUGHT PREVENTION

Because of the fact that your doctor has to spend seven years in preparation he is fully informed regarding public health measures. Disease prevention is at all times his most important task. He is of necessity the man in your community who can be trusted with the management and control of epidemics of disease. He gives advice to your community regarding the water supply, sewage and garbage disposal, and all matters which make for improved health of the public. It is a fact not to be denied that it is only the members of the regular medical profession that ever actively interest themselves in Public Health and disease prevention.

GREAT DISCOVERIES OF MEDICAL MEN

The second important reason why your doctor must spend seven years in study and preparation for his license to practice is that this prolonged and intensive study not only gives him knowledge, but develops the faculties of observation, critical analysis, judgment and discrimination, so essential to the investigator. Who were Jenner, Lister, Virchow, Koch, Ehrlich, Von Pirquet, Roux, Bright, Wassermann, Reed, Carrel and Banting? They were all members of the regular medical profession who chose the long and tedious route to knowledge which brought them fame and the everlasting gratitude of nations and suffering humanity. Who were they who controlled smallpox by vaccination? Who discovered bacteria and their importance in the production of disease, and the ordinary processes of fermentation and putrefaction? Who was the father of asepsis and antisepsis which has made possible all the advances in modern surgery? Who discovered the tubercle bacillus and made possible our present efficient methods of managing and controlling human and

bovine tuberculosis, so well exemplified in our own State of Wisconsin? Who developed diphtheria antitoxin, which saves thousands of our little ones annually — the Schick test by which children susceptible to diphtheria can be selected and a protective toxin-antitoxin injection given which protects them against the disease? Who discovered the protective inoculations against rabies, lockjaw, and typhoid? Who discovered the cause and mode of transmission of malaria and yellow fever, and through the same



Medical School Building, University of Marquette,
Milwaukee.

made possible such stupendous achievement as the building of the Panama Canal? Who accomplished the very recent and perhaps crowning achievement of the century — the discovery of Insulin and all it means to millions of suffering humanity? They were members of the regular medical profession. Clinical and laboratory research, which leads to important discoveries destined to benefit the human race, require deep and intimate knowledge, mental training and vision. This is why long years of study and preparation for entrance into the regular medical profession are insisted upon.

LEADERSHIP NEEDED

The third reason for this long course of study is that every doctor should be so educated as to take his proper place in the civic and social life of the community. The real doctor should not only possess the necessary knowledge of medicine, surgery, obstetrics and the diseases of children, but he should be a cultured gentleman, and above all a clean and moral man. In every community the clergyman, the lawyer, the doctor, the banker, and the journalist must in a measure be the leaders of thought and public opinion. Not only must they be prepared to mould and direct public senti-

ment, but they must lead in the activities of the community. In every sense, leadership is what is needed and the doctor, by reason of his university training, must be in the vanguard.

The doctor stands in such close relationship to the family, sharing in all its sorrows and secrets, that he must be a person who can be trusted. In fact, he must be a citizen of the highest type, capable and willing to sacrifice himself not only for the welfare of his patients but for the welfare of his community, his state, and

his glorious nation.

THE HEEL OF ACHILLES

I say, "Nay, nay," to the breezy jay who comes to my humble shack, to sell me stock, or an eight-day clock, or a jar of applejack. For I am wise to the faking guys who traffic in heated air, and their lungs are strong and their tongues are long, and we see them everywhere. I thunder, "Nix!" when the gilded bricks of fakers offend my gaze; I shun the sharks who for easy marks are looking throughout their days. I mutter, "Shoo!" to the soulless crew who'd gather me in their snares, who plan and plot for my house and lot in exchange for teddy bears. And then I fall for the faker tall who weareth a high silk hat, and I buy his dope in the ardent hope that it will reduce my fat. His pills I chew for a year or two, and then to the scales I go, and I find my weight to be twice as great, and who shall describe my woe?

WALT MASON,
Hearst's International Magazine.
Copyright April, 1924,

Vaccination Has Prevented Nation-wide Epidemics.

**“It is the unprotected individual who keeps the disease alive and spreading.
It is the protected individual who helps to confer an immune
status on the body politic.”**

BY H. M. GUILFORD, M.D.,
DIRECTOR BUREAU OF COMMUNICABLE DISEASES, STATE
BOARD OF HEALTH

We have at this day forgotten the fear with which smallpox was held a little less than a century ago. All accounts handed down from that time indicate that it was a common and fatal disease, rivaling in frequency measles of the present day, fifteen to forty per cent of cases proving fatal. In fact, the seed was so generally sown in the population that smallpox was regarded as a children's disease, because older persons were likely to have had the disease in childhood, recovered, and thereby became immune.

Lord Macauley, writing of the prevalence of smallpox in the eighteenth century, chronicled as follows:

“Smallpox was always present, filling the churchyards with corpses, tormenting with constant fear all whom it had not yet stricken, leaving in those whose lives it had spoiled the hidden traces of its power, turning the babe into a changeling at which the mother shuddered.”

A noted French physician living in the time of Louis XV left record of his belief that one-quarter of all mankind were crippled and disfigured and that one-tenth lost their lives. This fact is substantiated by the statement that the annual mortality from smallpox in England and Wales was 3,000 in every million population, and that in France 30,000 people died annually from the disease and over 40,000 in the empire of the Prussian monarchs.

When the earlier explorers came to America they brought smallpox to the Indian tribes just as they brought various other accompaniments of civilization which proved no blessing to the uncontaminated natives. Tribe after tribe of Indians since that day, and in this, have fallen prey to smallpox and been well nigh exterminated. So by all historical accounts we have proof that this king of pestilences kept the peoples of the earth from their rightful multiplication and brought with it its resultant invalidism and defects. Unfortunately these facts have been well nigh forgotten by most of our citizens of the present time.

A COMPARISON

In 1877 Milwaukee had 1313 smallpox cases reported. It was estimated that only half of the cases were reported. Of the 1313 reported, 385 proved fatal.

In 1923 Milwaukee had 69 cases with no deaths.

JENNER'S GREAT DISCOVERY

The discovery of smallpox vaccination by Edward Jenner is possibly the greatest blessing ever to come upon mankind. It can be figured mathematically that without vaccination and with similar conditions prevailing as in the eighteenth century, our country now would be depopulated by many millions.

The discovery of vaccination was what is termed empirical. That is, Dr. Jenner, a country physician in England, did not know the reasons *why* his vaccine prevented smallpox. He only found out that it *did* so and that was sufficient. He knew nothing of the intricate microscopic processes with which we are in part familiar today. The germ theory was not then in vogue, and bad humors in the blood, unfavorable weather conditions and other impertinent things were supposed to give rise to the disease.

According to all accounts, it had been for some time noised about that those persons who had accidentally become afflicted with a similar but milder disease in cattle, known as cowpox, did not take smallpox. There are some claimants to the deliberate inoculations of some individuals with cowpox prior to the time of Jenner, but Dr. Jenner first brought general attention to the fact that inoculation of human beings with cowpox prevented them from being afflicted with smallpox. He vaccinated a lad with material taken from the hand of a milkmaid who was accidentally infected with cowpox while milking. Six weeks later he inoculated the boy with smallpox and no results followed, nor did the boy ever take smallpox in later years. These experiments he repeated upon

other children, and having a sure foundation he published a treatise upon the subject of vaccination. This was in the year 1798. He was opposed at that time by people who objected to vaccination just as people oppose it today. But nevertheless vaccination became an established procedure. The whole civilized world hailed it with great acclaim, and it is only hazarding a guess to say that the majority of all the people of the civilized countries were vaccinated in the half century succeeding.



JENNER'S TEMPLE OF VACCINIA WHERE HE GAVE FIRST IMMUNIZATION TREATMENTS.

It came to be a habit and to be recognized as necessary. Laws were finally placed on the statute books of many countries compelling vaccination.

PERIL NOT REMOTE

In the last twenty years the peril of smallpox has appeared to be so remote and forgotten that many states have neglected vaccination laws, and this is particularly true of the central and western states. Organized opponents seem to have persuaded us to forget the deadly history of smallpox, and as its causative factor has been so universally weakened and eliminated through the process of vaccination, we are in the mental condition of "out of sight, out of mind" with regard to smallpox.

Like a forest fire, dry brush is needed for its onward sweep, and just so with smallpox, non-immune material is requisite for its progression. It is painfully apparent that this non-immune material is on the increase, as evidenced by the increase in smallpox in our western states.

Smallpox is a disease of marked peculiarities. It is very contagious to unprotected individuals who are exposed. Practically all members of an unvaccinated household take it from the first case. It has great ranges in severity—from the very

mild to the very severe. The mild types breed mild types for the most part, although there are some fatalities resulting. The severe types breed severe types in those with whom the stricken person comes in contact.

A TRAVELER'S DISEASE

It is something of a traveler's disease, and that is why our quarantine laws deny entrance into this country of the unvaccinated on seagoing vessels. The victim with smallpox does not come down immediately after exposure, rather it takes about two weeks' time. During the first stage of the disease the victim has symptoms similar to influenza or la grippe, and these symptoms continue for three or four days until a rash breaks out on the body. The fever is likely to drop just before the breaking out, and the person feels quite well. Because of these peculiarities he may be up and about. He may travel thinking he has had influenza or some similar disease. Thus others have unusual opportunities to come in contact with the victim in the infectious stage, and so smallpox spreads.

Mild smallpox appears to be quite on the increase in various parts of the Union, and sudden turns to the severe type now and then crop out. For example, in 1921, Kansas City, Mo., had 943 cases of smallpox and 156 deaths. In 1919 and 1920, Denver, Colo., had 1,676 cases of mild smallpox, with no deaths. From this numerical prevalence it is apparent that there was a large proportion of unvaccinated individuals living there. But in 1921 came a sudden change in severity, and there were 46 deaths and 924 cases, and in 1922 there were 248 deaths and 784 cases. These outbreaks were controlled by extensive vaccination.

VACCINATION ONLY PROTECTION

A well vaccinated person can come into intimate contact with smallpox and have no untoward results follow. Vaccination against smallpox is the transference of cowpox virus into the human being, and is the only remedy for protection. For example, at a quarantine hospital in Homerton, England, during an outbreak of smallpox, 98 of the 100 attendants were vaccinated. The two who were not vaccinated contracted the disease and the 98 escaped.

The American Army of 4,128,000 men in the World War was thoroughly vaccinated, and there were 14 deaths from smallpox—a negligible number when one considers the history of past wars. During the Franco-Prussian war the German army

had been by mandate completely vaccinated, and in the French army it was optional. Both armies were attacked by smallpox, and the deaths among the French numbered 23,000 and among the Germans 278. "In the same tent, breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been vaccinated, had not a single case."

The statistics of Copenhagen report that from 1751 to 1800 the annual smallpox death rate was 3,128 per million inhabitants, and from 1801 to 1850, after Jenner's discovery of vaccination, it was 286 per million.

The incidences of the wiping out of smallpox in communities by vaccination are many. The accounts would fill volumes. There is no question to

the reasoning mind, with all the evidence presented, that vaccination is effective in protecting the individual and that the present comparative freedom of our civilization from smallpox is the result of this procedure. There is no evidence produced in courts more complete than that of the results of vaccination.

Vaccination is not only an individual measure but one of public interest as well. It is the unprotected individual who keeps the disease alive and spreading. It is the protected individual who helps to confer an immune status upon the body politic. It is the good citizen who helps along in the general good of all, and this fact alone is sufficient to urge vaccination.

"They Will Have it Sooner or Later"—A Dangerous Fallacy in Measles and Whooping Cough

BY H. B. SEARS, M.D.,
EPIDEMIOLOGIST, STATE BOARD OF HEALTH

Comparative mortality statistics of recent years show very clearly the diminished death rate along certain lines. This is true especially concerning the diseases mentioned elsewhere in this issue, such as typhoid, diphtheria, and smallpox. It is pronouncedly true in infant mortality, and it is common knowledge that yellow fever and cholera have been entirely banished from our shores, and for the most part throughout the world. Even the dreaded malaria of the southern states, which once took so vast a toll of invalidism, is now in subjection through drainage and mosquito campaigns, and is greatly lessened in prevalence.

As to the value of efforts of Preventive Medicine along all lines, we find that many of the larger cities with well endowed health departments now have a mortality and sickness prevalence not greater than the rural counties around them, and in some instances even less. Forty years ago it was generally known that the death rate in these cities was much higher than in the country. The old time remark that the country is the healthiest place to live may be more or less true, provided there are equal public health facilities. This, however, is commonly not the case.

PREVENTIVE MEASURES IN MEASLES

To all this we may say that there is a certain class of diseases with which medical science has made no very great progress because of inherent difficulties due to lack of tests and other measures.

One of these diseases is measles, which in the years of prevalence causes upwards of 200 deaths annually in Wisconsin. The organism causing it has never been discovered. Therefore we cannot look for it under the microscope. It may be that it is so small that it is beyond the range of the microscope. We have no known laboratory tests to determine its presence in a doubtful case. It is one of the most contagious diseases we have, and usually all those in the household among children who have not had it contract it from the first case. One attack in general confers immunity, there being but few exceptions to this rule, and that is why adults as a class do not have it.

The early symptoms of measles resemble those of a common cold in the head, often with a cough and inflamed and sensitive eyes, and very frequently it is misdiagnosed as being only an ordinary cold. In this very factor it gains rapid headway, especially among school children. It is usually about three or four days after this cold that rash breaks out on the body. It is communicable from the very start of the symptoms, and presumably more widely so in these first few days than in the latter part of the disease. We are successful in lessening the extent of measles only as we are able to get hold of children in this initial stage of the trouble. The dictum has gone forth among health officers and teachers to be on their guard when measles is prevalent in the neighborhood

and to rule out of school all who present such symptoms. It is the duty of parents also to keep home children with these symptoms after they have been exposed. All this applies to those who have not been placarded by the health officer. The law requires placarding when a diagnosis of measles is made, and the exclusion from school of children who have not had it.

A DANGEROUS FALLACY

Unfortunately there is an old story that has always gone the rounds that all children must have measles sooner or later, and that it is one of the necessities of childhood. It is no more a necessity than is smallpox, except that the prevalence of measles offers greater chance to come down with it. A survey of the deaths from measles shows that over 90 per cent of them occur in the first five years of life, and that pneumonia is the common complication of these small children, and from which complication most of the deaths occur. Likewise defective hearing, weakened eyes and a predisposition to tuberculosis are the lot of some of those who acquire measles.

It is reasonable to believe that if all parents knew the exact truth about this malady they would take more precautions against it. They ought not to allow their own children to expose others, nor if they know it, to allow other children to expose their children. Children, especially those under 5 years of age, should have medical attention to help them over complications. Moreover, no child should be out of bed and playing around, as is often the case, with the initial symptoms preceding the rash if the family suspects the true nature of the case, or during the rash, or during a bronchitis or fever immediately following it. The patient should be saved from the chill and exposure of that period. It may be that the future has something in store as a remedial agent, but that is not in sight yet.

WHOOPIING COUGH

Whooping cough is another disease of which there is some misinformation abroad. The deaths from whooping cough in Wisconsin last year were 153, and, as in measles, more than 90 per cent of them were in children under 5 years of age, and, just as in measles, pneumonia is likely to be a complication. The first year of life is most risky for children with whooping cough. This disease also has its beginning symptoms in a cold and cough, which progressively grow worse for a week or two

before the whoop is evident. Likewise, because of the character of the symptoms, many exposures occur.

Physicians now have access to a vaccine intended to prevent whooping cough. It is also sometimes used for curative purposes. It is known as pertussis vaccine. Its efficacy, however, has not been fully established. It is worthy of a trial.

The spasms of whooping cough are distressing to the patient and parent alike, and physicians commonly prescribe drugs which lessen the extent and severity of the spasms, and the use of them universally would in all probability cut the death rate down.

Whooping cough is no more necessary for children to have than measles, and what we have said concerning that disease applies to whooping cough. It is one of the regulations of the schools that all children with coughs and colds, especially when they have been exposed to communicable diseases, as whooping cough, shall be promptly ruled out of school. When whooping cough is in the neighborhood it is the part of wisdom to see that children do not associate with those who have coughs and colds. It is well for parents to be mindful of this, especially if their children are under 5 years of age.

Fresh air, with proper precautions against taking cold, is beneficial in the treatment of this disease, but in obtaining it no other child should be exposed. It is quite possible to guide most of these little children safely through a dangerous period of life by precautionary measures and proper treatment. The quarantine laws apply to those having whooping cough and it becomes obligatory upon the physician to report the case to the local health department, or upon the parent to do so if the case is not otherwise reported.

"HAVE A HEALTH EXAMINATION ON YOUR BIRTHDAY"

The National Health Council has launched a campaign for a yearly examination for everybody. The council hopes that as a result of its work 10,000,000 health examinations will be made during the year beginning July 4. The annual loss to the people of this country through preventable disease and deaths is more than \$3,000,000,000, according to Dr. Donald B. Armstrong, executive officer of the council. If 10,000,000 persons can be interested in the fact that many physical defects can be prevented and health, happiness, and length of life increased by proper care of one's body and mind, the council believes that it will have started well on its mission to add during the next decade at least five years to the span of life of Americans.

—HYGEIA, August, 1923.

Increasing Health and Happiness of People by Means of Preventive Measures is Aim of Health Boards

BY L. W. HUTCHCROFT,
ASSISTANT STATE HEALTH OFFICER.

The machinery necessary to insure adequate health protection for the people of Wisconsin is well provided for by the statutes. The Wisconsin laws give detailed directions for the organization of the state and local boards of health, and the powers and duties of these boards are also clearly set forth in the state laws. Some local boards, particularly in the larger cities and in localities where there had been severe epidemics with great loss of life, were provided for before the time the state board was organized in 1876.

We have no accurate record of the number of these local boards which were active in the early history of the state but we know that as late as 1880, four years after the state board was organized, there were only 207 local boards of health in the entire state. In 1886 there were 1,100 local boards and in 1923 the number had increased to 1,750. The large increase in the number of local boards from 1880 to 1886 was due to an act of the legislature in 1883, which made it necessary to have a health board in all towns, villages and cities, with a health officer for each. This action of the 1883 Legislature was a great stride in advancing the health interests of the state, but the organization alone of a local board of health in each political unit was, of itself, not sufficient to protect the valuable health interests of the state. The local boards in Wisconsin have been made more efficient through the action of the state board and through the recommendations submitted by the state board to the legislature.

The State Board of Health, from the time of its organization in 1876 to the present, has been composed of seven members appointed by the Governor with the approval of the Senate. The term of office of each member is seven years and the executive officer of the board is selected by the board.

Local boards of health must be composed of at least three persons, a chairman, a clerk and a health officer. The common council in cities, the village board in incorporated villages and the town board in towns is required, within thirty days after each spring election, to organize as a board of health or appoint, wholly or partially from its own numbers, a suitable number of persons to act as a board of health. This is a statutory require-

ment and insures at least the form of a health organization in each town, village and city of the state. If all local boards of health had a proper understanding of their duties to the public and if all local health officers were especially trained conscientious officials, unafraid to act when duty points the way, it would not be necessary to have

WEEKLY MORBIDITY REPORT.

Report for week ended Saturday* 19.....
from County of Wisconsin.
(Township, village, or city.)

Disease.	New cases notified.	Disease.	New cases notified.
Chicken pox	Poliomyelitis .....	.....
Diphtheria	Rubella .....	.....
Encephalitis lethargica	Scarlet fever .....	.....
Erysipelas	Smallpox .....	.....
Influenza	Trachoma .....	.....
Measles	Tuberculosis (of any organ) .....	.....
Meningitis (cerebrospinal)	Typhoid fever .....	.....
Phthiasis neonatorum	Veneral diseases .....	.....
Pneumonia	Whooping cough .....	.....

* Please mail this report Saturday.
If a case of Asiatic cholera, plague, typhus fever, or yellow fever occurs, report it. Mail a card every Saturday. When no cases have been reported during the week, write "No cases reported" on the card and mail as usual.

2-9215 (Signature of Health Officer.)

This is the form upon which your health officer makes a weekly report of all types of communicable diseases existing in your community. When these reports are distributed the state authorities are able to locate budding epidemics and to aid in checking their further development.

a large state health department to assist the local boards in the performance of their duties.

DECENTRALIZING AUTHORITY

The entire history of the state and local boards of health in Wisconsin proves clearly that the policy has always been to assist the local boards in doing work for themselves rather than in doing for them the things which must be done in order to safeguard the public health. The Wisconsin State Board of Health has consistently followed the policy of decentralizing authority in its relations with local boards of health. This the board believes is necessary in order to educate the public along health lines and also to conserve the expenditure of state funds.

The State Board of Health has no authority in dealing with health problems as they affect the health and lives of the people in any community which the local board of health does not also enjoy. The State Board of Health is charged with the general supervision throughout the state of the health and lives of the citizens of the state and possesses all powers necessary to fulfill the duties prescribed in the statutes. Local boards of health,

on the other hand, are authorized by statute to take such measures and make such rules and regulations as shall be most effectual for the preservation of the public health. The local board may appoint as many persons to aid them as they deem necessary and fix the compensation of all employes.

PREVENTION IS FIRST DUTY

The foregoing is a brief statement covering the organization of the state and local boards of health and outlines briefly their relations in handling health problems which have a state-wide importance or which are peculiarly problems of any particular locality. Naturally, the first duty of the



The Child Welfare Special takes the message of good health to the rural communities.

state and local health boards is to prevent the spread of dangerous communicable diseases. In this work the state board assumes a leading part for the reason that it outlines minimum requirements which must be observed in the prevention and control of these diseases. The minimum requirements have the full force of law and it is the duty of all local boards to enforce these regulations without fear or favor. The chief consideration in the control of communicable diseases is the isolation or quarantine of all persons afflicted with such diseases on the ground that such diseases are spread quite largely by direct contact with persons afflicted, by contact with disease carriers and by contact with freshly soiled articles used by the afflicted person. It is a maxim worthy of repetition here that these diseases cannot be properly controlled unless all cases are reported promptly to the local health officer and he, in turn, is required to report these cases to the State Board of Health. Where a physician is employed, it is his duty to report these cases of dangerous communicable diseases to the local health officer within 24 hours, and if a physician is not employed, it becomes the duty of the householder or any other per-

son who has knowledge of such cases to report the facts to the health officer. An accurate knowledge of the number of cases of these diseases is not the only thing that is necessary in order to properly prevent and control them. It is necessary to carry on an extensive educational campaign so that the general public will have a practical knowledge of how these diseases are spread and what to do in order to prevent them. The problem of constitutional disease, such as heart disease, and Bright's disease, the problems of maternal and infant mortality are also important considerations in our efforts to reduce the general death rate. In the solution of all of these problems the question of substituting habits of right living for habits of wrong living in the adult population and the cultivation of habits of right living among the children must be emphasized. This implies an extensive educational campaign which must be unified and directed by some central state authority.

ABATING NUISANCES BUT ONE DUTY

It is a popular notion that the state and local boards of health exist mainly for the purpose of investigating and abating nuisances or other conditions which seriously interfere with the peace and comfort of our citizens. This is only one of the duties imposed by the legislature on these boards, but on account of many of our citizens being more interested in the abatement of a nuisance involving some slight discomfort than they are in the more important problem of disease prevention, a great deal of the time of the local health officer is taken up with such investigations.

Our Supreme Courts have held in a large number of cases that while an individual may use his property as he sees fit, yet he cannot use it in such a way as to create a nuisance detrimental to health or to interfere with the peace and comfort of his neighbors.

In many localities the local board of health is charged with other duties such as the disposal of garbage, the inspection of milk and other food products, the school inspection work and the enforcement of a large number of local ordinances some of which have only a remote bearing on the problem of public health. The question of whether the state and local boards of health have done their work well can be answered only by the results accomplished. If the general death rate has been lowered, if the number of cases of communicable disease has decreased, if living conditions have im-

proved and if habits of right living are more generally practiced, it is fair to assume that the work of the state and local boards of health has been a success.

WORK SHOWS RESULTS

It has been stated that the test of a health officer's fitness is his ability to reduce the death rate.



The County Nurse visits the rural school. Each county nurse averaged 135 such visits during 1922, and the number of children inspected averaged 2,960 per nurse.

Measured by this standard the public health work in Wisconsin has been carried on in a very satisfactory manner. Death rates are entirely too high in some localities, but the average is low. In comparison with other states similarly situated and with the registration area of the United States which now includes thirty states, the general death rate in Wisconsin is considerably lower than the average. Wisconsin has a comparatively low in-

fant and maternal mortality and is among the very lowest of all the states in death rates from typhoid fever, tuberculosis and smallpox. The Census Bureau's life tables for 1920 show that Wisconsin ranks next to Kansas for the longest life expectancy. This means that the longest lived people were those living in Kansas, with the average of 59.73 years for males and 60.89 for females, while Wisconsin can boast of 58.77 years expectancy for males and 60.71 for females.

The State Board of Health and insofar as it is possible practically all of the local boards of health cooperate with the Dairy and Food Department, the Industrial Commission, the State Engineering Department, the State Board of Agriculture, the Railroad Commission, the Conservation Commission and the State Superintendent of Schools in avoiding the duplication of inspection work and in better serving the people of the state at a minimum cost.

Every citizen of the state should feel free at all times to call on his local health officer for assistance in solving problems of communicable disease control, the abatement of nuisances and in advancing standards of healthy living, and on the other hand the local health officer is entitled to the assistance of every public-spirited citizen in the performance of his duties. No health officer can accomplish satisfactory results in the face of an adverse public opinion. It is the aim of the State Board of Health and should be the aim of every local board of health to prevent rather than cure, to guard the people of the state against disease and to increase, through better health, the happiness and prosperity of our people.

Hygeia—What Is It and Why?

BY JOHN M. DODSON, M.D.,
CHAIRMAN, THE EDITORIAL BOARD, HYGEIA

Hygeia is a magazine of individual and community health published by the national organization of physicians—the American Medical Association—for the information and education of the public in regard to health and its attainment.

For centuries an air of mysticism has obtained in the attitude of the public towards the physician. When one sought the services of a physician he did so because he was ill and wished relief from pain and suffering and to be restored to health by the administration of potent pills or plasters or some other form of drug preparation, or, when these

were inadequate, by some surgical procedure. This conception of the powers and performance of the regular practitioner of medicine is not so very far removed from that held by many persons toward the medical man, the fakir, the voodoo, or the practitioner of some mysterious form of healing such as laying on of hands, the use of charms and other devices. This attitude of the mind was inevitable so long as we had so little knowledge of the causes and modes of transmission of disease and of dependable methods of prevention and cure. In the last sixty years a great change has come. The con-

vincing demonstration by Pasteur that certain diseases are due to the invasion of the body by the minute forms of life (germs, bacteria, etc.) has provided a firm scientific foundation for combating these diseases. What is more it has resulted in methods of study of other diseases not of germ origin which are scientifically exact and dependable. It is because of the introduction of methods

ness after it has once attacked an individual. To be fully effective this knowledge must become the property of every person and not alone of physicians, public health officials, or any group or groups of persons. Therefore, the most important agency for the advancement of human health is education and especially the training of health habits and education for health of the coming generation in schools and colleges of all grades. *Hygeia* has been established as an agency for this health education of the public. One of its chief claims to consideration is the fact that having been established by the American Medical Association, with its 90,000 members, it commands the active interest and service of the recognized leaders of medicine in all of its branches. It speaks with authority. Its original articles are written by authors of wide experience and knowledge in their respective fields. Even the answers to individual questions which appear in the Question and Answer columns are written by those who speak with authority from first hand knowledge of their special branches.

NOT TECHNICAL

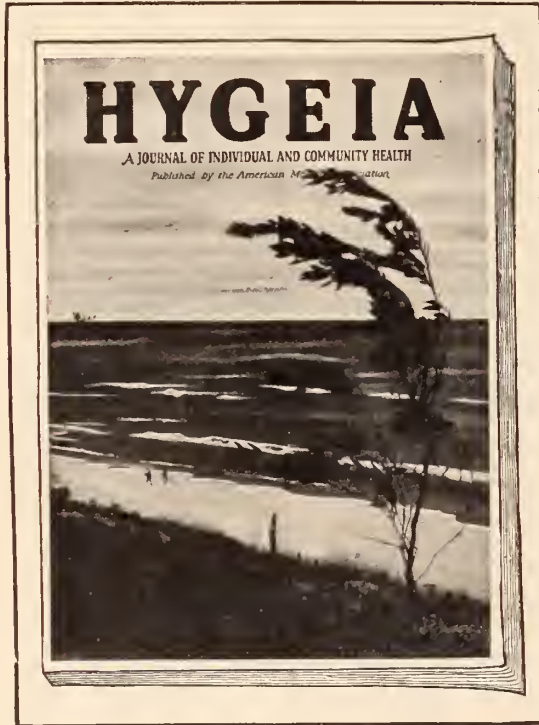
Hygeia speaks not only with authority, but in plain, simple, non-technical language which can be understood by the general reader not familiar with the technical terms of medical science. After all, the two most potent agencies on which we must rely for the education of the people in matters of health in every community are the teacher and physician, cooperating as they should be in the task of arousing the interest and extending the knowledge of both adults and children along health lines. Thus it is in their power to revolutionize health conditions in a single generation. *Hygeia* seeks to be a helpful agency in promoting the work of all agencies in the direction of health betterment.

SUGGESTIONS APPRECIATED.

Hereafter the Lay Issue of this Journal will be the January number each year. The suggestions and criticisms of the readers are invited to the end that future numbers shall contain that which will be of most value. The editors will appreciate your suggestions.

OUR INSANE

Insanity comes entirely out of disease. Much of the disease can be prevented. Why not prevent, as far as we may, the diseases which cause insanity? Is it economy to spend millions for the care of the insane when for a comparatively small sum they may be kept sane and useful citizens?



of scientific exactitude that the medical sciences have made greater progress in the last half century than in all previous time. We are in possession today of a body of knowledge which has enormously reduced the frequency of illness and the percentage of mortality and has extended the average life period by nearly twenty years. If this knowledge can be made universal, and our modes of living and working can be brought into accord with this knowledge, the average length of life of human beings can be still farther extended by at least from ten to fifteen years. What is more important, if such knowledge be made the basis and guide of all human activity, the health of human beings can be so improved as to make for vastly greater comfort, happiness and efficiency.

KNOWLEDGE PREVENTS DISEASE

This new knowledge has yielded practical results almost wholly in the direction of prevention of disease as distinguished from our ability to cure ill-

Pennies Saved 1100 Lives in 1923; Public Health Sold by Wisconsin Anti-Tuberculosis Association

BY MRS. RUTH MACMILLAN,
MILWAUKEE.

*FOR SALE
PUBLIC HEALTH*

That was the central idea emblazoned on the shingle the Wisconsin Anti-Tuberculosis Association hung above its door sixteen years ago. It was an idea then so new and radical that it was hardly more than dimly felt by its proponents themselves. Yet in less than a year it had been "sold" to the people of Wisconsin and in that sale was laid the foundation for one of the greatest public health movements in the country. Today Wisconsin is one of the heaviest buyers of public health.

Breaking away from the age-old system of philanthropic relief, the Association turned toward education, seeing in this a broader and more productive field. It proposed to teach the people that tuberculosis is preventable and curable. This was a startling and almost unheard of theory to the lay public of sixteen years ago to whom a diagnosis of tuberculosis was equivalent to a death warrant. How successful this teaching has been can best be gauged by the fact that the death rate from tuberculosis in Wisconsin has dropped from 107.7 deaths per hundred thousand population in 1908, the year the association was organized, to 63 per hundred thousand in 1923, representing a saving of about 1,100 lives in the past year alone.

There is nothing sentimental about the arguments used by the Wisconsin Anti-Tuberculosis Association in its teachings and in selling the penny Christmas seals which entirely finance the organization's work. It is a simple business proposition, based upon common sense and appealing to the instinct of self-protection. For this reason it has received the support not only of the few "interested" persons, but of literally hundreds of thousands of people from all strata of society who have been won to the idea that "no home is safe from tuberculosis until all homes are safe." And so the fight against this greatest of all home wreckers is generously supported despite the fact that education is at best a slow process. During the 1923 Christmas seal sale nearly \$125,000 was

raised to finance the work. How this money is spent and the results it obtains indicate the high spots in the story of the Association's work.

A FIGHTING ORGANIZATION

The Association is a medium through which the knowledge of medical science passes and is changed into such a form that it can be assimilated by the public. The Association is "first and last" a tuberculosis fighting organization. But because right living and proper health habits are so potent a factor in the prevention and cure of tuberculosis, it has become necessary to include in this movement other movements embracing the general crusade for better health.



REGAINING HEALTH AT THE TOMAHAWK LAKE CAMP.

Whenever the Association saw the need of a certain type of health work in the state it has shown the people that need and by demonstrating how that need could be met, created a demand for the particular type of work. Among the health agencies which its efforts helped to create are the state and county sanatoria, the public health nurse, the fresh air schools, the traveling clinic, the Modern Health Crusade and other health educational movements which are playing an increasingly large part in the rural school.

"It can't be done," was the cry raised on all sides when the Association conceived the idea of a traveling free chest clinic. "The people won't come out to the clinics, even if you can get the doctors to do the work."

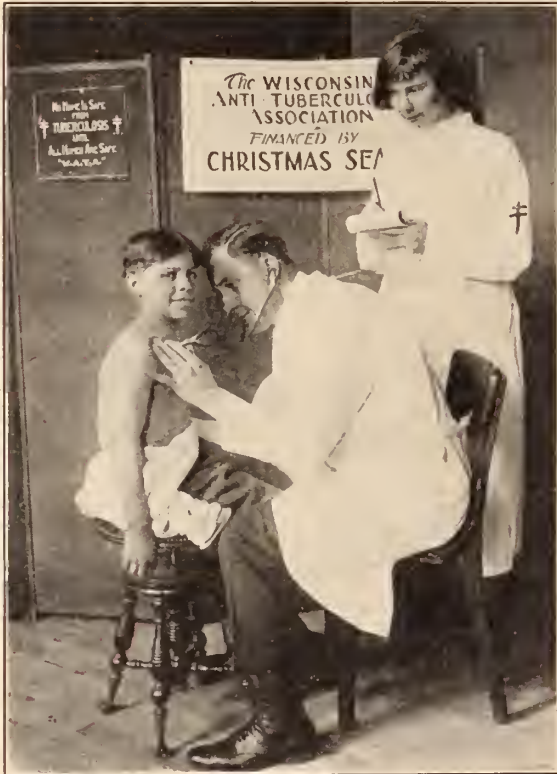
The very idea of a group of physicians traveling about examining people much like the Indian medicine man, except that the latter sold "cure alls" and did not trouble about the examination, seemed to present insurmountable difficulties. But in 1919 the attempt was made. Since the first clinic, held in Kenosha that year, nearly 36,000 examinations have been made by the clinic

the last point a brief health talk is given by the physicians to every patient examined at the clinic, whether tuberculous or not. In addition to the bare chest examination, the heart, glands of the neck, nose and throat and teeth are examined.

Approximately 18 per cent of those examined at the clinics since the work was started have been placed in the tuberculous classification. A considerable proportion of the 18 per cent was classified as suspicious, that is, cases in which the disease had gained so slight a hold that no positive diagnosis could be made upon one examination. The discovery of a large number of such cases, most of which are not under the observation of physicians because the patients are not actually "sick," is one of the most hopeful and valuable things accomplished by the clinic work. Never have those in authority in the Wisconsin Anti-Tuberculosis Association held the idea of replacing or substituting this clinic service for that of the physicians of the state. Indeed, the fundamental purpose of this whole work has been to increase the amount of good work that the medical profession is prepared to render to the employing public. The fact that 62 per cent of all the cases seen at the clinics are referred back to the medical profession for further observation, and confirmation or correction of clinic diagnosis, and for definite treatment shows how practically this idea is being carried out.

SANATORIA A SAFEGUARD TO PUBLIC

Popularization of Wisconsin's public sanatoria, for the erection of which the Association has been largely responsible by "selling" the idea to the taxpayers, is another phase of the Association's work that is important. When the Association began its work there was no workshop for members of the medical profession in which to effect tuberculosis cures. The need for sanatoria was at once apparent. There must be sanatoria in which early cases can be cured and in which advanced cases can be kept from passing the disease on to others, especially to their own young children at an age when the children are particularly susceptible to the disease. Many a patient with incipient tuberculosis has entered a sanatorium as the result of persuasion at a free chest clinic and left the institution an arrested case well on the road to a complete recovery. Many a patient in the advanced stages of the disease has been persuaded by clinic physicians to go to sanatorium where, even though it might be too late for him to regain his



A CLINIC EXAMINATION HOLDS NO FEAR FOR THE BOYS AND GIRLS

team which now consists of four doctors. Whenever two- or three-day clinics are held in the larger cities of the state, outside physicians called in to help take care of the large numbers that apply for examinations. In addition to the medical men, there are two social workers on the clinic team. One travels with the clinic and the other follows, visiting the homes of those found tuberculous to ascertain whether the clinic physician's recommendation that the patient place himself under the care of his family doctor is being followed.

CHEST CLINICS SUCCEED

The purpose of the clinic work is three-fold; to catch the incipient cases; to discover old, chronic and advanced cases that are not being cared for, and above all to teach prevention. To emphasize

own health, he at least ceased to be a menace to others.

During the past year 280 clinics were held in 148 Wisconsin communities and many requests for clinics from towns throughout the state had to be postponed for lack of sufficient men and money to fill all demands. Two hundred twenty communities scattered from one end of the state to the other, have been visited by the clinic. Several especially interesting and novel clinics were held during the past year: one at the vocational school of Sheboygan where several hundred children were examined and the tuberculosis rate found to be un-

zoned has been ironed out by the Association's consultants. It has been found that the morale of the institutions and their ability to serve has been much improved by his consultation work and today there is nowhere in the United States a stronger chain of county tuberculosis sanatoria than in Wisconsin.

TRAINS PUBLIC HEALTH NURSES

When the Association began to demonstrate the value of public health nursing in 1910, it started something that by 1916 required completion. There was a demand for public health nurses and there were no trained workers to fill the position.



ON THE ROAD TO RECOVERY AT MUIRDALE SANATORIUM, WAUWATOSA

usually high for this age group; a clinic on the Odanah Indian Reservation where more than 600 men, women and children were examined in one week; and a clinic that was begun last November at the Milwaukee continuation school and is still under way. Several thousand children have already been examined at this clinic which is conducted with the cooperation of the Milwaukee health department.

In addition to its clinic work, the medical department conducts a consultation service for all Wisconsin county sanatoria with the exception of Muirdale, which has a large medical staff of its own. This service, a unique service not to be found anywhere else in the entire country, consists of visits to the sanatoria at regular intervals by an Association physician. He examines and talks with the patients, confers with the regular medical attendant regarding patients and sanatorium problems and discusses sanatorium questions with the superintendent. Many a difficulty and misunderstanding arising at the sanatoria and looming very large on a comparatively small hori-

In 1916 the Association opened its Health Service Training School, which has now graduated nearly 250 public health nurses and sent them out into the field. About 150 of these young women have been actively employed in Wisconsin, the others being scattered from the Balkan states in the east to the Pacific ocean in the west and the Panama canal in the south to Alaska in the north. Only graduate and senior student nurses of accredited hospitals are eligible for enrollment in the course which endeavors to give the nurse training in the theory and practice of public health work.

Because the dissemination of information is an essential function of any educational organization, the Association maintains an educational publicity department. This department issues a monthly publication, *The Crusader*, devoted to the campaign against tuberculosis and other public health problems. It also publishes, from time to time, pamphlets on various health subjects including health games, plays and stories which are used in

(Continued on page 550)

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EDITORIALS

A BASIC THOUGHT.

IT is entirely proper that this first annual Lay Issue should have its leading editorial written by a layman. So we present such an editorial by a layman to laymen. It deals with a subject that will be presented to the 1925 legislature. It deserves this place of prominence.

VITAL TO PUBLIC PROTECTION.

"What are the rights of a state in regulating medical practice? As outlined by a Chicago attorney before the Congress of Medical Education and Licensure, these rights are: Enactment of regulations making it impossible for any person to receive a license until he has demonstrated ample knowledge of the phase of healing in which he is working; ability to discover the nature of diseases he seeks to cure; a scientific knowledge of methods of treatment; training which fits him to apply intelligent effort toward prevention of the spread of the disease.

"That is a conservative statement and one to which, as we see it, no member of any of the healing branches outside the recognized medical schools could object. In fact, such a basis for licensure would be to the distinct advantage of the so-called substandard methods of healing. It would weed out the incompetent members of these schools, raise the whole standard of these newer methods and put them on the same basis as the older forms of doctoring.

"There is in this procedure no attempt by the

state to dictate what kind of healing its citizens shall choose. It is merely a plan to determine that whoever offers himself as a physician in the treatment of human ailments shall be fit and skilled in his branch. There is nothing unreasonable in this demand.

"The fake medical school and the fake diploma mill can safely be left to those who act under the police powers of the state, provided honest physicians are ready and willing to give these officials every bit of information indicating fraud that comes to them. Too often the well meaning doctor in his busy round forgets to do this. But this other thing, the raising of standards, is going to require a long, hard pull, and the overcoming of many prejudices and misleading arguments, before it can be realized. Yet the establishment of such standards is vital to public protection."

This editorial from the Milwaukee Journal of March sixth last, holds a thought for the physician and the layman alike. From the physician it asks continuation of a cooperation which has ever been given in Wisconsin.

From the layman it asks an understanding support for a measure that is solely for their own protection and the protection of those about them less able to perceive fraud and incompetence. Misleading arguments create a prejudice that will blind some to the real issue involved. But we believe that when three thousand years ago Dante said "Give the people light and they will find the truth", he gave us a maxim and not an unattainable ideal.

A DOCTOR BLOWS OFF STEAM.

“CONFOUND it all, I get so sick of being called upon to repair worn out human machinery and ‘make it good as new’ that I often feel like locking up my office, tossing the key far out into the river and beating it to a farm or some other place where I could grow things instead of tinker with them after they’ve broken down.” The doctor was not talking for publication but to some of his intimate friends in the Club. “Half the time,” he continued, “my patients might almost as well expect me to grow a new leg on an amputated stump as really to improve their kidney, liver and heart conditions by the time I am consulted.

“Preventing disease should be the thing in medical practice nowadays, but how many patients ever think of going to the doctor until they begin to feel pain somewhere, lose a lot of weight, or have some other symptom that makes their disorder as apparent and insistent as a couple of missing cylinders in my little old last year’s Ford? And even then they want a repair or readjustment made by some hocus-pocus process; something, too, that won’t discommode them any or consume any of *their time*. Practicing medicine under present conditions is a fine profession—I don’t think.

“We doctors are sometimes accused of being interested in disease primarily, instead of health primarily. We have a fine chance to approach it any other way, haven’t we! The only healthy individuals I see in my office are insurance solicitors, book agents, bill collectors, and fake mining company promoters. And they are there after my money and not to pay me any of theirs for my service.

“I know that it may be said that we doctors, in a measure, are to blame for this situation; that we haven’t advertised our best wares. But the fact is the vast majority of people just won’t come for an inspection and overhauling when they are feeling well any more than the average man will go into a life insurance office and lay down an unsolicited application for an insurance policy. And we can’t go out and solicit patronage as the insurance companies do. The doctor who would make a good solicitor would almost inevitably be a poor doctor.

“If the people were a bit more wise they would organize and hire us physicians to keep them well. Some are doing something of the kind now, but

as a rule they aren’t doing it very wisely. In lodges and sick benefit societies, for example, they usually try to drive too good a bargain. They often get the doctor at a figure so low that he cannot give the best of service and keep out of the bankruptcy court. The average high grade, scientific physician will work night and day for a living and assurance of a safe future. What more do reasonable people want? And—take it from me—he’d rather prevent disease than prescribe remedies to alleviate disease after it has reached incurable stages.”

TWO CENTS APIECE.

I N the press of a Wisconsin community of over 2,500 inhabitants there appeared recently the salaries fixed for 1924. The list follows:

Street Superintendent	\$1,320
Water Superintendent	1,320
Driver of Fire Truck	1,200
Pumpman	1,200
Night Officer	1,140
Day Officer	1,080
Clerk	1,080
Treasurer	840
Mayor	300
Assessor	300
Attorney	250
Alderman	150
Health Officer	50

There is no one acquainted with the story of our health departments, so vividly portrayed by Dr. W. A. Evans in this issue, but will realize the tragic sense of proportion as shown in a part of this payroll.

There is a distinct necessity for a competent health officer in every community. We recognize the demand for tax reductions. But few taxpayers realize the extent prevention cuts the cost for support of state, county and local institutions for the care of their fellow-citizens broken down through disease.

We mention this one case as graphically showing the need for others than doctors to take an interest in public health. Public health means your health and mine. Our good health is worth more to our community than two cents each.

A trained health officer is a valuable asset to any community. He has many duties to perform. His pay should be commensurate with those duties, and then he should be held to strict accountability. Don’t disdain your health officer. He is your best friend.

Cancer is a Curable Disease in its Early Stage: Death Rate Will Fall as Public Appreciates Facts

An Outline Discussion of the Cancer Problem for the Information of the Laity

BY J. P. MCMAHON, M.D.,
CHAIRMAN COMMITTEE ON CANCER, STATE MEDICAL SOCIETY OF WISCONSIN
CHAIRMAN COMMITTEE ON CANCER, MILWAUKEE COUNTY PUBLIC HEALTH ASSOCIATION.

Cancer has long been considered a fatal disease by most of the laity. Even mention of the term engenders such a fear that the great majority of people imitate the ostrich—hide their heads in the sand and try to convince themselves that “out of sight, out of danger.”

Nothing could be further from the truth than to consider cancer as a necessarily fatal malady. From the view point of longevity, no practice could be more irrational than to fail to periodically attempt to discover the facts with reference to one’s physical condition and immediately employ such means as are indicated for the prevention of impending and the cure of existing disease.

Cancer in its early stage is curable.

The facts that approximately one hundred thousand (100,000) people in the United States die each year from cancer; that approximately two thousand seven hundred (2,700) people died from cancer in Wisconsin in 1922; that cancer is the cause of one death in ten after the age of forty and of one woman in eight or 12½% and one man in fourteen or 7-2/7%, and that the incidence of cancer is on the increase, all indicate the necessity for everybody knowing more about this invader because arrest is dependent upon the employment of adequate methods before the enemy succeeds in overwhelming the first line of defense.

The success in the fight against any disease depends upon general knowledge of its cause, symptoms, early diagnosis, and successful methods of treatment.

What then do we know about the disease under discussion, “Cancer?”

MORE GENERAL KNOWLEDGE NEEDED

We know that:

The term cancer as ordinarily used, implies a lawless growth of rapidly multiplying abnormal thief-like (epithelial) or other cells which are at first localized and later spread by continuity, contiguity and by means of the circulation, thereby producing secondary growths or tumors. These

abnormal cells produce systemic intoxication or poisoning which is followed by malnutrition, loss of weight and strength and later by ulceration which admits infection. Ultimately they cause death unless they are completely removed, destroyed or limited by proper local and continued constitutional treatment;

Cancer cells are therefore cannibalistic;

The immediate causes of cancer are not yet known but some contribution to our knowledge of the subject is made each year by scientists;

There are reasons to believe that all of the causes will be fully understood in the not distant future;

The four outstanding conditions which may result in cancer are:

An inherited predisposition;

A lowering of the tissue and general systemic vitality, thereby reducing resistance to all disease;

Chronic local irritation which may be mechanical, chemical, bacterial, or thermal; and

Advancing age.

SYMPTOMS CAN BE RECOGNIZED

We know further that:

Being located on the surface of the body as are some of the organs which are frequent sites of cancer, and communicating with the surface of the body as do the majority of the other organs and parts which are frequent sites of this disease, cancer early gives rise to both subjective and objective symptoms;

The early signs of cancer are understandable and recognizable by every person of average intelligence;

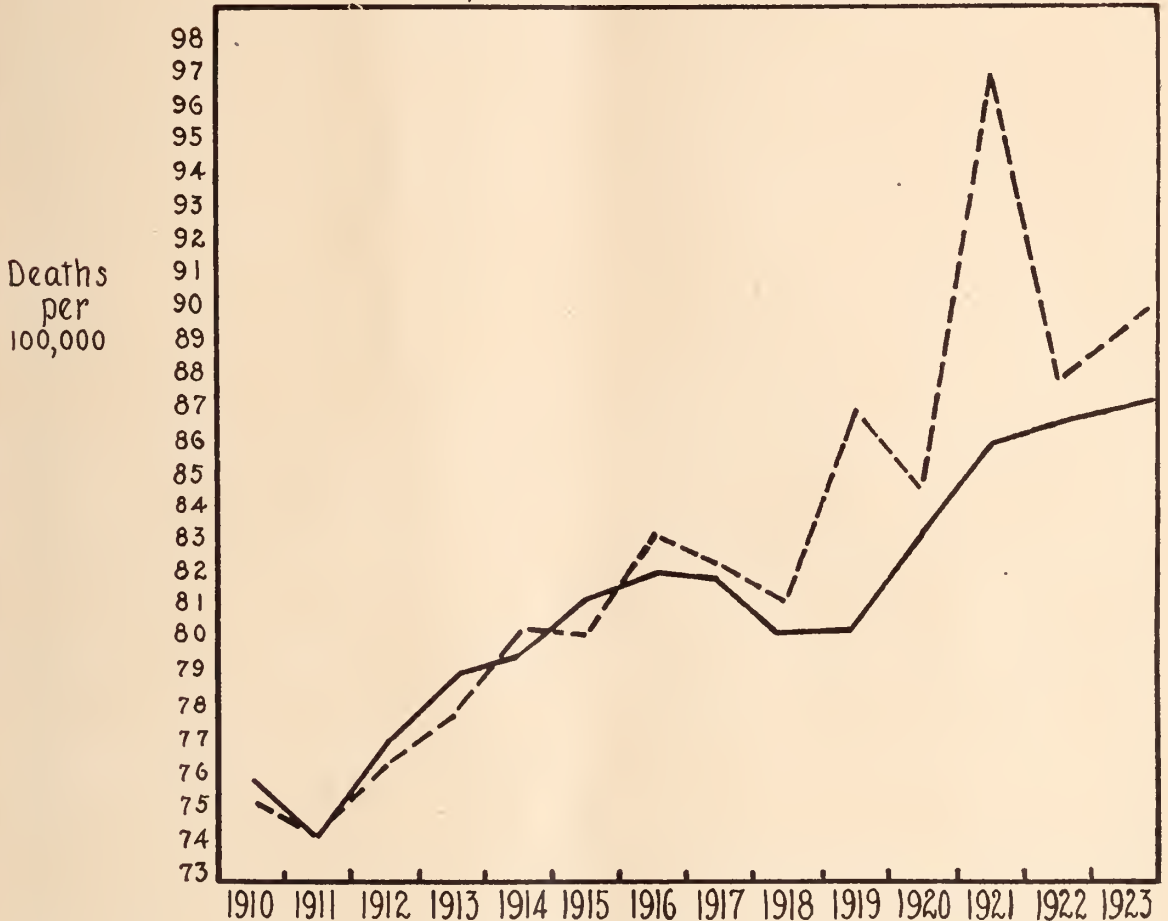
The estimated total annual mortality from cancer in the United States each year approximating one hundred thousand (100,000) is distributed as follows:

Females	67,000
Males	33,000
Whites*	95,426
Colored	4,574

CANCER

DEATH RATES (by years) PER 100,000 POPULATION FOR THE STATE OF WIS- CONSIN AND REGISTRATION AREA

State of Wisconsin -----
Registration Area _____



Compiled from data secured from the United States Census Bureau and the Wisconsin State Board of Health.

Total 100,000

The other frequent causes of death in the United States during the same period of time and the number of deaths due to each is as follows:

Diseases of the heart 111,579

Tuberculosis 106,985

Pneumonia 105,213

Diseases of the kidneys 75,005

It is readily seen from the above quoted statistics that cancer is the fourth most frequent cause of death in the United States.

The organs and parts primarily affected with cancer and the number of deaths due to cancer of

each in a total of one hundred thousand (100,000) cases is approximately as follows:

Stomach and liver 35,000

Female generative organs (rivals cancer of stomach and liver in woman) 20,000

Female breast (one-half in unmarried women) 15,000

Intestine and peritoneum 12,000

Buccal cavity or mouth 4,000

Other organs or parts 10,000

Total 100,000

The number of deaths from cancer in Wisconsin in 1921 was approximately two thousand six hun-

dred and five (2605) and the distribution in the different organs and parts was as follows:

Stomach and liver	1,180
Female generative organs	226
Female breast	201
Intestine and peritoneum	353
Skin	51
Buccal cavity or mouth	65
Other Organs and parts	529
Total	2,605

CANCER DEATH RATE INCREASING

A further study of statistics on cancer shows that deaths from it in the registration area have apparently been steadily increasing during the last 13 years. Since 1916 the number of deaths from cancer in Wisconsin have been proportionately higher than in the other 32 states and 18 cities included in the registration area. Since the specific cause or causes are as yet unknown, a definite explanation of the apparent increase must necessarily be left for future study and determination. It is probable that increased skill in diagnosis and a more determined effort on the part of the medical profession during the last thirteen years to be precise when entering the causes of death on certificates explains part of the apparent increase. In this connection it should be suggested that inherited predispositions, physical strain and mental anxiety and the complexities of modern life with accompanying tendencies to excesses and dissipations contribute to the development of cancer and therefore play a part in bringing about an actual increase.

The accompanying chart shows graphically the increase in deaths from cancer in the registration area of the United States and in Wisconsin during the last 13 years.

WHAT CAN BE DONE TO REDUCE DEATH RATE?

In view of the above cited facts, the question naturally arises as to what we are going to do with the problems brought forth in the text and emphasized by the tabulations. In reply to this question it may be stated that the principal means of staying the ravages of cancer are:

1. Education of the laity so that all shall be familiar with the early suggestive symptoms of cancer in the different parts of the body. All should realize the fallacy of such false modesty as has heretofore caused them to postpone and not infrequently prevented them from submitting to examination. In this connection, women in whom two-thirds of all cancer occur, should be impressed

with the fact that cancer cannot be diagnosed through brassieres, corsets, or the modern day bloomers. All should be disabused of the false fear of being apprised of the truth with reference to their physical welfare and be impressed with the advisability of consulting their family physician and submitting to a thorough physical examination immediately after the appearance of suggestive symptoms. Each should be acquainted with the fact that if the family physician does not suggest a thorough physical examination or if he justifiably or unjustifiably hesitates to give them a definite opinion, it is their privilege and a duty they owe themselves to ask for consultation and if refused, to consult another physician or surgeon.

2. Establish not only early diagnosis, but diagnosis while the growths are still precancerous or while they at least remain localized.

3. Efficient treatment of local growths. Inform the apprehensive that this does not always mean submitting to an unjustifiably much dreaded cutting operation for the reason that electro-coagulation, the actual cautery, radium and X-ray often accomplish as much and sometimes more than the extensive surgical operations formerly employed, and that much of the treatment can be administered under local anaesthesia.

4. Complete and permanent removal of the predisposing and exciting causes, particularly all forms of chronic irritation.

5. Building up the patients' physical resistance and so adjusting and ordering their daily routine as to maintain this resistance throughout the remainder of their lives as the medical profession has been attempting to do in the management of undernourished infants, those suffering from rickets, the over-worked, neurasthenics and the tuberculous.

EDUCATION OF PUBLIC REDUCES MORTALITY

The accomplishment of these objectives may require the establishment of independent cancer clinics, hospitals or sanitarium, or still better, well manned cancer departments as subdivisions of existing general clinics, hospitals and sanitarium; and the assembling of the combined diagnostic and therapeutic resources of the medical profession and the educational facilities offered by the sociological professions as well as by volunteer and governmental agencies. These accomplishments will require interested, intelligent, consistent and persistent cooperation on the part of our population in the form of the putting forth of systematic

efforts by church, fraternal and educational organizations to spread the knowledge of the necessity for early diagnosis and proper treatment of cancer.

The essentials of the above plan have been introduced in two of our larger cities with the results that:

The proportion of cancer patients who consulted physicians within three months after the first symptoms appeared increased from 32 to 57% ;

The proportion of patients submitting to treatment within the first two weeks after a diagnosis had been made increased from 78 to 90% ; and

The proportion of patients in whom approved treatment justified hope of a material prolongation of life increased from 62 to 74% .

The time has arrived to institute a similar program in all centers of population and by virtue of both tradition and training, the members of the medical profession are the logical initiators of the movement, and they will undoubtedly live up to their opportunity to render additional humanitarian and public service. The result accruing from this undertaking will, however, necessarily depend upon the cooperation accorded by those who are not members of the medical, dental and nursing professions.

As self preservation is the first law of nature; longevity, worldly accomplishments and happiness are in quite a measure determined by physical fitness, and as cancer ranks third or fourth among the most frequent causes of death and is neither contagious nor infectious, the privilege or obligation, whichever one may choose to consider it, of escaping death from cancer is pretty much a question to be decided by each individual for himself. For those who decide to escape, the following outline of suggestive symptoms should be of material service.

The suggestive symptoms of cancer in different parts of the body with which everyone should be familiar are:

Suggestive Symptoms of Cancer of the Lip, Tongue and Mouth.

Bluish or yellowish white flake like spots or patches on the lips, sides and roof of mouth and sides and top of tongue, sores, cracks, and fissures of the lips and sides of the tongue, floor of the mouth and the gums, which persist longer than ordinary cold sores and cankers, and which heal over and recur at varying intervals, and pain and toothache which fail to respond to treatment by a dentist. Ninety per cent (90%) of cancer

of these organs occur in men and are undoubtedly samples of cancer being produced by chronic irritation following the use of tobacco; infected decayed and fragmented teeth, and general carelessness in mouth hygiene.

Suggestive Symptoms of Cancer of the Tonsils and Vocal Chords.

Sensation of swelling, sensation of fullness, pain accompanying talking and swallowing and radiating to the ear, and hoarseness gradually increasing in severity and shortness of breath.

Suggestive Symptoms of Cancer of the Oesophagus and Stomach.

Loss of appetite, such symptoms of indigestion as fermentation, eructation of gas, heart burn, brash, pain in the chest and just below the breast bone; difficulty in swallowing; the bringing up of solid food, later fluids and vomiting of dark or blood streaked fluids and semi-solids.

Suggestive Symptoms of Cancer of the Intestinal Canal.

Chronic indigestion, constipation alternating with diarrhoea in patients over forty, mucous stools, blood streaked stools or stools of a very dark color, and hemorrhage from the bowel. Cancer of the lower bowel must be differentiated from piles.

Suggestive Symptoms of Cancer of Female Generative Organs.

An increased whitish or yellowish discharge gradually becoming watery and more profuse—this discharge may be water at the start and continue as such—spotting between periods usually a number of hours after violent exercise, following stool, examination by a physician, or following the taking of a douche, and increased flowing during periods. The reappearance of a whitish discharge, the appearance of blood streaks, spotting, clots and hemorrhage or bleeding after the change of life practically always indicate the presence of a tumor and it is usually cancerous. Pain and mal odor are late symptoms of cancer of the female generative organs, as they are of cancer elsewhere in the body.

Suggestive Symptoms of Cancer of the Breast.

The appearance of a lump in the breast or enlargement of it occurring in women after thirty and unassociated with nursing; discharge from a rash on or about the nipple; a bleeding nipple; retraction of the nipple; pain upon exerting the arm of the side involved, and enlargement of the glands in the corresponding arm pit.

Cancer of the male breast is extremely rare.

Suggestive Symptoms of Cancer of the Skin.

Evidence of irritation, increase in size and extension, crust formation or ulceration of warts, moles and birth marks, especially those located on the forehead, the eyelids and the sides of the face, the lips and angles of the mouth, those located in the neighborhood of the entrance to the nose and ears or in parts of the hands and feet which are subject to chronic irritation.

WHY TAKE A CHANCE?

The appearance of one or more of the above mentioned symptoms does not establish the presence of cancer and ten to one cancer will not develop. Few conservative people, however, take a ten per cent chance of losing their savings, especially when the employment of proper precautions promise to avoid loss. It is difficult for medical men to understand why so many take the risks which they daily observe patients taking with their lives as a result of ignoring the simplest rules of hygiene and failing or refusing to act upon professional advice directed to prevent impending disease and to cure actually established serious growths.

As evidence of the extent to which intelligent Wisconsin people ignore the early symptoms of cancer and procrastinate in undertaking treatment after a positive diagnosis has been established, the writer in recording the histories of approximately five hundred cancer patients taken in a Milwaukee institution during the last four years found that:

A large majority of patients delay consulting a physician for three months after recognizing the presence of subjective symptoms which anyone of average intelligence should interpret as being suggestive of serious constitutional trouble and occasionally of the development of cancer;

A goodly number delayed consulting a physician either because of false modesty or fear of having their suspicions that they were suffering from cancer confirmed;

More than one-half of the patients examined postponed undergoing treatment for three weeks after a definite diagnosis had been established;

Owing to these delays in only 45% of the patients examined was there hope of a material prolongation of their lives following as a result of the most approved treatment, while in 27% palliative treatment only was indicated, and 28% of the patients had growths so far advanced that

the only treatment indicated was an attempt to minimize suffering; and,

In many of the fatal cases the story might have been much different were it not for the fact that the afflicted traveled the by-ways of medicine seeking false gods before securing approved treatment from competent and conscientious physicians and surgeons.

As an illustration of the interest the Federal Government is taking in the problem of bringing about earlier diagnosis of cancer, a copy of a bulletin issued by the United States Public Health Service for the information of the public is herewith included and reads as follows:

1. Cancer at the beginning is usually painless and its onset for this reason is especially insidious and dangerous.
2. Cancer is at first a small growth which can be safely and easily removed by competent surgical or other treatment.
3. Cancer is not a constitutional or "blood" disease.
4. Cancer is not contagious.
5. Cancer is, practically speaking, not hereditary.
6. Every lump in the breast should be examined by a competent doctor.
7. Persistent abnormal discharge or bleeding is suspicious.
8. Sores, cracks, lacerations, lumps, and ulcers which do not heal, and warts, moles, or birth marks which change in size, color or appearance may turn into cancer unless treated and cured.
9. Probably 60% of cancers of the rectum are first regarded as piles. Insist on a thorough medical examination.
10. Continued irritation in some form is the usual cause of cancer. It rarely results from a sudden injury.

While it is not within the purpose of this outline to enter into a discussion of the treatment of cancer, it is believed that enough has been said on the subject to establish the facts. When cancer is treated early and efficiently, it is not a hopelessly incurable disease. On the contrary, local tumors can be completely removed and if thorough removal or destruction of local growths is followed by a regime properly designed to improve and maintain body nutrition and therefore resistance to cancer as well as to other diseases, a much

Decrease in Deaths from Typhoid Fever Form Brilliant Record in Annals of Preventive Medicine

BY F. F. BOWMAN, M.D.,
 EPIDEMIOLOGIST, STATE BOARD OF HEALTH

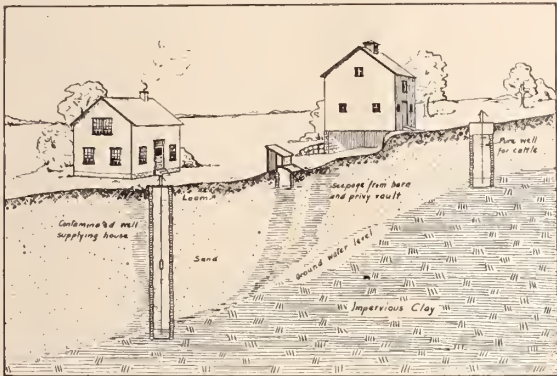
Typhoid fever was once one of the most prevalent diseases throughout the state of Wisconsin. Reports to the Wisconsin State Board of Health show that in 1910 there were 588 typhoid deaths, and presumably there were approximately ten cases to every death.

There is no more brilliant story in the history of the control of communicable diseases than that concerning typhoid fever. Deaths reported to the

stream will bear human contamination many miles along its course. Changing currents of a lake carry to distant points whatever is in them. Underground currents through crevices of rock and gravel may transport contamination for many yards underground.

For this reason the water of any stream that ever receives human pollution is dangerous to drink without treatment. The water of any well or spring which may receive overground drainage from cesspools, vaults, etc., is dangerous. Constant work in requiring cities and villages to draw their water from deep well supplies has caused great changes in the prevalence of typhoid fever. It has been found that the addition of chloride of lime in water will kill the typhoid germ, and many cities which require an abundant water supply make use of streams and lakes by purification of this water through what is known as chlorination.

In the space of fifteen years the advance in water purification has gone on to such an extent that the decline noted in the figures above cited tells the tale of its incalculable value.



One way typhoid is spread. Wrong underground drainage and well top not protected from surface contamination.

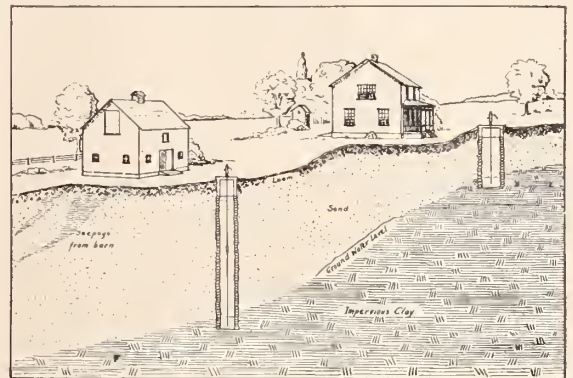
Wisconsin State Board of Health in 1923 from typhoid were 55. While this is a vast decline both in mortality and in the presumable occurrence of cases, it shows that typhoid is still something of a factor in preventive medicine. Although comparatively quiescent, it is ready to strike again with the old vigor whenever sanitary customs lapse into the conditions prevailing during the last century.

An account of the manifold ways in which typhoid perpetuates itself may give an idea why it is not possible to banish this malady altogether.

The original home of the typhoid germ is in the internal organs of the human animal. The first settlers were secure from it until some other settler having this disease moved in. It travels from one human being to another through the medium of the discharges of the person having the disease. It is not borne through the air.

WATER IS A CARRIER

Water is the great intermediate carrier of human wastes. It is the moving force that transports them from community to community and from rural life to the cities. That is to say, that a



Showing farm buildings properly located in relations to wells. Underground drainage away from wells and tops of wells protected from surface pollution.

MILK MUST BE CLEAN

It has also been known for some time that milk is a breeding medium for typhoid and other germs. If milk is infected at the hands of the milker or any other person handling it, it breeds out typhoid abundantly, and in a very short time if the milk is warm. If kept cold, milk may carry these germs but does not breed them in the same abundance. The pasteurizing of milk in large cities, and the

observance of proper precautions for cooling and for general sanitary care in its production in the smaller places, have also been factors in the reduction of typhoid.

If the above means of transmission were the only ones, typhoid would have been banished completely from our civilization long ago. Unfortunately there are other factors that keep it alive. The typhoid germ is most abundant in the human intestine during the course of the fever in the individual. It begins to decline numerically and disappears soon after the end of the attack. Fifteen per cent of typhoid patients still carry the germ about with them up to three months after they have recovered, and two to three per cent become "carriers" for many years or even for a lifetime. These chronic carriers may not themselves know that they still retain the germ, and may remain undiscovered unless some incident requiring an investigation reveals them to be carriers. They are the innocent cause of much trouble. For example, a man who had typhoid twenty years ago may become employed in a dairy, and the resulting outbreak of typhoid among the customers of the dairy leads to the discovery of the individual causing it. The discharges of these carriers go through sewage into our large streams or pollute vaults and are carried by flies or may drain into a near-by well. The carrier is the residuum that keeps typhoid alive from year to year.

As the years go by there are fewer carriers because there are fewer cases, but their total elimination, if it ever occurs, is far in the future. It is a frequent happening that some person in a family is taken with typhoid fever where one or more members have had typhoid in previous years. In nearly all these cases a hunt may reveal some one of these previous cases still to be retaining the organism, and it is only as opportunity offers that the person has polluted some foodstuff in the household.

There is one saving grace about the transmission of the disease, and that is the fact that the germ readily dies outside the body. It does not live more than a few days in a running stream, where sunlight and other bacteria get rid of it, nor more than a few months in the cold, clear water of a deep well. Time is a factor in its elimination by nature.

It is also said that flies are disseminators of the disease. They do this by feeding in filth of vaults which have received the discharges of a typhoid

case, and by carrying that filth direct to foodstuffs. This is a matter of mechanical transportation.

PREVENTION OF TYPHOID FEVER

Understanding clearly the ways in which typhoid is spread, we should have a clear idea of how to lessen the disease. Cities and villages purify water for their citizens. That part of the work is done for us. It is the duty of the community to select uncontaminated sources and adequate methods of delivering clean water. Many small communities and farms are now possessed of these advantages, but others must look to themselves for their own salvation in this respect.

Any well which receives overground drainage, such as with a creviced wooden top, is dangerous, as flood water in the spring may carry pollution a long distance. Any well that is likely to receive drainage from a nearby vault is dangerous. Only the properly cased and deep well can be considered to be reasonably safe.

It is best for campers and tourists in the summer to carry their drinking water in a thermos bottle or other container filled at one of the larger towns through which they pass. Water can always be made safe by boiling. If summer campers take their water from clear, cold springs around which other campers have been, they run a chance of getting typhoid germs the same as from a stream. It is easy to boil and cool water with the facilities of almost any camp.

Nearly twenty years ago an effective vaccine was discovered to prevent typhoid fever. In the World War this was used on all the American soldiers, and thousands of lives saved thereby. The World War saw assembled for the first time large bodies of men who in the course of the conflict did not develop numerous cases of typhoid.

Young adults, from 15 to 30 years of age, suffer from typhoid fever more than persons of other ages, although none are immune from it at any time of life. A considerable number of children annually contract it. It is therefore the part of wisdom for anyone, especially a young adult, upon going hunting, camping, or otherwise making a journey into places where sanitary arrangements are likely to be neglected, to consult a physician and take typhoid vaccine. If this were done customarily, typhoid would be as rare as it was in the late war.

Typhoid fever is an exhausting disease, requiring many weeks or months for full return to vigor. The monetary loss among those afflicted is likely to be great. Precautions such as are here recommended are advisable for all individuals.

State Provides Eleven Charity Clinics for Treatment of Venereal Diseases: Infantile Blindness Prevented

BY C. A. HARPER, M.D.,
STATE HEALTH OFFICER

Prior to the compulsory use of nitrate of silver in the eyes of the newborn, 20% of the inmates of blind institutions were the result of infantile infections.

Since 1913 some 600,000 births have been reported with but two cases of infant blindness.

The State Board of Health had a bill introduced in the Legislature in 1909 to make ophthalmia neonatorum, which may produce blindness in the new born, a disease which must be reported to the public health authorities. In January of 1913 the board passed a rule that two drops of a 1% solution of nitrate of silver must be dropped in the eyes of all new-born babies for the purpose of preventing ophthalmia neonatorum or inflammation of the eyes due to infection from gonorrhoea at time of birth.

Since the adoption of this rule there have been born in Wisconsin nearly 600,000 babies, with only one or two cases of blindness resulting from infection at time of birth, and the sight of but some five or six babies partially impaired. Prior to this time it was found that about 20% of the inmates of blind institutions were there as a result of gonorrhoeal infection of the eyes at time of birth. Later on the Legislature made this rule a statutory provision and appropriated \$1,500 a year to the State Board of Health to furnish ampules of nitrate of silver free to physicians and midwives of the state. The results obtained from this procedure have been most remarkable, not only from a humanitarian standpoint, but also in saving the state large sums of money in lessening the number of institutional cases of blindness.

This procedure is now in general use over the civilized world and practically all physicians are required by law to use a preparation of this type at the time of birth to safeguard the eyes of the newborn babe. You will note that it has practically eliminated that distressing complication which means so much to the happiness of the individual. It is a word of caution that the continuance of this remedy should never slip out of mind. Blindness in newborn babies is but one of the ravages of the venereal diseases.

Severe complications resulting from venereal diseases are many and varied. The deaths espe-

cially from syphilis and its complications are numerous. We hide our light under a bushel in not plainly telling the facts concerning them under the reasoning that, born in secrecy and having a stigma attached, the truth about them shall remain secret.

The financial burden due to industrial incapacity, lost days of work, and the expense placed on our asylums (about 13% of these patients being there as the result of venereal disease) and on members of the family who are forced to support the sick person, reaches a huge total. Every in-



In the search for an improved method of killing the spirochete of syphilis, hundreds of experiments were carried out by the government research workers. *Courtesy Hygeia.*

dividual is entitled to know the truth about these diseases, and he becomes his own moral guide after that. The state laws at least require that all who become afflicted with such a disease in a communicable form shall undergo adequate treatment. These diseases are usually curable if treatment is instituted early and continued for a sufficient length of time. Neglected, they produce, eventually, chronic invalids of many who are afflicted and these diseases are a potent factor in keeping up the death rate in this state.

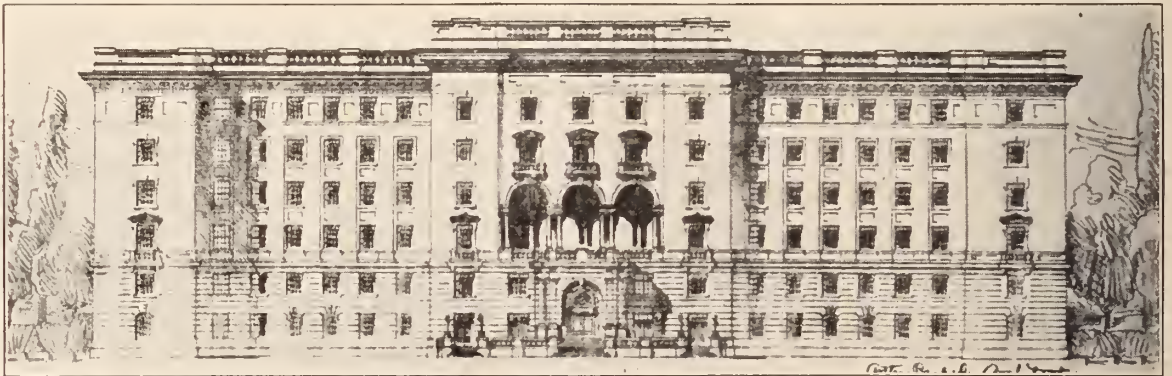
For the purpose of providing treatment of the indigent, free dispensaries have been opened in eleven of the larger cities of Wisconsin. These are for those who cannot afford a doctor. Rather expensive drugs and a considerable period of time are necessary for adequate treatment. Cities hav-

ing free clinics for treatment of venereal diseases are Beloit, Green Bay, Janesville, Kenosha, La Crosse, Madison, Milwaukee, Oshkosh, Racine, Superior and Wausau. The state also furnishes drugs to physicians anywhere in the state for use upon indigents.

New drugs are constantly being discovered, and new and more effective modes of treatment applied, and the word should be disseminated widely that such methods of treatment are essential to the welfare of the individual, especially so with regard to his future life. The people should not take offense at information broadcasted along proper channels, for the innocent sometimes suffer

as well as the guilty, and all that we can do to prevent the scourge of the venereal diseases is for the benefit of the human race, both for the present day and for posterity.

Practically every community has this problem, and ways and means must be devised to meet it squarely. These diseases and their seriousness should be understood by every individual. Their prevention and cure should be given the same consideration that is given to diphtheria, typhoid fever or other communicable diseases. Venereal diseases undermine and destroy civilization more rapidly than any other agency affecting the human race.



THE WISCONSIN STATE GENERAL HOSPITAL.

This new state hospital, now nearing completion, is located at Madison. The hospital was erected following legislative appropriation in which it was said "it shall be more particularly designed for the care of person afflicted with a malady, deformity or ailment of a nature which can probably be remedied by hospital service and treatment, and who would be otherwise unable to secure such care."

ONLY ONE BOARD IS NEEDED

In no state should there be more than one medical examining board, and that one alone should issue licenses to practice medicine. Its members would not belong to any "school." They would be men of real medical education themselves, able to distinguish between a real college and a diploma mill—between a real doctor and a quack. They would know that a real doctor is one who has acquired a decent knowledge of all the many means by which disease, by himself or others, can be prevented and cured if curable. They will be ready to use suggestions or the manipulation of bones or viscera in cases demanding it—as ready as they are to administer drugs when drugs are needed or trust wholly to diet and outdoor life in the not infrequent instances when nothing more is required or can be done with any expectation of benefit.

Not one of the men licensed by such a board would claim universal efficacy for any form of treatment. Whoever does that is instantly revealed as a quack, either ignorant or dishonest, and he is not any the less a quack because he can produce "testimonials" from grateful patients, including the familiar legislator whose close relative was saved from fast-approaching death by an "irregular" after he, or more often she, had been given up by anywhere from one to a dozen "regular" doctors.

The number of people, otherwise intelligent, who can thus be deceived and with the best of intentions can deceive others as gullible as themselves is disgracefully and humiliatingly large.—New York Tribune.

AGAIN THE QUACK

Recent court trials for medical quackery and unlicensed practice of the healing art have brought out some astonishing examples both of gullibility on the part of the public and of sublime impudence on the part of the practitioners.

Among examples of the latter sort, that of one Dr. Lowrie of Hartford, Conn., seems to shine forth with peculiar luster.

This chap (whose successful quackeries should arouse the envy of a certain type of politicians) actually persuaded his clients that in 1895 he made a trip to heaven and was there presented with the "key of knowledge," together with the formula for a certain wonderful "sun and moon ointment" warranted by the celestial apothecary to do most anything but raise the dead, if bought liberally and well rubbed in.

For this and other heavenly salves and balsams Dr. Lowrie, as he testified, procured "many wealthy clients" who were greatly impressed as well by the brazen assurance as the fluency of his representations.

Fortunately, the doctor acquired no surgical knowledge while in heaven, and confined his treatments to the use of herbs and simples in the catnip, snakeroot and pennyroyal line, and did not persuade his patients to let him punch and poke their spinal columns, or cut them open and snip off a piece of their insides.

He did them no harm, so far as he knew, beyond fooling them and prying them loose from their change.—Milwaukee Sentinel, Jan. 20, 1924.

Proper Nutrition a Vital Factor in the Fight Against Disease and Deformity

BY ELMER L. SEVRINGHAUS, M.D.,
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Of course every one knows that we cannot live unless we eat. Only a few sick people lack the inclination to eat. The desire for food is so strong that the prodigal son in the Bible story "would fain have filled his belly with the husks the swine did eat." Even in such remote times husks were recognized as of little food value. But during the war the starving people of Central Europe tried essentially the same thing when they attempted to appease their terrible hunger with roots, bark, or anything that could be chewed and swallowed without making them immediately ill. Probably no one can realize the extent of the emaciation that followed this starvation except those who have traveled or worked in Europe during the war or the years that have just passed. This has been a gruesome lesson on some of the vital factors in nutrition for those who can read this experiment in human starvation. Not only was there a shrivelling up of the starved bodies, but infections of different types occurred, and many people became swollen with a sort of dropsy.

The experimental work on foods which has been done in the past quarter of a century has made clear to us many of the factors which were at the root of these troubles. The great epidemics of disease in the Japanese Navy during the Russo-Japanese War, the frequency of pellagra among certain classes of poor people in the South, the occurrence of scurvy and of rickets among children everywhere, and the retarded growth of poorly fed children have started such studies. This research work has been done in the laboratories of the medical schools aided by such institutions as the Wisconsin Agricultural Experiment Station, for much of this study is applicable to men and to animals also. It would be impossible to learn what we now know about nutrition of the human body without the use of the thousands of rats, guinea pigs, rabbits, dogs, pigs, cows, pigeons and chickens that have been used. The animals have profited as much as we humans from this work. There is still much to be learned, and we must expect to continue to support these institutions that make possible such improvements in the health of men and of animals.

APPETITE ONLY A PARTIAL GUIDE

A knowledge of nutrition is obviously important for those who have charge of the feeding of large numbers of people. It is often thought that appetite will guide an individual to the choice of the proper foods. There is a partial truth in this view. Consequently the most pressing need for intelligent use of the new knowledge of nutrition is in the case of selecting diets for children, for hospital patients, and for inmates of state or county institutions. Good hospitals have dietitians who can do this. The modern physician is giving attention to such matters so that he may properly provide for his patients. But many mothers do not yet know what they must feed their children to make them grow properly and keep them well. Much progress has been brought about in this field by such efforts as the Wisconsin Bureau of Child Welfare is putting forth in sending speakers and teachers to the communities all over the state.

In the case of public institutions there may be ignorance of the needs of the inmates on the part of the men who have supervision of the diets. Too often there is an exaggerated pressure put on such individuals to save every possible cent even at the expense of some of the important but slightly more expensive parts of the diet. This is now known to be the cause for the frequency of pellagra in the southern asylums for the insane. The disease is cured by giving moderate amounts of milk or lean beef. A monotonous diet of a few vegetables or especially grains without sufficient amounts of meat and milk, omits some essential factor. This substance has not yet been identified. It is probably not one of the accessory food factors called "vitamines," but a part of the substances we call proteins, which are so necessary for the growth of the body and its maintenance in health. These proteins are the materials of which our living body cells are largely composed. Just as some kinds of soil furnish far better ingredients for the growth of good crops, so some kinds of protein furnish better materials for building the body. This is the reason that meat, milk and eggs are such valuable sources of the protein for our diet.

TOO MANY "EAT MORE" WEEKS

Wisconsin will always feel ready to foster a "Drink more milk" campaign to stimulate home industries. But we are now being besieged from every side with similar efforts to increase the use of such foods as wheat, fruit, nuts, and raisins. If we follow all these suggestions we shall become a nation of fat people. In the effort to avoid the disasters of a diet that omits some of the fundamental substances for a proper nutrition we may easily eat too much. The study of diabetes during the past ten years has shown that continuous overeating is a large factor in causing this disease. The insurance companies find that fat people do not live as long or as well as people of normal weight or even less. These findings refer to adults,

because it contains the fat soluble vitamine A which is concerned with the maintaining of nutrition of vital organs such as the heart and the digestive system. This vitamine is likewise to be found in the green vegetables. These juicy vegetables have many other values, important among which is their soft bulk which enables them to satisfy hunger without the danger of overeating, and which relieves many people of constipation. The water soluble vitamine C which prevents and cures scurvy has been studied by these same men. It is the substance which has caused fruits and tomatoes to be held in such high esteem for infant feeding. At present these investigators with many others are discovering important facts about the fat soluble vitamine D which is found in cod liver oil



The rat on the right had a satisfactory diet, as is shown by its size, fine coat, and normal attitude. The rat on the left was of the same age, and its diet was the same except for the character of the fat which it contained. The large, well nourished rat was given 1.5 per cent of butter fat, the small one 5 per cent of cottonseed oil. In this case the faulty development on a diet largely composed of cereals—properly supplemented for the one rat—lay in a deficiency in vitamin A, which is abundant in only certain fats. *Courtesy Hygeia.*

particularly after thirty years of age. It is better, however, for the growing child to be up to or slightly above the normal weight. Perhaps this will not continue to be true as we find out more definitely what to eat for essentials, so that we may not have to overeat to be sure of having enough.

Vitamines are the first thought of most people at present when nutrition is mentioned. We have come to recognize their great importance in our diets in the last twelve years. Wisconsin shares largely in this new knowledge through the work done at the Agricultural Experiment Station at Madison by such people as McCollum, Steenbock, Daniels and their numerous young assistants. From these experiments we value butter so highly

so abundantly, and which prevents or cures rickets. Miss Marlatt of the Home Economics Department of the University of Wisconsin announced recently that this vitamine is probably to be found in the livers of many of Wisconsin's fresh water fish. The evidence is still incomplete.

WATER IS ESSENTIAL

Water is such a commonplace part of our diet that we are prone to neglect it. Yet most of us could profit by drinking more freely of water. In many cases drinking eight to ten glasses daily improves the condition of the kidneys, gives relief to constipation, and facilitates digestion. To cultivate a drinking habit one should keep a daily record of the amount until he is certain that he is drinking a sufficient quantity.

Because the drinking water in the Great Lakes region contains less iodine than we need, Wisconsin must be increasingly interested in the prevention and treatment of goiter. Over half our girls and women have goiters. We know definitely that most of these can be prevented and many of them cured during childhood. This is to be done by taking regularly a small amount of certain inexpensive compounds of iodine. It is important that this be done under the supervision of a physician.

It is not the aim of such a short article to mention all the factors in proper nutrition. For these, as well as for any adequate explanation of them, a

study must be made of such books as the "Newer Knowledge of Nutrition" by McCollum, or the simpler texts on dietetics written for physicians and nurses. Some of these are obtainable from the package library of the University Extension Division. There is no one completely satisfactory food for any human being. The essence of proper nutrition is to be found in an intelligent combination of many foods. Although this makes life more complex it likewise makes it possible to have life more full of happiness and less marred by disease and deformity.

Present Mortality from Childbirth Can be Reduced by Individual and Community Cooperation

BY CARL HENRY DAVIS, M.D., F.A.C.S.,

LECTURER IN OBSTETRICS AND GYNECOLOGY, EXTENSION DIVISION UNIVERSITY OF WISCONSIN; SECRETARY SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY OF THE AMERICAN MEDICAL ASSOCIATION

All branches of science, including medicine, have advanced to a remarkable degree during the past seventy-five years. Increased knowledge has made possible a marked reduction in the mortality from most diseased conditions, and it is usually assumed that the general mortality from pregnancy and childbirth has also been greatly reduced. Unfortunately this is not the case. Pregnancy is not a disease yet the vital statistics of the United States show that among women aged 15 to 45, childbirth is the second greatest cause of death. Why should this be? There are numerous factors and the encouraging feature is that many of them may be overcome if women really care to make motherhood safer.

TRADITIONAL CAUSES

The most primitive women of all ages had their young unattended, probably in much the same way as many of the higher mammals. As a race developed the older women who had been through the ordeal gave aid to their younger sisters during labor. Gradually some of these attained a degree of skill and were called on to assist their neighbors, thus becoming the first midwives. Such women had a well recognized place among the Israelites at the time of the exile into Egypt (Exodus I, 15-16). Throughout the ages childbirth remained in the hands of midwives. Some of these undoubtedly attained a fair degree of skill, but most of them were superstitious and very ignorant.

It was only natural that when the midwife's practical methods failed, she should turn to the Priest or Medicine-man for assistance. In all semi-civilized as well as civilized races the great knowledge and wisdom of the priesthood has been recognized. The records show that long before the time of Hippocrates, Priests performed various operations to deliver the child which could not be born. At a very early date they are believed to have performed caesarean sections. The first crude instruments for the mechanical removal of a dead child probably were designed and used by them.

Hippocrates (400 B. C.) established medicine apart from religion, and during the centuries which followed the physician became the one skilled in operations to relieve woman of the child she could not deliver. But at all other times both priest and physician were carefully excluded from contact with the woman in labor. As late as 1522 a Hamburg physician had to disguise as a woman in the effort to observe and study a normal labor. When discovered he was burned alive for his interest.

Modern obstetrics dates from 1550 A. D., when Paré rediscovered internal podalic version (turning of the child). Chamberlain used the first of the modern obstetrical forceps in 1647. As late as 1884, at least half of the women delivered by caesarean section died.

The study of obstetrics was first required for graduation from a medical college in 1813 when the Trustees of the University of Pennsylvania made the courses taught by Professor James a recognized portion of the curriculum. Up to the year 1850 a man who did obstetrics was not permitted to join the Royal College of Surgeons in London. In fact if a member of the college was seen talking to an obstetrician on the street his resignation was requested.

Thus we see that tradition and the "normal function" attitude led to a long delay in making a careful scientific study of pregnancy and labor. But during the past century, and especially during the past half century, a thorough study has been made. Not all the obstetrical problems have been solved but much has been done toward overcoming many of the dangers which formerly confronted every woman who became pregnant. Under the care of the best obstetricians of today the risk of maternity is very slight—yet the mortality rate from childbirth in the United States shows little if any improvement. This can only mean that women are not receiving the obstetrical service they need. Whose responsibility is it?

THE DOCTORS' RESPONSIBILITY

So long as women did not consult the physician regarding pregnancy and when in labor did not call him until the condition was hopeless for the child, if not for the mother, his responsibility was slight. But with other changes which have evolved since the sixteenth century, medical men have gradually been given some supervision, first in labor with evidence of delay, later with the entire handling of normal deliveries, and today a general supervision during pregnancy, labor and the period following confinement.

Statistics show that in 1680 when physicians were first being called, if there was undue delay, one London mother died for every 44 delivered of a baby. As people became educated to the change and physicians were more frequently consulted, the deaths were reduced until the records for England and Wales in 1840 show only one death for every 168 deliveries. Since 1840 there seems to have been little or no reduction in the general mortality. The early and relatively simple improvements gave a big return in reducing accidents and at a relatively low cost. But as in all safety efforts, further improvement can only be had through con-

stant vigilance and at a much greater expenditure of time and money.

Obstetrical teachers realize their responsibility and are constantly striving to give their students a more adequate training. However, they must face several difficulties. Obstetrics has always been treated as a stepdaughter by medical authorities. A century ago when medical colleges were being organized the least important physician in the group was frequently made Professor of Obstetrics. Naturally this did not lead to high grade teaching. But later the development of gynecology as a specialty caused a more competent group of medical men to become interested in the teaching of obstetrics. Each generation of medical men has had an increasingly large number who became competent obstetrical surgeons. The most serious feature in the training of competent obstetricians today is the lack of clinical facilities. Medical students receive most of their clinical training by assisting in the delivery of women in tenements. This unfortunately gives them but an indifferent idea of the technic.

Today medical colleges are earnestly trying to secure adequate clinical facilities for the training of safe obstetricians. The average physician who does obstetrics is more alive to his responsibility today than ever before, and wishes to give women the care which means safety and health. However, the physician is constantly limited by existing conditions to such a degree that he can accomplish little alone. He must be assisted, on the one hand, by the women who appreciate the great importance of strict care from the beginning to the end of pregnancy, and on the other by a community realization of the economic importance of providing adequate maternity facilities.

WOMAN'S RESPONSIBILITY

The greatest responsibility belongs to woman. She is the one who has paid most dearly for all of the obstetrical blunders in all ages. Both the family and the community suffer, but it is the mother who makes the supreme sacrifice. There is abundant proof that much of the mortality and most of the illness which woman has suffered from pregnancy and childbirth can be avoided. Woman has the power to correct many of the existing conditions if she will. Will she do it?

The lowest mortality and sickness records for both mothers and infants are found in the cities

where there are (1) adequate prenatal clinics, (2) ample maternity facilities with a large percentage of the labors conducted in hospitals, and (3) ample care for infants. Women can secure these improved conditions if they want them.

In a study of three parallel series of 1000 cases each, Beck has shown that the first with complete prenatal care had 25 infant deaths; the second with supervision of nurses had 47 deaths; and the third thousand with no prenatal care lost 76 infants. He also reports that in 4500 consecutive deliveries at the Long Island College Hospital only one mother was lost in every 643 deliveries.

The average woman does not realize the importance of prenatal care.

"Why," she asks, "should I go to see the doctor when I feel perfectly well?"

Yet the answer is simple. Most of the complications which develop during pregnancy may be prevented by careful supervision *if the patient will follow the advice given*. If trouble does develop early recognition and prompt treatment always reduces the risk to a minimum. A little swelling of the feet may result from pressure, but it may also be one of the signs of serious kidney disease. A little headache may be due to some indiscretion in diet or it may be one symptom of a severe toxic poisoning. The physician who is making routine records of blood pressure, weight and urinalysis is less apt to misinterpret these abnormal symptoms than the woman who knows little of their significance. Early anticipation of complications makes it possible to secure proper treatment. If the woman needs hospital care she can be taken there before it is too late. Think of the folly of letting a woman with a badly deformed pelvis labor at home until the baby is dead and the mother exhausted! In the modern hospital she can be delivered by caesarean section with comparative safety if the operation is performed early in labor.

The obstetrical care should not end until some months after the delivery. The modern obstetrician is not satisfied if he cannot discharge the patient free from any morbidity or injury resulting from the childbirth. Nearly twenty per cent of women normally have a retro-displaced uterus. After delivery it is important to treat these cases until the uterus has returned to a normal size, or very annoying symptoms may develop. Many women have some degree of inflammation about the mouth of the womb after delivery. If this is

not relieved it may become chronic and increase the later risks from cancer. It may lead to severe involvement of the tubes and ovaries and necessitate an abdominal operation. The complete obstetrical care offered today takes time and temporarily seems more expensive than the old careless method of trusting to nature. But weighed in the balance against loss from ill health if not



Good health via the Child Welfare Special. A woman physician is in charge of the work.

death, it will be found that the approved modern type of complete maternity care is in the end a conservative measure. Economically it means the saving of many hundreds of mothers and thousands of babies. It means healthy mothers and happier families. Is it not worth while?

THE COMMUNITY RESPONSIBILITY

The home is the foundation stone of the state. The mother is the most important person in this economic unit. No one can take her place in guiding the mental and moral development of the child.

An adult human life has been estimated to have an economic value of \$5000. Eliminating all sentiment and forgetting the importance of the

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Diphtheria is no Longer the Plague: Antitoxin, Schick Test and Toxin-Antitoxin Save Children

BY H. M. GUILFORD, M.D.,
DIRECTOR BUREAU OF COMMUNICABLE DISEASES, STATE
BOARD OF HEALTH

THE RATE GOES DOWN

In 1881 Wisconsin reported 9,714 cases of diphtheria with 2,202 deaths.

In 1922, despite increased population, there were but 3,593 reported cases of diphtheria and only 249 deaths.

To use biblical terms, mankind has always assumed dominion over beasts of the field and the fowls of the air. But it has been reserved for man to assume dominion over the lower forms of life only in very recent years. The advancement of science has made this possible, so that at the present time we have a considerable degree of control over some of the microscopic parasites that cause certain diseases, and this is especially so of diphtheria.

The diphtheria germ was discovered as long ago as 1883, and because of this discovery physicians have been able to experiment with the germ in laboratories and methods of combatting it have been evolved which have been of inestimable value to the world of children at large. It is therefore no longer the scourge that periodically involved many communities and in some cities removed from life ten persons where one is lost today.

The diphtheria germ can generally be obtained in the secretions of the nose and throat, and it is now common practice for physicians and nurses to take upon a cotton swab specimens of these secretions to determine accurately whether diphtheria exists. The diphtheria membrane that forms in the throat is nothing but a great colony of diphtheria germs which has fastened itself upon the mucous membrane and woven its tentacles into the tissues.

The old-fashioned case of diphtheria was likely to run ten or twelve days before recovery or death. It was apparent that there was some combative agent in the body which finally overwhelmed the disease and put an end to it or otherwise it would run on indefinitely until the body succumbed. Science came to the rescue and proved that the colony of diphtheria germs manufactured a deadly poison which was set free in the circulation, and being carried to all parts of the body caused

damage to the nerves and other organs, often resulting in various forms of paralysis and heart failure. The technical term for this poison is "toxin."

EXPERIMENTS DEVELOP ANTITOXIN

Experimental inoculations of this toxin into animals showed that an animal's body produced an antidote in the course of time to counteract or neutralize this toxin. So at the present time horses that are proven healthy are inoculated with diphtheria toxin in increasing doses until they are immune from the disease altogether. Some of the blood is then taken from the horse in a sterile manner and the colorless part of this blood is concentrated and refined and used in the treatment of diphtheria. This is known as "diphtheria antitoxin." It is the substance that is now so widely used to cure diphtheria and to prevent it after exposure, and which has proven so great a blessing to humanity.

When a child is taken with diphtheria the membrane begins to form in the nose and throat and it begins to pour out its toxin into the system. In an ordinary or severe case of diphtheria the toxin is bound to do its damage in the course of a few hours or days. If, however, we are able to neutralize this toxin promptly its further effect is nullified and nothing comes of it. We beat nature to the task of slowly producing an antidote by providing the same antidote already prepared. The germ life in the throat finding unfavorable soil ceases to grow into the tissues and the membrane disappears. The germ life itself may lie loose in the throat for some weeks after the diphtheria antitoxin is given, but is harmless to the individual as long as the effect of the antitoxin is in the body.

Antitoxin is the only effective known remedy to cure diphtheria. If used on the first day of the disease practically all who receive it recover. Its value is progressively less with each additional day of the disease as damage once done to the system is not entirely rectified by it. Most diphtheria cases are treated on the second or third day and most of them recover, although there are some deaths at this period. The cases that are treated

late in the disease are still very often fatal. There is no time, however, in which antitoxin should not be used.

EARLY DIAGNOSIS DIFFICULT

There are certain inherent difficulties in getting hold of diphtheria on the first day of the trouble, and the reasons lie in the character of the symptoms which the case presents. The symptoms of diphtheria are ordinarily a sore throat with a white patch known as a membrane somewhere in the back of the throat which tends to increase in size. Sometimes this membrane is observable only as a little spot, especially in a beginning case, and in the bad and severe case it has grown to such an extent as to fill the entire air passages. In little infants it seems to have a predilection for the wind-pipe and it is there known as laryngeal diphtheria or membranous croup. It sometimes grows in the back of the nose. Together with this there is likely to be fever and headache and an increasingly rapid pulse out of proportion to the fever.

Many of the milder cases, however, show but little membrane and oftentimes this is out of sight to the examining parent. In these mild cases it resembles a common cold or tonsillitis with which so often children are afflicted. In the membranous croup form, situated in the windpipe, it is in its beginnings quite like ordinary croup and the membrane is inaccessible to view. The symptoms are, however, continuous and not decreasing as in ordinary croup but time passes before the parent is aware that there is some other trouble than common croup. Moreover, little children do not complain much of headache or other symptoms and it may be that three or four days pass before a doctor is called. It is these difficulties that keep up the present day mortality from diphtheria.

It should be the knowledge of every parent that danger lies in the sore throat or depressing cold or croup, and that these conditions are always an indication for medical attention. It is especially urgent in croup that persists over a night time into the following day. The doctor can give antitoxin to anyone he suspects of having diphtheria, and it is his duty to do so. He can take a test where laboratory facilities are available for the prompt examination of the specimen and be guided in his judgment by that. If this were universally done, we would hear little about late cases and mortality from diphtheria and many a child would be saved that otherwise is doomed.

There were 249 deaths from diphtheria in Wisconsin in 1922. The larger part of these were under five years of age. Some of them were school children with all the prospects of happy, healthy life ahead of them. We take it for granted that most of these were removed from life with great suddenness.

Diphtheria antitoxin has the same action in protecting those exposed by not allowing the germ to get a foothold. While we have been so greatly blessed by the discovery of antitoxin, it is perhaps unfortunate that its effect is not more lasting. When it is eliminated from the body, usually in four to six weeks' time, its protecting effect is gone.

THE SCHICK TEST

Thirty years after the discovery of the diphtheria germ, or in the year 1913, Dr. Schick of Vienna published the fact that he had discovered a test whereby it is possible to tell which individual is susceptible to diphtheria and which one is not. This is known as the Schick test and consists of introducing a very minute quantity of diphtheria toxin between the layers of the skin. If the individual is not immune to diphtheria the



The remedy for diphtheria is diphtheria antitoxin. If the antitoxin is given promptly, the patient is sure to recover. This antitoxin is produced from horses, which are given injections of diphtheria toxin in increasing amounts. The horses remain well during the treatment. Some of their blood is drawn from a vein, and the serum of the blood is the valuable diphtheria antitoxin. *Courtesy Hygeia.*

protective agencies of the body recognize this introduced toxin to be a foreign substance that does not belong there and set up a fight against it. An inflammation results which shows in a little red area about the size of a ten-cent piece around the site of the injection. The test is harmless. Its drawback is that it requires fresh material and a little painstaking care to properly place it between the layers of the skin. It seems that not all people will take diphtheria if exposed and that there is a different susceptibility at different ages. The child under six months of age is usually immune because it is still under the influence of the mother's blood. After that time it loses its immunity and at one year of age 75 per cent of children will take diphtheria. As the child grows older it becomes more and more immune and of adults probably about 20 per cent may contract it. This immunity is due to natural antitoxin in the body.

TOXIN-ANTITOXIN

The latest discovery of all, and a most valuable one, is that of toxin-antitoxin. This should not be confused with diphtheria antitoxin because of a similarity of names. Toxin-antitoxin is a vaccine to protect the person against contracting diphtheria. The injection of it causes a response within the body tissues and they set to work to manufacture natural antitoxin. This response is not immediate but requires a varying time up to three months or even more before the full effect of its work is accomplished. Toxin-antitoxin confers an immunity which lasts for years and perhaps a lifetime. There is at hand in this agent a means of saving 85 per cent of children who receive it from ever coming down with the disease. The quantity injected is a small amount and three doses are customarily given, a week apart, in the arm. It is no more painful than the pricking of a pin and it leaves no scar. Any physician can obtain and give it.

The State Board of Health is advising that all children under ten years of age receive this injection. It is better to begin at one year of age to tide them over the most dangerous period. Beyond the age of ten years children have greater immunity and resistance and it may be advisable to give them the Schick test and then inoculate with toxin-antitoxin, if they are not immune.

We have hopes that toxin-antitoxin will be widely used in the State of Wisconsin. It means

a satisfaction to the parent to know that his child is relatively immune to a treacherous disease. It does not mean that a sore throat or croup should be neglected, but it does mean that the chance of its being diphtheria is a small one. It is possible to give practically one hundred per cent immunity by repeatedly testing and giving additional doses of toxin-antitoxin until the Schick test shows negative. All means are at hand for the almost total abolition of diphtheria as a fatal disease among us if we would only use them. Our present death rate for diphtheria is a result of our failure to take advantage of these means. Science has brought forward measures since the discovery of the disease germ which have changed conditions entirely in regard to diphtheria. We rarely, if ever, now hear of the children of whole families being wiped out or of epidemics causing the loss of nearly one-half of those stricken.

Anti-Tuberculosis Association Sells Public Health

(Continued from page 531)

a large number of schools. The department sends out to the state press the news of the Association's work, material on tuberculosis and on the health movement in general. The splendid cooperation given by the press in the publication of this material is responsible to a large extent for the success of the organized fight against tuberculosis. Health movies and stereoptical slides form a part of the publicity department's equipment.

LOCAL BRANCHES CARRY ON FIGHT

The State Association has 61 local branches and much important public health work is done by these local associations in addition to the financial support they give to the mother organization. Several of the Associations have engaged the services of the follow up worker after clinics in making surveys and determining the actual needs of the community. One local helps to support a private philanthropic sanatorium; another is helping with financial and moral support the erection of a much needed community hospital. Paying for milk for tuberculous families and serving milk lunches to school children are projects of some of the smaller branches. The State Association has a field worker who visits these associations, gives talks before women's clubs and other civic organizations and in this way spreads the gospel of better health.

Prevention of Simple Goiter by Use of Iodin Urged by State Board of Health

BY V. A. GUDEX, M.D.,
DEPUTY STATE HEALTH OFFICER,
EAU CLAIRE

Those of us who have studied physiology know that there are different glands in different parts of the body, each of which has an important job in keeping us well. For example, the salivary glands pour a liquid into the mouth that aids digestion and the tear glands in the eyelids keep the eyeball free from dust and irritating particles.

In the tissue of the forepart of the throat just below the Adam's apple is the thyroid gland. The function of this gland is to act as a reservoir to store up an element called iodine, and in turn to secrete iodine in the circulating blood when the body needs it.

When the thyroid gland is in its normal state you would not know there is a gland there, but when for any reason it becomes enlarged it causes a bulging or unusual prominence in the lower part of the neck, and this prominence is called a goiter. Most everyone has observed people who have this enlargement or goiter.

SIMPLE GOITER

There are several kinds of goiter due to a variety of causes, but the one we wish to describe here is known as simple goiter. This form is seen most often in boys and girls and young adults, and is more frequent in the female sex than in the male, and it is a very common occurrence in some localities, so much so that we are inclined to pay little attention to it. It varies from a slight and hardly noticeable curvature to a conspicuous enlargement that often causes the person to use neckwear of an increased size or to keep the neck bared.

CAUSE OF SIMPLE GOITER

Simple goiter is caused by a lack of iodine in the system. When the thyroid gland fails to get enough iodine for storage purposes, it begins to enlarge and a goiter results.

The soil of our farms and gardens contains minute quantities of iodine, and the water we drink, originally draining over and through the soil, also gathers some of it and holds it in solution. In some areas of the world the soil is deficient in iodine, and vegetables and grains grown there contain less of it than in other districts. Likewise drinking water coming from ground having too little iodine contains insufficient quantities of

it. So that in the daily food or water of certain regions there is not enough iodine for the need of the system and in consequence simple goiter may result.

WHERE GOITER EXISTS

Goiter is more prevalent in some regions than in others. In America it is more frequent in the St. Lawrence basin and in the Great Lakes basin and in the mountain regions of the North Pacific coast.

In some of the northern valleys of other countries, particularly in some cantons of Switzerland, the majority of young people have goiter. Animals as well as human beings are likely to suffer with it. At Pemberton Meadows in British Columbia the tendency to goiter was so great that it was impossible to raise young animals as calves, lambs and pigs. Since 1918 this affliction has, however, been controlled by the addition of small amounts of iodine to the food and drink. Even brook trout in some hatcheries have goiter and this has been controlled by putting a little iodine into the water. Along the sea coast there do not seem to be many people with goiter, for the soil in these regions contains plenty of iodine.

THE HARM OF GOITER

Because the thyroid gland is hidden away in the tissues and has no ducts but gets rid of its secretion only through absorption by the blood through a network of little blood vessels, its use was hard to study, and it has only been discovered in late years just exactly what this gland is for. It is now believed that thyroid secretion circulating in the blood plays a part in helping the building up and tearing down of the tissues that is constantly taking place in all parts of the body. When one has a simple goiter, therefore, these changes are not taking place with quite the freedom and efficiency that they otherwise would; that is to say, the person is not quite in robust health. Of course, we know many people with goiter seem to be in health and in some of these the goiter may disappear in the course of time, but the thyroid gland is there for a purpose and when goiter occurs we know that it is not doing its work entirely as it should.

(Continued on page XXX)



THE JOURNAL BOOK SHELF

- Pennington's "Disease and Injuries of the Rectum, Anus and Pelvic Colon."** By J. Rawson Pennington, M.D., F.A.C.S., Proctologist to the Columbus Hospital, Veterans' Hospital No. 30, and the United States Marine Hospital. Chairman of the Scientific Assembly, Section on Gastro-Enterology and Proctology, American Medical Association; 679 illustrations, including 2 plates, cloth, \$12.00. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia.
- Clinical Diagnosis.** By Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, M.D., Professor of Clinical Pathology, University of Colorado. Fifth Edition, Enlarged and Reset. Octavo of 762 pages with 325 illustrations, 29 in colors.
- Sexual Problems of Today.** By William J. Robinson, M.D. Published by The Critic & Guide Co., 12 Mt. Morris West Park, New York, 1923.
- Neurologic Diagnosis.** By Loyal E. Davis. Chicago, 1923; 173 pages. W. B. Saunders Co., Philadelphia.
- The Boston number of the Medical Clinics of North America,** Vol. 7, Number 3, November, 1923. Published by W. B. Saunders Co., Philadelphia, contains many interesting clinics.
- The Annual Report of the Rockefeller Foundation for 1922** covers 420 pages and is of decided interest to both layman and physician.
- The Care of the Baby.** A Manual for Mothers and Nurses, containing practical directions for the Management of Infancy and Childhood in Health and Disease. By J. P. Crozer Griffith, M.D., Professor of Diseases of Children in the University of Pennsylvania. Seventh Edition, thoroughly revised. 12mo. of 478 pages with 104 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.
- Report from Pathological Department and the Department of Clinical Psychiatry, Central Indiana Hospital for Insane.** Vol. VIII, 511 pages.
- Diseases of the Skin.** By R. L. Sutton, Kansas City. C. V. Mosby & Co., St. Louis. Fifth Edition, 1,200 pages, illustrated. Cloth, \$10.00.
- International Clinics.** Vol. IV. Thirty-third Series. 1923. J. B. Lippincott Co., Philadelphia and London. Cloth, 308 pages. Illustrated.
- Infection, Immunity and Biologic Therapy.** John A. Kolmer, M.D., University of Pennsylvania. W. B. Saunders Co., Philadelphia and London. Cloth, \$12.00.
- American Illustrated Medical Dictionary (Dorland).** A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with the Pronunciation, Derivation, and Definition. Twelfth Edition, revised and enlarged. Edited by W. A. Newman Dorland, M.D. Large octavo of 1296 pages with 338 illustrations, 141 in colors. Containing over 3000 new words. Philadelphia and London: W. B. Saunders Company, 1923. Flexible Leather, \$7.00 net; thumb index, \$8.00 net.
- Fighting Foes Too Small to See.** Prof. Jos. McFarland, Prof. of Pathology, University of Pennsylvania. F. A. Davis Co., Philadelphia. Price, \$2.50.
- Practical Local Anaesthesia and Its Surgical Technic.** By Robert Emmet Farr, M.D., F.A.C.S. Large Octavo, 529 pages with 219 engravings and 16 colored plates. Cloth, \$8.00 net. Published by Lea & Febiger, Philadelphia and New York, 1923.
- Management of the Sick Infant.** By Langley Porter and William E. Carter. Second edition. Published by C. V. Mosby Co., St. Louis.
- Intravenous Therapy: Its Application in the Modern Practice of Medicine.** By Walton Forest Dutton, M.D., Medical Director, Polyclinic and Medico-Chirurgical Hospitals, Graduate School of Medicine, University of Pennsylvania. 542 pages with 59 illustrations. F. A. Davis Co., 1924. \$5.50 net.
- Cancer—A Practical Quarterly Journal Devoted to the Best Interests of Cancer.** Vol I, No. 2, January, 1924.
- Geriatrics, A Treatise on the Prevention and Treatment of Diseases of Old Age and The Care of the Aged.** By Malford W. Thewlis, M.D. 2nd Edition. C. V. Mosby Co., St. Louis. 1924.
- Practical Chemical Analysis of Blood.** By Victor C. Myers, Ph.D., Professor and director of the Department of Biochemistry, New York Post Graduate Medical School and Hospital. 2nd Edition, revised and enlarged. C. V. Mosby, St. Louis. 1924. 232 pages.
- The Medical Clinics of North America.** Jan., 1924. University of Kansas. Vol. 7, No. 4. Published by W. B. Saunders Co.

BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,
Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Operative Surgery. By Warren Stone, Bickham. New York City, 1924. Six volumes with 6378 illustrations, many in colors. W. B. Saunders Co., Philadelphia.

Three volumes of the above are issued and indicate a treatise of unusual merit on operative surgery. The text is clear, concise, comprehensive and profusely illustrated. Arrangement of the subject matter is methodic and an orderly sequence is evident throughout. Especially commendable with each individual operation is the plan whereby the author treats the subject under the various sub-divisions of (a) Description of operation, (b) Preparation of patient, both local and general, (c)

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As a consequence of the above the reader readily refreshes his memory on the applied anatomy concerned without loss of time, has a clear conception of his undertaking and through the original comments offered gains many valuable suggestions.

The one criticism that might be offered on such a work is the frequent reference to preceding paragraphs for minor details of procedure but this is of small moment and on the whole the author is to be congratulated on an undertaking of such magnitude, its practical value and general applicability in the field of surgery.—T. W. T.

Scientific Rejuvenation Without Operation. By H. H. Rubin, M.D., Director of the American Institute of Radiocrinology, Medical Science Publishing Co., New York City.

Much publicity in recent years has been given, particularly by the lay press, to methods of rejuvenation, notably to those advocated and used by Prof. Steinach of Vienna.

The author of this volume, who is evidently an enthusiastic supporter of these theories, presents his arguments briefly but with much duplication through the various chapters.

He speaks of the Science of Radiocrinology, rejuvenation by radiation of the endocrine glands beginning with the gonads or sex-glands, which he maintains are the foundation of the entire endocrine system.

There is undoubtedly something of interest to the profession in this subject and even though the author may be over enthusiastic, his side of the case is worth reading.—W. A. M.

Dosage and Solutions. A text book for nurses and a reference book for physicians and nurses. By C. E. Garnsey, Instructor Washington Sanitarium and Hospital Training School for Nurses, Washington, D. C. W. B. Saunders Co., Philadelphia and London.

This pocket size volume is an excellent little manual estimating dosage and preparing standard solutions. If at times it seems elementary, one should not forget that it was written primarily for nurses. The classification of drugs and the tables of their dosage are valuable both to physician and nurse.—W. A. M.

The Medical Clinics of North America. St. Louis Number, Vol. 7, No. 5. Philadelphia and London: W. B. Saunders Co.

These volumes, issued monthly, are usually replete with interest to the medical man.

Grouping the Clinics as they do, either by schools or large medical centers, particular numbers appeal especially to graduates of such schools and those whose professional affiliation is largely with the men whose clinics are reported.

In the St. Louis number, space is given to nineteen of these clinics—all of which offer much that is helpful as is shown by the appended contents:

Clinic of Dr. William Engelbach—Pituitary Tumor.

Clinic of Dr. Ralph A. Kinsella—Hypertension and Nephritis.

Clinic of Dr. McKim Marriott—Nephritis in Children.

Clinic of Dr. Borden S. Veeder—A Discussion of Some of the Diagnostic Problems of Lobar Pneumonia in Children.

Clinic of Dr. Philip C. Jeans—Diphtheria.

Clinic of Dr. John Zahorsky—I. The Mouth-and-Hand Syukinesia. II. Erythema Nodosum in an Infant. III. Recovery from Extreme Marasmus.

Clinic of Dr. Jules M. Brady—Intracranial Hemorrhage in the Newborn.

Clinic of Dr. Sidney I. Schwab—"Heart Disease" in a Neurologic Clinic.

Clinic of Dr. Francis M. Barnes, Jr.—Hysteria.

Clinic of Dr. John L. Tierney—Headache.

Clinic of Dr. Albert Ernst Taussig—Non-Diabetic Glycosuria and Non-Glycosuric Diabetes.

Clinic of Dr. George W. Wilson—Influenza.

Clinic of Dr. J. Curtis Lyter—Multiple Adenocarcinoma of the Brain. Multiple Emboli. Perforating Gastric Ulcer.

Clinic of Dr. Drew Luten—On the Use of Digitalis in the Treatment of Patients with different types of Heart Disease.

Clinic of Dr. Horace W. Soper—Benign Pyloric Obstruction in the Aged.

Metabolism Clinic of Dr. Wm. H. Olmstead—The Value of Weight Curves in Determining the Severity of Diabetes.

Clinic of Dr. Alphonse McMahon—Purpura.

Clinic of Dr. Louis Henry Hempelmann—Mikulicz's Disease.

Clinic of Dr. Charles Hugh Nelson—Focal Infection in General, with Special Reference to the Prostate.—W. A. M.

Hernia, Its Anatomy, Etiology, Symptoms, Diagnosis, Differential Diagnosis, Prognosis and Operative Treatment. By L. F. Watson, M.D., Associate in Surgery, Rush Medical College, Chicago. C. V. Mosby, St. Louis, 1924. 660 pages.

It cannot be said that this book fills a long felt want, inasmuch as the subject of hernia has long since been ably covered by numerous authors, but the presentation of the subject is made in such a delightful almost intimate way that the volume should make a special appeal to the students as well as to the operating surgeon.

The object of the author to present within reasonable space the most important features of the anatomy, etiology, symptoms, diagnosis, differential diagnosis and prognosis of hernia together with the best operative technic of modern surgeons has been achieved by concise, compact, and intimately correlated presentations of the historical, anatomical, surgical and other phases of the subject.

The descriptions and illustrations of the various more or less standardized operations are presented in a satisfactory manner. As is usual with surgeons who have devoted considerable attention to the subject of hernia there are introduced numerous modifications in technical procedure; in some instances these are meritorious while in others they typify the so-called modification habit.

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raphy accompanies many of the chapters. For a student and young practitioner this book supplies all the information essential to a thorough understanding of the subject. The experienced surgeon, with ample library facilities, will find many refreshing features. The chapter on the medico-legal aspects of hernia should be of especial interest to him.—R. H. J.

International Clinics. Published by J. B. Lippincott of Philadelphia and London. Vol. I, Thirty-fourth series, 1924.

The Clinical lecture on Exophthalmic Goiter by Dr. Lewellys F. Barker of Baltimore was originally delivered in the Medical Extension Course, University of Maryland. It is extremely interesting and very valuable particularly to the general practitioner.

The Symposium on the New Born by five Washington, D. C. Specialists takes up Pre-natal, Natal and Neonatal mortality; Injuries and Accidents in the Newly Born; Care of the New Born Child; General Diseases Arising in the Newly Born; and Skin Affections of the New Born Baby. All these are particularly instructive.

"Some Aspects of Migrane," by Dr. A. H. Gordon of McGill University throws new light on a little understood and often lightly considered condition. It is a common-sense article which one wishes every physician could read.—W. A. M.

The following publications were received and reviewed previous to the adoption of the loan service and are not available for inspection.

Psychoanalysis and Gland Personalities. By Andre Tridon, New York. Brentano's, 1923.

This book, just completed before the author's death, treats of the combined effect of the unconscious, as elucidated by the psychoanalysts, and of the glands, as explained by the experimenters in glandular therapeutics, upon the human personality. It is an extremely interesting subject by no means settled by this or any other work and each author's discussion brings about a likely speculation.

Essays of a Biologist. By Julian Huxley, New York. Alfred A. Knopf, 1923.

Julian Huxley, who bears by right of direct descent a name honorable wherever Science is honored, has already made a name for himself as one of the most notable investigators of the younger generation. This, the first of two projected volumes, contains important studies on such subjects as "Progress, biological and human," "Some bearings of biology on sociology," "Sex biology and sex psychology," "Philosophic Ants: a biological fantasy," "The present relation between Science and Religion." The essays are serious in treatment and intention, but written in a most engaging style which will commend the book to the general reader no less than to the specialist.

Nervous and Mental Re-Education. By Shepherd I. Franz, New York. The Macmillan Co., 1923.

Here is a splendid little work written in a practical helpful style by one who has contributed much to the special field in which he is engaged. Dr. Franz writes of the general concept of re-education and general re-educational methods ending the work with neurological

and mental adjustment in infantile paralysis, tabes, cerebral paralyses, speech defects, the psychotic, etc. It should appeal to all who are engaged in the education of persons disabled by nervous and mental diseases and will be of interest to those interested in child welfare, especially teachers who handle crippled children. It is a worth while book for any and every physician.

Outline of Psychology. By William McDougall, New York. Price, \$2.50. Charles Scribner's Sons, 1923.

This is a most excellent work by the distinguished professor of psychology in Harvard College. As a book which will introduce the student to the subject and give him a fruitful way of thinking of psychological problems it has few if any equals. Throughout the author's splendid teaching ability is evidenced. He handles a most difficult subject for beginners in a simple, readable manner.

Nosography in Modern Medicine. By Knut Faber, M.D. With illustrations. Price, \$3.75. Paul B. Hoeber, Inc., New York, 1923.

The author states in his preface—"The object of clinical science is the study of morbid phenomena as displayed by patients, and, within this domain, nosography—that is, the description of diseases—forms a special discipline. The importance of the nosographic method as a method in investigation has been, and is still, very differently rated by different authorities. For this reason I have considered it worth while to consider the phases through which nosography has passed and the changing judgments on its value, in order to obtain a clear idea of the importance of this method for scientific progress." The work is divided into six parts: Sydenham and the Nosologists, the Paris School, German Physiological Medicine, The Bacteriological Clinic, Functional Diagnosis, and Constitutional Pathology. All interested in internal medicine will enjoy this work and are indebted to Professor Faber for so clearly tracing the historical development of this subject.

Post Mortem. By C. MacLaurin. Price, \$2.50. George H. Doran Co., New York, 1923.

Here is indeed an interesting work for any doctor interested in history. A physician treats the subject from a modern scientific standpoint and tells us of the great and near great as a modern physician would appraise them. It is most cleverly written, is highly entertaining and will show the medical reader the characters of the past in an entirely new light. Decidedly worth while and a work which will hold your attention all the way.

A Plea for Monogamy. By Wilfred Lay, Ph.D., New York. Boni, 1923.

Here is a tremendously important work by the distinguished author of "Man's Unconscious Passion." It makes clear how the average marriage runs down or becomes short circuited. If every married person or those contemplating marriage would read this understandingly the divorce question would be solved. This work is most highly recommended. The physician could do much good by reading it himself and passing it on from time to time to patients he can see in danger of marital shipwreck.

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ORIGINAL ARTICLES

THE PRESENT STATUS OF THE DIABETIC PATIENT AS A SURGICAL RISK*

By RUSSELL M. WILDER, M.D.,

and

S. FRANKLIN ADAMS, M.D.

Division of Medicine, Mayo Clinic,
ROCHESTER, MINNESOTA

The existence of diabetes, however mild, in a surgical case increases tremendously the hazard of operation. In former years mortalities of from 12 to 30 per cent were common, even in the better hospitals. The dangers are shock, acidosis and infection, and hardy indeed is the surgeon who can face these with equanimity. It may be that the higher mortality figures reported heretofore were in part due to a tendency to postpone surgical intervention, so that only the most critical conditions ever came to operation; nevertheless, the serious dangers involved cannot be minimized. In very recent years, better results have been obtained, and we are now convinced that skillful surgery, wisdom in the choice of the anesthetic, and skill in its administration, together with appropriate preoperative and postoperative medical measures can reduce the hazard of these operations nearly to that met with in surgical cases uncomplicated by diabetes. Insulin is a valuable adjunct in the preoperative and postoperative treatment, but can in no way replace good surgery and intelligent management. The better results we are reporting were obtained, in part, before insulin was available, and no amount of insulin will protect the diabetic patient from poor surgery or careless management.

Berkman, in 1921, published a statistical study of 233 operations performed on 201 diabetic patients at the Mayo Clinic, covering in his report a period of four years. The mortality, based on the number of operations, was 6.4 per cent, and based on the number of patients, 7.4 per cent. This creditable showing, while attributable in part to a conservative selection of cases, and to the absence of emergency operations, was none the

less gratifying, especially because a large proportion of these patients underwent major operations and were relieved of serious conditions.

Between October 1, 1921, and October 1, 1923, 327 operations were performed on 251 patients with diabetes by ten members of the surgical staff of the Mayo Clinic. The results are shown in Table 1. The cases are divided into two groups; those treated before insulin was available, and those treated subsequent to its introduction. The date, October 1, 1922, separates the groups, and marks the time when insulin was available at the Mayo Clinic for all patients requiring it.

The 141 major operations in the two groups of patients under consideration were of a nature comparable to those of any general surgical list, including eighty-three intraperitoneal operations, five nephrectomies, twenty-six thyroidectomies, seven amputations of the thigh, and so forth. A certain selection of patients for operation was exercised during the period 1921 to 1922, as had previously been customary, but after October 1, 1922, no patient was refused operation because of diabetes. In other words, for the cases in Group 2, the existence of diabetes was disregarded as an element affecting surgical risk, and the operability of the case was gauged without reference thereto.

If the cases of Groups 1 and 2 are considered together, there are 327 operations on 251 patients with four deaths, a mortality by operation of 1.2 per cent. Three of the deaths followed intraperitoneal operations, a mortality of 3.6 per cent. These statistics compare favorably with the surgical mortality figures of the clinic at large. The last available report is that for the year 1922, in which year the total surgical mortality was 1.3 per cent, and that for intraperitoneal operations, 2.7 per cent.

The severity and type of the diabetes of the patients undergoing operation is shown in Table 2. It will be noted that thirty-three major operations were performed on patients with moderate diabetes, and fourteen on patients with severe diabetes, without a fatality. According to the classification of diabetes, suggested by one of us,⁴ seventy patients had diabetes of the acute type, sixty-seven had diabetes associated with arteriosclerosis, forty-nine gave evidence of gross pancreatitis, and

*Presented at the 77th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, October 3-5, 1923.

eighty-three had the diabetes of obesity. Six patients with acute diabetes of considerable severity underwent major operations without a death.

The four fatalities all occurred in patients with mild diabetes of the chronic types. In each instance, death may fairly be attributed to the surgical complications, and at the time of death there was no diabetic acidosis.

REPORT OF FATAL CASES.

Case 1 (A377643), E. G., aged fifty-seven years. This case was diagnosed clinically as carcinoma of the head of the pancreas, obstructive jaundice, and mild diabetes mellitus of two years and eight months' duration. A cholecystostomy was made under local anesthesia, December 1, 1921. The postoperative course was unfavorable; the jaundice became deeper, and the patient was unable to retain anything by mouth. On December 6, 1921, the blood urea was 76 mg., and the coagulation time was much diminished. The urine remained sugar and diacetic-acid free up to the time of death, which resulted nine days after operation from toxemia and cachexia. The pathologist reported recent cholecystostomy for obstructive jaundice, carcinoma of the head of the pancreas, right adhesive pleuritis, old endocarditis, coronary sclerosis, calcareous bronchial lymph-nodes, miliary gastric ulcers, and purulent seminal vesiculitis.

Case 2 (A361466), J. G., aged sixty-five years. This case was diagnosed clinically as carcinoma of the rectosigmoid, arteriosclerosis and mild chronic diabetes of two and a half months' duration. A permanent colostomy was made under field block anesthesia, April 7, 1923. Death occurred eight days later, from extensive generalized peritonitis. On the day of death, the urine contained a trace of sugar, but no diacetic acid, and the breath did not smell of acetone. The pathologist reported carcinoma of the rectum with generalized peritonitis and terminal bronchopneumonia, metastasis to the liver and mesenteric lymph-nodes, and thrombosis of the portal vein.

Case 3 (A376977), Mrs. J. H. K., aged fifty-seven years, was dismissed from the hospital February 21, 1923. She had mild diabetes of the obese type. She re-entered the hospital July 15, 1923, for an emergency operation on a perforated appendix. Ether was used as an anesthetic. The patient died four days later. The pathologist reported appendectomy and drainage for acute

gangrenous appendicitis with generalized peritonitis, atrophy of pancreas with diabetes (clinical), multiple diverticula of the colon, and cloudy swelling of liver and kidneys.

Case 4 (A422698), J. S., aged sixty-five years. This case was diagnosed clinically as adenomatous goiter with mild hyperthyroidism, carcinoma of the prostate, arteriosclerosis, and mild chronic diabetes of about three years' duration. Thyroidectomy was performed April 23, 1923, under combined anesthesia. The convalescence from this operation was uneventful. Suprapubic cystotomy and partial prostatectomy were performed May 22, 1923, under ether anesthesia. Five days after the second operation, the patient developed severe diabetic acidosis and became comatose. The carbon dioxid capacity of the blood plasma fell to 14 volumes per cent. Under insulin treatment, which was instituted at that time and continued until the patient died, acidosis was controlled. The blood urea was 74 mg. in 100 c.c. The patient died on the eighth day after operation. The carbon dioxid capacity of the blood plasma on the day of death was 51 volumes per cent, the blood sugar 425 mg. per cent and the blood urea 113. The pathologist reported recent partial prostatectomy for carcinoma of the prostate with cystitis, pyelonephritis, and bronchopneumonia, partially healed wound following thyroidectomy for toxic adenoma of the thyroid with old abscess of left operative field, atrophy of the pancreas with diabetes (clinical), mucous cyst with polyp of appendix, rupture of pseudo-myxoma peritonei, arteriosclerosis, and atrophy of kidneys.

Case 4 teaches a very important lesson. Diabetes was recognized before the thyroidectomy, but was extremely mild, and while the patient was closely watched, no special measures were necessary before or after the first operation. It was assumed, therefore, that the second operation would be tolerated equally well, and since convalescence from the second operation was uneventful up to the fifth day, special attention from the diabetic standpoint was not given to this patient. The onset of bronchopneumonia and the coincident acidosis was abrupt on the evening of the fifth day. Such experiences as this have taught us to regard every case of diabetes under surgical treatment as a case of potential diabetic acidosis, and to insist on rigid preoperative and postoperative management.

FACTORS REDUCING MORTALITY.

The factors responsible for the satisfactory mortality statistics reported may be summarized as follows:

The surgical technic and judgment has been excellent, so that the time of operation and the degree of shock are minimized.

The anesthetic has been chosen with care and administered with skill. In 104 cases, ether has been the choice. Berkman, in his report, expressed the opinion that ether given either alone, or combined with nitrous oxid and oxygen, may in certain instances be preferable to other forms of anesthesia. Ether was used 140 times in 233 of the operations reported by Berkman, and the mortality in patients receiving ether was not greater than that observed when other anesthetics were used. It should be emphasized, however, as Fitz has already done, that the ether anesthesia employed in the Mayo Clinic is the lightest possible. In a comparative analysis of 100 abdominal operations, Fitz found that the volume of ether used was only 46 per cent of that employed in 100 indiscriminately selected abdominal operations in a representative surgical hospital elsewhere. In the group of operative cases which we are reporting, the average consumption of ether was not over one ounce for every nine and eight-tenths minutes of operating time. This confirms Fitz's presumption that the diabetic patients in the Mayo Clinic are etherized with special circumspection. He concluded quite properly that this is of the utmost importance, and is probably one of the factors accountable for the low mortality at the Clinic.

Satisfactory coöperation has existed between the surgeon and the internist. The surgeon entrusts the internist with the important preoperative and postoperative management; the internist appreciates the purely surgical features of the case, and thus both medical and surgical measures coincide. It is obviously of advantage as a preoperative measure to place the patient on treatment long enough so that the normal blood sugar level can be approximated, and acidosis controlled, but this advantage must sometimes be sacrificed for the surgical emergency.

PREOPERATIVE AND POSTOPERATIVE MANAGEMENT.

If the surgical condition does not demand an immediate operation, the diabetic patient is subjected to the regular medical course described elsewhere,¹ although an effort is made to prepare him

without unnecessary delay in order to minimize the detrimental effect of the anxiety of anticipating the operation. For three days preceding surgical intervention, the amount of carbohydrate in the diet is raised to 100 gm., and, if necessary, the dose of insulin is increased so that this amount of carbohydrate can be metabolized. The purpose of this is to enrich the glycogen reserves. As a rule, no food can be allowed on the morning of the operation; nevertheless a small dose of insulin, 10 to 20 units, is administered at this time. It has been found that the shock of operation mobilizes enough sugar from the body stores to counterbalance this otherwise unbuffered dose.

The choice of anesthetic is left to the surgeon and depends entirely on the nature of the operation contemplated. The surgeon makes every effort to operate as expeditiously as is consistent with good surgery, in order to minimize the degree of shock and the amount of anesthesia. After operation when, as is usually the case, the surgical condition interferes with the administering of food by mouth, 50 to 60 gm. of glucose are given daily parenterally, with a sufficient amount of insulin to control acidosis completely. If the patient does not urinate, he is catheterized at regular intervals, and each specimen of urine is examined for sugar and diacetic acid. During this period it seems wise to permit a slight glycosuria. This insures the presence of a buffer, and prevents severe insulin shock. We have not observed that a moderate hyperglycemia in cases in which insulin is given delays the healing of the operative wound, or predisposes to complicating pulmonary infection. The blood is tested for its sugar content, and the plasma for its carbon dioxid capacity in the afternoon of the day of operation, and each succeeding morning until the crisis is past. If a low alkali reserve exists, from 30 to 40 gm. of sodium bicarbonate in 5 per cent solution are injected intravenously or administered by enema.* The daily fluid intake and output are measured. About 3000 c.c. of fluid are administered daily, by mouth if possible, otherwise by rectum, by vein, or more

*Woodyatt has emphasized that a low plasma carbon dioxid capacity predisposes to surgical shock, and advises the intravenous injection of sodium bicarbonate to meet such emergencies. While insulin may ultimately raise the alkali reserve, the delay entailed may have fatal consequences. We agree with him entirely, and consider that this measure has met with undeserved opposition.

frequently subcutaneously. Tonic doses of digitalis are prescribed if the pulse is weak, because of the frequency with which heart failure is known to complicate diabetic acidosis. We have found digifolin very useful.

The acidosis following operation is exactly the same condition as that met with in nonoperative cases of diabetes, and requires, therefore, the same type of management and minute attention. The measures described are essentially the same as those recommended for the treatment of diabetic coma. If the patient who has been operated on receives this care prophylactically, so to speak, acidosis can be prevented and the greatest factor of the surgical risk can be removed.

When the postoperative condition permits, oral feeding is resumed and the parenteral administrations of glucose are discontinued. The appetite, however, may be capricious, and surgical contraindications often make the usual diet for diabetes unsuitable. In consequence, a little toast may be allowed, which with fruit juices, cream, milk and eggs, is usually acceptable and satisfactory. The amount of food actually consumed must be determined by weighing all portions served, and weighing back all uneaten food. It is well, we think, to provide a carbohydrate intake of about 60 gm. during this period.

The dosages of insulin will vary with the individual case. Some patients may not require insulin, and others have needed as much as 110 units in twenty-four hours to keep the urine free from diacetic acid. The larger doses are usually demanded only if there is an infectious complication, such as pneumonia. Not more than 30 units are given at any one time, and usually the daily quota is divided into three or four doses which are administered at intervals of six hours. As the patient convalesces, his diet may be rearranged to include more solid food and, as a rule, the daily dosage of insulin can be reduced so that finally it is possible to return to a medical régime, such as we have described elsewhere.¹

The proper treatment of the gangrenous extremities of the diabetic patient is a subject that has interested us considerably. Formerly it was Henderson's opinion, which we shared, that such extremities should be amputated above the knee. This opinion was based on the frequency with

which poor healing occurred if amputation was attempted lower down, and on the fact that such extremities, even if successfully treated at the time, often became gangrenous subsequently.

The introduction of insulin would seem to permit more conservative management. We have, therefore, in some instances, employed medical measures alone, using large doses of insulin in an attempt to hold the blood sugar low, and the nutrition high. The healing of gangrenous toes has been a slow process, but steadily progressive in most cases, and as these patients have been thoroughly trained in dietetics and in the use of insulin, it is expected that they may be able to avoid much trouble in the future. It has seemed to us that there is an increased vascularity in these impoverished tissues as a result of insulin administration. In other instances we have attempted amputation near the line of demarcation, and have obtained satisfactory healing of wounds.

SUMMARY.

The formerly prohibitive mortality which accompanied attempts at surgery on diabetic patients has been materially reduced by skillful surgery, proper anesthesia and the judicious use of medical measures before and after operation. It is unjustifiable to subject a diabetic patient to surgery unless very good surgery and special medical supervision are available. Insulin is a valuable adjunct in the management, but is only one of several important medical measures, and will not protect a patient unless it is skillfully administered. An operation may provoke severe acidosis in cases of very mild diabetes, and such cases deserve, therefore, the same scrupulous medical attention as do those of severe diabetes.

Three hundred twenty-seven operations are reported on 251 diabetic patients with four deaths. The report covers a two-year period ending October 1, 1923. This gross mortality of 1.2 per cent by operation compares favorably with that of the general surgical list. One hundred forty-one of the operations were major surgical procedures.

Patients receiving adequate treatment with insulin are now treated successfully for gangrene of the extremities with more conservative surgical measures than were heretofore thought possible.

TABLE I
OPERATIONS ON PATIENTS WITH DIABETES

Group 1, 102 cases	
Oct. 1, 1921 to Oct. 1, 1922	
Major operations	62
Deaths	1
Minor operations	80
Deaths	0
Group 2*, 149 cases	
Oct. 1, 1922, to Oct. 1, 1923	
Major operations	79
Deaths	3
Minor operations	106
Deaths	0

*Insulin was available, and used whenever required.

TABLE II
OPERATIONS ON PATIENTS WITH DIABETES

Oct. 1, 1921, to Oct. 1, 1923				
Severity and type of diabetes	Major	Operation Deaths	Minor	Deaths
Mild	94	4	96	0
Moderate	33	0	53	0
Severe	14	0	37	0
	—	—	—	—
Total	141	4	186	0
Acute	6	0	64	0
Vascular	23	1	44	0
Interstitial	38	2	11	0
Obese	32	1	51	0
Doubtful	42	0	16	0
	—	—	—	—
Total	141	4	186	0

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DISCUSSION

The discussion of this paper will be found at the conclusion of the paper following.

INSULIN TREATMENT OF POST-OPERATIVE (NON-DIABETIC) ACIDOSIS AND TOXEMIA VOMITING OF PREGNANCY*

By WILLIAM THALHIMER, M.D.

From the Laboratories of Columbia Hospital

MILWAUKEE

The report which I have the privilege of submitting to you mainly concerns itself with the insulin treatment of two non-diabetic conditions, post-operative acidosis and the acidosis of the toxemic vomiting of pregnancy.

A short discussion of acidosis in general is necessary, first. It is generally admitted that acidosis is dependent on the insufficient utilization or oxidation of carbohydrate, which causes incomplete oxidation of fats. Fats, it has been graphically stated, burn in the fire of carbohydrates, and Dr. Woodyatt has pointed out that when the amount of carbohydrate which is oxidized is insufficient to burn completely the fat, the fat smokes, and incomplete products of fat combustion are formed, that is, acetone, diacetic acid, oxybutyric acid, etc.

In diabetes, the body's low utilization of carbohydrates constitutes the main cause of the abnormal metabolism of diabetes. Often, as a result of this, as the fats are incompletely burned, acidosis occurs, and if not controlled often leads to coma and death. Insulin, you know, not only controls the glycosuria and hyperglycemia of diabetes, but in sufficient doses, properly controlled, rapidly relieves diabetic acidosis, and even coma.

Just as rapid relief has been secured with Insulin in a number of patients with post-operative, non-diabetic acidosis, and in one patient with the acidosis of toxemic vomiting of pregnancy. (Since this report was prepared, four additional cases of toxemic vomiting of pregnancy have been treated successfully.)

In these two types of cases vomiting soon becomes a distressing symptom. This prevents retention of food, and the acidosis, whatever its initial cause soon becomes a starvation acidosis. The body cannot utilize the carbohydrate because the stomach cannot retain it. It was mainly because of this limitation in carbohydrate meta-

*Presented at the 77th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, October 3-5, 1923.

bolism, which is similar to the limited power of the diabetic patient to burn carbohydrate, that led us to treat patients with these types of starvation acidosis with Insulin.

In a large experience with the treatment of various types of cases by intravenous glucose alone, we found that in patients with post-operative acidosis benefit occurs slowly, if at all, by the administration of only glucose. Harding and Potter, of Toronto, *Brit. J. Exp. Path.*, IV, 105, 1923, found similarly that it takes from 5 to 6 days to clear up the acidosis of the toxemic vomiting of pregnancy with glucose therapy alone. Williamson, recently, in the September number of the *American Journal of Obstetrics and Gynecology*, has found that there occurs a decline in blood plasma carbon-dioxid combining power as pregnancy progresses. This indicates a fundamental change in metabolism during pregnancy of such a nature as to tend towards acidosis.

Insulin makes the body oxidize more carbohydrate. Sufficient carbohydrate has to be supplied to a diabetic to balance the action of Insulin. In treating the non-diabetic acidosis cases who have not been retaining food, it is even more important to supply them with carbohydrate. And this has been done by injecting glucose, intravenously. In vomiting patients there is no dependable method of introducing glucose except by intravenous or subcutaneous routes. They cannot retain it by mouth, and rectal absorption is uncertain.

Since one unit of Insulin will utilize from one-half to two grams of glucose, an excess of glucose has always been given to render the Insulin treatment absolutely safe. Thus when a thousand cubic centimeters of a 10 per cent glucose solution (which contains a hundred grams of glucose) has been given intravenously, it has been our practice to use about 40 units of H-Iletin (Insulin-Lilly was kindly supplied for this investigation by Eli Lilly and Co.) or, more recently, 30 units of V-Iletin, given hypodermically in divided doses. The glucose solution is given slowly, taking from 3 to 5 hours to administer.

In the beginning of the use of Insulin in these cases we used small doses of Insulin, felt our way cautiously in increasing this, and only got a definite effect when finally comparatively large doses of Insulin were given.

Especial care should be used in administering

the Insulin and judging the size of the dose, and also in making sure that the glucose solution is pure and not caramelized.

This treatment should be reserved for the time being for the more severe types of the toxemic vomiting of pregnancy, as the milder cases usually yield readily to sedatives and glucose given without Insulin.

A few illustrative cases might be cited. In one case of post-operative acidosis vomiting occurred in a woman about 30, who had had about a 40 minute operation, in which an interval appendix and right oophorectomy was done for a small ovarian cyst. For the first 24 hours she reacted normally. At the end of 36 hours she began vomiting, and soon was vomiting a great deal. Only a few hours after that a condition occurred which I have never seen in non-diabetic acidosis. The woman had an extremely marked air hunger type of breathing. Her urine was loaded with acetone and diacetic acid. Glucose therapy per rectum was tried for a few hours, with no improvement in the condition. At about 9 o'clock at night, not quite 48 hours after the operation, a thousand c.c. of glucose were given slowly intravenously, and during this time, 40 units of Insulin were given hypodermically.

The next morning her urine was free from acetone and diacetic acid. She ceased vomiting during the night, and she went on to a perfectly uninterrupted convalescence, so far as her acidosis was concerned. No further vomiting occurred.

The case of toxemic vomiting of pregnancy was in a young married woman, 19 years of age, about 3 months pregnant, who had been vomiting practically continuously for three weeks. She was a rather small woman, weighed less than 100 lbs., entered the hospital in quite a serious condition. Her pulse was extremely small, the rate about 100, and could scarcely be felt. She had a dehydrated appearance. Her eyes were sunken, and she had a very anxious expression. During the first half hour that she was in the hospital she vomited 2 or 3 times, small amounts of dark brown material. Her urine was loaded with acetone and diacetic acid.

She entered the hospital about 8 o'clock in the evening. Glucose was started intravenously at 9. Shortly afterwards the first dose of Insulin was given. At about 11 o'clock the second dose, and at 12 o'clock the thousand c.c. and 10 per cent

glucose had run in. A specimen of urine was secured at half past twelve and showed only a trace of acetone and diacetic acid.

The next morning she vomited once or twice. The urine showed only a trace of acetone. But nevertheless, and in order to clear up the condition completely, the same procedure was repeated. At 3:30 in the afternoon the urine was free from acetone and diacetic acid. The patient did not vomit any more, and left the hospital in good condition.

There is another use that the combination of Insulin and glucose intravenous therapy might be put to, and this has been tried in several cases. One case in particular is that of a woman about 60, much emaciated, with an extremely large carcinoma of the stomach. She was prepared for operation by administering the day before a thousand c.c. 10 per cent glucose intravenously, and Insulin hypodermically. An almost complete gastrectomy was done. Following the operation the same procedure was repeated twice a day. Nothing of course, was given by mouth. This was continued for 3 days. The woman said that she felt stronger each time after the treatment was administered. She complained of practically no thirst, her pulse never reached a level higher than 80, and she went on to an uneventful recovery.

We have suggested that certain of the serious cases of the cyclic vomiting and acidosis of children be treated with this method, to clear up this condition for the time, the cases to be followed later with other methods.

The study of these cases we think indicates that the field of Insulin therapy may be extended to some other non-diabetic conditions.

DISCUSSION

THE PRESIDENT: The discussion will be opened by Dr. W. E. Nieely, of Waukesha.

DR. W. E. NIEELY, Waukesha: Mr. President, Ladies and Gentlemen. I feel that it is asking much of some of us common practitioners to discuss such papers as we have had here this morning.

However, I am very much interested in this subject, and can only say that I want to emphasize some of the things which were brought out in the papers.

Dr. Wilder's paper told us that Insulin was only an adjunct in the pre and post-operative treatment of diabetes patients. I want to say that that can be made general. In the treatment of diabetes Insulin is only an adjunct. Don't get the idea that giving Insulin gives license. You still have to follow the law. The diet has to be followed, and it has to be worked out just as

thoroughly or probably a little bit more so than previously. So that the treatment of diabetes is necessarily a treatment by diet.

In Dr. Thalhimer's paper he told us there was no method of telling how much glucose was absorbed into the blood, or how much is taken up, unless the glucose is given intravenously. I want to emphasize that idea in relation to the treatment of diabetes in general, that you don't know always how much food these people will take care of from the amount they eat. And when you begin to give Insulin you want to pay a little attention to that matter. Then too, there are quite a number of questions in regard to Insulin. What is it? How does it act in the body? I think most of the work thus far has shown us that Insulin is a catalyzer; that it does not enter into the product of the action, it is not used in the action; it might be said that it is an enzyme. However, it does cause the sugar to get to the cells so that the cell uses it. We know that part of it. Then comes the next question, how is it excreted or where? Some work has been done which tells us that it is excreted almost unit for unit in the urine, so that it shows to a certain extent that it is not destroyed in the body; therefore, it must act something like a catalyzer. Now that comes in as a pretty important problem. I might tell you a little experience of my own in one of the rather early cases. A patient came in with diabetes; there was no question about that. He had a heart that was not working well, and a kidney that was not working, or hardly working at all. His blood sugar taken was .267, which is large enough to argue that you can give a fairly good dose of Insulin. We were a little cautious with it at that time, fortunately for us, and gave him 8 units three times a day. His urine was examined regularly every time it was passed, and he showed sugar in his urine. Nevertheless, after we had given this dose for 48 hours, the man had the most marked hypoglycemia that we have ever had the misfortune to deal with. We could not explain it at all. The probabilities are as far we know now, that the Insulin, not being excreted, was still in the body. He had the full 48 units at the time that this came on, and was not absorbing any food to take care of it. So it is important to remember in using Insulin that it must be used with care.

In Dr. Woodyatt's paper he showed you some of the renal diabetes or renal glycosurias. I cannot emphasize too much the point that you must be sure that you are dealing with the diabetic when you find a little sugar in the urine. In 175 of the late cases admitted at the Spa, we have had 14 of these renal glycosurias, and they have nearly all been in young people. A year or so ago we had one that was starved down quite a little, and we found by giving her a glucose tolerance she took care of the dextrose all right, but still showed sugar in her urine. We could not figure out exactly what was wrong so we endeavored to find out what sugar was doing the reduction, and we found that it was levulose. Now it was absolutely unfair to that patient to keep her on a strict diet and starve her to keep the sugar out of the urine. You would have to

do that in her case, because it was starvation, it was not fasting. So the thing to do is to watch your patient. And the particular thing I want to emphasize this morning, is to make your diagnosis.

Now in regard to the older patients that Dr. Woodyatt spoke of, I always look on them as having had a good machine to begin with; it took them 50 or 60 years to knock it out so that their sugar tolerance was dropped a little, and that a very mild amount of treatment worked. But the thing is that it is the individual. And as he further emphasized, the mental attitude of that individual is very important. The treatment of diabetes is still diet, and it is an individual diet for each individual patient. If the patient cannot take care of the necessary amount of food to keep fairly well, other things being equal, we give him Insulin. If they get along with the 24 to 2600 calory diet, or even less, we don't give them Insulin. In this 175 cases, 161 diabetics, the other 14 renal glycosurias, we have given Insulin to 52 cases, one in 3. And you must remember that we don't get diabetics until they are supposed to be, as a rule, pretty well along the line. It might be well to emphasize something along that line. A diabetic is a sick person who is liable to go wrong unless he is taught right. And to give him a list of foods and say, you can eat this, and you can't eat that, would be a great deal like giving him a set of drugs and telling him, you can take these and you can't take those, without telling him how much.

Dr. Woodyatt's table brought out that point very strongly in the fact that carbohydrate, that is, starch, whether it is potato, bread, rice, or oatmeal, is one hundred per cent sugar when it gets into the body where it is used; protein as lean meat, or protein as gelatine, or wherever you find it averages about 58%; and right along that line we might get our old friend gluten bread. Gluten is a protein as you know; you can't make bread out of it that is fit to eat, unless you have 20 to 30 or 40% carbohydrate in it, and then when you figure that of this gluten which is left, 68% of that, not 58% but 68% of it goes into the blood as sugar, gluten bread is probably the worst substitute for carbohydrate that we can get. It gives a false sense of security. So if they can eat one or two pieces of gluten bread they can eat a smaller amount of ordinary white bread and whole wheat bread, or rye bread, or pumpernickel, or whatever they want, just as well as they can gluten. I thank you.

PRESIDENT: The discussion will be continued by Dr. H. P. Greeley, Madison.

DR. H. P. GREELEY, Madison: I have nothing to add to the papers except this; I might emphasize what Dr. Wilder would be unlikely to say himself, that the results which he reports cannot be duplicated unless you duplicate the organization, the medical and surgical knowledge, and the ability to make proper deductions from laboratory findings, and the proper kind of anaesthetic.

In regard to the post-operative treatment of non-diabetic acidosis, unless they are surgical emergencies, I think most of them could be prevented.

I think that Dr. Woodyatt's statements about treating the patient should be applied more widely by all of

us. Most of our older patients with diabetes are treated a little too much as metabolic units and not quite enough as individuals, whose diabetes is often negligible.

PRESIDENT: This subject is now open for general discussion. Is there further discussion? If not, I will ask Dr. Thalhimer to please close the discussion of his part.

DR. THALHIMER: Nothing further.

PRESIDENT: Dr. Wilder, have you anything else to say?

DR. RUSSELL M. WILDER, Rochester, Minn.: Mr. Chairman and Gentlemen: My purpose in presenting these statistics is less to dwell on accomplishments in the field of diabetes than to point the lesson of the importance of satisfactory cooperation of internist with surgeon in the management of surgical patients generally, not diabetic patients in particular, preoperatively and postoperatively.

Of course in the Mayo Clinic we do have very satisfactory circumstances for such cooperation. It is interesting to see the results that have been obtained in certain groups of cases where special efforts have been made by the staff of internists; and this diabetic example is only one. The statistics that Berkman reported three years ago, a reduction of the mortality of operations on diabetics to 6 or 7 per cent were highly creditable; the further reduction of this mortality to that of the general surgical list in the last two years must be credited to the assistance of the internist, since no appreciable change in the surgical technic occurred during this interval. But this is not the only field. With thyroid operations, the mortality has been similarly strikingly reduced in the last few years, since the introduction of iodine by Plummer as a preoperative measure in cases of exophthalmic goiter. So also in the group of gastric retention cases, the mortality was something like 16 per cent and is reduced now to practically the same mortality as the rate of the gastric operations without the complication of gastric retention. In the hypertension group of cases, similarly splendid results are being obtained.

The internist has more or less forced himself into the surgical team, but his usefulness has become recognized, and he will probably be in greater demand in the future than he has been in the past.

Doctor Woodyatt's position regarding these arteriosclerotic individuals with diabetes is quite radical, as must be apparent to everyone. I must say that I entirely sympathize with his position. I recall Doctor Graham Lusk's pathetic appeal for one of his friends who, in the hands of a distinguished diabetes specialist in New York, had lost thirty to forty pounds in weight and was a mere skeleton. This was a case of mild chronic diabetes. Whether Doctor Woodyatt's position can be successfully defended remains to be seen. It is not yet proved that more careful regime will not prevent complications such as diabetic retinitis and gangrene which are common with this type of diabetes. On previous occasions I have emphasized that the prognosis in diabetes will depend on the type of the disease and that generally it is favorable in this group of cases with vascular complications. Wagener and I have made a

study of diabetic retinitis and noted that in a large series of diabetic patients this complication occurred only in those who were genuinely atherosclerotic. However, it must be admitted that retinitis and gangrene happen earlier in the lives of these diabetic individuals than in similarly atherosclerotic individuals without diabetes. This must mean that the hyperglycemia or other metabolic disturbances in diabetes are in part responsible for the atherosclerotic complications.

PRESIDENT: I will ask Dr. Woodyatt if he desires to say anything in closing.

DR. R. T. WOODYATT, Chicago: Mr. Chairman and Gentlemen. I shall not detain you long. I wish to express my appreciation of your courtesy in permitting me to take part in this program, and wish to say that I am very happy to feel that Dr. Wilder agrees essentially with the observations made. I think there is no conflict between the points that Dr. Wilder brings out and those which I would express. There is no question but that in the presence of a diabetic retinitis or of any inflammatory process, such as an infection of the foot, or a gangrene with infection, the control of diabetic manifestations is rational and proper. Neither would I be dogmatic at all about the interpretation of the relationship between advanced arteriosclerosis, and this milder form of diabetes about which we are speaking. Naunyn suggested that in those cases, or in at least many of them, the diabetes was perhaps the direct result of the arteriosclerosis, that the celiac axis and the pancreatic arteries were sclerosed, and as a result of the arteriosclerosis there was an atrophy of the pancreas, that they were in fact cases of pancreatic diabetes due to the arteriosclerotic alteration. I have seen a number of autopsies on cases of that type in which the pancreas was small, in which the parenchyma was greatly atrophied, and in which the parenchyma was replaced to a large extent with fibrous and fatty tissues, which would seem to be in accordance with Naunyn's conception. On the other hand, on studying the histories and the family histories of these cases, I am not at all prepared to say that individuals of that type may not be individuals who do have an inherent diabetic vantage, and that other members of the family may not have another form of diabetes without the arteriosclerosis. There are merely questions for further study, and perhaps final elucidation.

The main thought which I meant to introduce in my discussion was, in the first place, that of making a demurrer against the tendency at the present time of commercial laboratories to imbue the general practitioner with the idea that good work cannot be done without a lot of expensive-technical appliances and methods; and also to introduce the idea that some elderly people with mild diabetes, are of a type that is more harmed by too much treatment, than by a somewhat negligent treatment; and that when one is dealing with that particular type, it behooves us to study them individually, and to discriminate between the stationary and the progressive cases. The method of study described makes it possible to discriminate with considerable certainty.

THE PRACTICAL APPLICATION OF INSULIN*

By F. D. MURPHY, M.D.,
and
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This paper is based on experiences gained by the authors at the Milwaukee County Hospital, County Dispensary, and their respective practices in treating two hundred patients with diabetes, pernicious vomiting, and post-operative acidosis.

It would seem superfluous to review the history of the discovery of insulin at this time, as it has been dealt with extensively in medical and other magazines during the past two years.

Insulin is an aqueous solution of the active principle of the Islands of Langerhans obtained from the pancreas of slaughter house animals, especially the beef. In the normal animal the islands fabricate sufficient internal secretion to control carbohydrate metabolism. When, insufficient internal secretion is formed, carbohydrate metabolism is upset, which is manifested by a heightening of the blood sugar, glycosuria and the symptoms of diabetes.

When insulin is injected subcutaneously into a diabetic patient the blood sugar drops, glycosuria disappears and the symptoms of diabetes are mitigated. Insulin is not a cure for diabetes; it supplies the internal secretion which the islands fail to produce; but insulin does not, so far as is known, remove the cause nor repair the damage done in the islets. Insulin is, however, a specific treatment and is an excellent adjunct to the dietary management of diabetes.

All those who have been treating diabetic patients agree that an important function of the physician is to teach the diabetic so that he can care for himself, under the supervision of his physician.

It is generally thought that the hospital should be the training school for the diabetic patient. There is at the present time a good deal of discussion of the question whether or not a patient needs the initial training of a few weeks in a hospital or whether this training can be given as well at home.

When insulin was first introduced it was generally felt that the hospital training was necessary.

*Read before the Milwaukee County Medical Society, March 14, 1924.

Now, as experiences have accumulated, this idea has been modified to such an extent that many workers in this field believe that hospitalization is not as essential as was originally thought. Poulton¹ when lecturing before the panel physicians of London, stated that the majority of cases could be treated by the family physician in the patient's home.

It however, seems to us, that this question depends to a great extent upon the four following factors:

1. The degree of severity of the disease.
 2. The time that the doctor can and is willing to devote to the training of the patient.
 3. The social status of the patient.
 4. The financial standing of the patient.
- We will consider briefly these four factors.

First: It scarcely seems necessary to state, that if the disease is of severe grade, and especially in a young patient, hospital treatment is essential. It is very difficult to establish the dose of insulin in a young individual.

Second: It is evident that more time and thought must be given by the physician to patients treated at home, than to those who are in a hospital, where well equipped laboratories are accessible. The home treatment may be made as efficient as the hospital treatment in many cases.

Third: If a patient is stupid and finds it hard to master the methods of caring for himself, he is better off in a hospital where he can benefit by the constant attention of trained dietitians, internes, and nurses. A bright patient may be able to take care of himself at home with very little training.

Fourth: There is no doubt if a patient is financially able, the ideal procedure is to have the initial treatment in a properly equipped hospital.

There are four essentials which every diabetic patient must be taught:

1. To construct his own diet.
2. To inject his own insulin.
3. To examine his own urine.
4. To know the symptoms of insulin shock and how to treat them.

The first point to consider is the construction of the diet. There are many different ways of doing this, but Joslin says "Those of us who have invented no new formulas or methods can pick the best from all procedures and use them."

Allen² says that it may seem scientific to determine basal metabolism and then guess at the diet; but that it is almost as well to guess at the diet in the beginning. Some approximation to the diet can be gained from the patient's height and weight but patients of similar sizes may require different rations. Allen also says that if a patient is gaining weight he is on maintenance diet; if losing weight, he is not on maintenance diet. The type of diet which seems to have found most favor is the high fat diet of Newburgh and Marsh. The reason is that this diet tends to satisfy the appetite more readily than others and because weight and strength seem to be more easily preserved on it. It would seem trite to express the opinion that no stereotyped form of diet is satisfactory to all patients, e. g., some patients cannot tolerate a high fat diet.

Ordinarily when a patient suspected of having diabetes comes under observation in the office or hospital he is weighed, his urine is examined and a blood-sugar is taken. It is best to have the blood-sugar taken before breakfast as this gives a level 12 hours after having had food.

A diet is then prescribed. The first diet in an average uncomplicated case, generally, is a test diet consisting of protein, fat, and carbohydrates, grams 50, 90 and 15 respectively. This is generally made up of 200 grams 5% vegetables, asparagus, spinach, tomatoes; 30 grams of bacon, 45 grams of beef, 4 oz. of XX cream; plenty of water and black coffee may be given. A twenty-four hour specimen of urine is examined on this diet; if the patient has sugar 48-72 hours after the initiation of such a diet, he is considered as a severe type and is put on maintenance diet with insulin; if he is sugar free on a test diet he is placed on maintenance diet without insulin; if he remains sugar free on maintenance diet he is considered a mild or not a true diabetic; if he needs insulin to keep him sugar free on a maintenance diet he is a moderately severe diabetic.

What then is a maintenance diet? A maintenance diet is one which will furnish enough calories to a patient so that he will not lose weight on moderate activity. This generally consists of: protein 60 grams, fat 200 grams, and carbohydrates 70 grams.

To construct a maintenance diet, it is necessary to weigh the patient, and to judge from his height and build if the weight is normal. One may con-

sult the ideal build tables of the Life Extension Bureau statistics or any of the like tables to ascertain this figure. The surface area charts of Du Bois and other similar charts are too complicated for practical work. The ideal weight of the patient in pounds is converted into kilograms and from this figure the calories, protein, fat and carbohydrates for the day are computed. The kilograms are obtained by dividing the weight in pounds by 2.2.

The following formulae is a slight modification of one made by Seale Harris.³ He gives credit, in his paper to Banting who however, claims no originality. The patient's weight in kilograms is multiplied by thirty to give the total number of calories for daily maintenance diet. The kilograms of weight are multiplied by .70 grams (the amount of protein necessary per kilo to maintain nitrogen equilibrium) to obtain the number of grams of protein in the daily diet. This figure is then multiplied by four to get the number of calories from the protein. This product is subtracted from the total number of calories; the difference represents the calories to be derived from fat and carbohydrates. This difference divided by thirty-one, equals the number of grams of carbohydrates in this diet. The figure thirty-one is arrived at, as follows:

The ratio of fat to carbohydrates in the diet is three to one. The three is multiplied by nine, the number of calories in a gram of fat, and the one by four, the number of calories in a gram of carbohydrate; and adding the results is thirty-one. If then, the number of grams of carbohydrates, as obtained above is multiplied by three the number of fat grams is the result.

EXAMPLE.

Patient weights 132 pounds.

132 divided by 2.2 equals 60, the number of kilos.

60 times 30 calories equals 1800 calories, the total calories for one day.

60 (kilos) times .70 grams of protein equals 42 grams of protein; this is daily ratio of protein.

42 times 4 calories equals 168 calories derived from protein.

1800 minus 168 (protein calories) equals 1632 calories to come from fat and carbohydrates.

1632 divided by 31 equals 52 grams of carbohydrates.

52 times 3 equals 156 grams of fat in daily diet.

When a patient is on maintenance diet he should be made to construct his own meals. He should be given a gram scales and some diabetic manual such as Wilder or Joslin containing the food value lists. From these lists he selects his foods and weighs out each article and then from the percentage tables, values his foods in terms of protein, fat and carbohydrate.

When a patient is in the hospital the best way to teach diet is to give him a note book, and have a slip on each tray, telling the amounts of food in grams and the corresponding number of grams of the three food constituents, proteins, fats and carbohydrates. He should have a note book and after a week or two the patient has accumulated many menus, which will serve as a guide after he goes home.

When a patient is going back to work the diet is generally raised 200-400 calories above maintenance diet; if he excretes sugar the insulin dose is raised proportionately.

The next essential is to teach the patient to inject insulin. What patients should be given insulin is a question frequently asked.

It is agreed that patients who excrete sugar on a maintenance diet should have insulin. However, a patient may be sugar free and have a blood sugar of above 200 mg. per 100 c.c. of blood, and have symptoms of diabetes; these patients should have insulin.

Insulin comes in vials and there are three different strengths indicated by the labels on the vials. The U-10 vial has a blue label and each c.c. contains 10 units of insulin. The U-20 vial has a yellow label and each c.c. contains 20 units of insulin. And the U-40 vial has a red label, each c.c. of which represents 40 units of insulin. The unit however has been standardized by the health section of the League of Nations.

What should be the initial dose of insulin is often asked. Some claim that this can be computed from the number of grams of sugar in the twenty-four hour urine. This is not always true because many patients have very little sugar in urine and have a high blood sugar with marked distress from diabetic symptoms. This fact was pointed out by Banting⁴ in some of his early lectures on this subject. It is evident that the best way to start insulin is to begin with 5 U twice daily and if the urine continues to have

sugar then increase the dose 5 U at a time until the urine is free from sugar.

Insulin should be injected not earlier than 15 minutes before the patient eats his meal; if, however, he does not eat his meal, an orange or some sugar should be administered to prevent an insulin shock.

The patient should be equipped with an insulin syringe, which is graduated in units. After a nurse or doctor has injected a few initial doses the patient should inject himself, under the close supervision of a doctor or nurse for a few times. It is remarkable how rapidly some who are considered stupid can master this technic. A patient who is using insulin should have in his hands a typewritten list of the following rules for his guidance. He should be drilled and quizzed on these instructions until he knows them thoroughly:

1. Learn to summarize the diet at each meal in figures of carbohydrates, protein and fat.

2. Insulin is prepared in solutions of different strengths. Know your dose in units (not in cubic centimeters) and how to measure the amount of solution to give that number of units.

3. Syringe and needle must be boiled each time before using. Cleansing of the skin and the top of the bottle with alcohol are also necessary. Immediately after removing the needle cleanse it and the syringe with cold water.

4. An insulin reaction usually occurs one to two hours, but may occur as late as six hours after the injection, and can be recognized by the sudden onset of severe hunger, weakness, sweating, trembling or pallor.

5. A reaction should be treated by eating an orange, two lumps of sugar or by taking the carbohydrate portion of the next meal.

6. At present it is not prudent to use insulin without daily examinations of the urine.

7. Arrange for a supply of insulin for one week in advance.

8. If your supply of insulin fails:

(a) Notify your doctor by telephone or telegraph and

(b) Quit one-third of your diet.

9. Bring part of mixed twenty-four hour quantity of urine with record of the amount.

Insulin can't be given by mouth as the gastrointestinal enzymes destroy its action; it is hoped that in the near future a method will be developed which will make practical the oral administration

of insulin. Injections are given subcutaneously only. Intramuscular injections cause pain.

The examination of the urine generally occupies a very small part of the time; a patient can generally master this procedure in one lesson; he should then be given the test tubes, solutions, etc., and told to do the test himself and to bring a specimen to the doctor for a check up every few days at first, then once a week after that.

When the dose of insulin and diet has been established, the patient, if well trained, can practically care for himself if he comes to the doctor once a week for a check up.

COMA.

The treatment of this complication needs immediate and heroic measures. No one, even among those with the largest experience is willing to lay down definite rules for treatment. The general treatment as outlined by Joslin gives good results. That is:

1. Patient must be put to bed and surrounded by hot water bottles.

2. Fluids by mouth or rectum are given.

3. Blood for sugar is drawn.

4. Bowel elimination by enema.

5. Caffein or digitalis are administered for the heart.

Insulin is given in a 40 unit dose to begin with and 20 units every two hours until sugar and acid bodies greatly decrease; generally 200 units are given. Blood sugar estimations are important guides for regulating insulin doses. Providing that the urine is sugar free and diacetic and acetone persists in urine glucose should be given intravenously followed by insulin subcutaneously—500 c.c. of 10% solution gives good results. Joslin emphasizes the fallacy of giving glucose when the urine and blood sugars are high. It is a fact, however, that when small quantities of glucose are injected intravenously, the procedure is made a little safer in the hands of the general practitioner. The results of insulin treatment of coma or precoma state, in youngsters, are very striking; the patient generally comes out of the stuporous state in four or six hours and feels well.

An important question asked often is, can insulin be discontinued? The answer can't be given until more data are collected. However, from reports it seems that in some cases it can be discontinued. There is evidence to show that insulin probably directly or indirectly causes the

islets to take on renewed activity; this may be due to the release of the strain on the island. One has to be careful here in making statements. In the recent literature, the assertion is made that insulin doses can be reduced; this, they say, indicates that tolerance has been increased. Newburg⁵ points out that tolerance can't be said to be increased until the maximum effects are determined by diet; then after insulin trial one may be able to judge if tolerance is increased. This has not yet been accomplished.

INSULIN SHOCK.

It is probably a good thing that the dangers of insulin shock (hypoglycemia) were exaggerated when insulin first came out. A tendency was created to make all those using it more careful and exact in its application. This exaggeration however, tended to prevent many doctors from using insulin. The general symptoms of shock are these:

1. A shaking feeling (inside and out).
2. Nervousness and irritableness.
3. Hunger.
4. Sweating.
5. Convulsions may occur if the antidote is not given.

The antidote is very simple; the patient may eat an orange or a few lumps of sugar and the shock passes away in a few minutes. Subcutaneous injection of adrenaline, 1 c.c. of the 1:1000 solution may be used. If the patient goes into convulsions and will not eat, then 200 c.c. of 10% glucose intravenously must be given to revive the patient.

The field of insulin usefulness in the treatment of non-diabetic acidosis is of considerable scope, including pre-operative and post-operative acetoneuria, and the toxemic vomiting of pregnancy with acidosis. It is fair to assume that further progress will be made, with these conditions, in the future. In 1922 investigators⁶ demonstrated the reduction of acid bodies with insulin, but comparatively little work was done until 1923 when published reports⁷ appeared regarding the treatment of post-operative non-diabetic acidosis. Acetonuria may be present to a very limited degree in health. It may be present to a greater degree in many conditions and diseases, viz: diabetes mellitus, epilepsy, pregnancy, cyclic vomiting, carcinoma and certain febrile conditions as

scarlet fever, pneumonia and measles. The acidosis of diabetes is known as ketosis.⁸ Fundamentally ketosis (in diabetes) is due to the same cause as in starvation, namely, an improper adjustment between the metabolism of fat and carbohydrates. Therefore, the treatment may be assumed to follow similar lines, i. e. insulin subcutaneously, and glucose solution intravenously, per rectum and by the gastro-intestinal route.

The report of a recent case of non-diabetic acetoneuria (toxic vomiting of pregnancy) follows:

CASE I. Mrs. M. J., age thirty years (primipara), patient of Dr. H. W. Shutter, admitted to Milwaukee Hospital February 11, 1924. She had traveled a distance of over 60 miles by train. About ten weeks pregnant with persistent vomiting for last four weeks previous to entry. She stated that the condition was due to a fall down a stairway with a resulting head injury. This occurred the second week in January. The previous history was negative, the woman not having been sick since the age of seventeen, when she had measles and chickenpox. The case had been treated by various methods previous to entry into hospital without good results. The patient was very emaciated, skin dry, tongue brown and dry, acetone breath, pulse rate 94, small, weak. Urinalysis, sp. g. 1016, trace of albumin—no sugar. Acetone and diacetic acid 3+. Blood sugar .08%. She vomited frequently. Glucose solution 10% 550 c.c. was given intravenously, a glucose peptonized milk solution per rectum and 55 units of insulin hypodermically. Improvement was marked, the patient being able to retain food, the pulse returned to normal, urine became free from acetone and diacetic acid. On February 22 the patient left the hospital for her home on full diet in excellent condition and has continued to be so.

CASE II. (A severe diabetic). Alex. K., age twenty-six, a white male, entered the Milwaukee County Hospital on October 11, 1923. His complaint was diabetes. F. H.—Father, mother, five brothers and two sisters are L. & W. Family history practically negative, except that his mother's sister had diabetes. P. H.—Has always been well. P. C.—In June, 1923, the patient noticed the onset of polyphagia, polydipsia and polyuria and he began to be weak. These symptoms progressed gradually, accompanied by a loss in weight of forty pounds in four months. Physical examination:

The heart, lungs and abdomen were negative. The weight 128 pounds. The height 5 feet, 6 inches. On October 12, 1923, the blood sugar was 285.7 mg. per 100 c.c. of blood. On October 13th the urine showed the following: sp. gr. 1.040, sugar + + + +, acetone +, diacetic acid +. The following diet was prescribed: P. 20, F. 88, C.H. 13, Cal. 936. This diet was maintained until October 16, 1923, with a loss in weight of seven pounds. The urine sugar remained + + + +, acetone ++, diacetic +.

The blood sugar was 325.2 mg. per 100 c.c. of blood. The diet was then raised to P. 37, F. 134, C.H. 45, Cal. 1534 and ten units of insulin H 20 before dinner and ten units before supper, were given. The acetone and diacetic acid disappeared at once but sugar remained + + + +. On October 22, 1923, the insulin was raised to fifteen units, twice a day. The sugar remained + + + +, so diet was reduced to P. 36, F. 120, C.H. 30, on October 24, 1923. On October 26, 1923, the weight had increased three pounds. Insulin was increased to twenty units at noon and fifteen units at night. The sugar remained + + + +. There was no increase in weight. The diet was then increased to P. 51, F. 91, C.H. 30, Cal. 1153. The insulin was changed on October 29, 1923, to twenty units at noon and twenty units at night; or 1 c.c. of H. 20 twice a day. The blood sugar on October 31, 1923, was 333 mgm. per 100 c.c. of blood. U 20 insulin was now substituted for H 20 and fifteen units U 20 were given twice a day. On November 5, 1923, the insulin was raised to 18 units and on November 9, 1923, to twenty units B. I. D. On November 15, 1923, the urine sugar became a trace instead of + + + + as heretofore. On November 13 the weight was 125 pounds. The diet was P. 50, F. 120, C.H. 50. The insulin was raised to twenty units of U 20 at noon and to thirty units at night; increased on November 14, 1923, to 35 units at night. On November 19, 1923, blood sugar was 272 mgm. per 100 c.c. of blood. The insulin was again increased by giving ten units U 20 before breakfast. On November 22, 1923, the morning dose raised to twenty units and urine became sugar free. On December 18, 1923, the blood sugar was 192 mg. per 100 c.c. of blood. The diet was raised to P. 50, F. 140, C.H. 60, calories 1700. On January 3, 1924, the insulin given amounted to twenty units before breakfast, thirty units before dinner and forty before supper, or ninety units U 20 per day.

January 9, 1924, the blood sugar was 192 mg. per 100 c.c. of blood. On January 19, 1924, blood sugar was 131 mg. per 100 c.c. of blood. When the patient was discharged on January 20 the patient weighed 133 pounds, a gain of five pounds. He was feeling well, was able to examine his urines, to inject his insulin, and to construct his own diet. He has been coming to the County Dispensary once every week. He has to date, April 15, 1924, been able to keep himself sugar free and has gained to 142 pounds. He works every day and feels fine.

CONCLUSIONS

1. Insulin can be used by every general practitioner, if the few essentials are followed.
2. The majority of patients can be treated at home.
3. Practically all patients are satisfied, i. e., they feel physically and mentally better under treatment.
4. The most striking results are obtained in coma.
5. The dangers of insulin shock have been exaggerated.
6. Insulin should be given with a properly balanced diet.
7. Patients should be kept sugar free on maintenance diet.
8. Insulin is not a cure but a valuable supplement to the dietary method of treatment.
9. A new method of administration, preferably per mouth, should be developed, because the subcutaneous injections have many drawbacks.

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A SUGGESTION FOR MEDICAL AND HOSPITAL COOPERATION*

By W. A. HENKE, M.D.

LA CROSSE

I wish to take this occasion to thank the members of the La Crosse County Medical Society, for the honor extended me, in electing me President of this Society for the ensuing year.

We have heard a great many unpleasant things about the medical profession and the hospitals of La Crosse. Contrary to these reports, in looking over the last standardization report of the American College of Surgeons, and the last edition of the American Medical Association directory, we find that La Crosse ranks first in the state of Wisconsin, among the cities of over 20,000 population, in maintaining Class A hospitals and hospital beds, per capita of population.

Milwaukee, with a population of 457,147, has ten hospitals in Class A, with a total of 1023 beds, or a ratio of 1 to 447.

Racine, with a population of 58,593, has two hospitals in Class A, with a total of 115 beds, or a ratio of 1 to 510.

Superior, with a population of 39,624, has one hospital in Class A, with a total of 100 beds, or a ratio of 1 to 396.

Madison, with a population of 38,378, has two hospitals in Class A, with a total of 195 beds, or a ratio of 1 to 197.

Eau Claire, with a population of 20,880, has one hospital in Class A, with a total of 115 beds, or a ratio of 1 to 181.

Kenosha, with a population of 40,492, has not a single hospital bed in Class A.

La Crosse, with a population of 30,363, has four hospitals in Class A, with a total of 445 beds, or a ratio of 1 to 68 of population.

Although La Crosse ranks seventh in point of population, it ranks second in the total number of hospital beds in Class A. Milwaukee, fifteen times the size of La Crosse, is the only city in the state that has more Class A hospital beds than has La Crosse. This is not all—the most important and the most encouraging is the fact that the hospitals of La Crosse are crowded beyond capacity, and extensions will be needed in the near future.

The medical profession of La Crosse is giving full measure of time and effort, not only to the population of the immediate vicinity, but to patients from practically every state in the Union. This is what the medical profession of La Crosse has accomplished, in spite of the fact that there has existed here the grossest kind of intolerance, mistrust and injustice. How much more could have been gained, had there existed that unity of purpose for which this Society was organized, and without which this Society has no right to exist. If at our regular meetings we could forget mistrust and stop the parading of our successes and our virtues, and instead discuss our failures and our mistakes, with constructive criticism for improvement, I am sure that before long there would not be an empty chair at our meetings.

Let us help the superintendents of our hospitals to maintain a high standard of efficiency. Let us help our historians to procure good histories, so that good and reliable statistics may be available and that our mistakes may be studied and eliminated. Let us have post-mortems whenever possible, for it is the greatest post-graduate school in the world.

The hospitals of La Crosse are in a high state of efficiency, and both the sisters superior and the superintendents are to be congratulated. They are giving to the physicians and to the public of La Crosse the lowest rate per room of any city of its size in the state. This has only been possible through efficient management. A hospital can be made not only self-sustaining, but to pay for its investment as well. To accomplish this, team work is essential—team work between superintendents, physicians, nurses and every employee of the hospital. Team work does produce results. We have proven that to our own satisfaction in our own organization. A few men, well organized and working in harmony will do more work and do it easier and better than twice that number poorly organized. Team work in medicine is absolutely essential to success.

In our own group, we find in checking over our failures, that we are making still far too many mistakes, but certainly we are not making as many combined as I did when I was alone in practice; and that we as a group have not a monopoly on this business of making mistakes, I am also prepared to say. As a rule, the larger the business, the greater the chance of making mistakes; and

*Presidential address read before the La Crosse County Medical Society, 1924. Published by request of the Society.



Figure I.



Figure III.



Figure II.



Figure IV.

(NOTE—The Journal acknowledges the kindness of Dr. C. A. H. Fortier, Milwaukee, in making the film reductions that made the illustrations for this article possible.)

also the greater the business, the greater the opportunity of discovering the mistakes of others. The greatest number of errors in diagnosis we are making, and we find this holds good for others as well, is in diseases and affections of the genito-urinary tract. I shall quote a few cases to bring out this point more clearly.

In 1914, I was treating a lady patient for what appeared to me to be a case of neurotic achylia gastrica. I was alone in practice at that time, but I was able to find time to do a urinalysis, a blood analysis and a gastric analysis. The blood and the urine were negative, the gastric content showed an absence of H.cl. The physical examination revealed a tenderness in the epigastric region. I treated that patient for achylia gastrica for some weeks and then she disappeared. In the early part of 1923 she returned, complaining of the same symptoms. She went through the clinic and the laboratory, reported traces of pus in the urine. She was sent to the hospital and a more complete examination, including cystoscopy and radiography was made, and this is what we found: (Picture 1). It was interesting to learn that during the eight years after she left me, she had consulted and received treatment from several doctors of this city, all of whom treated her for various ailments, but none found any trouble with her kidneys. When she returned in 1923, we removed the affected kidney and she is now in perfect health.

Another case was a locomotive engineer, living in a small city in the central part of the state, who consulted me in 1916. I examined him repeatedly, confining my examination to blood, urine and the physical examination. The diagnosis was pyelitis. This man was then 48 years old and had been suffering with the same symptoms for twenty years. Previous to coming to me, he had been treated by every doctor in his home town. After some weeks of treatment by me, he disappeared. He came back for treatment in January, 1923. A thorough examination at this time revealed uremia. The laboratory reported pus, blood and albumen in the urine. The blood urea-nitrogen was 86 mg., and the blood creatinine was 8.2 mg. The X-ray report indicated many small pea-sized stones in the right kidney; a stone the size of a lemon in the region of the left ureter, midway between bladder and kidney. This patient died after being in the hospital less than

48 hours. An autopsy was made and this was the report. Many small faceted stones were in the right kidney, which was much enlarged and almost completely destroyed by suppuration. The left ureter was completely blocked by a round, smooth stone, the size of an orange. The left kidney was entirely destroyed. There is no doubt that the stone in the left ureter was the cause of his early symptoms and that it enlarged to its present size in that location. An accurate diagnosis and proper treatment in 1916, might have prolonged his life. Our history taken in January, 1923, shows that this man was under constant treatment with different physicians in various cities of this state, all of whom overlooked his real trouble.

There is no doubt that the cystoscope and the X-ray have been too long neglected as a means of diagnosis. The X-ray should be used in conjunction with almost every physical examination, and the cystoscope and the X-ray whenever there is pus in the urine. Both ureters should not be injected at the same time.

We have never had a death, but we have had temperatures as high as 105, with chills, followed by all the symptoms of shock, when both ureters were injected. We have never had any untoward symptoms when sodium iodide was injected into only one kidney pelvis.

This subject was thoroughly discussed following a paper read by Dr. W. E. Stevens at the last A. M. A. Convention at San Francisco, at which convention Dr. Braasch and others were very emphatic in denouncing bilateral pyelograms. It is better and safer to wait two or three days to inject and radiograph the opposite kidney. (Figure 2) is a bilateral pyelogram that caused symptoms so severe that we were afraid the patient might die.

The quantity of sodium iodide does not seem to make any difference, as you see (Figure 3), this large hydro-pyonephrosis was also taken as a bilateral pyelogram, and there was not the slightest reaction.

Dr. Jamieson, who does this work for us, now radiographs each kidney separately (Figure 4), at least two days apart. In other words, we have discontinued bilateral pyelograms. It is next to impossible for any one man to do all that is necessary to make a diagnosis. Team work between the men of each group, or each hospital, is essential.

If cooperation is essential to the best interest of patient and physician, when considering hospitals

and groups, then there is every reason to believe that it is beneficial also when it exists between physicians of different groups and hospitals.

If the scope of the medical profession of La Crosse were limited by a stone wall and their practice limited to the thirty odd thousand of its inhabitants, then there might be some excuse for the petty jealousy that so frequently exists, but when the field is unlimited, with thousands of miles of railroads in every direction, and with every train that comes to La Crosse bringing more patients into our hospitals, there certainly can be no such excuse. It is up to us and to us alone; we all have an equal chance in the field, and the field is unlimited. With unity and harmony, La Crosse might well become a medical center.

I wish to say to the medical profession of La Crosse, that when a patient enters the Grandview Hospital who was a former patient of yours, you may be sure that your own interests are guarded, and I am glad to say that we have received the same consideration. I will quote two cases to elucidate this point. In one I was the benefactor, and in the other I believe I did justice to a fellow practitioner.

Some months ago, there was admitted to our hospital a patient with sepsis of the leg. Hot antiseptic compresses were applied. A few days later, the leg had two small blisters, caused by the hot water bottle. Several days later, he left the hospital with one of these blisters not entirely healed. He was to report for dressing of the leg in two days, but in the meantime he consulted a lawyer, who directed him to consult a physician, which he did. That physician happened to be Dr. Reay. I wish to take this occasion to thank Dr. Reay for the very ethical manner in which he disposed of the case. The patient returned to me and I treated him until his leg was well. He paid his entire bill at the time of his discharge from our care. After I handed him his receipt, he said that if it had not been for Doctor Reay, he would have sued the hospital for his blistered leg. I told him I had already been informed of that fact and that I had added \$25 to his bill, as it was for just such people as he that hospitals were compelled to carry liability insurance.

The other case was that of a man who entered the hospital, suffering with frequent and bloody urination, with more or less constant tenesmus. Dr. Jamieson cystoscoped him and reported a

foreign body in the bladder. He told the patient it was a stone. He tried to remove it with the operating cystoscope, but the field became too bloody. We operated and removed the foreign body the next day. The patient wanted to see the stone, but I did not show it to him, for the reason that he had been operated for prostatectomy several months previously by a surgeon for whom I hold great respect, and whom I believe to be the most able operator and the most ethical surgeon La Crosse has ever had. When I removed this piece of silkworm suture surrounded by calcareous deposits, I was reminded of a time when I also had a similar experience.

One morning while removing Michel clips from a patient, for whom I had performed a cholecystectomy, I found that the number of clips did not check up with the number of clips recorded on the technique sheet. There was one less and I was sure that it had dropped into the cholecystectomy drainage wound. It is eight years since that operation and the patient is quite well. An X-ray of the operation site does not reveal the presence of a clip, but I know that I will never again use skin clips in the proximity of a drainage wound.

In this case, it happened to be a small piece of silkworm gut. I explained to the patient that it was not an uncommon thing to develop stones in a diseased bladder, as it necessarily was preceding the prostatectomy. I enjoyed the opportunity to explore the bladder, and the base of the bladder was smooth and in perfect condition. I believe that patient will return to his former physician, if ever he or any member of his family are in need of any more surgery.

There is no doubt in my mind that cooperation by this Society would be greatly beneficial to all its members.

Fat-Free Tincture of Digitalis.—Roth found that fat-free tinctures of digitalis had no advantages over the U. S. P. tincture of digitalis. On the contrary, he found some of these fat-free tinctures were so unstable that he advised manufacturers not to market them without stating the date of their manufacture on the label. "Fat-free" tincture of digitalis was introduced under the belief that the fat from the leaf produced gastric disturbance; but Hatcher and Eggleston fed the fat to cats and found that it had no emetic action whatever. After an investigation of the subject, the Council on Pharmacy and Chemistry concluded that there is no essential difference in action between "fat-free" tinctures of digitalis and the product official in the U. S. Pharmacopeia. (Jour. A. M. A., March 16, 1924, p. 911).

OBSERVATIONS ON INSULIN TREATMENT OF DIABETES—DIURNAL VARIATIONS OF SUGAR UTILIZATION

By **W. E. NICELY, M.D.**,
and
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WAUKESHA

Two cases of diabetes in children are here presented, illustrating a very delicate adjustment between sugar utilization, insulin and diet, so that the time of day that insulin was administered became of first importance. It is demonstrated that

urine was never free from sugar for the whole twenty-four hours. The urine contained sugar in the mornings, but none in the afternoons. The blood sugar in the afternoon was normal six weeks before he came to us. When the dosage of insulin had been raised to ten units before each meal, he had a marked hypoglycemic reaction. When insulin had been discontinued, he had marked glycosuria and acidosis, and with difficulty was saved from coma.

Examination: He was a well developed child, weighing thirty-nine and one half pounds, a little over-weight for his age. His general physical con-

TABLE I.

Case I

Date	Urine Sugar				Blood Sugar %	DIET										INSULIN						
	Grams					%	7 AM		10 AM		12 ³⁰ PM		3 PM		5 ³⁰ PM		Total Glucose	FA/G	Early AM	B	D	S
	12 M ¹⁵ to 7 AM	7 AM to 12 ³⁰ PM	12 ³⁰ PM to 5 ³⁰ PM	5 ³⁰ PM to 12 M ¹⁵			C	P	F	C	P	F	C	P	F	C							P	F
2		15	0	0	.137															8	8	6
3	11.5	25	0	0	.091	6-18-34		2-0-0		19-23-36		11-1-5		5-16-27	87	1.36				8	8	
4	35	6.5	0	0		"		"		"		"		"					8	4	4	
5	10.2	105	0	0		6-8-29		2-0-4		20-14-26		5-1-9		13-8-23	73	1.3				"	"	"
6	12.5	7.5	tr	0	.125	"		"		"		"		"					6	4	3	
7	25	13	0	0	.086	"		"		"		"		"					8	4	3	
8	3.2	18	0	0		10-4-14		4-5-17		17-15-20		5-7-10		15-13-18	84	1.07				"	"	"
9	17	12	0	2		"		"		"		"		"					10	4	4	
10	18	12	0	1-		10-4-10		4-3-15		16-14-14		5-7-10		14-12-12	78	0.92				"	"	"
11	23	17	tr	0	.235	"		"		"		"		"					10	4	5	
12	22	13	10	0		"		"		"		"		"					12	5	5	
13	15	13	0	1-		"		"		"		"		"					"	"	"	
14	16	9	sltr	0		"		"		"		"		"					"	"	"	
15	4	0	vsltr	1-		"		"		"		"		"				4	10	5	5	
16	sl tr	vsltr	vsltr	vsltr	.056	"		"		"		"		"					"	"	"	
17	5	"	0	1-		"		"		"		"		"				4	8	5	5	
18	6	0	0	tr		"		"		"		"		"					"	"	"	
19	7	tr	tr	1-		"		"		"		"		"				6	6	6	6	
20	2	tr	al tr	0		"		"		"		"		"				"	"	"	"	
21	Patient left sanatorium. Blood sugar at 2 P.M. was 0.062%																					
	1 Blood specimen taken at 5 30 PM.																					
	2 " " " " 9 30 AM																					
	3 " " " " 6 45 AM																					
	Other blood specimens taken at about 9 30 AM, two hours after breakfast.																					
	Note—																					
	Total Glucose was computed: G = 58% P + 10% F + C																					
	FA = "Fatty acid" = 46% P + 90% F																					

the use of insulin at selected times of day is better suited to the control of the disease, and is more economical in the amount of insulin used.

The first case is that of a little boy aged three and one half years, who had had diabetes about five months.

Past History: For four months he had been under treatment elsewhere, for part of the time with insulin. The dosage was seven units before breakfast, five units before the noon meal. The

condition was good. He was bright and active, but tired very easily.

Treatment and Progress: In order to see when during the day or night he excreted sugar, we had each urine specimen voided collected and tested separately. The results are grouped in the table presented, and show that the sugar excretion was largely confined to the latter part of the night and to the morning up to noon. With such a child, blood sugar tests repeated through the day at in-

tervals of one or two hours, were not possible, though of course very desirable in order to follow the changes in the blood sugar. Judging from the urine sugar excretion, the blood sugar seemed to be low from noon till midnight, high from midnight till noon, with maximum near breakfast time. Accordingly we gave the largest dose of insulin before breakfast. The smaller doses before dinner and supper, however, were several times followed by slight reactions and several times

instead of three, in the hope of keeping from marked hyperglycemia after meals. Finally we gave part of the breakfast dose of insulin at 3:30 A. M., followed by the remainder of the former breakfast dose at breakfast time. No food was given at the early hour. At once there was improvement in the amount of sugar excretion. The urine was free from sugar in many more specimens each day, and the diacetic acid was eliminated from most specimens and appeared only in traces, even when glycosuria was present. The complete results of tests for several days, comparing the days before this change in time of insulin injection with days afterward, are given in Table 2.

TABLE 2.

Case 1.

Date	Urine	Insulin	Date	Urine	Insulin
Feb. 10.	Sugar Gm.	Diacetic Acid	Feb. 11.	Sugar Gm.	Diacetic Acid
A.M. 5	4	0	A.M. 5 ³⁰	3	0
7	13	++++	6 ⁴⁵	13	0
8 ¹⁵	3	++++	7	3	++++
10	3	++++	8	5	++++
11 ⁴⁰	v.sl.tr.	+++	9	9	++++
P.M. 3 ¹⁰	0	sl.tr.	10	1-	sl.tr.
5	0	0	12 ¹⁰	0	+
6 ³⁰	1-	v.sl.tr.	12 ²⁰	0	tr.
			5	0	sl.tr.
		7 A.M. -10 units			7 A.M. -10 units
		12 ¹⁵ P.M. -4 units			12 ¹⁵ P.M. -4 units
		5 ¹⁵ P.M. -4 units			5 ¹⁵ P.M. -5 units
Feb. 17.			Feb. 18		
A.M. 6 ¹⁵	5	0	A.M. 6 ³⁰	7	0
7	0	0	10	0	++
9	0	+	P.M. 1	0	0
10	0	0	3	0	0
12 ^{noon}	v.sl.tr.	0	4 ⁴⁵	0	0
3	0	0	6	tr	0
4 ¹⁰	0	0			
5	0	0			
6	0	0			
7	1-	0			
11	0	0			
		3 ²⁰ A.M. -4 units			3 ¹⁰ A.M. -4 units
		7 A.M. -8 units			7 A.M. -8 units
		12 ¹⁵ P.M. -5 units			12 ¹⁵ P.M. -5 units
		5 ¹⁵ P.M. -5 units			5 ¹⁵ P.M. -5 units

Unfortunately the child was taken home before the complete elimination of sugar from all specimens of urine could be accomplished. That the urine sugar excretion was a good index to the blood sugar may be seen in the figures for blood sugar of February 11 and 16. The former test was taken at 7 A. M., urine passed at 6:30 contained abundant sugar, and was 0.235%; the latter test was taken about 9:45 A. M., when the urine passed at 8:30 was sugar free, and was normal.

The question may be fairly asked as to whether such a diurnal cycle of blood sugar occurs in every case, and if so what is the reason for it. It has been suggested that exercise may assist in the better utilization of sugar during the day and the rest in bed at night may have the opposite effect. The child patient we have described, always took a nap or was at least lying down from 1:00 P. M. to 3:30 or 4:00 P. M., a period when the blood sugar was running low, as evidenced by the occurrence of several hypoglycemic reactions at such times. On many occasions after the breakfast dose of eight to ten units, and after the child had played actively from breakfast till about 10:00, urine passed at 10:30 or 11:00 A. M. would still contain sugar.

We would like to have seen if the early morning dose of insulin would have been more effective if given earlier than 3:30 A. M.; also whether the number of doses might have been reduced if given at different times of the day.

The second case has been under treatment long enough to work out the insulin dosage to better advantage. The patient is a girl of seven years of age. She has had diabetes twenty-two months. She came to us first in August 1923. She went

a small amount of orange juice had to be given. Apparently the blood sugar varied up or down rapidly and markedly. Even when the urine contained sugar at breakfast time, on a few occasions he showed some signs of hypoglycemic reaction in the middle of the morning. His reactions gave the usual signs of pallor, weakness and cold sweat, preceded and accompanied by sleepiness and lack of attention to his surroundings. When sugar showed in the urine, large amounts of diacetic acid also appeared, and persisted sometimes several hours after glycosuria had ceased.

We seemed to make no progress. If we increased the supper dose of insulin to try to offset the night hyperglycemia, he promptly had a reaction. The diet was divided into five small meals

home after two months' treatment, with blood sugar normal, and twenty-four hour specimens of urine sugar-free, except an occasional trace. She was taking eight units of insulin thrice daily. She gained some weight and did well till along in December. The trace of sugar appeared more often, especially in the morning urine, in spite of increase of the insulin to ten units before each meal. She returned to us January 16, 1924.

The table shows the findings daily. The very small amount of sugar persisted, scarcely more

the usual 3:30 with good effect. It has been recently moved back to 3 A. M. No food has been given with the early morning dose of insulin.

The hypoglycemic reactions in this case were characterized by extreme drowsiness and weakness, with little or no sweating or hunger. They occurred as early as one half hour after a dose of insulin, and as late as three hours afterward. A dose of fourteen units before breakfast would produce not a sign of reaction, whereas four to six units before a larger meal at supper frequently did

TABLE 3

Case 2

Date	Urine Sugar Grams				Blood Sugar %	DIET			Total Glucose	FA/G	INSULIN			
	12 M. to 7 A.M.	7 A.M. to 12 P.M.	12 P.M. to 5 P.M.	5 P.M. to 12 M.		7 AM	12 ³⁰ PM	5 ³⁰ PM			Early AM	B	D	S
Jan. 17	Sugar	present			.184	15-26-25	11-33-29	15-25-24	97	1.1	10	10	10	Tests of urine specimens were always made daily. In order to abbreviate table, results are given only on those days diet or insulin dosage was changed, or from Feb. 26 on, the urine was always free from sugar in all specimens except as noted on Mar 11.
18	5.5				.122	9-20-33	11-22-23	7-14-18	66	1.4	12	10	10	
20	27					17-26-34	14-29-27	21-21-22	104	1.0	12	10	12	
22	Sugar	present			.170	9-26-34	14-29-27	13-21-22	88	1.2	"	"	"	
23	10				.134	"	"	"	"	"	14	10	14	
28	v. sl.	tr.			"	"	"	"	"	"	14	12	14	
29	tr.				.105	"	"	"	"	"	14	12	12	
30	tr.				"	"	"	"	"	"	12	12	12	
Feb 1	tr.				"	"	"	"	"	"	12	12	10	
4	tr.				.127	"	"	"	"	"	"	"	"	
6	tr.				"	13-9-41	20-11-39	12-9-40	74	1.6	"	"	"	
8	3				"	13-15-35	20-17-31	12-15-32	82	1.3	"	"	"	
9	4				.086	"	"	"	"	"	"	"	"	
11	5				.124	13-15-29	19-16-22	11-14-23	76	1.1	14	12	10	
12	6	vstr	0	vstr	.045	"	"	"	"	"	"	"	"	
13	1	2	0	0	"	"	"	"	"	"	14	12	8	
14					"	"	"	"	"	"	14	12	10	
15	5	3	0	0	"	"	"	"	"	"	14	10	10	
16	1	0	0	0	"	"	"	"	"	"	14	4	4	
17	10	4	0	0	"	"	"	"	"	"	12	6	6	
18	6	0	0	0	"	"	"	"	"	"	14	6	6	
19	9	2	0	0	.109	"	"	"	"	"	"	"	"	
20	5	tr.	0	0	"	"	"	"	"	"	"	"	"	
21	0	0	0	0	"	"	"	"	"	"	4	10	6	
22	tr.	0	0	0	"	"	"	"	"	"	4	8	6	
23	tr.	0	0	0	"	"	"	"	"	"	4	6	4	
24	vstr	0	0	0	"	"	"	"	"	"	"	"	"	
25	tr.	0	0	0	.117	"	"	"	"	"	"	"	"	
26	0	0	0	0	"	"	"	"	"	"	"	"	"	
Mar 2	0	0	0	0	.067	"	20-17-27	12-15-28	80	1.2	4	4	4	
4	0	0	0	0	"	"	"	"	"	"	4	4	4	
6	0	0	0	0	.109	"	"	"	"	"	"	"	"	
11	tr.				"	"	"	"	"	"	"	"	"	
12	0	0	0	0	"	"	"	"	"	"	"	"	"	

Prior to Feb. 12, tests were made on 24-hour specimens. Except as otherwise stated, blood was taken 2 hours after breakfast.

than a trace in the twenty-four hour amount. Increase of insulin dosage failed to affect it. The collection and test of each specimen of urine voided, showed the appearance of sugar from early morning till about ten. The administration of insulin produced reactions except in the mornings, yet in spite of hypoglycemia in the early evening, hyperglycemia occurred in the night. The effect of the 3:30 A. M. dose is shown in the table. It is interesting to note that on March 11, the early morning dose was not given until about 4:15 and glycosuria resulted. The next day it was given at

provokè reaction. The reaction always began with drowsiness, after which she became limp and lax. While apparently sleeping, she was at least dimly conscious of all that was going on, and told about it afterward. Any attempt to rouse her would provoke an outburst of crying, something she seldom did otherwise. There were no "shakes." She was pale, but without the pinched look and pallor of the face. A half or whole orange would always dispel the symptoms within fifteen to thirty minutes.

In cases such as these the collection of urine in

four containers for the periods of time given in the tables, would probably be sufficient to give the information desired about sugar excretion. We tested each specimen voided always, but grouped the results together in the tables for economy of space. Benedict's quantitative method (as modified by Smith) was used. Urine was considered sugar-free when negative according to the standard Benedict qualitative test.

In computing the food values of diets the figures given are only approximate. One cannot compute food values or calories with absolute exactness, nor is more than approximate measurement necessary, because of the variability in the chemical composition of the foods themselves. The ultimate criterion of value of any diet is not the mathematical exactness with which it is computed, but the adaptability to patient to whom given. The only excuse for presenting figures is for purpose of comparison. We aim to teach each patient to prepare and measure such a diet as will enable him to keep his strength, his weight, if not already excessive, with urine free from sugar, and with blood sugar as near normal as possible. If a patient is overweight, such a diet as will allow a gradual loss of weight is desirable. The children mentioned in this report are both over-weight for age, and we wish them to maintain weight without gain for a year or more. They must never gain weight rapidly, and will be better a little under average weight.

The meaning of the nightly rise of blood sugar is better studied in adults than in children, because it is then possible to make blood sugar determinations more often. Our impression is that the more completely a diabetic is dependent upon insulin administration for control of his carbohydrate metabolism, the more likely is the marked variation of blood sugar and night hyperglycemia such as we are reporting. The little boy had prompt increase of all symptoms and threatened coma when insulin was temporarily discontinued before he came to us. The supplying of insulin during the night was partially successful in controlling the boy and completely so in controlling the girl. Evidently, in both, in the absence of insulin supplied from without, the body's mechanism for regulating blood sugar and keeping it within limits was insufficient.

As to just how this comes about, we can only theorize. The amount of sugar in the circulating

blood at any one time is a very small amount. Taking blood volume as about 85 c.c. per kilogram of body weight, the specific gravity of whole blood as 1.060, and blood sugar as 0.100%, the average sugar content of blood would be only about 0.04 gram per pound of weight—about 4 grams for a person weighing one hundred pounds. The blood sugar amount is a balance between what is put into the blood from food or from storage in the body and what is taken out to be used or stored by the tissues.

Studies of the properties of insulin are not altogether definite as to its effect in promoting glycogen storage, though some have reported such an effect. If such be the case, while the action of insulin lasted, glucose from the food would tend to be stored to some extent as well as utilized by the tissue cells. When the food assimilation period was over, the glycogen would be drawn upon for use by the tissues. If, however, by this time, five or six hours after meals, the insulin action were beginning to wane, and the tissue utilization of glucose under the action of insulin to decrease, glycogenolysis would tend to raise the blood sugar. The more deficient the patient's own insulin, and the more dependent he was upon insulin from without, the more marked would be this action. The night would be the only time of day when as long an interval between insulin injections as five or six hours would permit such a mechanism to be very prominent. The muscular rest during the night and consequent lessened demand for the burning of glucose would tend to accentuate the condition.

Such an explanation of the conditions noted is purely a theory. We do not pretend that the mechanism is altogether as simple as we have outlined. No doubt the equilibrium between opposing reactions is influenced by many things. These children, as well as most diabetics, were upset greatly in food tolerance by colds. Future researches into the chemistry of insulin and carbohydrate metabolism will some day clear up the whole matter in these cases as well as others.

COUNCIL MEETS IN JUNE.

The next meeting of the Council of the State Society will be held at Hotel Pfister, 10:30 A. M., Sunday June 8th. Committee reports, final arrangements for the annual meeting, and suggested lines of work will be discussed and acted upon at this meeting.

A METHOD OF BLOOD TRANSFUSION*

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The methods of blood transfusion in common use have a number of disadvantages. Most of them require operating room technique. When patients are critically ill, a trip to the operating room is sometimes dangerous. Dissection of a vein is necessary in most methods of transfusion, and it is sometimes hard to find a donor who will submit to such an operation. There are cases in which some techniques are not applicable because of the danger of infecting the donor from a patient with septicaemia. If clotting occurs where the whole amount of the transfusion is removed without citrate, the procedure is a total failure.

The following method was devised for use in medical cases, and especially in those too ill to be moved to the operating room. It is not considered a substitute for dissection methods in cases of acute anaemia from hemorrhage or in shock.

The apparatus required consists of one to six 100-c.c. Luer syringes with eccentric tips. For 500 c.c. of blood four such syringes suffice as they hold from 125 c.c. to 130 c.c. each. Two Luer needles about 18 gauge and 6 cm. long; a 2-c.c. Luer syringe; two pieces of light gum tubing 15 inches long for constrictors, and about one ounce of 2% sterile sodium citrate solution are also needed.

The procedure is as follows: The apparatus is sterilized by boiling. The hands of the operator and of the assistant are cleansed as for any surgical procedure. The syringes are washed out with the sterile sodium citrate solution by drawing into them a few cubic centimeters of the solution and expelling it. The donor is placed upon a couch or a wheeled stretcher near the patient's bed. An arm of the recipient and the adjacent arm of the donor are cleansed surgically and the constrictors are applied to the upper arms to distend the veins without obliterating the pulse. One of the needles attached to the small syringe is introduced into the vein of the recipient and the constrictor is removed. This needle and syringe are held in place by the assistant. The other needle attached to a

100-c.c. syringe is introduced into a vein of the donor, and a syringe full of blood is withdrawn. The filled syringe is detached from the needle and handed to the assistant while with the thumb, blood is prevented from flowing from the donor's vein. The assistant detaches the small syringe from the needle which is in the recipient's vein, attaches the large syringe filled with blood, and injects the blood into the recipient's vein. While this is being done, another 100-c.c. syringe is attached to the needle in the donor's vein and filled with blood; so that when the first blood withdrawn has been injected into the recipient, the second syringe is ready to be injected. As the second syringe is injected, a third is being withdrawn. The procedure is continued until the desired amount of blood has been transferred.

We have found the ordinary needles used much easier to handle than the various canulae described. The use of several 100-c.c. syringes in succession avoids the necessity for using the same syringe more than once in a transfusion, as is done when smaller syringes are used.

CHASING WILL-O'-THE-WISPS

When the doctor gently chides the patient who has wasted vitally valuable time chasing the latest advertised panacea, the victim always has a "come-back." He—or, more often, she—retorts that the medical profession is always opposed to new methods of treatment. There is no gainsaying the fact that ancient and medieval medicine was narrow and ecclesiastical in its attitude. At that time medicine was not a science, but a more or less imperfect art. It attracted, it is true, many brilliant minds, but it also had in its ranks a large preponderance of mystics and charlatans. What we know today as the science of medicine is of recent growth. The application of modern scientific methods to the study of the human body and its processes has produced results as far-reaching in their scope as any accomplished in other fields of human endeavor. Moreover, by applying the methods of the twentieth century both to the study of medicine and to the organization of the medical profession, charlatanism and mysticism have become the exception instead of the rule in medicine. The modern medical quack and faddist is but an exorcism. The result of all this has been to raise enormously the standard of the collective judgment of the medical profession. A careful review of modern medicine will show that in not one instance has the mass judgment of physicians been at fault in condemning methods of treatment that have failed to meet the exacting requirements demanded by the physician of today.

—HYGEIA, September, 1923.

*Presented at the Tri-State District Medical Association, Des Moines, Ia., October, 1923.

THE DIAGNOSIS AND TREATMENT OF CHRONIC OR LATENT TONSILLITIS*

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Chronic or latent tonsillitis frequently occurs in association with chronic infection of the roots of devitalized teeth, pyorrhoea or sinusitis. Although acute tonsillitis occurs more frequently in the young, the systemic manifestations of chronic or latent or tonsillar infection are more usually observed at or after middle age.

Chronic or latent tonsillitis may exist twenty or more years and may, for certain periods, be absolutely local, with no systemic manifestation. Frequently these periods are not truly local, but are latent, as toxins or micro-organisms are entering the blood without producing diagnostic symptoms. These periods of latency alternate with periods of obvious systemic infection.

Latent tonsillar infection is very apt to become active when any intercurrent infection or disease occurs, such as influenza, typhoid fever, pneumonia, diabetes, cardiac or renal decompensation or any condition that reduces the defense system of the body, such as malnutrition. Perhaps the commonest of all causes is an intercurrent infection.

The tonsils may be considerably or moderately hypertrophied, small in size or buried. The anterior and posterior pillars are frequently adherent to the tonsil and the anterior surface of the anterior pillars often present a dark red, congested appearance.

When infected tonsils are subjected to pressure, some yield no secretions, others show a cheesy or thin milk-like fluid which, when cultured, usually reveals the streptococcus hemolyticus or viridans. The crypts are frequently dilated, and when emptied, and material secured from the bottom by a platinum loop is cultured, the streptococcus hemolyticus or viridans may be obtained in pure culture. Similar organisms may be obtained from the surface of the tonsils, from the bottom of the spaces between the tonsils and the anterior and the posterior pillars. The pathogenicity and specificity of these organisms may be determined by animal experimentation. The blood serum on

examination may show varying degrees of immunity or susceptibility to the infective organism. Hemolytic streptococci have been found in the enlarged lingual tonsils and in diseased glands in the posterior wall of the pharynx. A negative culture may be due to the closure of crypts by adhesive inflammation or because the infection is a circumscribed intra or retro tonsillar abscess.

The small, buried, fibrotic tonsil may give no evidence of infection, and the diagnosis of its infectivity may rest entirely upon the exclusion of all other foci of infection, together with the clinical and leucocytic manifestations of systemic infection. Occasionally the only diagnostic sign is lymphocytosis, poly-morphonuclear decrease and leukopenia. Infected tonsillar tissue remaining after a tonsillectomy, even though no larger than a split pea, or unremoved infected glandular tissue in the region of the plica triangularis, may produce the same clinical manifestations as an infected tonsil.

Usually, chronic or latent tonsillar infection gives a history of one or more attacks of acute tonsillitis, scarlet fever or diphtheria, although occasionally no history of tonsillitis is obtainable, either because the infection was chronic from the beginning or the patient has forgotten that an acute attack had occurred.

When the tonsil is infected by contiguity from pyorrhoea, around the third lower molar, the patient may suffer no attack of acute tonsillitis. Whenever possible, tonsillectomy should be performed after the removal of infected teeth pyorrhoea or sinusitis. As a rule, when recurrent acute tonsillitis has occurred, even though twenty years have elapsed since the last attack, the tonsils should be suspected of being infected until proven innocent.

The presence of enlarged, indurated and painless cervical glands aids in diagnosing chronic or latent tonsillar infection, but they may be so situated as not to be detected by palpation. The most common clinical manifestations of chronic or latent tonsillar infection more or less, in the order of frequency are, arthritis, periostitis, teno-synovitis, myositis, chronic myocarditis, endo or pericarditis, endarteritis, neurasthenia, psychoneurasthenia, psychoses, neuritis, cholecystitis, cholelithiasis, hepatitis, hepatic insufficiency, intestinal toxemia, nephritis, pyelonephritis, renal calculus, peptic ulcer, and infective processes involving the eye,

*Read before the Tri-State District Medical Association, Des Moines, Iowa, October, 1923.

ear, skin, respiratory or genital organs. When a vital organ is involved, such as the heart or kidneys, and reasonable clinical evidence exists that it is infective in origin, more especially if the polymorphonuclear cells are decreased, with lymphocytosis and leucopenia, and no other focus of infection is discoverable, the tonsils may be removed on suspicion. A histological and bacteriological examination of the excised tonsils will establish the correctness or incorrectness of the procedure.

In more than one-half of the cases of chronic tonsillar infection, there is a well marked increase of the small lymphocytes, a corresponding decrease in the polymorphonuclear cells, and a decrease in the number of leucocytes per c.mm. Anemia or chloroanemia usually coexists. This diagnostic picture may be the chief or only evidence of chronic or latent tonsillar infection, and indicates that toxins or micro-organisms or both are entering the blood. If this diagnostic blood picture permanently disappears after tonsillectomy, it proves that all infection has been removed; if, however, it returns after a temporary absence, it proves that a focus of infection still exists.

The following is an abstract of a typical case of chronic tonsillar infection illustrating the difficulty of diagnosis: Maiden lady, aged 70, weight 81 pounds; marked asthenia, chloroanemia, relieved by removal of dental foci of infection. A few months later, symptoms recurred. Tonsils small, buried, and almost invisible, and a laryngologist stated they were normal. No history of previous disease of the tonsils. As the leucocyte count showed lymphocytosis, a moderate polymorphonuclear decrease and leukopenia, infection was believed to be present, and as no other focus of infection could be discovered, the tonsils were removed on suspicion, and showed haemolytic streptococci. The patient's recovery was solely due to the recognition of the diagnostic importance of lymphocytosis, polymorphonuclear decrease and leukopenia.¹

THE TREATMENT OF CHRONIC TONSILLAR INFECTION OF REMNANT IS COMPLETE SURGICAL REMOVAL

In inoperable cases of infected tonsils, the septa of the crypts may be divided so as to favor drain-

age. Any antiseptic, such as iodine or Dakin's solution, may be employed to irrigate the crypts after they have been thoroughly emptied by compressed air or liquid. The X-ray or radium properly applied, in proper doses, at proper intervals, some times causes a reduction in the size of the diseased tonsils and may reduce infectivity, and should be employed in conjunction with local treatment.

A properly made autogenous vaccine is of value in the senile, the debilitated, or those in whom resistance is lowered from any cause and in all cases where the blood of the patient exerts no bactericidal effect. In healthy, young adults, with no complication, vaccines are usually unnecessary.

Summary of the diagnostic evidence of tonsillar infection, in the order of importance.

1. The appearance of the diseased tonsils; adhesion of the pillars to the tonsils. Dark red, congested appearance of the anterior face of the anterior pillars.

2. A thin milk-like secretion obtained from the tonsils by expression, containing pathogenic organisms, usually the streptococcus hemolyticus or viridans. Pathogenic organisms, usually the streptococcus hemolyticus or viridans especially when secured from the bottom of the spaces between the tonsils, and the anterior and posterior pillars, or from the bottom of a crypt.

3. Clinical evidences of infection.

4. Lymphocytosis, polymorphonuclear decrease, leukopenia, usually in association with anemia.

5. History of recurring tonsillitis or tonsillectomy.

6. Enlarged cervical glands.

Canine Rabies Virus.—Results of the single injection method against rabies in dogs have been reported from different sources. The U. S. Bureau of Animal Industry has been conducting experimental work on this subject and results indicate that the prophylactic vaccination has value which, however, is determined to a certain extent by the virus to which the animal is exposed. The use of the single injection vaccine in animals that have been bitten is believed to be unwarranted at this time. The Högyes treatment of six doses, in animals bitten, has been used successfully for some time and the failures reported have been small. The use of the Högyes vaccine together with the cauterization of the wound and the placing of the animal in quarantine for six months to a year seems to be the best method of treating such cases. (Jour. A. M. A., March 29, 1924, p. 1066).

¹Lymphocytosis, as a diagnostic sign of chronic periapical dental infection in adults. Journal of the American Medical Association, October 22, 1921. Page 1308.

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"LET GEORGE DO IT."

Under this head we list each month definite offers of service available to our readers—the members of the State Medical Society of Wisconsin. Additions will be made from month to month but if you have a need not covered here your Secretary-Managing Editor will do his best to fill your needs. Address J. G. Crownhart, 558 Jefferson St., Milwaukee.

1. PACKAGE LIBRARIES are now available on Cancer, Schick Test, Vaccination, Periodical Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, and Control of Communicable Diseases. Address Package Library Dep't., Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

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6. LEGAL ADVICE upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

EDITORIALS

INGUINAL HERNIA.

INGUINAL hernia has recently been receiving renewed attention, due probably to military and draft board experiences.

There is more or less confusion relative to (1) Etiology, (2) Classification, (3) the Methods and (4) the Results, of Treatment.

(1) Etiology: As to the traumatic, or non-traumatic, origin, suffice it to say that, were trauma the cause of oblique inguinal hernia, such a cause should be easily demonstrated at operation following soon after the trauma; such demonstrations are exceedingly rare. The point as to whether the sudden entrance of viscera into a mal-fused funicular process in the spermatic cord (converting a potential sac into an actual sac, and hernia) is recoverable under the compensation laws, is quite another matter; and calls for a legal definition of the term, traumatic, which does not *directly* concern the surgeon. Oblique inguinal herniae are now looked upon as being due to an imperfect fusion of the funicular process and the use of the term "Congenital" to those cases in which this process communicated with the tunica vaginalis testes; and "Acquired" to those in which there is no such communication, merely gives rise to misunderstanding.

(2) Classification: Inguinal herniae are classified as Direct and Indirect. In indirect the neck of the sac emerges above the deep epigastric vessels and passes through the internal ring. In

direct the neck of the sac emerges below the deep epigastric vessels and the internal ring. Theoretically and anatomically such a distinction is correct, but if the internal ring should be dilated sufficiently to obliterate the posterior wall of the canal, then from a practical and surgical standpoint, there is little difference.

(3) Methods of Treatment: Modification of the Bassini have been very plentiful, but so numerous as to be disconcerting. A recent observation has been made by Seelig in which it is demonstrated that suture of muscle and fascia is not permanent. It would seem that attempts at *improving* Nature's mechanism to prevent inguinal hernia should be replaced by attempts at *imitating* this most remarkable natural defense against a weak spot in the inguinal region of the male, namely obliquity of the canal with a muscular valvelike check at its entrance.

(4) Results: The statistics depend upon various things, such as: the age, operative and post-operative complications, the care with which cases are followed up, the type of the hernia, the character of the operative procedure, and the relation of the former to the latter, and as a consequence of these variables the percentages of recurrence are sometimes misleading. One of the important reasons for unsatisfactory results is the utilizing of one set method in all herniae, instead of different methods to meet the different types of abnormal inguinal anatomy.

Indications for the cure of oblique inguinal hernia seem to be (1) the removal of the sac, (2) reconstruction of the inguinal canal; along *anatomic* lines, which calls for surgical judgment, which must be based upon normal and pathologic anatomy and physiology and (3) primary wound healing.

F. G. C.

HANDLING OUR PROBLEMS.

THE writer was a guest at a banquet held in honor of the graduating class of a prominent law school. Among the numerous speakers on that occasion was a member of the faculty of that college. There were many speakers who were publically better known but this member of the faculty presented a thought that is as basic to the medical profession as it is to the members of the bar.

He declared that the law of Wisconsin was changing. Pointing out decision after decision of

our Supreme Court he showed how new intent was given to old laws; how new laws were being interpreted in the light of new conditions, and declared all this to be rightly so.

"Our judiciary," he concluded, "must face the issues squarely. Many times they might find it easier to write an opinion one way than another and evade some difficult question. But they do not evade. The progress of law must be as unswerving as the blazed trail of the surveyor."

Does that not hold a thought for us? The medical profession as an organized body to promote all that is good for the greatest public welfare, is constantly meeting with new problems of a socio-medical nature. Are we handling them or are we dodging them?

By the handling of our socio-medical problems we do not mean reaching a decision in a month's time or in several month's time. A problem may remain a problem at the end of several years of thought. Handling the problem *does* mean giving it earnest consideration and taking a stand based upon what we do know. In other words, our obligation to be scientifically minded in this field is as great as it is in diagnosis and treatment of individual patients. Is it not better that we interpret what is known and point out what *is* possible, even though it may not constitute a complete solution? The problem we neglect is apt to be "solved" for us, in the wrong way.

THE RACE.

THE High Cost of Living steadily absorbs more and more of the country's thoughts.

Presumably, it is the bugaboo behind most of its troubles, but it masks an important bad habit which is altering people's lives and maladies. This is not the Cost, but the High Speed of Living. This tuning up of the nervous system to a higher and ever higher pitch, the straining of effort, the terrible race and chase after more or less desirable bagatelles, this cramming and stuffing of stomachs against time and sense, this grabbing for money and goods, the speeding of business, the whirl of automobiles on days once devoted to rest, all this rushing, shoving, reaching for some unattainable something or nothing—what about it? Are not the effects reflected in faces, complaints and diseases? Surely functional disorders keep cropping out in increasing numbers and variety, so many devils to torture the physician. And what of

him? He must warn and regulate, point even to the example of growing children. But instead, are not pills and drops and even the knife, which presumes to cut out this speed of living, often made the careless foundation for treatment when the physician should have warned Slow Down!

—T. L. S.

PROGRESSIVE STEPS.

THE secretaries of our several county societies are now in receipt of a most complete outline of the lectures available in postgraduate medical instruction as offered through the Extension Division of the University of Wisconsin. We feel that this outline as prepared is the most progressive step ever taken in this line of work.

Each member of the staff has prepared careful outlines for his several lectures. These page outlines contain a "brief" characterization of the lectures, leading topics with explanatory notes, short bibliographies and the requirements for cases if a clinic is desired. The combined outlines of all courses are furnished to the secretaries of the several societies. When specific lectures are selected, copies of the outlines for those lectures will be furnished each member in advance of the meetings.

We express the hope that no society, whether large or small, will "file" this outline. Its potential value is large and it deserves not only this commendation, but our earnest attention.

ANOTHER WORTHY PROJECT.

The State Board of Health has recently placed in the hands of each Health Officer a most valuable compendium of Wisconsin's health laws. This booklet explains clearly and concisely the public health laws, their application and interpretation. It should prove a most valuable aid to the Health Officers in their day by day work.

A SUGGESTION.

In publishing this digest of Wisconsin's health laws, we feel that the State Board of Health has possibly pointed out a way in which our State Board of Medical Examiners can be of inestimable value to the law enforcement officers of this state. Theirs is the duty of making effective the medical practice act, conceived for the protection of the citizens against fraud and incompetence. While the statutes are clear, actions brought under them involve questions and law that are sometimes difficult of preparation.

Here, we feel, is an opportunity for our State Board of Medical Examiners to do a service for these officers similar to that rendered by the State Board of Health for our many Health Officers. A compilation of the decisions of our Courts interpreting the medical practice act, together with explanatory notes, would be a most valuable aid to those whose duty it is to enforce the statutes.

SPIRIT WRITING.

ON January 11, 1924, the daily press informed us of the death of Dr. F. C. Werner of Watertown. For fear some have forgotten the Doctor, it will be remembered that he was the inventor and patentee of the Galvano-Necklace (a "cure" for goiter); President of the Cosmas Pharmacal Company that sold the necklace at \$7.50 each, and that he was Consulting Physician of the same company. Thus when one inquired about the "cure," Dr. Werner as "President" referred you to Dr. Werner as "Consulting Physician" and then proceeded to answer you.

Now for the marvel—under date of April 11, 1924, a layman received a follow-up letter signed by Dr. Werner. Thus exactly four months after Dr. Werner died he writes the prospect that he will reduce the price from \$7.50 to \$5.00, or 33½ per cent off, not wanting "the mere matter of dollars and cents to stand in the way of your health."

We are moved to wonder at the sagacity of an author by the name of Shakespeare who three hundred years ago said:

"The evil that men do lives after them,

The good is oft interred with their bones."

A NEW RECORD.

SOME 1640 of the 1925 members of our Society had paid their dues before May first.

This sets a new record for prompt payment. Secretaries of the several county societies and the officers of the State Society have but one concern when members fall in arrears. That concern is not financial—it is solely in the interest of the progressive work that each constituent society and the state organization is trying to accomplish. Accomplishment will come with the active support of every member. The present work and the future aims are worthy of that support.

THE JOURNAL CLINIC

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CANCER OF THE OESOPHAGUS

BY F. T. O'CONNELL, B.A.

REPORTED FROM THE CLINIC OF GENERAL SURGERY,
MILWAUKEE COUNTY HOSPITAL
SERVICE OF DR. J. L. YATES

The patient, a white single male, 64 years of age, a teamster by occupation, was admitted to the Milwaukee County Hospital on Nov. 5, 1923. His complaint on entrance was: "Inability to swallow solid foods, loss of 35 pounds in weight in the preceding six months, and general weakness."

No familial history of malignancy was obtained. The patient himself had enjoyed unusually good health throughout childhood, youth and middleage. His venereal history was negative.

The present complaint began in May, 1923. At that time the patient noticed that he occasionally regurgitated his food. These occurrences increased in frequency and the condition became gradually and progressively worse, until at the time of admission into the hospital he was able to swallow only fluids.

All attempts to swallow solid foods are followed by a "filling up" sensation in the patient's oesophagus and after two or three mouthfuls, regurgitation occurs. The "filling up" sensation begins at a point—as indicated by the patient—at the level of the fifth intercostal space along the left border of the sternum. At that location he experiences a constant dull pain which is unaffected by breathing, swallowing or change of posture. He says there "seems to be a lump" there which will not pass up or down. The material regurgitated has the same appearance as when masticated and is without trace of blood. Following ejection there is no foul odor or sour taste.

The patient's appetite is as good as in previous health but his diet is—perforce—restricted to liquids.

He has lost 35 pounds in weight since May, 1923, and his weakened condition necessitated giving up all work early in October, 1923. One month later he entered the hospital.

Blood Pressure: Systolic 115, Diastolic 75 mm. Hg. P. Press. 40.

Physical Examination reveals a thin man with a good body frame who shows evidence of recent loss of considerable weight. He is not acutely ill but his expression is haggard and worried.

Head and neck are negative—no cervical adenopathy.

Chest and abdomen negative with exception of bilateral complete inguinal hernias.

Extremities and genitalia negative. Reflexes normal.

Laboratory Data:

Blood: Hemoglobin 75%; R. B. C. 4,116,000 per c.mm. W. B. C. 10,140 per c.mm. Neutrophiles 63%,

Small lymphocytes 18%, Large lymphocytes 11%, Transitional 7%, Basophiles 1%, Eosinophiles 0. No achromia, anisocytosis or poikilocytosis of R. B. C. Platelets markedly increased in size and number.

Urine: Repeated examination disclosed no abnormalities.

Wassermann: (Blood) Negative.

Röntgenologist's Report: "Thick barium given. Passage of barium obstructed six inches above diaphragm—later passing through into the stomach."

Dr. J. L. Yates saw the patient on Nov. 20, 1923. He advised resection of the oesophagus provided secondary involvement were not so extensive as to nullify this procedure. Dr. Yates also prescribed preliminary administration of glucose solution intravenously.

Preoperative Management: Diet consisting of egg-nog, whiskey and lemonade. 500 c.c. of 10% glucose solution given intravenously on Nov. 21, 23 and 26. Preparation otherwise routine.

Operative Procedure: Dr. Yates operating; light nitrous oxide anaesthesia by Miss Fitzgerald.

Fairly wide resection of 6th left rib along its lateral curvature; pleural adhesions separated and collapsed left lung dislocated upward. Left Phrenic nerve injected with 1% Cocaine solution causing immediate paralysis with elevation of diaphragm.

A removable mass, nodular in character was located in the lower oesophagus. A wide incision was made in the left leaflet of the diaphragm extending from the oesophageal opening laterally and posteriorly and avoiding so far as possible the branches of the Phrenic nerve. This permitted intraperitoneal examination and favored upward dislocation of the stomach into the thorax.

Intraperitoneal examination disclosed an involvement of the upper retroperitoneal lymph glands so extensive as to make radical treatment futile. Resection of the involved portion of the oesophagus—as mentioned later—was therefore not attempted.

Diaphragmatic incision was closed with a continuous catgut suture and the 5th and 7th ribs were over-approximated by means of wire stay sutures passed around them. The redundant intercostal tissues were approximated in layers without tension after the lungs had been inflated by increasing intro-tracheal pressure according to the method of Gwathney. The skin was closed with silk. No drainage was employed because of the patient's hopeless condition and to avoid adding to his discomfort.

The patient's condition following the operation was such as to convince observers that he would have survived without difficulty had the proposed procedure been completed. He died Dec. 26, 1923. Permission for autopsy could not be obtained.

DISCUSSION

Organic stenosis of the oesophagus is usually carcinomatous—benign growths, tuberculosis and lues being rarely met with as etiological factors. Especially in progressive stenosis as evidenced by increasing dysphagia carcinoma may be predicated in 75% of all cases and—according to Pratt—in

90% of those cases which fall within the cancer age.

The same author remarks on the apparent lack of interest in cancer of the oesophagus—as indicated by the paucity of literature on the subject—and ascribes as a possible reason the bad prognosis of the affection. Two additional factors are the comparative rarity of the condition and the uncertain diagnosis of it. In the Johns Hopkins Hospital, for example, only 38 cases of oesophageal carcinoma were recognized in a period of 23 years.

Pratt (*ibid*) urges special attention to early symptomatology—particularly to the progressive dysphagia with a view to early diagnosis and treatment.

Aside from the emaciation resulting from stenotic aphagia, carcinoma of the oesophagus may hasten the patient's exitus by contiguous growth and by metastasis. Infiltration and perforation into the pleural cavity or pericardium may occur with resultant putrefactive or purulent pleurisy or pericarditis. The wall of the descending aorta may be attacked and weakened. The pressure of the blood within may be sufficient to produce rupture and fatal hemorrhage. Aspiration pneumonia may follow infiltration and perforation of the trachea or bronchi.

Metastases may occur in the lungs or liver. Infiltration and penetration of the Vena Azygos or Thoracic Duct open a path to the lungs whereas the liver is reached through the involvement of glands on the posterior wall of the stomach with subsequent penetration into the branches of the Portal Vein.

In the surgical treatment of carcinoma of the lower oesophagus, Miller² points out that two schools have developed. One of them mobilizes the oesophagus and converts the operation into an extra-thoracic procedure; the other, with simplicity in view, attempts resection and suture *in situ*.

Miller's experimental surgery on the thoracic oesophagus has followed the lines of the latter school. His procedure is to free the oesophagus at its diaphragmatic attachment, and through the opening in the diaphragm deliver the fundus of the stomach into the pleural cavity. There it is fixed by suturing to the diaphragm. Then, after resection of the diseased portion of the oesophagus, the proximal stump is joined to the fundus by end-to-end anastomosis. The distal stump of the oesophagus has previously been closed and invaginated into

the stomach.

The chief difficulty heretofore encountered in end-to-end anastomosis of the oesophagus was the tearing out of sutures due to increased tension on the shortened tube. Miller has shown (*ibid*) that after resection of more than 3 cms. of the oesophagus, reunion of the stumps has slight chance of success because of resultant tension. Conversely, the surgeon can hardly hope to encounter a carcinoma of the oesophagus so early in its development as to require so slight resection. Hence he argues that if intra-thoracic repair is to become practicable, a method must be employed that will obviate tension on the tube. As a solution he offers his method of mobilizing the stomach. The results of his experimental work fully demonstrate the feasibility of the suture in dogs and a fairly satisfactory substitute for at least the lower two-thirds of the oesophagus.

Miller's method as above outlined was not completed because of prohibitive glandular involvement in the patient who is made the subject of this report. Dr. Yates, in the course of the operation, emphasized the value of injecting the Phrenic Nerve with cocaine to immobilize the diaphragm during intra-pleural resection and subsequent repair. It was also pointed out that adequate exposure of the field must be obtained to permit of accurate manipulation—even if multiple rib resections be required—once the feasibility of removing the tumor mass is demonstrated.

To date, operation offers the only possibility of prolonged relief in carcinoma of the oesophagus. Treatments with X-ray and radium have proven futile. The greatest obstacle to successful operative treatment is the delay in diagnosis and in offering surgical relief to patients. This is largely attributable to the surgical failures in the past and to the almost universal superstition that no feasible operation has yet been devised. The experience with this patient indicates Dr. Miller's proposed operation is not forbiddingly difficult. His experiences with human patients have been similarly discouraging because of the hopeless condition when operative relief was sought.

The most important part of this lesson is that early operation may relieve carcinoma of the lower oesophagus that may not otherwise be relieved. Moreover the diagnosis by means of X-ray is now so simple and so readily accessible that valid reasons for delay are few.

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CAVERNOUS SINUS THROMBOSIS WITH
REPORT OF A CASE OF DENTAL ORIGIN*

BY RALPH P. SPROULE, M.D.

MILWAUKEE

I. Anatomical Background.

The cavernous sinus extends from the sphenoidal fissure in front to the apex of the petrous portion of the temporal bone behind. Important structures close by are medially the internal carotid artery and the abducent nerve; laterally the oculomotor, the trochlear nerves, the ophthalmic and maxillary divisions of the trigeminal nerves.

It is fed mainly by the ophthalmic veins. It communicates with the transverse sinus by means of the superior petrosal sinus; with the internal jugular by means of the inferior petrosal sinus; with the pterygoid plexus through the foramen Vesalii, foramen ovale and foramen lacerum.

The two sinuses communicate with each other by means of the anterior and posterior circular sinuses.

It is not necessary to further detail the anatomy of the cavernous sinuses but there are several points I wish to emphasize.

First: The anastomosis between the right and left cavernous sinuses is so free through the circular sinuses that thrombosis of both is the rule. In Dwight and Germain's series of 182 cases where post-mortem results were obtainable, bilateral thrombosis was found in two-thirds of the cases.

Second: The petrosals are not merely channels for emptying the cavernous sinuses into the sigmoid sinuses and the jugular bulb, but receive tributaries from the triangular area of the petrous portion of the temporal bone including branches from the tympanum, the cochlea, vestibule and inferior cerebellar veins.

It is undoubtedly true that most cases of cavernous sinus thrombosis of otitic origin are extensions from the sigmoid but it is obvious from the preceding statement that the petrosals may be directly involved in ear infections by extension through the small veins I have just referred to.

II. Etiology.

The etiology is based on the anatomy just described.

First: The infection may be, and usually is of otitic origin. There are two possible routes of infection to the cavernous sinus. The more common is directly by the lateral sinus. The less common is from the tympanum or labyrinth, through the superior and inferior petrosal sinus, without previous involvement of the lateral sinus. There are hundreds of cases of the former in literature; I was only able to find four of the latter.

Second: The infection may originate from the nose. Cases of cavernous sinus thrombosis, following nasal infections, such as folliculitis, have appeared in literature occasionally. For example, Dr. L. M. Hurd described in the New York Academy of Medicine, March, 1921, the history of a man who picked a crust from his nose on Sunday, while playing golf. On Friday, five days later, he died with all the signs and symptoms of cavernous sinus thrombosis.

Third: The infection may be of sinus origin. I was able to find four cases following frontal sinusitis, reported by Dwight, Germain, Dighton and Coffin.

Fourth: Cavernous sinus thrombosis may be of oral origin. The infection takes place through the pterygoid plexus, but is very uncommon. It occurred in a case reported by Dr. John Kernan, of New York City, in November, 1920, following a paratonsillar abscess which he had opened. It occurred in three other cases following dental extractions. Two were reported in 1921, by Dr. Theodore Blum before the New York Academy of Medicine. The third case following a tooth extraction, which occurred a few weeks ago at the Milwaukee Hospital, I will detail shortly.

Bacteriology. The organisms usually found are the streptococcus hemolyticus, more rarely the staphylococcus aureus, and the pneumococcus.

III. Occurrence.

Johns Hopkins University clinic in the Archives of Surgery, 1920, report cavernous sinus thrombosis as having occurred but twelve times in 50,000 cases.

Dwight and Germain, writing in the Boston Medical and Surgical Journal reported on 182 cases which they had collected in literature.

IV. Symptoms.

The general symptoms of cavernous sinus

*Delivered before the Milwaukee Oto-Ophthalmic Society, March 18, 1924.

thrombosis are those of sepsis under any and all circumstances. The local symptoms are conveniently divided into two classes.

First: Those due to venous obstruction, which are oedema and chemosis of the orbit producing an exophthalmos; oedema of the skin around the orbit, forehead, cheek and sometimes the fauces, pharynx and neck.

Second: Those due to pressure on the II, III, IV, ophthalmic division of the V, and the VI nerves. Pressure on the second of the ophthalmic nerves produces choked disc, or optic neuritis, oedema of the retina, and usually consequent disturbance of vision.

Motor disturbances, although they may be produced by pressure on any of the other nerves mentioned above, are usually most pronounced in parts supplied by the third. These symptoms are manifested, as divergent squint, dilated pupils and ptosis.

It is important to remember that while trouble may be unilateral at the start, it soon spreads to the other side. The oedema around each eye is characteristic. Because it is not due to the direct extension by contiguity, the part of the skin at the root of the nose is normal.

V. *Diagnosis.*

If one has the triad, high and remittent temperature, meningeal irritation and commencing exophthalmos, it is pathognomic of commencing cavernous sinus thrombosis.

VI. *Prognosis.*

The prognosis in these cases is very bad. Dwight and Germain reported fourteen spontaneous recoveries in 192 cases. Dr. Norton Wilson of New York has seen eight cases, only one of which lived over two weeks.

VII. *Treatment.*

The principle modes of attack so far devised, are those of any severe blood infection. Dr. J. Milne Dickie reported a cure in which he used autogenous vaccines. Harold Hays advises the use of repeated transfusion of whole blood in 500 c.c. doses. Others have employed streptococcic serums in 60 to 120 c.c. doses. The treatment as described above has been so far largely experimental. Not enough cases have been reported with treatment of this kind to draw any conclusions. It would seem that the future offers some encouragement along these lines.

History.

Following the above sketch of cavernous sinus throm-

bosis, the case which I wish to present tonight is that of a young woman, age thirty, who was admitted to the Milwaukee Hospital, January, 1924, on Dr. Hitz's service. She was in good health until about the tenth of December, 1923. At this time she had a right lower third molar tooth extracted. Two or three days later there was pus coming from the socket. On the fifth day following the extraction, the patient had a chill lasting ten minutes followed by temperature. It was at this time that the family physician was called in. The patient was under his care during the rest of December and the first part of January. On January 14, Dr. Hitz was called in consultation, made a tentative diagnosis of cavernous sinus thrombosis and advised the patient to go to the hospital at once. She was admitted on January 19, five days later.

During the period at home the patient had a chill followed by a rise in temperature practically every day. Each day the chills increased in length and severity. We are unable to give a further detailed report of the case in this stage of the illness as she was only seen once in consultation before entering the hospital, six weeks after the onset.

There is one further detail in the history which I wish to bring out. This patient had a chronic discharging right ear of eight years' standing. Our ante-mortem record pointed to the fact that this was not to be considered the etiological factor in the cavernous sinus thrombosis. The post-mortem record which I will read at the conclusion of my paper, proved definitely that it was not the etiological factor.

Physical Examination.

The physical examination of the patient on admittance to the hospital revealed the following.

A. *Eyes:* There was a puffiness around the left eye. Both pupils reacted to light and accommodation, but were sluggish in their reaction. The left eye was divergent and showed an exophthalmos. An examination of the eye grounds revealed a haziness of both disc margins but no papillitis or oedema of the retina.

B. *Nose and Sinuses:* There was good breathing space on both sides of the nose and no evidence of discharge. The sinuses were clear on transillumination.

C. *Ears:* The right ear drum showed a large perforation with a small amount of mucoid discharge in the canal. There was no tenderness over the mastoid, no oedema, no redness, no sagging of the canal wall or any other signs of acute mastoid involvement. The left ear drum was normal.

D. *Throat:* The teeth were in good condition. The right third molar was absent. The alveolar socket at this site, six weeks after extraction, did not appear unusual. An examination of the tonsils, pharynx, post-nares and larynx revealed nothing.

E. *Neck:* There was some rigidity of the neck and pain on moving the head. Pressure over the region of the carotid and jugular on the left side revealed tenderness.

F. *An examination of the Chest, Heart, and Abdomen* were negative.

G. *Neurological:* The neurological examination was

practically negative. There was no Kernig, although the neck was slightly rigid as described previously. The knee jerks were a little sluggish.

The temperature on admittance at four P. M. was 100.6, pulse 108, respiration 26. The leucocyte count was 16,200.

Digest of Clinical Course.

Two hours after admission the patient had a chill lasting twenty minutes, the temperature shot up to 103.6, the pulse 120, respiration 36. There was a slight remission of temperature during the night, but the following morning at seven, the patient had another severe chill (blood culture taken), lasting twelve minutes, after which the temperature went to 105.8, pulse 160, respiration 44. Following this the patient was observed to be cyanosed for two or three minutes at a time. The rest of the day was uneventful. The patient's temperature dropped rapidly and was 99.6 at six P. M. A white count taken was 33,000. The urine was negative.

At eleven P. M. the same night the patient complained of a severe pain in the neck, exaggerated on moving. At twelve P. M. she had another severe chill lasting one hour, the temperature went to 106.6. By eight A. M. it was again normal.

This was the morning of the third day. The patient seemed much improved over the previous day. The eye grounds were quite normal as concurred in by three men. Both pupils reacted well to light and accommodation. The swelling of the lids was less marked. The patient's mind was clear and she had no headache. 15 c.c. of spinal fluid were taken and was found to be clear, not under pressure, the cell count was nine, and there was a reduction of sugar. In spite of her apparent good condition in the morning, at three P. M. she had another severe chill, lasting 35 minutes. Her temperature again went up to 106 and a fraction. A second specimen of blood was taken during this chill. The culture of this and the previous one, after forty-eight hours, was negative.

The morning of the fourth day, the pupil of the right eye was widely dilated; the pupil of the left eye was small. Neither one reacted to light or accommodation, the eyelids were much more puffy, and the left eye was half closed. The patient complained of diplopia. Examination of the eye grounds showed the margins of both discs nearly obliterated. 50 c.c. of anti-streptococcic serum were given during the day. The patient had another severe chill the same night.

The morning of the fifth day there was an increased oedema around the right eye and an increased exophthalmos of both. Icterus was present in both conjunctivi. The patient was drowsy and had involuntaries. 50 c.c. more of anti-streptococcic serum were given.

The sixth day the patient was more drowsy and quite irrational. The symptomatology was the same only more severe. The patient had her sixth chill. She died the afternoon of the seventh day following a final chill.

The autopsy report was as follows:

Autopsy on Head.

Died 2:35 P. M., 1/25/24. Autopsy 9:30 A. M., 1/26/24.

The body is that of a well developed and nourished adult white female. Rigor mortis and post mortem lividity are present. There is considerable swelling on both sides of the face and neck, extending down to the clavical.

On removing the calvarium the dura mater appears normal. There is considerable fluid in the arachnoid space. The longitudinal sinus appears normal. The cerebellar vessels, on the right side, are more congested than on the left. The pia mater over the left side of the cerebellum is dull in appearance. At the junction of the parieto-occipital region the tissue is slightly discolored. The base of the brain does not appear, in the gross specimen, especially abnormal. The dura mater is adherent at the base of the skull. The dura lining the posterior fossa, on the left side, appears discolored. The cavernous, the circular, the supra and infra petrosal sinuses on both sides, together with the basilar and sigmoid sinuses, show, when opened, a yellow gelatinous material, having the appearance of a partially organized clot. The pituitary gland and the third nerve on the right side were surrounded by a pus-like exudate. The mastoid cells and the sphenoidal sinus were explored and showed no pathological lesion.

Anatomical Diagnosis.

1. Thrombo-phlebitis of communicating branches from veins of lower jaw to cavernous sinus.
2. Thrombo-phlebitis of sinuses at base of brain.

In conclusion, I am glad of the opportunity to present this case tonight, first because it is an unusual case and secondly, because it is a case with an extremely uncommon etiology. So far as I have been able to determine, there are only two other cases of dental origin in literature.

I am indebted to Dr. Hitz for allowing me to use his record and to Dr. Gibson of the Milwaukee Hospital, for his kindness in collaborating some of the material for this paper.

SPECIAL MEETING, THE UNIVERSITY OF
WISCONSIN MEDICAL SOCIETY
FEBRUARY 25, 1924
THE DIAGNOSIS AND TREATMENT OF
BLOOD VASCULAR DISEASES OF
THE EXTREMITIES
BY BARNEY BROOKS, M.D.

ST. LOUIS, MO.

Dr. Brooks introduced his discussion by a statement of antiquity of blood vascular surgery, adding that in spite of this fact its ultimate development had been very greatly delayed. In consequence of this condition the vast majority of diseases of the blood vessels were either untreated, or very radically and often illogically met; vague

thinking rather than a true appreciation of the fundamentals has been apparent. There has been too much stress laid on vaso-motor phenomena and other poorly understood physiologic factors and too little consideration of the pathologic anatomy of the vascular bed. For example, it is well known that although vasomotor changes are held responsible for such conditions as Raynaud's disease, no cases coming to autopsy have failed to show anatomic changes in the blood vessels.

Dr. Brooks next discussed his personal researches on the effects of ligation of the common iliac and hypogastric arteries in the dog. The earliest change is stiffness in the hind limbs, with later resumption of function. The ischemia, resulting from reduction of arterial flow, leads to this result, but to no anatomic pathologic change nor gangrene. In certain animals this occlusion continued over a period of time led to necrosis in certain muscle groups, irregularly placed by reason of the protection of others by collateral blood supply. It is possible that a small amount of work may be accomplished but that fatigue will early result in the under-nourished muscles of the affected limb. Volkmann's paralysis ordinarily attributed to an ischemia, does not apparently depend on obstruction alone. Certain important points in relation to the relative resistance of muscle and skin were discussed. Necrosis apparently indicating that the skin is more susceptible to a reduction in its blood supply.

Dr. Brooks next showed the increase in frequency of gangrene occurrence if the artery and corresponding vein were simultaneously occluded. The changes in arterial and venous pressure under these circumstances were discussed, and the fall in temperature in the extremity whose artery has been ligated was remarked. In any discussion of the anticipated changes in an extremity under the above circumstances, two factors stand out as prominent, namely—the volume flow to the extremity in a given time and the pressure of blood in the vascular bed. In this relation it is important to know approximately the cross-section of the area of arteries, veins and capillaries, from a standpoint of nutrition, but the inadequacy of our present day methods leave little but the clinical inference to determine the state of nutrition and viability of a part.

With a view of determining more adequately the amount of blood flow in a part, Dr. Brooks has de-

vised a method by which, through a thermocouple attached to a needle plunged into the soft parts of the great toe (in case of the leg), the temperature of that part may be determined. A curve is obtained, depending on the normal fall of temperature on the application of the tourniquet to the leg above. The release of the tourniquet is normally succeeded by a rapid rise in the temperature level to or above the previously established point. Characteristic curves were demonstrated, and the delay in the rise of temperature on release of the tourniquet was stated to constitute very important evidence of the inadequacy of blood supply.

A second method to determine the position and degree of obstruction consisted of exposing the femoral artery after applying a tourniquet to cut off the venous return but not the arterial supply. Then applying a Crile clamp to the artery 10 c.c. of sodium iodide solution (containing 100 gms. to 100 c.c.) was injected below the clamp. Immediately on removal of the clamp the X-ray was taken. The demonstrated slides of the vascular injections were most conclusive evidence of the efficacy of this measure. (Dr. Brooks stated to a group, in discussion, that gas had been more recently administered on account of the pain attending injections). The anatomic changes, he concluded, were far more important than vaso-motor control in vascular diseases.

This paper was discussed by Drs. Jackson and Bardeen.

THE RETICULUM OF THE LUNG*

BY WILLIAM SNOW MILLER, M.D.

MEDICAL SCHOOL, UNIVERSITY OF WISCONSIN

Dr. Miller introduced his subject by a discussion of the three types of tissues which make up the tissue frame work throughout the body, namely—white fibrous tissue, elastic tissue and reticulum. He stated that while white fibrous tissue and reticulum were closely related, elastic tissue was entirely different from these two. He next showed the differences in solubility, chemical and staining reactions of the three different types of tissues.

From this point Dr. Miller entered into a discussion of the relation of the reticulum to tubercle. By a series of appropriate slides he demonstrated this relationship, showing that reticulum tended to

*Summary of paper read before the joint meeting of the Dane County and University of Wisconsin Medical Societies, 1924.

enclose and form a basket-like network about the giant cells, epitheloid and lymphoid cells comprising the tubercle. Evidences were introduced to prove that reticulum, in truth, constituted precolлагенous tissue but in time became converted, in most cases, into white fibrous tissue.

Dr. Miller explained how a series of sections of lung was prepared and arranged to permit of different staining of successive sections at adjacent levels. He brought out the importance of Bielschowsky's special silver stain in the differentiation of elastic fibers and reticulum. From this point, Dr. Miller's discussion led directly to the exact distribution of reticulum in relation to the tubercle. Slides were shown of microscopic tubercles in the pleura, in tuberculous bronchiolitis, caseous pneumonia, tuberculous bronchopneumonia, and, in fact, tubercles in every stage from the miliary to the conglomerate, to the caseous, to the ulcerative, and to the encapsulated. The presence of giant cells always bespeaks marked accession in the amount of reticulum and, therefore, miliary tuberculosis of the lung is attended by a great increase in reticulum, whereas but a small amount is found in caseous pneumonia; tuberculous broncho-pneumonia shows practically none, but in certain exudative types of tuberculous pneumonia, there is considerable in the actual exudate. As might be anticipated from the course of the condition, there is practically no reticulum in phthisis florida.

Slides were shown to prove the probable origin of white fibrous tissue from reticulum. In conclusion, Dr. Miller asserted that the resistance to tuberculous invasion was apparently, in part, dependent on the amount of reticulum. This delicate enclosing network may easily be broken down at certain stages of development, and this relation of tuberculous materials may explain renewed invasion through a loss of the walling-off structure. In this relation the importance of rest seems quite apparent.

LYMPHOID RESISTANCE AND SUSCEPTIBILITY*

BY C. H. BUNTING, M.D.

MEDICAL SCHOOL, UNIVERSITY OF WISCONSIN

Dr Bunting stated that it took two to make a fight, therefore bacteria plus a susceptible individual made, or resulted in, disease. In certain diseases resistance is a small factor, as for instance

measles and smallpox to which practically all individuals are susceptible. In others immune factors may vary between individuals and at various times. Many factors may influence susceptibility and resistance, such as inheritance, environment, diet and underlying disease. Although many factors exist there may, nevertheless, be a single mechanism of resistance.

The leukocytes have been considered the special mechanism of defense in connection with the humors. The humoral plus cellular defense may be active in any given individual. The polymorphonuclear leukocytes were first studied in relation to resistance by reason of their phagocytic activity. This mechanism may not be the entire, nor perhaps the chief, defense against disease production, although their activity in relation to the destruction of cocci and pus formers, in general, is apparent. Dr. Bunting expressed the belief that the polymorphonuclear white corpuscles were maintained at a given level to defend the human being against the constant presence of cocci on cutaneous and mucous surfaces. If their number falls, by reason of such infectious disease as measles or influenza, we fall easy prey to the ever-present cocci, the complicating pneumonias in the diseases mentioned forming their chief danger.

No disease running a polymorphonuclear leukocytosis is succeeded by a lasting immunity, unless we except scarlet fever. Indeed, all coccal diseases leave very slight if any immunity. Dr. Bunting advanced the theory that since the cocci are met by polymorphonuclear leukocytes and ingested, their destruction or survival affects only one cell, and that an "End" cell. The products of digestion of phagocytized bacteria may lead to increased marrow activity; but since there is no progeny from the individual polymorphonuclear leukocyte, any resistance arising in this cell is lost to future generations.

Diseases leading to lymphocytosis develop a persistent immunity of an active type and the serum of these cases may pass the immunity on to a second individual. Lymph nodes act as mechanical and chemical filters in that between the periphery and the general circulation one or more groups of these filters are interposed. Fixation of toxins thereby protects deeper structures. The

*Summary of paper read before the joint meeting of the Dane County and University of Wisconsin Medical Societies, 1924.

strong toxins destroy whereas the weak stimulate. In either case, but particularly through the stimulation, an antitoxic quality is transmitted to the progeny by the mother cells in the lymph nodes.

It is well known that lymphoid cells constitute the greatest mechanism of resistance against cancer, tuberculosis, and other chronic diseases. Acute diseases are possibly met in the same relation if immunity be developed. Endothelial cells and reticulum are important factors in this mechanism of resistance. Variation in disease may appear in relation to age and sex. As illustrative of this variation the relationship of Hodgkin's disease, a destructive lesion of lymphocytes, to chronic lymphocytic leukaemia, a proliferative lymphoid lesion, was discussed. Dr. Bunting demonstrated that all proliferative types occurred above 31 years of age, and that actual resistance to Hodgkin's showed a definite age relationship, being greatest between 10 and 15 years and lowest between 15 and 30. The virus is the same but the resistance of the lymph tissue varies. This is borne out by certain other diseases and the figures for the mortality of tuberculosis were quoted—the highest incidence between 25 and 30 years of age. These mortality statistics bear out the contention of Hippocrates that tuberculosis is most common between the ages of 15 and 35. The fall of mortality with the rise of incidence in children emphasizes the increase of resistance in children in the curve for tuberculosis.

In attempting to explain this situation, Dr. Bunting stated that it was his belief that some internal secretion connected with the sexual activity was responsible for the changes in lymphoid resistance. It is well known that castration leads to an increase in the thymus gland, and the thymus extirpation leads to an increase in the size of the sexual organs. Thymus and lymphoid elements show a physiological atrophy with sexual development, particularly in the male, and this physiologically defensive state renders the tissue more susceptible to pathological lymphotoxic substances. The 30th year is a critical one in lymphoid resistance; this is in peculiar contrast to the known physical activity and efficiency of man at this period of life, and probably is explicable on the above grounds. Sydenham has stated that a young man in the prime of life stands less chance in confluent smallpox than a woman or a person under puberty, and unquestionably this is borne out by the fact that lymphoid resistance is lower

at this period in the male. Dr. Bunting is of the opinion that occurrence of chlorosis and changes in the red blood cells occurring in woman at puberty is explained by some changes in the bone marrow of the female parallel to those in lymphoid structures in man.

Dr. Bunting's paper was discussed by Dr. Bardeen.

INSULIN IN THE MANAGEMENT OF KETOSIS

BY E. L. SEVRINGHAUS, M.D.

In introducing his discussion of the subject Dr. Sevringhaus stated that the Toronto group had determined the early relief of the acidosis of diabetes on the administration of insulin together with sugar. Studies by Jonas and Cullen have more recently confirmed this conclusion by pH determinations. Many other studies have determined the rate of carbohydrate becoming available on the administration of insulin, with the resultant relief of acidosis.

Charts were presented to demonstrate the typical response to insulin. Clinical cases were discussed in which beginning coma or ketosis was the outstanding feature. In these charts Doctor Sevringhaus demonstrated the existence of a low alkali reserve without true acidosis, in which prompt response to insulin resulted. In this relation Dr. Sevringhaus showed how ketosis could exist without true acidosis, since acidosis only occurs when the sodium of the body has been carried off by reason of extreme ketosis. The charts plotted from a case in which under insulin there was a steady but slow rise in alkali reserve, with subsequent sudden rise on alkali administration, had the practical importance of demonstrating the speedy return to normal of the alkali reserve on the administration of alkali.

It was added, however, that alkalis could give rise to serious damage by reason of alkalosis (tetany and interference with oxidation). On the other hand acidosis may result fatally. Insulin apparently eliminates the production of acid bodies and does not of itself product alkalosis. The addition of alkali may speed up the return to normal of alkali and may be utilized as a procedure of safety. This is particularly important in the cases of long continued ketosis, where exhaustion of the body sodium may occur.

In conclusion Dr. Sevringhaus stated that he, personally, favored the use of moderate doses of alkali, but the important factor was the proper oxidation of carbohydrate in the tissue which resulted from the administration of insulin.

PREVENTIVE MEDICINE

Edited by
W. D. STOVALL, Chairman
 Section on Preventive Medicine, State Medical
 Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

**THE RESULTS OF CHILD WELFARE
 WORK IN MILWAUKEE**

BY I. F. THOMPSON, M.D., M.P.H.
 DEPUTY COMMISSIONER OF HEALTH

MILWAUKEE

Early in 1922 the Commissioner of Health of Milwaukee appointed a committee to study the child welfare problem and to make such recommendations as they agreed were necessary to better the conditions under which the children of the city were reared, and to safeguard their health. At the request of the committee, in order that they might have accurate knowledge of existing conditions, the records in the Bureau of Vital Statistics of the Health Department were carefully studied. The salient points are here presented.

The International List of the Causes of Death was adopted in 1910.

The present ward lines were established in 1912.

Organized child welfare activities began with the creation by the Council of a Child Welfare Commission, in the year 1911. In June, 1912, the Child Welfare Division legally became a department under the jurisdiction of the Health Department.

For all the above reasons, whenever it is desired to evaluate the Child Welfare program we usually begin our tabulations with the year 1912.

Birth Rate. The birth rate in Milwaukee fluctuates from year to year without any apparent reason. It was the highest in the last twenty year period in 1914, when it reached 29.45 per 1,000 population. It was the lowest (22.2 per 1,000 population) in 1922. One may not realize the full meaning of this when expressed in rate per thousand population. It is much more striking

if we note the actual births. There was a gradual increase in the number of births recorded, from 7,492 in 1900 to 11,929 in 1914, since which time there has been a gradual decrease in the number of births, to 10,563 in 1922. This is the fewest number of births in any one year since 1909. Since 1909, however, the city has increased in population not less than 100,000 people. In other words, it is as if we had a city of 100,000 population without a single birth.

The opinion has frequently been expressed that it is only the rich and the American born who are avoiding child-bearing. A careful study by wards disproves this statement. While it is true that more than one nationality and varying degrees of wealth are found in each ward, yet there are wards in which there are found predominating nationalities and financial conditions. A general statement can therefore be made. To avoid what might be comparing two exceptional years, an average was taken of the birth rate in each ward for the years 1912, 1913 and 1914, and compared with the average of the years 1920, 1921 and 1922. It was found that a ward inhabited by skilled workmen had a decrease in the birth rate of 45%. The ward often called "The Gold Coast" showed a decrease of 33%; a strongly predominating German ward, a decrease of 31%; two strongly predominating Polish wards a decrease of 29% and 28%. The least decrease was shown in two wards inhabited principally by Sicilians and two wards in which the Jewish predominate.

While the wards in which the Jewish and Sicilians predominate show the least decrease in birth rate, yet they do not have a high birth rate as compared to some of the other wards inhabited by descendants of other nationalities. The wards in which the Polish predominate had the highest birth rate each year in the periods studied.

In the following table the wards are grouped according to the number of wards with the same birth rate.

It will be seen that there has not been a ward in which there has been a birth rate of 50 per 1,000

WARDS GROUPED AS TO BIRTH RATE

Birth Rate	WARDS GROUPED AS TO BIRTH RATE											
	Number of Wards											
Over 50	1	0	1	0	0	0	0	0	0	0	0	0
40-49	1	2	1	2	2	1	0	0	0	0	0	0
30-39	6	6	6	4	3	2	5	3	2	2	1	5
20-29	15	16	17	18	18	19	17	15	17	16	13	12
10-19	2	1	0	1	3	3	3	7	6	7	11	8
Year	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923

inhabitants since 1914, or over 40 per 1,000 inhabitants since 1918. Whereas there were only two, one and zero wards with a birth rate under 19 per 1,000 inhabitants until 1915, there were six, seven and eleven wards with a birth rate under 20 per 1,000 population for 1920, 1921 and 1922.

The question is frequently raised as to whether the morals of the young people of the country are becoming worse or better. There is, of course, no method by which this can be accurately determined. The following table of the illegitimate births is an indication that so far as Milwaukee is concerned, the morals are not becoming worse.

ILLEGITIMATE BIRTHS

Year	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Number	243	298	324	292	318	304	264	266	294	275	230
Rate per 10,000 population	6.3	9.6	8.1	7.1	7.3	6.9	5.9	5.6	6.4	5.9	4.8
Rate per 1,000 living births	23	27	28	26	28	27	23	25	27	25	22

The above table brings out the fact that while the illegitimate births represent approximately the same rate to the total births over the entire period, the rate per 10,000 population has decreased. It will be noted further that the War Period did not increase the actual number or the rate per 10,000 population, as it is said to have done in many other cities. The greatest number of illegitimate births occurred in 1913. The greatest proportionate number to the total births occurred in 1914 and 1916.

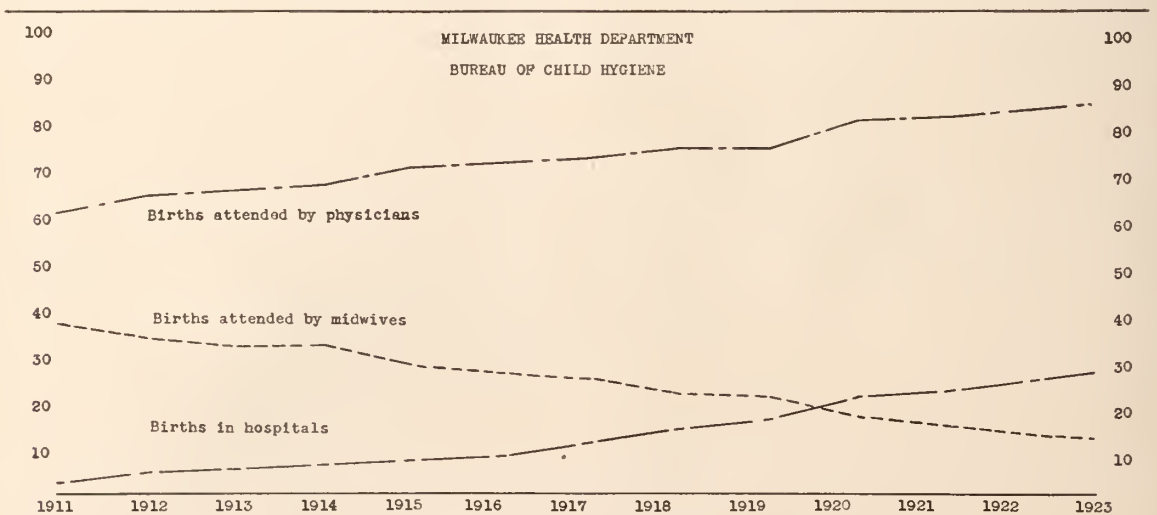
The proportion of boys to girls has remained nearly uniform over the whole period, the greatest variance being in the year 1913 and 1914, when there were nearly 53% of boys and 47% of girls;

and in 1920 when there were 52.5% of boys. In seven of the ten years from 1910 to 1922 inclusive, the proportion was approximately 51.5% of boys and 48.5% of girls. It was found that neither before, during or after the War Period was this proportion changed.

Hospitals, Confinements in. It is of considerable interest to note that more and more people are appreciating the value of hospital and medical care in obstetrical cases. In 1911 only 302 births (approximately 3% of all births) occurred in the hospitals. In 1922, 2,709 births or 25% of the total number occurred in the hospitals. In 1922

50% of the births in one ward, 40% in two wards, and over 30% in five other wards occurred in the various city hospitals.

Confinements, Physicians in Attendance. In 1911 the physicians of Milwaukee were in attendance at 61% of the births, the midwives at 37% of the births. In 1922, 84% of the births were attended by physicians and only 13% by midwives. When we consider that the population of Milwaukee is largely made up of people or descendants of people among whom the midwife is the accepted attendant at confinement, the change noted above is remarkable. We will, undoubtedly, always have the midwife with us, but the people are demanding



better care, and where economic conditions permit, they are evidently obtaining it.

There are 54 licensed and registered midwives in active practice in Milwaukee.

Maternity Hospitals and Lying-in Homes. In addition to the obstetrical wards in the various hospitals of the city there are two maternity hospitals adjacent to Milwaukee, and two lying-in homes licensed by the State Board of Health. The two lying-in homes are visited regularly by the nursing staff of the city Health Department.

Baby Boarding Homes. To care for babies from homes where conditions exist that compel the mother to work to support her child; where the mother has died and the father has no relatives to care for the children; in the case of the illegitimate child, where the mother wishes to leave the child for sometime, or until a home can be established, the baby boarding home fills a very important place. The State Board of Health licenses the baby boarding home after investigation. The investigations in Milwaukee are made by the Juvenile Protective Association before a license is issued. Application for placement of children in the homes is also made to the Juvenile Protective Association in order that the number in each home may be properly regulated. A field nurse of the Health Department visits each home at least once a week to observe and correct health and sanitary conditions.

Approximately 300 babies, and from 130 to 150 baby boarding homes are under supervision at all times. Forty-eight thousand dollars has been paid the baby boarding home mothers for the care of the children in one year.

Day Nurseries. To care for babies or children of pre-school age from families who have established homes but where the parents are at work all day, there are two day nurseries. Approximately forty children are cared for between the hours of 7:00 A. M. and 6:00 P. M. every weekday in each of the nurseries.

Child Placement. Eight organizations in Milwaukee are licensed by the State Board of Control to place children for adoption.

The mortality rate of the illegitimate child has formerly been high. Realizing the need of maternal care and breast feeding, and the prevention of adoption until the baby had made a good start in life, the Commissioner of Health requested that every effort be made by all agencies to keep the child with its mother for a period of three months, before being placed for adoption. This request resulted in a great improvement in the mortality rate among these children. When the Children's Division of the Board of Control was established they adopted in their rules the requirement of three months' maternal nursing wherever possible, and this rule now has the force of law. Every effort is made by the various social agencies and the Health Department to see that it is enforced in Milwaukee.

Infant Death Rate. The infant death rate in Milwaukee has shown a marked decrease, from 130 per 1,000 living births in 1912 to 80 per 1,000 births in 1922. This decrease, however, is almost entirely in the one age period from 30 days to one year. The stillbirth rate has improved but slightly, from 38 to 32.6 per 1,000 living births. The one to 30 day period is likewise nearly stationary, only showing a slight decrease, from 47 to 41 per 1,000 living births. The improvement in the 30 day to one year period from 84 to 36 per 1,000 living births is undoubtedly due not only to the Child Welfare work the Health Department has carried on, but to the general educational work of the magazines, papers, Parent-Teachers' and Mothers' clubs, and various other organizations, as well as the improvement in the milk supply and our newer knowledge of the needs of the infant; and, in fact, all the many factors and improvements of our modern method of living.

The improvement in the age period "30 days to one year" is strikingly shown by grouping the

INFANT DEATHS—30 DAYS TO ONE YEAR. WARD CLASSIFICATION

Death Rate	Number of Wards											
	1	2	3	4	5	6	7	8	9	10	11	12
125-149	1	1	1	0	1	2	1	0	0	0	0	0
100-124	5	1	2	0	2	2	2	0	0	0	0	0
75-99	13	4	0	6	5	1	5	6	0	0	0	0
50-74	4	8	7	9	10	4	10	8	6	1	4	
25-49	2	10	13	9	7	15	6	10	15	14	17	
15-24	0	1	2	1	0	1	1	1	4	6	3	
1-14	0	0	0	0	0	0	0	0	0	4	1	
Year	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	

wards according to the number of deaths per 1,000 living births in each ward.

From the above table it is seen that in 1912 nineteen wards in the city had a death rate of 75 per 1,000 living births in the 30 day to one year period. Since 1920 not a single ward has had a death rate of 75 per 1,000 living births in the 30 day to one year period. It will also be noted that whereas in 1920 only two wards had a death rate below 50 per 1,000 living births in the 30 day to one year period, for the last five years from 7 to 24 of the wards have had such a low rate.

"intestinal causes;" atelectasis, injury, premature, malformed, asphyxia, congenital debility, cerebral hemorrhage and difficult labor, all terms that are used to describe what is often the same condition, are considered under "premature, injury and accidents of birth."

It will be seen that the only improvement in the infant death rate has been in the lessening of deaths from intestinal causes. There has been no improvement in the number of deaths from pneumonia. The deaths from prematurity, injury and accidents of labor have increased. It is a consider-

DEATHS GROUPED—PULMONARY, INTESTINAL, INJURY AND ACCIDENTS OF BIRTH

PERCENTAGE OF TOTAL DEATHS UNDER ONE YEAR

Causes	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Pulmonary	12	19	14	19	21	21	21	22	21	20	15	17
Intestinal	31	29	27	20	20	20	21	17	18	18	16	13
Premature, injury etc.	32	31	39	42	36	38	37	30	39	39	49	41
Percentage total deaths under 1 year	75	79	72	81	77	79	79	69	78	74	80	71
Premature alone	11	10	14	16	16	15	17	14	16	20	23	17

Stillbirths in City and Hospitals. As stated in a previous paragraph, the stillbirth rate has shown but slight improvement. A record of the stillbirth rate in hospitals was not tabulated previous to 1922 so that we are unable to state whether or not there has been an improvement. In four of the hospitals in 1922 it is below the average for the entire city, in the remainder of the hospitals it is higher. The same statement holds true for deaths of infants under 30 days in the city and in the hospitals.

Deaths by Months. The summer months were found to be the healthiest for the baby. More deaths occur in March in children under one year of age than in any other month of the year. This is to be expected when we consider the diseases and conditions causing the greatest number of deaths. The following table shows the percentage of total deaths from the diseases causing the greatest percentage of deaths in infants under one year.

In this table broncho-pneumonia, pneumonia and pulmonary congestion, and bronchitis are grouped as "pulmonary causes;" enteritis and indigestion as

able increase. We will find that there is much food for thought in the statement that the deaths of infants from accidents of labor have shown a gradual increase instead of an expected decrease, if we consider what has been shown earlier—that the number of births in hospitals has increased from 3% to 25% and that the cases confined by physicians have increased from 61% to 84%.

Maternal Deaths. The total maternal death-rate and the maternal death-rate from septicaemia has been uniformly and exceptionally low, as the following table will show.

It is a matter of record that the total maternal death rate in 1922 for the state of Wisconsin was 5.4, and for the United States, 6.8.

SUMMARY

Maternal Deaths. The maternal deaths have been uniformly low. So far as our records show, the rate is so low that it cannot be expected to be reduced to any great degree. A certain number of deaths from various causes are certain to occur during the puerperal state in spite of all precautions that the obstetrician may take.

MATERNAL DEATH RATE
RATE PER 1,000 LIVING BIRTHS

Year	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Septicaemia	1.5	1.4	1.4	1.0	1.4	1.6	1.4	1.6	1.6	1.3	1.1
Total	3.9	3.1	4.2	3.2	3.1	3.9	4.2	3.8	4.4	3.9	3.0

An improvement reported by obstetricians but which is not shown in the records is the reduction of the illness and complications following delivery, which were so common in the past and so infrequent in the properly cared for woman of today. Further improvement in this particular is expected.

Births. There is a very marked decrease in the birth rate. This is not only true of Milwaukee but of practically every other large city. This decrease is noticeable in every ward and all conditions of living and among all nationalities.

Deaths. There has been a marked lowering of the death rate of infants under one year of age since 1922. This decrease, however, is in the over-thirty-days and under-one-year period. There has not been a perceptible decrease in the death rate of the infants under thirty days of age, or in the number of stillbirths.

Midwives. The midwife is becoming less and less a problem. There is seemingly no reason why a special effort should be made to aid and instruct the few who are carrying on this work.

The Illegitimate Child and Child Placement. The assumption of supervision by the Juvenile Department of the Board of Control and the licensing of child placement organizations places this phase of child welfare on a reasonable and humane basis.

The Child Boarding Home. The boarding home is fulfilling a place in child welfare work that is most necessary. It enables a self-supporting and self-respecting mother to provide for herself and child, when otherwise they would both be a charge on the county or inmates of county institutions.

Maternity Homes. The recognized maternity homes in Milwaukee and Milwaukee county render a most valuable service to the unmarried mother and her child.

Physicians. The physicians are now attending 84% of the women in confinement. It is probable that the general practitioner will always attend the larger part of the cases. Every effort should, therefore, be made to raise the standard of the obstetrical work of the general practitioner and the student by offering to them every opportunity for observation and study in clinics and bedside instruction.

Hospitals. It would not seem that the hospitals are able to increase their obstetrical beds as rapidly as the need demands. The standard of equipment,

facilities and arrangement for the care of both mother and child in practically all the hospitals is all that could be expected.

As the recommendations of the committee would not be of interest outside of Milwaukee, with one exception, they are not presented. Believing it to be a fact that the majority of births will be attended by the general practitioner, that an effort should be made to improve the teaching facilities in obstetrics, that the greatest safeguards to a confinement are offered in a hospital, and that there is a great need for pre-natal care, the following recommendations are offered:

Obstetrical Care. Primarily it should be the purpose of all agencies to endeavor to have every case confined in a hospital with a physician in attendance. We would recommend that:

(a) The County Medical Society emphasize the need and necessity of prenatal examinations to the extent that in 1925 they will agree not to accept a case for confinement, except in emergency, that has not placed itself under their care for at least three months previous to the expected confinement;

(b) The "free" medical and obstetrical care to as great an extent as possible be expected to take place only at the County Hospital or in such other hospitals as have facilities for teaching or demonstrating the proper technic of labor, that the standard of obstetrical service in the city may be improved.

PUBLIC HEALTH NOTES

It was stated by the State Board of Health that all nurses not working under the direction of a physician are instructed not to treat any type of ailment.

Where a person comes down with a communicable disease in a town other than where he resides, the board of health of the district where he is under quarantine can recover from the district where he has a legal residence all necessary expense incurred in maintaining the quarantine.

In the absence of the local health officer, the secretary of the board of health or other person may be deputized to act for him, and any expense necessarily incurred by him in enforcing quarantine laws must be paid by the town board.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1924

ROCK SLEYSER, Wauwatosa, President
 M. R. WILKINSON, Oconomowoc, 1st Vice President
 JOHN MINAHAN, Green Bay, 2nd Vice President

C. D. BEEBE, Sparta
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 6th Dist., F. G. Connell - Oshkosh

TERM EXPIRES 1927

9th Dist., Joseph Smith - Wausau
 10th Dist., R. E. Mitchell - Eau Claire

TERM EXPIRES 1924

3rd Dist., C. A. Harper - Madison
 4th Dist., W. Cunningham - Platteville

TERM EXPIRES 1926

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LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

County.	President.	Secretary.
Ashland-Bayfield-Iron.....	J. V. Wenzel, Ashland.....	M. L. Young, Ashland.
Barron-Polk-Washburn-Sawyer-Burnett.....	A. N. Nelson, Clear Lake.....	D. L. Dawson, Rice Lake.
Brown-Kewaunee.....	J. J. Robb, Green Bay.....	F. J. Gosin, Green Bay.
Calumet.....	J. W. Goggins, Chilton.....	H. C. Krohn, New Iolstein.
Chippewa.....	A. J. Somers, Chippewa Falls.....	C. B. Hatleberg, Chippewa Falls.
Clark.....	F. A. Boeckmann, Greenwood.....	R. R. Rath, Granton.
Columbia.....	A. F. Schmeling, Columbus.....	R. D. Boynton, Kilibourn.
Crawford.....	C. A. Armstrong, Prairie du Chien.....	T. E. Farrell, Seneca.
Dane.....	J. P. Dean, Madison.....	E. Sullivan, Madison.
Dodge.....	A. J. Krahn, Beaver Dam.....	A. E. Bachhuber, Mayville.
Door.....	H. C. Sibree, Sturgeon Bay.....	T. C. Proctor, Sturgeon Bay.
Douglas.....	F. J. Broghammer, Superior.....	C. B. Rydell, Superior.
Dunn-Pepin.....	E. C. Jacobs, Durand.....	J. Blom, Menomonie.
Eau Claire.....	L. H. Flynn, Eau Claire.....	H. M. Stang, Eau Claire.
Fond du Lac.....	F. P. Marshall, Fond du Lac.....	D. N. Walters, Fond du Lac.
Grant.....	J. C. Doolittle, Lancaster.....	M. B. Glasier, Bloomington.
Green.....	J. L. Fleeck, Brodhead.....	J. F. Mauernann, Monroe.
Green Lake-Waushara-Adams.....	B. E. Scott, Berlin.....	A. J. Wiesener, Berlin.
Iowa.....	D. B. Hamilton, Ridgeway.....	M. W. Trentzsch, Highland.
Jefferson.....	J. F. Dennis, Waterloo.....	A. C. Nickels, Watertown.
Juneau.....	E. H. Townsend, New Lisbon.....	A. T. Gregory, Mauston.
Kenosha.....	B. J. Schwartz, Kenosha.....	H. A. Binnie, Kenosha.
La Crosse.....	W. A. Henke, La Crosse.....	Jens Rosholt, La Crosse.
La Fayette.....	H. B. Moe, Blanchardville.....	P. W. Leitzell, Benton.
Langlade.....	L. A. Steffen, Antigo.....	J. C. Wright, Antigo.
Lincoln.....	L. M. Pearson, Tomahawk.....	W. H. Bayer, Merrill.
Manitowoc.....	F. S. Luhmann, Manitowoc.....	A. J. Shimek, Manitowoc.
Marathon.....	I. M. Addleman, Wausau.....	M. L. Jones, Wausau.
Marinette-Florence.....	T. J. Redelings, Marinette.....	M. D. Bird, Marinette.
Milwaukee.....	M. L. Henderson, Milwaukee.....	E. L. Tharinger, Milwaukee.
Monroe.....	H. B. Johnson, Tomah.....	H. H. Williams, Sparta.
Oconto.....	E. A. Linger, Oconto.....	C. J. Ouellette, Oconto.
Oneida-Forest-Vilas.....	W. C. Bennett, Rhinelander.....	E. R. Boyer, Rhinelander.
Outagamie.....	E. F. McGrath, Appleton.....	E. L. Bolton, Appleton.
Pierce.....	G. M. Dill, Prescott.....	Rolla Cairns, River Falls.
Portage.....	F. A. Marrs, Stevens Point.....	G. H. Lawrence, Stevens Point.
Price-Taylor.....	E. O. Riley, Park Falls.....	E. B. Elvis, Medford.
Racine.....	H. J. Brehm, Racine.....	Susan Jones, Racine.
Richland.....	H. C. McCarthy, Richland Center.....	G. Benson, Richland Center.
Rock.....	J. C. Smith, Beloit.....	G. K. Woolf, Janesville.
Rusk.....	I. F. Clark, Bruce.....	H. C. Johnson, Bruce.
Sauk.....	H. J. Irwin, Baraboo.....	Roger Cahoon, Baraboo.
Shawano.....	W. J. Ragan, Shawano.....	R. C. Cantwell, Shawano.
Sheboygan.....	Edmund Knauf, Sheboygan.....	G. J. Hildebrand, Sheboygan.
St. Croix.....	F. S. Wade, New Richmond.....	B. G. Stockman, Woodville.
Trempealeau-Jackson-Buffalo.....	H. C. Koch, Whitehall.....	R. L. MacCormack, Whitehall.
Vernon.....	H. J. Suttle, Viroqua.....	Wm. H. Rorer, Chaseburg.
Walworth.....	E. J. Fucik, Williams Bay.....	Neal F. Crowe, Delavan.
Washington-Ozaukee.....	W. H. Drissen, Port Washington.....	A. H. Heidner, West Bend.
Waukesha.....	S. B. Ackley, Oconomowoc.....	J. F. Wilkinson, Oconomowoc.
Waupaca.....	T. E. Loope, Iola.....	A. M. Christofferson, Waupaca.
Winnebago.....	J. M. Hogan, Oshkosh.....	R. H. Bitter, Oshkosh.
Wood.....	J. B. Vedder, Marshfield.....	W. G. Sexton, Marshfield.

SOCIETY PROCEEDINGS

ACADEMY OF MEDICINE

The Milwaukee Academy of Medicine met March 11, when Dr. Julius Hess, professor of pediatrics, University of Illinois, presented some clinical cases and gave a paper on "Studies in Prematurity." On March 25th the Academy had another meeting, the program subject then being a symposium on Thrombosis and Embolism. Dr. H. W. Shutter gave a paper on "Puerperal Thrombosis and Embolism," and Dr. W. E. Grove on "Lateral Sinus Thrombosis." Dr. L. F. Jermain discussed non-fatal pulmonary embolism and Dr. E. L. Tharinger Etiology and Pathology.

On April 22 the Academy of Medicine held a joint meeting with the Oto-Ophthalmic Society at the Health Service Building, Milwaukee. The program consisted of papers by two physicians: Dr. J. R. Pennington, professor of rectal diseases at the University of Illinois, who discussed A Simplified Method for the Diagnosis and Treatment of Rectal and Anal Diseases—Its Application to Treatment; and Dr. W. I. Lillie of Rochester, Minn., who talked on the Frequency of Ocular Phenomena in Acromegaly.

Three speakers made up the April 8th program of the Milwaukee Academy of Medicine: Miss Anna Fitzgerald, R.N., who discussed the need for and the possibility of a Physician's Exchange; Dr. Eugene A. Smith who talked on the influence of mediastinal conditions in heart disease; and Dr. Chaucey D. Leeke, University of Wisconsin, who discussed the beneficial effects of administering extract of red bone marrow and spleen to patients with secondary anemia.

B-P-W-S-B COUNTY

An evening entertainment which every member is urged to attend is to be given some time in June by the Barron-Polk-Washburn-Sawyer and Burnett County Medical society, Dr. I. G. Babcock, chairman of the program committee announces. The last meeting of the society was held April 1st at Spooner, when the following program was given: "Diagnosis and Treatment of the More Common Skin Diseases." Dr. Charles D. Freeman, St. Paul; "Irritable Bowel," Dr. Gjermund Hoyme, Eau Claire; "Menstruation and Its Disorders," Dr. E. S. Christman, Barron; "Pernicious Vomiting of Pregnancy," Dr. E. J. Knapp, Rice Lake, and "Prostatic Hypertrophy," Dr. D. L. Dawson, Rice Lake.

DANE COUNTY

The Dane County Medical Society held a meeting March 11, when the following program was given: "A Review of General Anaesthesia," Dr. Louis Fauerbach; "The Treatment of Skin Diseases," Dr. T. L. McIntosh; "Kinks of the Ureter," Dr. Ira Sisk; "Functional and Organic Hyperchlordria," Dr. G. H. Robbins. The April meeting of the Society was held April 15 at the Madison club. Papers were given by Dr. Damon Brown on "Nephritis, With a Report of a Case of Acute Hemorrhagic Nephritis;" Dr. A. Milton Cox on "The Problem of Quackery;" Dr. W. M. Nesbit, "Vasomotor

Rhinitis;" and Dr. G. H. Robbins, "Functional and Organic Hyperchlordria."

DOUGLAS COUNTY

Dr. Charles Ide, former superintendent of Muirdale sanatorium, was the speaker at the April meeting of the Douglas County Medical Society held in Superior on the 15th. Dr. Ide's subject was "Radiology of the Chest," but he also emphasized preventive medicine and the basic health law of China. The Chinese custom of paying a doctor to keep them well—and refusing to pay while ill was discussed by Dr. Ide.

FOND DU LAC COUNTY

The March meeting of the Fond du Lac County Medical Society was held on the 12th at the Reclaw hotel in Fond du Lac. A paper on "Intestinal Obstruction and Some Lesions of the Large Bowel" was read by Dr. Dean Lewis of Chicago.

A business meeting of the society was held April 9th for the purpose of purchasing an orthopedic table for a local hospital.

LA CROSSE COUNTY

A paper and demonstration on flat and painful feet was the center of interest at the April meeting of the La Crosse County Medical Society held April 10 at the La Crosse club. Dr. Maurer pointed out some of the common causes of flat feet, such as carrying heavy loads on the head and back and long, difficult marches. He illustrated his talk by showing how certain kinds of shoes and pads will remedy this defect. The society voted the paper one of the best presented before that body in years and recommended that it be sent to the State Medical Society for publication in the State Medical Journal.

MARINETTE-FLORENCE COUNTY

The Marinette-Florence County Medical Society met at the home of Dr. H. F. Schroeder March 6. Dr. H. C. Schumm of Milwaukee read a paper and held a clinic on "Infantile Spinal Paralysis." A dozen or more little patients were present as were also Judge Alvin Davis of the County Court and Mr. Frank Kersten, chairman of the county board. As a result of the clinic several patients will be sent to hospitals and given relief.

The April meeting of the Society was held on the 11th at the home of Dr. A. T. Nadeau. A most interesting address on "Tuberculosis in Children" was given by Dr. Oscar Lotz of Milwaukee, a staff member of the Wisconsin Anti-Tuberculosis Association. Dr. Nadeau presented two clinical cases of unusual merit.

Dr. K. C. Kerwell of Stephenson, Mich., told of his recent trip to India and depicted medical conditions in Europe generally. He said that the American physician receives a more cordial welcome in Vienna than any other medical man, and that this capital still holds her own against any other teaching point, which is very materially assisted by the American Medical Association.

Dr. T. J. Redelings spoke of his visit to California and reported a delightful trip; but he said that the

average physician is much better off in Wisconsin than in that popular state. A luncheon closed the evening.

MILWAUKEE COUNTY

The Milwaukee County Medical Society held its monthly meeting March 14. Dr. Francis Murphy discussed methods of subjecting diabetic patients to home treatment by insulin. A paper was also read by Dr. Ernest E. Irons, Chicago. Plans for the tri-state meeting of the society, to be held in Milwaukee in October, were discussed.

Dr. John Osborn Polak, author and teacher of gynecology at the Long Island College Hospital, Brooklyn, N. Y., delivered an illustrated lecture before more than 100 members of the Milwaukee County Medical Society at a meeting April 11. His paper was discussed by Drs. R. G. Sayle, M. L. Henderson, C. M. Echols, J. P. McMahon and J. H. Sure. The subject of Dr. Polak's paper was "The Types of Fibroid Tumors of the Uterus Which Require Treatment, that is Intelligent Watching; Radium or X-ray; Surgical Measures." The talk was illustrated.

MILWAUKEE RADIOLOGICAL

A discussion of X-ray and other matters of interest to physicians was held at the dinner meeting of the Milwaukee County Radiological Society March 7. Five minute talks on the Relation of X-ray to Various Specialties were given by Dr. Oscar Lotz and Dr. M. L. Henderson. Others who spoke were: Drs. Manly Sanborn, Appleton; I. S. Trostler, Milwaukee; Edward L. Miloslavich of Marquette University, and Dr. Edward Blaine, Chicago.

The May meeting of the Milwaukee Radiological Society was held jointly with the Milwaukee Academy of Medicine, Tuesday, May 13th, in the assembly hall of the Health Service Building, 558 Jefferson St., Milwaukee. Dr. James T. Case, Battle Creek, Mich., was the speaker of the evening. His subject was "Gastro-Intestinal Tract," giving "The Travelogue of the Barium Meal" and the pathology which may be ascertained by such a meal.

NEURO-PSYCHIATRIC SOCIETY

The Milwaukee Neuro-Psychiatric Society of Milwaukee met March 27 at the Milwaukee Academy of Medicine. The speakers were Dr. J. A. Howell of Resthaven and Dr. Smiley Blanton of the University of Wisconsin.

OUTAGAMIE COUNTY

About 25 physicians attended a meeting of the Outagamie County Medical Society at the Hotel Northern in Appleton, March 13. Papers on diseases of the bladder were read by Dr. J. F. Schneider of Oshkosh and Dr. E. T. Mielke of Appleton. A general discussion followed.

PIERCE COUNTY

Members of the Pierce County Medical Society met at Ellsworth, Friday evening, April 24th. Mr. J. G. Crownhart, secretary of the State Society, gave an informal talk on the work and aims of the Society. Following a

discussion, election of officers was held. The following were elected: Dr. G. M. Dill, Prescott, president; Dr. J. M. Conway, Spring Valley, vice-president and delegate; and Dr. Rolla Cairns, River Falls, secretary-treasurer. It is planned that a joint meeting will be held with St. Croix County for the next meeting.

RACINE COUNTY

The regular meeting of the Racine County Medical Society for March was held at St. Mary's hospital in Racine. Dr. W. M. Kearns, Milwaukee, gave an address on "Polyuria Caused by Recurrent Bladder Carcinoma," and Dr. L. L. Allen of Muirdale Sanatorium, Milwaukee, discussed the subject. "Early Diagnosis of Pulmonary Tuberculosis." Both lectures were illustrated.

ROCK COUNTY

Dr. John Nuzum of Chicago, an associate of Dr. A. J. Ochsner of that city was the speaker at the Rock County Medical Society meeting in Janesville March 25. A banquet was held in his honor and after the dinner he gave an address on "Thyroid Disease," supplemented by lantern slides. Dr. Nuzum was introduced by Dr. D. R. Connell of Beloit. The presence of Dr. Nuzum was a surprise, especially to the Janesville physicians, Dr. Connell having arranged for the speaker secretly.

ST. CROIX COUNTY

A special meeting of the St. Croix County Medical Society was held at New Richmond Saturday afternoon, April 25th. Papers were read by Dr. B. Kunny of Baldwin on "Surgical Considerations of the Enlarged Prostate" and by Dr. O. H. Epley of New Richmond on "Medical Considerations of the Enlarged Prostate." Mr. J. G. Crownhart, secretary of the State Society, told of the work and aims of the Society.

STATE MEDICAL SOCIETY

With the opening of the roads permitting larger attendance at the society meetings, the Secretary is visiting a number of the county societies this spring. In April the societies visited included Dunn-Pepin, Pierce and St. Croix. May engagements include Waukesha County, May 7; Grant County, May 8; Crawford County, May 9, and Shawano County on May 14th.

The paid-up membership report as of May first was 1640, over 300 more than as of the same date in 1923. When all delinquents have remitted the total membership will be approximately 1950.

A second meeting of the Council will be held on Sunday, June 8, just prior to the opening of the annual meeting of the American Medical Association on the ninth. This second meeting of the Council is made necessary because of the active work of committees and the Society officers.

Sixty-five per cent of the 1924 membership have taken advantage of the optional medical defense offered by the Society. According to a report of the Society's attorneys covering the year 1923, seven cases were defended and all won for the several members.

NEWS ITEMS AND PERSONALS

Chiropractors may not use the title, Doctor, according to a ruling by Judge Page in a Milwaukee District court recently. Ferdinand Wisner, who conducted a legal battle to determine whether chiropractors with the "degree of Doctor" conferred upon them by an "accredited school" may use such a title in connection with the word chiropractor, was fined \$100 for the use of the title. Mr. Wisner will appeal to the supreme court if it is understood.

Dr. W. S. Middleton, Madison, has been appointed a member of the state soldiers' rehabilitation board by Governor Blaine. Other members of the board are Dr. C. A. Harper, state health officer and Dr. William F. Lorenz, director of the State Psychiatric Institute.

Dr. Philip Fox, Madison, civil war veteran, celebrated his 83rd birthday March 27. He has been a practicing physician in Wisconsin for more than 50 years.

Dr. M. K. Green has been appointed superintendent of the Wisconsin Hospital for the Insane at Madison to succeed Dr. Frank I. Drake, resigned. Dr. Green is a graduate of Rush Medical College and has specialized in mental diseases.

Dr. Lawrence G. Sykes, Milwaukee, has left that city to become medical director of the Connecticut General Life Insurance Company at Hartford. He was formerly assistant medical director of the Northwestern Mutual Life Insurance Company in Milwaukee.

Preparatory to a large hospital development costing approximately \$750,000 at St. Mary's Hospital, Madison, the medical staff has been reorganized and ten additional names of prominent Madison physicians added. Official announcement has been made of the election of Dr. W. F. Lorenz as president of the staff. Dr. Philip Fox is honorary president. The complete membership of St. Mary's staff for the coming year is: R. C. Aylward, W. J. Blackwenn, S. R. Boyce, D. Brown, R. E. Burns, H. M. Carter, R. T. Cooksey, J. P. Dean, Joseph Dean, J. P. Donovan, J. A. E. Eyster, L. Fauerbach, P. R. Fox, H. R. Gilbert, H. P. Greeley, F. J. Hodges, A. Johnson, W. F. Lorenz, J. W. Madden, O. F. Meng, R. L. McIntosh, J. V. McKee, E. E. Neff, H. E. Purell, G. H. Robbins, W. M. Nesbit, E. F. Schneiders, I. R. Sisk, J. C. Sommers, W. D. Stovall, T. W. Tormey and A. R. Tormey. One of the reasons for the enlargement of the hospital staff is the opening of a nurses' training school at the hospital. A three-year course is to be given to girls desiring to become registered nurses. The first class is to open next September and sixteen students have already been enrolled.

Dr. Thomas W. Tormey and brother, Dr. Albert Tormey, Madison, have moved to the 7th floor of the Gay building and are now located in quarters which include a business office, two large reception rooms, four consultation rooms, an operating room, an X-ray and chemical laboratory and dark room.

Dr. and Mrs. Rock Sleyster, Wauwatosa, have returned from an extended trip in the West Indies.

Dr. August Sauthoff, Madison, has been appointed clinical director of the Wisconsin State Hospital for the Insane at Mendota. Dr. Sauthoff formerly served on the staff of the hospital from 1906 to last June, when he resigned. His wife, Dr. Mary B. Sauthoff has been made senior physician for the female side of the hospital.

Dr. W. M. Nesbitt, who has been associated with the Jackson Clinic, Madison, has just opened private offices in the First Central building of that city.

Doubt as to whether the general public is any better informed regarding modern medicine than was the populace in the days of Rome, was expressed recently by Dr. Edward Quick at a meeting of the first aid school of the Association of Commerce, Milwaukee.

William J. Black, Milwaukee, was fined \$100 in district court when found guilty of a charge of practicing medicine without a license. It was alleged he prescribed medicine without a permit.

Dr. Jerome Head, son of Dr. L. R. Head, Madison, is taking up pathological work at the Mayo clinic at Rochester, Minn.

Dr. Robert Millard, formerly of Madison, has gone to Lanai as resident physician for the Hawaiian Pineapple company on that small island.

The Sheboygan clinic was recently added to the state accredited testing laboratory list by the state board of health. The laboratory is now authorized to make official tests of bacteria.

Dr. and Mrs. A. O. Shaw, Ashland, have returned from a trip to the south where the doctor was recuperating after a recent illness. He has regained his health and is back at his work.

Two tubes of morphine were stolen from the car of Dr. M. A. Cunningham, Janesville, by Ray Cramer, who was subsequently sentenced to 90 days in the county jail. The young man said he formed the drug habit following an operation performed while in the army during the war.

Support for the milk ordinance, now under consideration by the Fond du Lac commission, has been given by the Fond du Lac County Medical Society, which submitted its approval to the city authorities in the form of a communication to the council. The proposed ordinance contains provisions for a tuberculin test once or twice a year, for monthly examination of milk for bacteria count, sediment test and butterfat. The Society also approved pasteurization.

Doctors and druggists found guilty of misdemeanors under the Volstead act will have their licenses permanently revoked from now on, according to an announcement by the prohibition director.

Dr. L. J. Woodworth, city sanitary inspector of Janesville, has been appointed assistant city health officer by City Manager Henry Traxler.

Mrs. Margaret Hutton Abels, Waukesha, has been appointed a member of the State Board of Control by Gov.

Blaine to succeed Mrs. Elizabeth Kading, resigned. Mrs. Abels is one of the most capable sociologists in the country and has had long experience in institutional work.

Dr. Wallace A. Reinhardt, Milwaukee, formerly head of the Heath Institute, who was recently arrested in the war on his "clinics," was fined \$1,000 and costs by Judge Page in District Court. A plea of guilty to charges of conspiracy carried with it the automatic revocation of Dr. Reinhardt's license to practice either medicine or surgery in Wisconsin.

The charges of conspiracy against Dr. Nathaniel Rogers, an associate of Dr. Reinhardt, were held open for six months under an arrangement by which Dr. Rogers agrees to discontinue practice in the state of Wisconsin.

Dr. John Osborn Polak, author and teacher of gynecology at the Long Island College Hospital, Brooklyn, N. Y., held a dry clinic at Marquette University Dispensary April 11.

Dr. Roy A. Barlow, formerly of the Mayo Clinic, has joined the staff of the Jackson Clinic, Madison.

Dr. S. Greenwood, Oshkosh, has been elected chief of the physicians' staff of Theda Clark Memorial hospital.

Prosecution of "goiter quacks" said to be flourishing in the state, is promised by the Wisconsin Board of Health. Investigations show that ignorant goiter sufferers throughout the state have been mulcted of thousands of dollars through fake "cures." "Sure cure" treatments are advertised and sold for as much as \$90 the board claims.

Dr. Lewis Cohen, Milwaukee, has been sentenced to four years imprisonment at Leavenworth on charges of stealing letters from the mails and forging government checks. The young doctor was sentenced by Judge Geiger but was granted a new trial by the circuit court of appeals on a writ of error.

Ernest G. E. Meyer, a Brooklyn, N. Y., chiropractor, was convicted of second degree manslaughter and sentenced to serve from one to two years in Sing Sing after being found guilty for the death of 6 year old Caroline Germuth who died of diphtheria.

Dr. O. O. Nelson, who has been in general practice at Arcadia and Washburn for more than ten years, has moved to Madison where he will open offices in the Washington building.

Dr. J. D. Fuller, Brownsville, has been appointed health officer for the village of Oakfield.

Dr. George E. Peterson of Waukesha was seriously injured recently when his automobile struck a moving freight train. His injuries were first thought to be alarming, but he is now reported to be improving.

Dr. Sprugeon Stringer, Ladysmith, fractured his left shoulder recently when he fell to the ground in attempting to board a train.

Dr. Osee Dill has resigned her position at the Northern Wisconsin Colony and Training School, Chippewa Falls,

to take charge of the women's section in the office of an Indianapolis oculist.

Dr. William C. Henske, Chippewa Falls, who has just completed a post-graduate course in a Chicago hospital, has gone to Buffalo to study before leaving for a six months' stay in Europe.

Dr. Charles Stauffacher, who has been practicing medicine in Portugese East Africa for the past 12 years, is visiting his parents in Monroe. He is accompanied by his wife and two children.

Dr. J. L. Brown, Waupun, has been elected president of the Rotary club of that city.

Dr. John G. Meachen, Jr., Racine, has been elected surgeon for the police and fire commission.

Dr. B. I. Pippin, general practitioner at Excelsior for 10 years, is finishing a special course in Chicago and will locate at Richland Center where he will specialize in eye, ear, nose and throat diseases.

Dr. W. T. Sarles, Sparta, is recovering from a severe illness of several weeks' duration.

Dr. J. J. Bellin, Green Bay, has been elected president of the Deaconess Hospital board of that city.

A new treatment for cancer, colloid gold, used successfully by many Chicago physicians including Dr. Edward Ochsner, was made public recently in a paper by Dr. Ochsner read before the Chicago Medical Society, and the credit for its discovery goes largely to Louis A. Kahlenberg, professor of Chemistry at the University of Wisconsin. Interviewed regarding the discovery Prof. Kahlenberg declared that it is too early to make any claims of a permanent cure, as several years are required in cancer cases to determine whether or not a recurrence of diseased tissues is likely to develop. One claim made for the treatment is that it ends cancer pains. Prof. Kahlenberg has been working with Dr. Ochsner in development of medical measures since 1911. Professor Kahlenberg is continuing his research in an attempt to discover the exact nature and causes for cancer. Following the death of a near relative from cancer he made up his mind to stamp out the disease if it lay in his power to do so.

Colloid gold, which is nothing other than finely divided gold in water, is administered internally, 10 drops in a wineglass full of water three times a day, an hour before each meal. In particularly bad cases it is applied intravenously.

Re-establishment of the nurses' training school at the Wisconsin State Hospital for Insane at Mendota will be made soon, according to officials of the state board of health. This will insure a higher type of attendants and care at the institution.

MARRIAGES

Dr. N. W. Haddow of Chippewa Falls to Miss Louise Helen Miller of Minneapolis, Minn., April 16th.

Dr. Neal F. Crowe of Delavan to Miss Ruth Rogers Barker of Daytona, Fla., April 12th.

DEATHS

Dr. W. F. Malone, Milwaukee, was stricken suddenly with cerebral hemorrhage on March 25th while performing a major operation at Hanover Hospital of which he was the founder. Dr. John C. Schroeder, who was assisting him in his work, completed the operation. Death was almost instantaneous and came in the same institution which he had founded twenty years ago.

Doctor Malone was born at Rochester, Wis., on June 1, 1862. He graduated from the University of Illinois in 1888 continuing his studies in Berlin and Vienna for several years. He returned to Milwaukee in 1903 and shortly after established the hospital. Doctor Malone is survived by his widow, two sisters and one brother. He was a member of the Milwaukee County Medical Society, the State Medical Society and the American Medical Association.

Dr. Edward J. Kelley, Milwaukee, died at his home March 9th. Doctor Kelley received his medical education at the Rush Medical School. He practiced for a year at Columbus, Ohio, before establishing his office in Milwaukee where he has been for the past 35 years. Surviving Doctor Kelley are a sister and two brothers.

Doctor Kelley was a member of the Milwaukee County Medical Society, the State Medical Society and the American Medical Association.

Dr. C. E. Richards, Milwaukee, practicing physician in Milwaukee for nearly fifty years died Thursday, April 3rd. Death was due to a stroke of apoplexy. Doctor Richards was born in Cumberland, Md., in 1855 and was graduated from the University of Maryland in 1869. He received his medical training at Chicago Medical College, graduating from that school in 1876. Surviving him are his wife and two brothers.

Dr. Robert W. Monk, Neillsville, died at his home early in April. Dr. Monk was formerly a state senator and had been actively associated with public health legislation. He was born in 1866 and graduated from Northwestern University in 1894. He was granted his Wisconsin certificate in 1903. At one time he was Mayor of Neillsville.

Dr. Monk was a member of the Clark County Medical Society, the State Medical Society and the American Medical Association.

 SOCIETY RECORDS

NEW MEMBERS

Love, I. B., 414 E. North Ave., Milwaukee.
 Thompson, E. X., 1109 Kinnickinnic Ave., Milwaukee.
 Miloslavitch, E. L., 638 4th St., Milwaukee.
 Zlatnik, A., Two Rivers.
 Guilford, H. M., Madison.
 Schubert, C. K., Madison.
 Harkness, G., Waukesha.
 Littig, L. V., Madison Gen. Hosp., Madison.

Vingom, C. O., Methodist Hosp., Madison.
 Puestow, K. L., State Bank Bldg., La Crosse.
 Conway, John M., Spring Valley.

CHANGES IN ADDRESS

Slaney, A. F., 2621 Wells St., Milwaukee, to Kenosha.
 Johnson, Laura, Boston, Mass., to State Sanitarium, San Haven, N. Dakota.
 Hovde, A. G., Redlands, Calif., to Bd. of Trade Bldg., Superior.
 Oberembt, B., 425 E. Water St., Milwaukee, to 490 Broadway, Milwaukee.
 Sauthoff, Mary B., Madison, to Mendota.
 Hathaway, G. J., Chetek, to 5900 Tower Avenue, Superior.

CORRESPONDENCE

OFFICIAL CALL

To the Officers, Fellows and Members of the American Medical Association:

The seventy-fifth annual session of the American Medical Association will be held in Chicago, Ill., from Monday, June the ninth to Friday, June the thirteenth, Nineteen hundred and twenty-four.

The House of Delegates will convene on Monday, June the ninth.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June the tenth at 8:30 P. M.

The various sections of the Scientific Assembly will meet Wednesday, June the eleventh at 9 A. M. and at 2 P. M. and subsequently according to their respective programs.

Ray Lyman Wilbur,
President,

Frederick C. Warnshuis,
Speaker, House of Delegates.

ATTEST:
 Olin West, *Secretary,*

Chicago, Illinois, March tenth.

HOUSE OF DELEGATES

The House of Delegates will convene at 10:00 a. m. on Monday, June 9, 1924, in the Assembly Room, American Medical Association Headquarters, 535 N. Dearborn St.

SCIENTIFIC ASSEMBLY

The General Meeting, which constitutes the opening exercises of the Scientific Assembly of the Association, will be held Tuesday evening, June 10, 1924, at 8:30. The Sections will meet on Wednesday, Thursday and Friday, June 11, 12 and 13, 1924.

Convening at 9:00 A. M. the Sections on
Surgery, General and Abdominal.
Ophthalmology.
Diseases of Children.
Pharmacology and Therapeutics.
Nervous and Mental Diseases.
Dermatology and Syphilology.
Preventive and Industrial Medicine and Public
Health.
Miscellaneous Topics.

Convening at 2:00 P. M. the Sections on
Practice of Medicine.
Obstetrics, Gynecology and Abdominal Surgery.
Laryngology, Otolaryngology and Rhinology.
Pathology and Physiology.
Stomatology.
Urology.
Orthopedic Surgery.
Gastro-Enterology and Proctology.

REGISTRATION DEPARTMENT

The Registration Department will be open from
8:30 a. m. until 5:30 p. m. on Monday, Tuesday,
Wednesday and Thursday, June 9, 10, 11 and 12,
and from 8:30 a. m. to 12:00 noon on Friday,
June 13, 1924.

Managing Editor,
Wisconsin Medical Journal,
Milwaukee, Wisconsin.

Dear Mr. Editor:

"We have some time there, boy."

This is a quotation from a letter in your March issue, signed "Member." Were I a casuist it would be easy to hoist Member with his own petard. It should not be "expense" to spend money giving individual support and encouragement to our State Society. If the Member will attend more than "seldom," attend every meeting, he will find it his biggest asset. The reason should be obvious.

The programs are just as good as members will make them by their attendance and enthusiastic support. I also attended the Minnesota meeting as well as our own. Theirs was a better meeting because it was made up largely of papers by members of the staff of the University Medical School and the Mayo Clinic. For some reason I do not know, neither of the Medical Schools in our state seem to contribute very much to our annual meetings in either papers or discussions.

It is not fair to compare any state meeting with the Tri-State—a huge three ring circus affair whose only object is to feed predigested, scientific material to a heterogeneous collection of medical men. This is good so far as it goes in the diffusion of knowledge. As an educational process its value may be questioned. In any case such an unofficial society cannot take the place of the state meeting. The object of the state meeting is to "get together and discuss and hear discussed medical problems of today."

This cannot be done without our being there. It is the duty as well as the privilege of the member to "dictate the policy of the society."

The State Society, like the county societies, is or should be the most democratic society in our democratic country. It fails in this when the attendance is poor and when enthusiasm lags. We will have better programs, a more "social atmosphere," fewer meetings "practically a failure" when we have fewer "strange roosters in a strange barnyard."

So let us get together and have a 100% perfect state meeting at Green Bay. We will if "Member" and every other member will attend. We have problems to discuss and problems to solve. The problems of social medicine may be taken from our leadership if we do not wake up. The problem of state medicine is slumbering—not dead; dangerous only because of our professional apathy.

Only in our state and national gatherings can these problems be properly discussed and intelligently solved. For these reasons the member who "has attended so seldom" or who never attends, or who is passive is the most serious and dangerous of all of our problems. As one who has been active—and happily so—in the State Society for many years I appeal, on behalf of the State Society and its efficient officers, in the opening lines of the "pome" that follows the member's letter in the March issue:

"Oh Doctor lend a listening ear,
I pray to my afflictions."

AN ACTIVE MEMBER.

April 2, 1924.

Mr. J. G. Crownhart, Managing Editor,
Wisconsin Medical Journal,
558 Jefferson St., Milwaukee, Wis.

Dear Mr. Crownhart:

I cannot tell you how much I appreciate and enjoy the privilege of borrowing medical books from the University Library. It has opened avenues of investigation and made possible studies which were closed to me through lack of a sufficiently extensive library. This has been due to your efforts and I acknowledge my personal obligation and gratitude.

Thanking you, I beg to remain,

Yours, truly,

L. J. FRIEND.

St. Croix Falls, Wis.,
Mar. 16, 1924.

The Wisconsin Medical Journal,
Milwaukee, Wis.

Gentlemen:

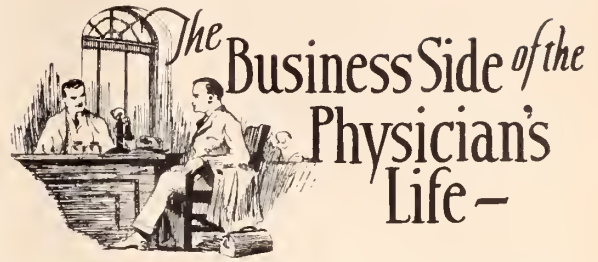
I have a friend who is a general practitioner in the country. He told me he did not think things were as they should be, especially in the country. He found many cases that required a physician where the families would not get one because the cost was prohibitive to them. He said he found many cases who needed home treatment and could get it if they lived in a city or town, but, owing to extra expense of mileage, could not get it in the country and if they did get the necessary treatment, he would have to stand the loss. He thought

if he kept up his expenses, he would have to refuse to take care of them. Then he said if he attended a medical meeting or clinic, the chances were he would be needed while gone. He realized the necessity to get some work in a hospital frequently if he were to do the best he could for the people who depended on him. He realized how much depends on the general practitioner. He also remembered how easy it is to forget certain diseases if his work has been confined to other diseases for some time, unless he had the opportunity to study conditions in a hospital under a master.

I suggested a remedy in State Medicine, but to this he was bitterly opposed. Yet he would be pleased if the state or county would pay for those who were unable to pay for themselves. He was also firmly convinced that State Compensation laws were a mighty good thing for both the laborer and physician. He had no objections to cooperation work even if their fees were much lower than the prevailing fees, for he said he would be sure of his money. I then told him that I could not understand how he would be opposed to some form of State Medicine; some organization like our army. There they have physicians of different ranks. It may be that some of our civil practitioners have larger incomes than any army physicians, but remember if the change is made, it is for the benefit of the people and not the physicians. I think it would also benefit the profession as well. Then when one entered the profession he would enter in the lowest ranks, and his advancement would depend much on himself. There would be plenty of incentive for better work for the right minded man. Then I said there would be hope of having doctors where they would be needed. There would be no deaths for want of physician, or invalids for want of treatment as we often find now. Provision would be made for the doctor to attend medical meetings or clinics in hospitals frequently, and if he did not attend them, he would have to give a good reason. Of course some would be found that did not take interest in their work, who did not do the best they could for their patients. There would be a splendid chance to drop them from the profession. Sometimes we now find a man in the profession who seems to take more interest in exploiting his patient or himself than in helping the people. In the army they would soon drop him. As far as self seeking is concerned, he might make a go of it in the army, but they have a way that would soon put a stop to it.

I can think of no better plan to raise the practice of medicine to a higher plane, than for us physicians to form a voluntary association, binding ourselves to be ready at all times, to be examined as to diagnosis, prognosis and treatment of our last 10 patients. Of course the committee who would make this examination, should realize the difficulties of a general practice. It has always seemed to me that the physician who is too busy to go thoroughly to the bottom of each case, is too busy to take the proper care of a new patient. The patient would be better taken care of, the physician would be more alert, take more interest in every thing and the chances are he would be better off financially.

Yours truly, H. C. CALDWELL.



According to the Statistical Bulletin of the Metropolitan Life Insurance Company, the health record for January, 1924, was the best ever recorded by them for the first month of any year. Conversations with several physicians indicates that seldom, if ever, have they been idle so much of the time at this season of the year, as they now are. Death rates for many cities indicate new low records.

To the practitioner, faced with the immediate necessity of paying real estate, income and other of the 57 other varieties of taxes, the personal economic problem has sometimes been a disquieting one. Collections, too, have frequently been poor.

As the head of a family, the doctor has been happy over the excellent health of his own wife and children. As an altruistic citizen, he is as glad as anyone could be that disease and death are not driving happiness from the homes of his neighbors and intimate friends. *But*, as a breadwinner, he must meet his notes at the bank; pay large bills for maintaining his automobile; settle for that recently bought shoddy, read-to-wear, clothing that must be replaced so soon, etc., etc. Is it strange that he wears a worried look; that he has difficulty in repressing a vagrant hope that an epidemic might occur—one that would providentially spare him and his own family but deliver all his rich clients into his hands?

It may be that changing conditions are tending rapidly to eliminate the practice of medicine as we have known it. Probably not, but it is possible. The river boats of the time of Mark Twain have long since rotted and will probably never be replaced in kind. The river is now paralleled by swift trains affording luxurious travel conditions beyond the dreams of the past generation. The stage coach is coming back, however, but it is a new type of stage and the drivers have never heard of spavins, galls and ring worm. They can replace

a shoe as ably as could any pioneer Jehu, but it is an altogether new kind of shoe:

Twenty-five thousand children in the public and parochial schools of Youngstown, Ohio, were "Schicked" during the week of February fourth. On the findings, those susceptible to diphtheria will be immunized. As a result, diphtheria should be put where it belongs—in the historical library.

In a Wisconsin community of less than 5,000 population, at least 75 tonsillectomies have been performed by local surgeons, following a visit of the Free Chest Clinic. If these have all been done as well as they appear to have been, and reckoning on natural spread in popularity of this preventive measure through word of mouth of well pleased patrons, the future incidence of organic heart disease in that community should be materially reduced below the general 2% attributed to the population at large. Much other less obvious medical service has been rendered by the physicians of that community—the good results of which will probably never be directly measurable.

The Chicago & Northwestern Railway Company, a few years back, had a monopoly on the inter-urban passenger traffic of the residential and rapidly growing industrial lake communities between Chicago and Milwaukee. They owned the most favorable rights of way and had a full equipment of locomotives and coaches. The latter may have been somewhat dilapidated and dirty, but what of that? The public had to be transported and was not unduly fussy.

Now the steam road is paralleled by electric railroads and while less convenient in some respects, they are getting an increasing patronage because of somewhat lower fares and much greater freedom from smoke and cinders.

The Milwaukee Electric Company watched the paralleling of its city and interurban lines by busses and jitneys. The future of railroads for short hauls alongside of the beautiful stretches of concrete state highways began to be questioned. Busses, so far, had not been able to buck the snow drifts as can steam and electric railroads, but

the careless public did not think of that. In fair weather, they used the busses. When the latter did not run, they fell back on the electric railroads and let the latter pay the high costs of maintaining the right of way by big snowplows and the employment of large gangs of emergency employees.

No doubt the management was fighting mad over the rank injustice of such conditions; but fighting seldom pays dividends so they established their own competition. Once more they have a monopoly of the traffic—in fair weather, as well as in foul.

In the early days of "Wellville," and before it got its present name, the doctors worked day and night during epidemics; responded to the calls of midwives for all the difficult labors that threatened the lives of mothers and babes; did patchwork on dilapidated hearts and urinary tracts and did the many other discouraging chores that are part and parcel of curative medicine. On Sunday mornings and Wednesday evenings they steered their autos carefully between the banks of sedans and limousines parked close together in front of the beautiful modern temples of the First, Second, Third, etc., etc., Churches of Christ, Scientist.

In their offices, they sat night after night and watched, through their empty reception rooms, the "fair weather sailors" from among their clientele line up before the pay-as-you-enter desks of luxuriously furnished offices of the manipulating (sic) "doctors." They became fighting mad. But they thought how little fighting madness had accomplished in the World War in which they had been among the first to enlist and for which nobody had sacrificed more.

Came an inspiration: why not compete with themselves, parallel their indispensable curative work with preventive service? They knew that certain conditions were preventable; when not prevented, that they are curable if taken in time. Even the cynics among their number came in time to see that this was what the public had wanted and stood ready all the time to pay well for.

And that is why the physicians of Wellville can view the high costs of shoddy clothing, steadily mounting tax rates and the other things that go into the high cost of modern living with a philosophical attitude approaching that of the prosperous man of business.

Speakers Handbook Distributed to Members and Public Health Workers; Lay Issue Brings Favorable Comment

Upwards of 2,500 copies of the Speaker's Handbook were placed in the mails the last of April to aid members and public health workers by providing accurate vital statistics upon which to base their talks. This handbook, issued under the direction of the Committee on Public Policy and Legislation, will be greatly enlarged for future editions. The plan of the Committee calls for a second edition late in the fall.

With the First Annual Lay Issue in the mails but a week, the Committee has received several comments indicating that this pioneer work was of value.

"The lay issue of the Wisconsin Medical Journal which reached me today," writes one of the foremost newspaper men in the state, "is a surprise and to the organization itself, it must be the realization of its highest ambition. This issue of the magazine ought to go to every public library in Wisconsin, so that those who are interested in health problems and community development would have an opportunity to read it. It is a great issue."

"I believe that we may have a very reasonable expectation that it will more than pay for the expense and labor that has been put in it," wrote Dr. S. S. Hall, Treasurer of the Society. (The Committee thanks you Doctor.)

"Your idea is fine," wrote Mr. H. L. Hoard, Editor of the Jefferson County Union, in forwarding an editorial he had written based on the issue. We quote from his editorial:

BIG WORDS CUT OUT

The Wisconsin Medical Journal for April bears the legend "First Annual Lay Issue." It is worded in language that the common reader can understand and the contents are so valuable that the price per copy—50 cts.—should be no bar to placing it in every home. In its "Message to the Lay Reader" Editor J. G. Crownhart says: "The basic problems of health and disease affect us all alike. The means are now at hand by which we may solve many of these problems. In solving them together we shall add years to our lives, bring material benefit to the communities and state in which we live, and assure for each of us increased happiness.

"Known means for the prevention of disease can only be made most effective with the co-operation of men and women in every walk of life. That co-operation will come with a more general understanding of the fundamental problems. We are trying to make that information available to you."

Big words that require first a special medical dictionary to translate into other big words that can be found in Webster's Unabridged and again to be translated into words that common people use—are all cut out of this issue. We take it that once a year, from this on, a special edition will be issued for the common understanding.

A single article in this issue by Dr. W. A. Evans is well worth the price of the whole magazine. One of his disease charts shows how deaths from typhoid fever were cut from 170 per 1,000 of population in Chicago in 1893 to 1 per 1,000 per year for the past five years.

(NOTE—Mr. Hoard was mistaken in his very natural assumption that the numbers were sold—they were all distributed without charge.)

"I take this opportunity in extending my congratulations upon the splendid new issue of the Medical Journal which appeared last week," said Mr. Charles Tribe, Manager of the Milwaukee Optical Company. "It is indeed very nicely arranged and must be of great interest to its readers."

While the date of writing this article precludes the possibility of getting a wider range of lay opinion, the Committee feels that the issue was well worth while. Over 4,500 additional copies were run and all were in the mails on the fifteenth of the month. It appears from the address lists that the Journal reached prominent laymen in almost every community in the state.

By request of the Wisconsin Anti-Tuberculosis Association, upwards of 1,000 copies were forwarded under their direction. At the time of mailing the issue the Association sent the following card to each of the recipients:

"The Wisconsin State Medical Society is sending to you today a copy of its first annual lay issue.

"The publishers desire that this edition—which is very limited—be carefully distributed so that it shall reach the important people of each community. They asked us to suggest people whose influence would make it desirable for the Medical Society to reach. In this list you are included and we ask you to give the Journal the careful attention that its mission warrants.

"To bring the interests of the public and the medical profession in closer harmony and understanding is the purpose of this lay issue—one of the first efforts of the kind ever attempted by a medical publication."

Plans and Program for August Annual Meeting Close to Completion: Green Bay Offers Historic Setting

With all committees actively at work, preparations for the 78th Annual Meeting at Green Bay, August twentieth to twenty-second, are well under way. Every member of the Brown-Kewaunee County Medical Society is on one of the committees that are working to set a new high record for successful annual meetings.

The general committee has secured the Bay View Beach Municipal Building for the three day sessions. The building offers excellent facilities for the handling of the annual meeting. Located on the bay about a mile and a half from the center of town, it has street car service and is on the concrete road to the nearby tourists camp.

The building has two large halls on the ground floor with a restaurant hall connecting. One hall will be used for the scientific sessions while the opposite hall will house the 34 booths for the exhibits. An upstairs hall will be used for the morning meetings of the House of Delegates and the Council.

The first meeting of the House of Delegates will be held Tuesday evening, August nineteenth, at Hotel Northland. The meeting proper will open Wednesday morning, August twentieth at Bay View Beach.

The Program Committee headed by Dr. W. E. Fairfield is making every effort to secure a program that will not only include topics of every sectional interest, but that will, as a whole, be of greatest value to the general practitioner. Present plans call for two out-of-state papers on each day of the three day session.

"There will be nothing left undone that can be done to provide for the entertainment and comfort of the members and their wives," declare members of the Arrangements Committee headed by Dr. J. R. Minahan.

With the opening of the new Hotel Northland, Green Bay has ample hotel facilities to care for the members. In addition one of the finest tourist camps in the state adjoins Bay View Beach.

The wife of every physician in Brown and Kewaunee counties will be on a special committee for the entertainment of the wives of attending members. This committee plans a tour of the many sites of historic interest in and around Green Bay. A luncheon at the Green Bay County Club is included in other plans of this committee.



Marker erected by State Historical Society where Jean Nicolet landed in 1634.

The banquet and dance for the members will be held in the spacious ball room of Hotel Northland on Thursday evening, the evening of the second day of the meeting.

Suggestions of members following the Milwaukee meeting last year, have all been incorporated into the plans for the 1924 meeting. Invitations to attend the Wisconsin meeting will be sent to all members of the Michigan Society living on the Upper Peninsula. The Arrangements Committee anticipates the establishment of a new record in attendance.

GREEN BAY IS HISTORIC SITE

In holding the 78th Annual Meeting at Green Bay, members of the State Society will not only visit the home of Wisconsin's first physician of prominence, but will also have the opportunity of seeing many sites of historic interest in the development of Wisconsin.

Jean Nicolet in 1634 learned of a far western people who were known as the "people of salt water." Thinking that these people lived on the border of the route to the famed Cathay, Nicolet prepared an expedition to visit them from his post in Canada.

"It was the year 1634," said M. M. Quaife of the State Historical Society in describing the expedition. "For 140 years the red man's forest-clad domain to the west of Lake Michigan had gone un-

polluted by the footprint of a white man. Then, suddenly out of the east in a bark canoe driven by unknown Indians, came a mysterious stranger. Skirting the shores of Green Bay he approached an occupied village.

"Instead of an oriental people Nicolet had discovered a village of Winnebago Indians. Instead of the route to Cathay he had found the way to Wisconsin."

And so members of the Society will have the opportunity of visiting Red Banks where the State Historical Society has marked the spot where the first white man set foot in Wisconsin.

In Union Park there still stands the Tanks Cottage, built in 1776, the oldest house in the state. Built by a French trader this cottage was in turn the home of Judge Jacques Porlier, Wisconsin's first school teacher and later Wisconsin's first magistrate, and later became the home of Nils Tank, the brilliant son of a Norwegian nobleman who came to Green Bay with the hopes of establishing a Moravian colony.

Green Bay is also the home of the first bank building, owned by John Jacob Astor; the old sur-



The Tanks Cottage is Wisconsin's oldest home.

geon's quarters of Dr. William Beaumont, in whose honor the American Medical Society has erected a tablet at his later home, St. Louis; and of old Fort Howard. Dr. Beaumont erected the first hotel across the river from Fort Howard in 1833. He named it the Washington Hotel. The name was changed to the Beaumont Hotel in 1863 when it was rebuilt and in 1910 the more modern present structure was erected.

The Need for Impartial Medical Service Under Workmen's Compensation Act and How to Obtain it

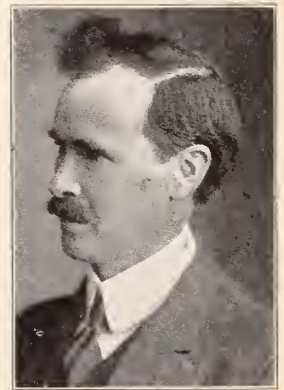
BY F. M. WILCOX

CHAIRMAN WISCONSIN INDUSTRIAL COMMISSION

MADISON

Workmen's Compensation ushered in a radical change in the method of determining liability for wage loss to employes resulting from personal injury. Still more radical was the proposal of the law respecting medical attention in such cases. In practice it took from the workers a right which had theretofore been treated as so personal a matter that men who have stopped long enough to view the situation calmly have been amazed at the surrender of this right by employes with so little of protest. These injured men gave up the personal privilege of selecting the physician who was to attend them, the surgeon who was to operate them, the hospital in which they were to be confined, the assistant who was to give them an anaesthetic and the nurse who was to dress their wounds and measure out their medicines,—all for the purpose of developing a well-balanced and harmonious compensation system by which employers should have opportunity through contact with the medical attendance to protect themselves from fraud.

Since 1911, with minor exceptions, 170,000 men and women employes have been treated in Wisconsin, for injuries which disabled them for more than one week, by doctors as to choice of whom they had substantially no voice. A larger number of employes were treated for lesser injuries, like-



wise by doctors not of their choosing. Large numbers of these men and women have been conveyed to strange hospitals at the direction of employers or insurers rather than by request or even express consent. They have submitted to anaesthetics, to the removal of limbs, to the most radical type of operation, by doctors never known to them before—doctors selected by an employer with whom they have had no personal con-

tact or by an insurance carrier directing the service from distant headquarters.

AVERAGE COST \$33.00.

The average expenditure per injury for all medical attention in these cases where disability lasts more than a week is \$33.00. Just how responsive would a business or professional man be to any scheme by which another person takes over the selection of his doctor? Where is the employer who in order to save \$33.00 is willing to submit himself or his family to the care of a physician, strange to him, of skill unknown and as to whose selection he has no voice? And where is the doctor who is ready to "go under the knife" in the hands of the surgeon who has not been tried and proven to him over and over again?

This is not a criticism of the abilities of the physicians who are treating these injured workers, or of the hospital care they are given. It is an endeavor to have the doctors and the hospitals and the employers and the insurance companies appreciate as they should what sacrifice of personal right and what resignation to legislative plan has been made by the industrial workers of this state.

Members of the medical profession know and appreciate full well what unbounded dependence families place on their family physician. No other person may inspire in that family so much of hope and confidence. No other person assumes greater responsibilities. And no responsibility to another was ever met by firmer faith. What then has this same physician to say of the hopes and fears of the injured worker who comes under his care without having had time or opportunity to develop confidence in this new relationship which means so much to him? It is to the everlasting credit of the workers of this state that they are responding so well to the plan of medical selection by employers. It displays unusual faith in the judgment of those who legislate, and direct and administer compensation affairs for them to meet this radical reversal of what had come to be recognized as an indisputable personal right. True an injured employe may yet refuse treatment by the company doctor, but the extremity of their financial circumstances, particularly so when earning ability ceases, usually forbids such course. Submission to employer-selected-medical-attendance is next door to compulsory.

The Wisconsin plan of employer selection of medical attendance is based on the theory that the

employer is better able to judge of the needs of the injured worker and of the capabilities of those called upon to treat him. Back of the employer is a volume of experience with doctors, an intimate knowledge of their reputation and skill in the profession, a keener appreciation of the results of scanty or unskillful attention, and the faculty of determining emergency questions without a moment's delay and with real vision. Rarely indeed would an injured employe have experience so fully fitting him to make the proper choice. The times when he has had to assume the responsibility of selecting a physician to treat accidental injuries are nil—at most just a few times in a life time. The employer of a few hundred persons in a plant of average hazard will have to meet the need almost weekly of calling a physician to attend some one of his employes who has been injured so seriously as to cause him disability ranging from a day of lost time to fatal termination. These observations will illustrate the better training of the employer for the task.

The employe has no thought that he will ever have need of a doctor for such an injury. Others may be injured but he has slated no such mishap for himself, and so he has no plan for treatment when the unexpected happens. The employer knows that accidents will happen. He has his course well thought out in advance. He knows just how he is going to proceed when the time comes to act, when minutes are precious and frittered time means sacrificed lives and limbs. Because the employer has prepared himself for the job and knows how and where to procure the service and skill necessary to meet the situation and has a very direct interest in obtaining for his employe the fullest and largest measure of physical repair that is possible, the legislature gave him the privilege of making the medical selection.

Judged from the standpoint of preparedness for emergency service, skillful treatment, and physical restoration and repair, employer selection of medical attendance has demonstrated the soundness of the plan. Not so much may be said for it on other and quite as vital grounds. The surrender to the employer and insurer of the right to determine the medical attendance calls for something in return besides good doctors and good hospitals. The privilege accorded the employer and insurer puts upon them, and upon the doctor and hospital as well, obligations which if not met in full measure

will in the end sacrifice the whole plan. I refer to the morals involved in the relationship of physician to patient which demand that the former exerts no partisan influence in the determination of indemnity benefits and that he does not violate the privileges which statutes and professional ethics have laid upon him.

PERIOD OF DISABILITY IMPORTANT.

In each of the many thousands of compensation cases the period of disability has been a matter of vital importance. With chances for fatal results well past, with no need for further medical attendance, and with healing period ended, the measuring of disability then becomes the matter of dominant interest to the employe. The pain and discomfort that an employe may suffer as he works with body or limbs once broken or bruised, the realization that he may not again hope to do his former task as well or at all will call to his mind often and again any lack of fairness to him when his disability was measured. It will cause angry thoughts and criticism and resentment against the laws and everyone having to do with the miscarriage of justice long after he has forgotten all the care and skill with which the physician sought to protect him from pain and suffering and to bring him back to health and usefulness.

In our insurance scheme of distribution of compensation cost, the overestimating of disability in an individual case is of comparative minor importance to industry and to the consuming public upon whom the burden eventually falls. On the other hand, any underestimate of disability is of supreme importance to an employe because he must bear the loss alone. In the fixing of the disability period and the adjustment of compensation liability exceeding care should always be exercised to the end that no employe be overreached. Employers and their insurers have abundant means of protection. The employe is of the dependent group. The need that is usually present after a period of disability will force him to yield what he believes to be his rights. The unequal opportunity to withstand pressure must not be used to obtain unfair advantage of him. The self-insured employer in his financial strength and his ability to pass on the cost of compensation to the consumer may not long reap unfair advantage in adjustments and still retain right working response from his employes. The insured employer has paid for just and liberal protection to his workers and

should see that they get it. The insurer cannot afford to apply common law liability practice to the adjustment of compensation claims. And the doctor—well, he should be the last to tolerate any skimpy treatment of an injured employe. This man was his patient and he had best not forget about it, even though the period of treatment has ended.

The right of selection has led the employer and insurer to expect and all too many physicians to admit that the relationship calls for aid in establishment of disability at a minimum. They give advice to the employer and insurer at the end of the treatment respecting extent of disability and withhold this information from the employe for no sufficient cause. They inquire into the personal affairs of the injured man, into his other physical ailments and then relay this information to the employer and insurer with a zest that betrays unmistakable partisanship. They deny the employe access to the hospital records for no better reason than the false notion that their responsibility beyond the treatment of the man is to the employer who pays them.

POSITION MUST BE NONPARTISAN.

Many developments from the relationship must necessarily be made known to the employer and the insurer and the commission as well as to the employe in order that rights may be preserved and responsibilities fully discharged. Good conscience will tell a physician whether he is discharging his duty in such cases impartially. These things that are really vital to the rights and liabilities of the parties when treated by the physician with impartial frankness will violate no privilege and give no offense. Beyond that the information is privileged; it belongs to the injured man, and the physician who violates that confidence is hastening the day when the employers and insurers will no longer enjoy the unusual privileges they now possess. And it is hastening the day when the amount of practice he has in this field will be limited to those cases in which he is able to gain and maintain unassisted the confidence of his patient. The fact that the legislative plan made it possible for him to establish the relationship of physician to patient, not by consent of the patient but at the instance and pay of an employer or insurer, does not warrant him in treating his obligation to his new patient as differing in the least from his obligation to any other patient. He should never

again assume that aside from his obligation to give the injured man the most skillful treatment possible, all other calls for service belong to the employer and insurer.

The legislature of 1921 passed the so-called "Medical Panel" amendment. It represented an earnest effort to pry employers and insurers and the industrial physician loose from the notion that the framers of the first compensation act intended to give a monopoly in the medical and surgical aid field to a comparatively few members of the medical profession and to disregard in whole the right of an injured worker to have any voice in a matter more vital to him than to all the other interests combined. It was an endeavor to give the injured employe something approaching a choice of physician, and to insure impartiality of the physician selected.

PUBLIC DEMANDS FAIR PLAY.

This legislation has been productive of good. For one thing it forced upon the attention of those immediately interested the understanding that the public was demanding fairer play for the injured worker and fairer play for the physicians of the state who were being held out of the field of industrial medicine notwithstanding the fact that their competency ranked well with the qualifications of the chosen few. But the attitude of employers and insurers varies widely. Some self-insured employers allow their employes to have the service of any competent physician in the community. Some insurance companies allow employes in individual risks like opportunity for choice. Although the medical panel provision is in effect a minimum requirement, the majority of employers and insurers treat it as a maximum requirement and give nothing of service beyond what the law demands. And still others violate both the letter and the spirit of the provision. Those who chose to limit attendance privileges to bare statutory requirements found opportunity in the naming of clinics and partnerships to hedge in the employe's right of choice. It took a legislative amendment to free the compensation system from that evasion of the spirit of the act.

For a majority of the employes of the state, this legislation liberalizing the matter of choice of physician has not proved sufficient. When the list of physicians on the medical panel is conveniently filed away in the employer's office desk and employes are still led to understand that the plant physician is the only chance for medical service at

the employer's cost; when the attempt of an employe to exercise a choice from the panel is met with short office information to the effect that the only medical service then available is the "regular plant physician"; when healing period is reported as fully ended, notwithstanding the employe is still unfit for regular work; when he is required to return to light work and his physician leaves him to spend the limbering up period under the direction of a plant foreman who does not want a physically unfit employe about the place; when recovery is reported complete because the injured man is able to perform his regular task although there is permanent impairment of his limbs for other tasks; when the attending physician assumes the position of aide to the attorney for the insurance company at the hearing and coaches the questioning of the witnesses; and when other circumstances show unmistakable evidence of partisanship of the employer-selected-physician, there is apparent need for something besides a "Medical Panel" to awaken the type of responsibility to the injured employe which the relationship demands.

There are many cases where the employe who has had skillful treatment at reasonable cost and has made satisfactory recovery is denied reimbursement for his expense on the sole ground that he refused to take treatment by the plant physician and that the situation demands that he be disciplined. Defending liability in such a case would be tolerable if real morals depended on the position. But 'tis not so. It is resort to a harsh statutory defense, cruelly insistent, short sighted and eventually costly. A recent issue of the Insurance Press says: "The Medical Society of New Jersey will address a communication to manufacturers and insurance carriers urging them to have persons injured in industry treated wherever possible by the injured person's family physician. There has been much complaint in this respect both in New York and New Jersey."

The situation in this state demands of employers and insurers and administrators an answer to the question of how absolute impartiality of the employer-selected-physician may be obtained. The "Medical Panel" provision requires that the physician be impartial in order to maintain his eligibility for service on the panel. There is rather convincing and consistent history of partiality. To illustrate—in the administration of the law where dispute obtains respecting extent of disability, the commission may take the advice of an

independent physician. It is seldom that the disability is not found by the independent physician to be greater than that fixed by the attending physician. True the estimates of the physician called by the injured man will usually exceed that reported by the commission's advisor. However, that may be explained by the fact that he is testifying expertly at the special instance of a litigant. But the attending physician—why should his estimates of disability vary materially from those of the independent physician, almost always to the advantage of the employer and insurer?

The most trying situation results from the entry of the attending physician, either voluntarily or by solicitation, into more or less active part in the conduct of the compensation hearing. Sitting elbow to elbow at the counsel table with the personal representatives of the employer or insurance company, coaching the attorney, formulating questions, even going to the extent of cross-examining witnesses—these are the lengths to which some doctors are willing to go and the length to which some employers and insurers are willing they should go. If they have not attended the employe and are simply there as expert witnesses, their zeal for the success of the cause may perhaps be their own affair. Physicians rarely appear before the same circuit court jury on more than one occasion, so there is in courts less loss of prestige because of frequent calls upon them for service as expert witnesses. In compensation, however, the appearances are before the same commission time after time and the cumulative effect of serving one or the other party in and out of season is bad. The commission knows the physician whose attitude is against the spirit of the system which gives him access to the case, and it knows the physician who places his obligation to well rounded out administration of the law above any partisan influence. The opinion of the former is discounted. The counsel and advice of the latter is solicited.

My observations will appear to the attending physicians as over-critical if I do not recognize that they too have a problem to meet. They do have. The setting is bad. It is calculated to array the physician on the side of the employer, and it will lead the employe to assume that after treatment has ended, his interest and that of the physician are distinctly adverse. But if this is so, the strong, independent, guarded physician who

weathers the test and maintains an impartial attitude to the end will be the preserver of the employer's best interest. If the system will not produce an absolutely fair and impartial attitude on the part of the physician under all conditions then such physician must not have certified entrance to the family. The relationship entitles the employe to that consideration regardless of all else.

THE REMEDY.

What is the remedy? Surely not a complete reversal of plan—allowing to employes unrestricted choice and charging the expense to the employer. That would usher in a more intolerable condition, and yet that has been the course most states have taken when they were forced to a test. Violation of the personal rights of the employe group not infrequently begets impractical legislation as its relief.

Employes might now refuse treatment by the physician his employer names on the ground that he is not impartial and for that reason not eligible for service on the panel. But that would be a heavy burden for the employe to lug since partiality rarely makes its appearance until after treatment has ended. Moreover, it would involve the Industrial Commission in nasty personal contention respecting a professional man's ethics or lack of ethics. The commission has had such wonderful support from the physicians in making workmen's compensation a dependable plan that the advantages must not be sacrificed unnecessarily. Selfishness, business greed, lack of understanding of the rights of the employe by certain insurers and employers and physicians should not forfeit the rights and privileges of those who are responding to the spirit of the present system. The burden of necessary changes should be laid alone on those who make the change necessary.

Some simple and practical plan must be devised for denying the right of employer choice, at least temporarily, to the employer or insurer who encourages partial conduct or who keeps on its panel any physician who violates the ethics of the relationship. For ease of administration, the right to choice of physicians should be left with the employe, except as an insurer or self-insured employer may elect to maintain a suitable panel of physicians and will guarantee impartial service, in which event the privilege of employer-selection may be authorized by order of the commission and

may be revoked for abuse.

Such a plan would save the good in the present system and squeeze out the bad. It would discourage partiality. It would encourage impartiality. It would relieve the industrial physician from

embarrassing calls to serve one party as against the other in claim adjustment matters. It would promote the confidence of the worker in the industrial physician and relieve the compensation system of the most fruitful source of complaint.

The Part the Physician Should Play in the Public Life

"The Doctor Knows the Heart of Humanity. I am Sure our Country Would be Better if More Men of the Medical Profession Entered the Field of Politics"

BY HON. ROYAL S. COPELAND, M.D.

UNITED STATES SENATOR FROM NEW YORK

If a group of statesmen or other citizens should be called upon to define the purposes of government, I suppose there would be as many answers as there were individuals questioned. Why can we not all agree that the purpose of government is to establish and maintain the welfare of all the citizens?

When we look back to the early settlement of America we are impressed by the number of persons who came here to gain religious freedom. Their ethical and religious ideas had been called in question in the older countries. They sought a place where every man could worship God according to the dictates of his own conscience.

Others came because of the opportunities to get gold, or other things of monetary value. Likewise, there were those who crossed the seas in the spirit of adventure.

As with every other country emerging from a purely pioneer state, it became necessary to establish some form of orderly government. In the course of time the recognition of authority was a demand made upon every citizen. In the language of the Declaration of Independence everybody is entitled to life, liberty, and the pursuit of happiness, and, quoting, "to maintain these rights governments are instituted among men."

In the last analysis the purpose of government is to insure the safety and welfare of the citizen. I think no one will deny that the first duty of government is to make it possible for the individual to provide himself with clothing, house, heat, and food. His body must be protected against injury, either accidental or intentional. So far as may be, the citizen must be protected against attacks of disease. The public health must be guarded by raising barriers against infection. To this end there must be furnished food and drink which are free from contamination.

As the country grows and becomes increasingly populous, cities come into existence. As these great centers increase in population there arise social problems. Some of these are founded on the intimate contacts of tenement and factory life. The physical surroundings of the people have much to do with the development of such problems. They cannot be solved without intimate knowledge of the underlying causes of social distress. Government, like a wonderful mother, must devise ways and means to guard her children, the citizens of the country.

It must be apparent, I am sure, that when we really consider the purpose of government, most of its vital problems have to do with things more familiar to the physician than to anybody else in society. There is a popular idea that lawyers are the natural statesmen. It is supposed that their training somehow or other fits them to take charge of government. That this is the popular conception is shown by the fact that of the ninety-six members of the United States Senate, eighty-two are lawyers.

I hold no brief against the lawyers. Many of my most intimate friends belong to this inspiring profession. They will forgive me, I am sure, if I speak frankly of the lawyer in politics, as compared to what the doctor might accomplish in this field.

Countries are governed by laws. These laws are written in legal language, the language of tradition. Certain formulas have existed "since the mind runneth not to the contrary." It is admitted that in the formulation of laws, it is wise to perpetuate the recognized methods of expression of the intent of the people. But is not the work of a lawyer remarkably similar to the work of the printer in the printing office? The compositor knows his "case." With remarkable speed he can pick up the type from the boxes of the case and

assemble them, making words and sentences. In due time, in the makeup, he brings together an entire article. This may be a convincing sermon, an appeal to patriotism, or a proclamation of war. It may be the material expression of some great human instrument capable of changing the intellectual outlook of a nation.

Certainly no one can contend that the printer, by whose skill this message was prepared for the people, is in any sense the author of the thoughts visualized by his work. We have lawyers to formulate in legal language the conclusions reached by legislative bodies, but it does not follow that they originate the ideals expressed in the finished laws. In all modesty I contend that the doctor is better qualified to know the desires and the necessities of the human family better than the lawyer, the engineer, and even the minister or the priest.

Who goes into the home, no matter how humble it may be? Who recognizes in the symptoms of his patient the lack of proper food? Who is so well able to testify to the lack of clothing, the want of proper housing and the deprivation of heat? Determined as he is to seek ultimate causes, who is so well qualified as the physician to get at the bottom of the great social problems, the natural accompaniments of modern civilization?

If he is a thoughtful man, does not the doctor find out why decent houses are not furnished our people? Is he not the first to discover that the wrong kind of a tariff may interfere with a building program, because of the high costs of materials necessary to erect houses? This particular need of the people involves the problem of the tariff, the problem of transportation, the problem of the labor union, and the problem of finance. Certainly the training of the lawyer does not fit him to form different or better conclusions in these matters. Indeed, however kind hearted he may be, the lawyer has not had the human contacts necessary to stir his heart and soul and to make him an ardent advocate of better laws in order that those who suffer may be relieved of their tortures.

The physician goes into the homes of the poor. He sees there the lack of nourishing food and the undernourishment of the children. He hears the story from the wife and mother of the lack of funds to buy the very necessities of life.

As he drives into the country and visits his rural patients he sees the fruit spoiling upon the ground

and knows that the vegetables are rotting in the earth. He sees these great quantities of food going to waste, food that would furnish health and life to the poor of the cities.

Is it any wonder then, that the doctor finds fault because proper markets and marketing facilities are not provided? He wants to know why the transportation facilities and rural credits are not arranged in order that the farmer may get these things to those who need them in the city.

He is an eye witness to the sufferings of the poor and knows the great and startling inequality between the poverty stricken of the crowded sections of the city and the affluence of those who live on the avenues. In consequence his soul is moved and he becomes an advocate of social justice. He yearns to wipe out the artificial and man-made distinctions between the rich and the poor. He begins to think about the minimum wage and a fairer distribution of the profits of business.

In his talks with the farmer he finds that the surplus grain cannot be sold because of the lack of markets. The farmer confides in the doctor and finds there a sympathetic listener. They discuss together these matters of vital importance to the citizens of the farming districts. I believe the doctor, more than any other man, comes to recognize that the buying power of the world must be guaranteed in order that the producer of America may have an output for his products.

This gives the doctor a wide vision, a vision which becomes more acute by reason of the fact that in his reading and in his study he comes in contact with the men of every country. He goes to the medical centers of the old world and mingles with professional men from every part of the earth. Naturally the vision of the physician is cosmic. He thinks in terms of the world as well as in terms of human beings, whom he knows better than anybody except the priest.

The doctor does not speak the language of the banker. However, he recognizes that prosperity in business is fundamental to the happiness and health of the human family. The doctor will never be a revolutionist or an anarchist, because he knows that revolution and anarchy make for bloodshed and death. It is the business of the physician to staunch the flow of blood and to protect human life. Therefore medical men will strive for orderly and stable government. They cannot be "stand patters," however, because they realize that

life depends upon progress. There can be no health or long life for a nation which fails to exercise its powers by activity and progress.

I suppose I could go on indefinitely in pointing out the reasons why the doctor has an important place in politics. But the medical man is so devoted to his profession that he hesitates to leave it to take on the larger work of helping to heal the ills of a nation. However, when he does venture into this field, his education, his experiences, his human contacts, his broadened sympathies and intimate knowledge of the endless needs of the human family, must make him a useful and active agent for the good of the nation. He knows the heart of humanity.

The doctor can point out the human reasons why a coal strike is an unthinkable thing. He can

show why the transportation system, carrying the necessities of life, must never be hampered. He can point out why the large banking and financial systems of the country must be aided so they can further the plans of a better humanity. He can point out the effects of bad government upon the human welfare of our country. He should be able to inspire legislative bodies to make laws for the betterment of society. Then, when these plans are agreed upon, the lawyers may choose the language in which to write the laws. They may take it from the boxes of tradition and place it upon the statute books in a form which can be understood by the courts which must interpret it. This is the lawyer's job. I am sure our country would be better if more men of the medical profession entered the field of politics.

The Hospital Proposition—An Independent Survey. State Architect Reviews Present Needs

BY ARTHUR PEABODY,
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Editor's Note—This is the third of a series of four articles by Mr. Peabody constituting an original survey of the Hospital Problem. The fourth and last article will appear in the June number.

SANITARIA AND ASYLUMS

One of the differences between hospitals and sanitarium is based upon the continuous residence of inmates. Another point of divergence is their location, usually away from cities and sometimes distant even from towns. Institutions of this class partake then of the character of self-sustaining communities independent of ordinary public utilities and conveniences. Roadways and walks, original sources of heat, light, power, water supply and drainage, with a local sewage disposal plant, a railway side track for deliveries, storage buildings for food and fuel, gardens and greenhouses for vegetable culture, barns and cattle for milk supply with fields for pasture and for growing food crops and finally an enclosure about the institution for the protection of inmates and the public all become necessary. Some of these general utilities, being the sole defense against possible hardship if not disaster, should be installed in duplicate units. It is of course the extreme of hazardous practice to depend upon a single steam boiler, which might fail in the middle of winter, for heating an institution.

Such a contingency might involve moving the entire population in severe weather, to some place of safety, which would be hard to find, to say the least. The same thing will apply to a single pump for the water supply, a single dynamo for light and power. It is necessary not only to install in duplicate, but to provide such capacity for power that either unit can under necessity carry the entire load while the other is being repaired. In fact, to limit these essential pieces of apparatus even to two is hazardous because of the frequent necessity for repairs. There should be one or more extra boilers over what are commonly in use, to allow for cleaning, a water pump ready to take the place of the one broken down, a dynamo always on call beside the two in service, etc. These items are as necessary as two stairways in every building, one of which will be practicable in the event the other is already filled with smoke and made impassable. All precautions commonly provided for large aggregations of people in cities are necessary with an isolated institution, and generally in a greater degree according to the extent to which it is inaccessible to assistance from the outside.

The building of an institution on a plot of new ground, on an extensive prairie for example, or in a piece of woodland is a notable undertaking.

Here as with the hospital, the assistance of experienced men is required. The selection of the site as related to its advantage to the state is too often passed over for superficial or at least immaterial reasons. Among other ways of fixing upon a location, one is to offer it as a prize to the lowest bidder. This is likely to result in institutions being placed in most inaccessible spots, upon the poorest and most difficult soil, and adjacent to the least important of towns where it may be said that absolutely nothing happens. This may even occur subsequent to the report of a skilled and competent commission appointed to look out for desirable locations, merely to satisfy a desire of the governing body to be good fellows and give everybody a chance. But that is not a good basis for the location of institutions. It is not logical to assume that one spot is as good as another so long as inmates are provided for, at least not in these modern days when the object of institutions is recognized as not simply to put a certain number of persons in "cold storage." Such elements as continuous supervision by medical or psychiatric experts and proximity to other institutions where remedial measures may be carried on must be taken into account. Without impugning in the slightest degree the efficiency and the devotion of directors in charge, there is advantage in frequent contact with other men within the profession. This is recognized by directors, but in some instances the physical difficulties in the way of obtaining treatment of the proper kind, arising out of distance especially, precludes the application of measures which might otherwise be practicable. Such considerations ought to overbalance less important ones, especially those not directly pertaining to the care and possible cure of inmates.

GROUND DESIGN IMPORTANT.

But to return to the matter of the ground selected. The important item of interest will be the general ground design in which the same problems as for the hospital apply. The project, however, is usually more extensive, involving several hundred acres of land with the institution buildings advantageously located as regards surface drainage, railway facilities and access to public roads.

One of the first problems for the expert is to determine where and how a dependable water supply will be secured and what shall become of the effluent of the sewage disposal system. This and

kindred matters being settled so that building operations may be considered in detail, the first item will be to construct the power station and to install boilers and pumps. This being done, the institution may be said to be alive. Additional to this elementary equipment one or more electric generators will be advantageous for the distribution of power and light for construction purposes.

Ordinarily this program is not followed. The desire to erect buildings and to make a showing is natural, but hazardous. At all events the water supply and sewer system and the power house should be in operation as soon as the first buildings are ready for occupation. Otherwise the feeling of satisfaction on the part of the governing body is apt to be diminished by the presence of buildings not possible to put into use until these important utilities are in commission. It is justifiable to dwell a moment on this contingency, for the thing has happened and the dilemma has been tiresome to explain.

Buildings for sanatoria and asylums are simpler than for the hospital, being substantially dormitories, with a general refectory, recreation hall and infirmary. Sanatoria for the treatment of tuberculosis are more closely allied to the hospital than some others and in fact constitute something like outposts of it. The treatment here is definite and would appear to enlist a particular range of technical ability on the part of the supervising physician. With psychiatric institutes the same may be inferred. It is reasonable to presume, however, that close contact with the standard hospital should be always maintained.

From the sanitarium the next step is to the asylum, the waiting place of the incurable until death relieves him of the burden of his disorder. As now prevailing in many states, inmates of asylums are not under continuous medical supervision. Whether this is warranted is a question for the expert. The condition, however, makes for simpler buildings and rather larger groups of inmates. These institutions ordinarily house both sexes and sometimes persons of more than one color. Children also come to them at an early age. Segregation is therefore imperative. Patients are graded in asylums with regard to physical and mental condition, the more able types being employed about the barns, the farm and the kitchen. The same general principles apply to asylum building construction as for the hospital. They in-

clude fireproof materials well put together, concrete or steel frames permitting extensive remodeling, reasonable and durable finish capable of withstanding rather severe usage and cleaning and the avoidance of unnecessary appliances which increase cost. The buildings ought not to be repellent in appearance, but, on the other hand, should not be ostentatious. Cupolas, domes, colonnades and the like appeal very little to inmates and are not convincing to the public.

SINGLE STORIED BUILDING BEST.

The advantages of the single storied building are applicable to the sanitarium and asylum in the same way as to the hospital. One of the frequent errors of designers of institutions is the construction of great sweeping porches. The psychology of the asylum inmate does not include the porch, so that these amenities to our civilization, so appealing to the average visitor are left vacant. Inmates pass their time either within the buildings or quite away from them as a rule. This does not apply of course to glassed in porticos for the use of certain types of patients during the colder intervals of spring and fall.

Beside the main institution buildings, which are usually the heritage of times and methods long past, much benefit has been derived from the "farm colony," an outlying group of buildings to which a selected number of inmates are assigned with the intention to verify the stated advantages to them of segregation and employment. Too much emphasis is laid sometimes upon the farm colony, as if the members of it were comparable with persons of normal intelligence except for certain minor failings. Competent judges of their mental calibre would probably advise that this is not the case. A moron is defective in every way. Colonies of defectives cannot be relied upon to take the initiative in providing for simple contingencies such as the sudden onset of very severe weather, but require constant supervision and control. They must be sufficiently near to the main institution to permit of extraordinary care on occasion. Finally, the results of their work are ordinarily so meagre as to need supplementing by the labor of persons of sound mind to bring results. Single story buildings similar to those previously described are particularly suitable for the farm colony.

The principal grounds of the sanitarium and the asylum will be sufficiently protected by a woven wire fence of the "non-climbable" sort. This pre-

vents intrusion from without (and no institution should be absolutely open to the public) and forms a limitation for the wandering of inmates so that on evening roll call the ones missing may be readily brought into the fold. Outside of this enclosure, groups of workers are taken to the surrounding fields, even to some distance, under the guidance of the attendant, to assist in the lighter tasks of gardening and raising of vegetables.

As with the hospital, institutions for defectives contemplate two general divisions of work. Beside attendants whose duties concern the personal care of the inmates, there is the working staff including the steward, accountants, kitchen employees and the general service force of engineers, painters, carpenters and farm superintendents. In the isolated locations commonly selected for this class of institutions, housing must be provided for all these persons. In times past, spaces in the buildings have been assigned for the purpose. There is objection here in that the spaces so occupied are either unfit for continuous habitation, being what are afforded by basements and attics, or they are taken from principal parts of the buildings intended for inmates. In either event under such a program, the attendants and employees are likely to become thoroughly institutionalized. Their lives lack contrast. They lose initiative. For children especially the surroundings are unfortunate and unnatural. In recent years some provision has been made at institutions of separate dwellings for employees, segregated from the institution by setting off a portion of the grounds in such a way that inmates will not intrude upon it. Where the number is sufficient a recreation building is added to the group. In this way all employees enjoy regular periods of absence from the scene of their duties and their families have the advantage of home life of the ordinary kind.

With this plan for the accommodation of employees the interior arrangement of inmate buildings is made simpler and more economical of space. Buildings may be adjusted to their intended use. The housing of employees again is made less expensive, perhaps by one-half as compared with the plan of assigning spaces in regular inmate buildings. It is not necessary to go into the detail of the plan arrangement of inmate buildings. In general, the spaces are divided into single rooms and wards according to the requirements of the case. In the newer type of buildings, dormitories

are separated from the day rooms instead of the old arrangement of the exercise corridor which never was sufficiently lighted and ventilated. Toilets, baths, clothes rooms and treatment rooms are provided as necessary. The program of separation into smaller groups and the classification of patients tends to promote the comfort and happiness of inmates and to make the labor of the attendants less tiresome.

Among the desirable changes and betterments to be obtained is the receiving hospital in which newly arrived patients may be temporarily housed for observation and study before assignment to a particular group. The office of the building is similar to that of the psychiatric institute. This phase of sanitarium and asylum work deserves more adequate consideration than has been common in the past. Persons committed to asylums by court action are not always particularly examined as to the exact nature of their malady. A period of preliminary observation is therefore extremely advisable. To this building also persons brought informally for temporary care and probable cure can be brought, to considerable advantage. The building should be separated from the general sanitarium group and should have its own kitchen and dining room. For the higher grades of patients the general dining room is available. The size of this room will be determined by the number of persons convenient to be cared for in a single unit. Even here segregation of groups is desirable, separate dining rooms being assigned to each. By this means constraint is reduced and those who affect different codes of table manners are made happy. Certain classes, however, must be fed in their rooms and incapables even in bed. Separate dining rooms for different groups of employees are provided and generally a private dining room for the superintendent and family. This service is somewhat reduced where the superintendent and employees are provided with individual cottages and go home to meals.

STORAGE ROOM NECESSARY.

As with the hospital, the kitchen of these institutions is an important item. The areas and equipments will be quite similar to the hospital kitchen although the food is plain. Storage spaces for food, and refrigerated rooms, will be more extensive than for institutions where frequent deliveries are made. Considerable stocks of dried and canned goods and of flour, meat, etc., are carried.

The scullery or vegetable preparation rooms contemplate the employment of a good number of inmates, who are benefited by occupation of this kind. For this reason some of the labor saving appliances on the market are superfluous to the asylum work.

In connection with the work of provisioning, the underground root cellar is important. In this building the products of the field and orchard are stored in quantity for winter use.

In connection with dining and living room service and for laundering clothes a standard power laundry is essential.

Other minor buildings will include shops for carpenters, painters, upholsterers and furniture repairers.

In most institutions an attempt is made to maintain a fire brigade. For this an equipment of hose and chemical extinguishers is provided and a system of fire hydrants extended to the best advantage over the institution grounds. This together with sprinkler systems within the buildings constitutes the extent to which fire extinguishing can be carried. The weakness of all such systems is the absence of an adequate water supply and pumps of sufficient capacity to handle it. It is not possible ordinarily to satisfy this requirement. The proximity of a lake or flowing stream suggests the use of this water for fire extinguishing, but the hazard of using such a water supply for ordinary institutional service is too great considering the constant pollution of water courses by the discharge of sewage from cities and towns. Some source of pure water as from deep wells is necessary for daily use, and evidently all such are limited in amount. The alternative of a duplicate water system separating the domestic water from that for fire service entails an investment of increased dimensions, but is practicable in certain cases. The second alternative is to build of fireproof materials, separating the institution into small units and restricting the hazard of fire in every practicable way. It will be appreciated that a real battle with the flames would be beyond the capacity of the sort of fire brigade likely to be created out of the staff of employees available.

Recreation for the institution staff and for inmates capable of benefit are essential to institutions located away from every day facilities of this kind. At the present time this amounts to lectures, amateur theatricals, moving pictures and

chapel exercises, with Christmas celebrations once a year, so that some sort of auditorium is commonly afforded, where the large dining room will not answer the purpose. For children's homes out-of-door playgrounds with very simple apparatus are desirable. Generally speaking, however, defectives do not play. How much this faculty is worth developing will depend upon the grade of intelligence of the inmate. It takes brains to have a good time.

Education in simple form is carried on where practicable so that class rooms are provided or school buildings erected as the case demands. In connection with this, manual training, sewing, etc., are taught. The opinion of an experienced director of one of our institutions is that garden and kitchen work is quite equal to anything else in its appeal to interest and that basket making and the like is of less value.

Finally, it should be remembered that the sanitarium which contemplates at least an extended stay and the asylum which is meant for permanent residence, constitute the home for the time being at least, of the inmate. It should be pleasant, convenient and safe. The benefits to be derived are those of quiet, protection, and sympathetic guidance adapted always to the requirements of the individual. Whether the residence be for treatment with the expectation of such betterment as will restore health and mental balance or simply for the kind of care that enables him to live with what kind of happiness he can compass, the intention is to make life endurable. The study of these objects may be worth the attention of the physician as well as of the caretaker. The development of medical science may one day bring about the cure of many now regarded as beyond help. For this reason, persons once in possession of their physical or mental faculties should never be quite lost sight of. Who can tell what new treatment or new remedy may relieve the burdened mind, once the actual seat of trouble is discovered and the right course pursued.

SCHOOLS FOR THE BLIND AND THE DEAF

These are different in general from the sanitarium in that the persons attending are of normal intelligence and health and suffer only from the loss of sight or hearing. The schools are operated according to the regular periods of public schools, having vacations at set times when the scholars

return to their homes. The general conditions therefore are similar to what would prevail in a small coeducational secondary school where the students reside in dormitories and attend classes in the academic buildings. In most schools industrial training is added to the ordinary curriculum so that the graduates become proficient in some trade. There is, however, something of the institutional aspect in that even the comparatively slight defect of deafness or blindness carries with it the mental quality of the dependent, making the persons diffident and not quite self-reliant. Some of this is outgrown in consequence of the education and training received, so that the graduates are able to take their places in the ordinary walks of life.

These institutions are frequently located within the limits of some town, so that the provision for supply storage is lessened though not entirely done away with. The population also is comparatively small and the work less exacting than in the sanitarium.

The difference between schools for the blind and for the deaf turns on the fact that, in the first, sound signals are predominant and in the second those depending on sight. Precautions against accidents depend on these facts. Occupational studies will diverge also on these lines, so that in schools for the blind, piano tuning may be taught for example and in the other typesetting, cabinet making, etc.

The desirable type of housing is similar to the small college. Class rooms generally should, however, not exceed twenty persons to the room. An auditorium is necessary for mass instruction. Dormitory wards are undesirable except for young children. Single rooms are practically imperative on account of temperamental peculiarities of the older students. The boys' dormitory at the Wisconsin School for the Deaf, which has met the commendation of a number of persons experienced in this kind of work consists of a large social and study room on each story with single dormitories opening directly from it. In this room games are played and evening study carried on until bed time. One element of disciplinary control in the building is that when the electric lights are turned off by the monitor on the floor, the power of conversation among the students, being limited to the sign language, is automatically cut off. In general, buildings should be not more than two stories in height.

There is no particular argument here for one storied buildings.

HOUSES FOR DEPENDENT CHILDREN

While blooded cattle are the ones expected by farmers to produce a profit and scrub stock is generally sold, children of almost any race and parentage are supposed to be capable of growing up into high class citizens provided the environment is right. Whatever foundation there may be for this anticipation, it is probably fair to say that the "children of the state" are as well cared for as any of the wards under its care. Something remains to be desired as to the housing of these children; in the usual case. The construction of great buildings for use as homes for children or of any buildings higher than one story, except for administrative purposes, is hardly open to argument. The desideratum for these institutions is the greatest possible amount of sunshine, fresh air, and the absence of stairs, elevators and all other means of raising infants high above the ground.

Out of every considerable group of dependent children, a certain number are found to be defective, subnormal, diseased, malformed or crippled. For these the best hope of recovery lies in the skilled attention of specialists during the early period of growth and before secondary effects have had opportunity to develop. Aside from this, as before stated, abundance of sun and air, correct feeding and good care are the prominent functions of the home. Ample glazed porches in which to sleep and exercise are necessary. Dining rooms with miniature furniture, for learning to eat and play rooms for creeping and walking supplement the ordinary provision of dormitories, infant baths and toilet rooms common to institutions of this type. To this is added kindergarten and school rooms for the larger ones up to the time when they have graduated out of infancy and become boys and girls. A good number of dependent children are offered for adoption into families, care being taken to ascertain that all such are of sound mind and body. The result is that the older boys and girls remaining are mostly those requiring special treatment or for whom there is but small promise for the future.

Evidently the best locations for dependent children's homes will be those quite near to hospitals in which tuberculous affections, infantile paralysis and club foot can be treated according to modern practice, along with affections of the eye, ear, nose

and throat. The proverb of the tree being bent in the way the twig is inclined has especial application to the care and cure of children who otherwise than under the beneficent care of the state, might develop into persons of peculiar character, not to say cranks and possibly criminals.

From this point the discussion will turn to another enterprise of the state, to be expressed briefly by the word correction. There is a distinct relation between the suffering body and the diseased mind. Although certain crimes result from poverty, hardship and failure, and not from causes connected with defects of the natural body, a considerable number of offenses result directly or indirectly from such handicaps. The reflex action of disease, bringing nervousness and irritation, pulls down morale and abets temptation. A sound mind in a sound body is at least one great source of safety to society.

I WAS, BUT I AIN'T

Good bye, Old Doc, I'm off of you forever,
No more pills, powder'n dope—Forever.

* * *

Some meal! pickles, tripe, sauerkraut and cheese
I've eat so much it makes me wheeze.

* * *

What's that! Have I a pain? O, shame and vexation.
By Gosh! It's right down in my mid-section.

Hush, little bellyache, do keep still
You can't hurt me against my will—

For I am good and very steady
I'm a faithful pal of Sister Eddie.

Ouch! but you are a terror

(No—you ain't—you're just an error)
I believe every word for my very self
As written in Science and Wealth—

Wow! but you are a curse

I hope to goodness, you ain't getting worse
Be still! let me concentrate—"mind over matter,"
And soon, old pain, you'll begin to scatter

Jiminy, Gripes! I can't stand *that* long
You must have faith, Sister Eddie is never wrong
I'll read more and more, with thoughts away

From my "tummy," it's the only way
Zowie, Bingo!! I'm all tied in a knot!

Give me that Sloan's Linament—I'd most forgot
It's out in the barn—right in plain sight

I used it on "Old Dobbin" the other night
They say it's good for "Man or Beast"

If I get better it's a "Horse on me" to say the least
Gee! It's Hot! but it seems to hit the spot

Yep, I'm better—quite a lot.

Sister Eddie meant well—but I'm here to say
She never had a bellyache, like *That* anyway!

Or she's thinking of future dollars and cents,

Yes,—I paid the dollars—but you see, I had no sense.

C. A. A., Member, Active Member and Contributor.

Wisconsin Public Sanatoria Offer Best Facilities to Effect Recovery: Willowbrook Has Excellent Record

BY MRS. RUTH MAC MILLAN,
Wisconsin Anti-Tuberculosis Association.

With the ever increasing realization that while a warm, sunny climate is an asset in the cure of tuberculosis, it is by no means an essential, Wisconsin physicians are gradually abandoning the one-time almost universal practice of sending patients to other states to regain their health and are using Wisconsin's own public sanatoria for this purpose. There are still some, however, who send patients in the advanced stages of tuberculosis out to the southwest in the hope that there they may have a chance for recovery, and it is to these physicians that Dr. G. Windesheim, medical director of Willowbrook, the Kenosha county sanatorium, makes this appeal.

"It is nothing short of cruelty to send a patient with advanced tuberculosis away into some far-off state to die," declared Dr. Windesheim in a recent interview. "The doctors who do that undoubtedly do it with the best of intentions, but in 99 cases out of 100 all that actually happens is that the patient dies within a few weeks or months, usually in far greater discomfort than had he remained at home with relatives or friends or in a nearby sanatorium."

As a rule, it is pointed out, the patient in the far advanced stage of tuberculosis has already spent most of his money in trying to regain his health at home, and by the time he is sent away has only the barest means for living expenses, certainly not enough for the comforts that are essential for the welfare of the tuberculosis sufferer. If it is possible for the patient to have absolute rest, competent medical supervision, good, wholesome food and mental quiet far away from home, a warm, sunny climate can only add to his well-being; but such is very seldom the case. It has been proven beyond doubt that the former conditions are essential to the cure of tuberculosis while thousands of cures have been effected in climates that are cold and damp and might generally be considered unfavorable.

That the sanatorium is coming "into its own" and rapidly gaining recognition as the most suitable place for the cure of tuberculosis, is demonstrated by the fact that vacancies in Wisconsin's 19 public sanatoria are becoming the exception rather than

the rule. Willowbrook sanatorium, which primarily serves Kenosha county, but will also accept patients from other counties if there is a vacancy, has not had a vacancy for months, and Miss Ellida Dunker, superintendent of the institution, has been obliged to put into steady use even her one emergency bed.

Willowbrook is one of the few Wisconsin sanatoria that welcomes child patients although it has no special cottage for them. The only institution that has a separate building for children is Muirdale, the Milwaukee county sanatorium. The children at Willowbrook are accommodated in a separate wing on the second floor of the building, and have their meals served in a small dining room apart from the adult patients. Every attempt is made to have the atmosphere cheerful and homelike, and the children are given two hours of regular school work daily. This instruction is given by a teacher, who devotes the rest of her time to the occupational therapy department.

Willowbrook is one of the older as well as one of the most attractive institutions in the state. It is located about three miles from the center of Kenosha, a little more than a mile from the city limits, on an attractive piece of ground. A small farm is conducted in connection with the sanatorium, and the institution gets all its milk, cream and eggs from this source. A few pigs are also raised. While the barns are fairly close to the sanatorium building they are far enough away so that the inevitable barnyard odor does not reach the patients. A special manager is in charge of the farm. At the back of the sanatorium lies a wooded slope of ground several acres in extent, which provides a delightful rambling ground for ambulatory patients.

A new nurses' home is one of the features of which the sanatorium management is particularly proud, and the house is indeed exceptionally attractive both from within and without. Entirely separate quarters for the nurses is one of the projects of nearly every sanatorium which is not already equipped in this way. In addition to Miss Dunker, Willowbrook has five nurses. The sanatorium accommodates 38 patients. An effort is



Beautiful Grounds Surround
Willowbrook Sanatorium,
Kenosha

made to keep a fair percentage of the patients of the ambulatory and convalescing type in order that the morale of the institution may be kept up, but bed-patients are never refused when there is a vacancy. There has not been a death at Willowbrook since October, 1923, and the patient that died at that time died of heart disease, not of tuberculosis.

"No coughs in the dining room" is one of Miss Dunker's policies, and any patient who is so ill that the cough cannot be controlled at meals is counted as a tray patient, and has his meals served either in bed or on a small table in the corridor. This makes the pretty dining room a really attractive place in which to eat. A total lack of "institutional" stiffness and a feeling of comfort per-

vades the sanatorium, and there are as few rules and regulations as possible.

In addition to the services of Dr. Windesheim, medical supervisor of the sanatorium, the institution has availed itself of the consultation service offered by the Wisconsin Anti-Tuberculosis Association and once each month a member of the Association's medical staff confers with Dr. Windesheim on sanatorium problems relating both to the institution itself and to the patients.

Any legal resident of Kenosha county is eligible for care at Willowbrook, and patients who are unable to pay for their care will be admitted free of charge by making arrangements with the county judge. Patients from other counties may be admitted by special arrangement with the county judge of that county in which they are resident.

SAPPING OUR HEALTH WORK.

Somebody is paying for a tremendous amount of red ink, black ink, white paper and postage in spreading propaganda to arouse the public against the "dangers" of vaccination, serums and anti-toxins in the control of disease. One who didn't know the facts might get the impression that the health authorities in urging vaccination and other preventive methods are trying to kill off the population of the United States.

Such propaganda is sapping at the foundations. One of our most valuable assets is the confidence of the people in the work our health authorities are doing. Our health services have all but vanquished a number of scourges and have extended the span of human life. And they have done it largely by methods worked out by Jenner, Pasteur and their successors to make the human body immune.

But there is nothing about that in the propaganda. It rehashes the old stories of sickness caused here and there through the use of serums. There have been such cases. Impure serums and frozen serums have been used unfortunately in a few communities. But these things are understood now and every responsible health department is on its guard against such occurrences.

The propagandists—it might be highly enlightening to know the source of their revenue—would put us back to the days before Pasteur, when man was at the mercy of bacteriological diseases. But we refuse to go back. We propose to go on spreading the gospel of what science is doing for us by the use of serums in the elimination of diphtheria, smallpox and all the other scourges of childhood and manhood.—*The Milwaukee Journal*, April 13, 1924.



THE JOURNAL BOOK SHELF

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- American Illustrated Medical Dictionary (Dorland).** A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with the Pronunciation, Derivation, and Definition. Twelfth Edition, revised and enlarged. Edited by W. A. Newman Dorland, M.D. Large octavo of 1296 pages with 338 illustrations, 141 in colors. Containing over 3000 new words. Philadelphia and London: W. B. Saunders Company, 1923. Flexible Leather, \$7.00 net; thumb index, \$8.00 net.
- Fighting Foes Too Small to See.** Prof. Jos. McFarland, Prof. of Pathology, University of Pennsylvania. F. A. Davis Co., Philadelphia. Price, \$2.50.
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A REVIEW

The Gall-Bladder: Its Past, Present and Future.
The Mütter Lecture of the College of Physicians.
By J. E. Sweet Int. Clinics, Vol 1, Series 34

In the Mütter lecture for 1923, Dr. Sweet, Professor of Surgical Research at the University of Pennsylvania, presents in a fashion somewhat jocular but none the less interesting his ideas in regard to the function of the gall bladder. As a background for the lecture are many years of study and research which the author has devoted to hepatic physiology.

The gall-bladder's past is of course its embryological development. The most interesting observation in this connection is that the liver and cyst both arise from the same fold of the fore-gut and that the gall-bladder therefore has in its ancestry the same cells which give rise to all the important organs of secretion and absorption along the alimentary canal. The author questions the likelihood of such rich material being used for a simple storage organ.

In its present development in most of the higher animals the gall bladder is found under the anterior edge of the right liver lobe, hanging from the cystic duct, and usually attached over at least one-half its surface. It is located at the most dependent part of the biliary system. Its duct is somewhat siphon shaped, angulated, and any pressure or displacement would tend to prevent its emptying. Due to its attachments the gall-bladder could never be completely emptied by the action of its muscular coat. Furthermore the duct is supplied with a spiral fold of mucous membrane, known as Heister's valve, which would seem to prevent any outflow. Possibly the organ is placed where it is so that the respiratory movements may provide a steady and rapid circulation through its lymph vessels.

Histologically the muscular coat is a muscularis mucosae, the purpose of which is to throw the mucosa into folds rather than to produce emptying movements. The lymphatics form an elaborate plexus over the entire organ. Their activity was demonstrated by injecting potassium sulphocyanide into the gall-bladder and emulating one of the lymph vessels. The Prussian-blue reaction was demonstrated almost at once. Bile pigments and bile-salts were also found in this lymph. The mucosa itself consists of high columnar epithelium. A point in the histology of the bile ducts has an important bearing on Dr. Sweet's views. The walls of the bile ducts, particularly the larger ones, are supplied with little sacculations best called the "Parietal saculli."

These are not mucous glands but may be actual supplementary gall-bladders.

What does the gall-bladder do? The anatomical and histological points already mentioned practically eliminate the storage function idea. Instead the author sees an interesting analogy between the pancreatic and hepatic systems. Just as the pancreas, which prepares a digestive fluid for the intestine, has associated with it another organ the islets which add to the blood stream an internal secretion necessary for carbohydrate metabolism, so the liver which adds a secretion to the intestine, has associated with it another organ, the gall-bladder, which adds an internal secretion to the lymphatics for the metabolism of the fats or some of the fat-like bodies.

In support of the hypothesis, Dr. Sweet cites workers who have found evidence of cholesterol absorption by the mucosa of the gall-bladder. Much more important, however, are his investigations of the cholesterol content of the blood before and after cholecystectomy in dogs. Here he finds a great increase in the total cholesterol of the blood immediately after operation. The peak is also reached longer after feeding than before. The increase is due not to the free cholesterol fraction but to that part which is in the form of an ester. After a time, usually some forty days, the cholesterol content of the blood returns to normal. Dogs with the gall-bladder removed also show a great compensatory increase in the parietal sacculations of the bile ducts.

The author interprets his data to mean that the gall-bladder is not an organ of storage but of absorption. Whatever passes in through the cystic duct never again passes out through the same way. The position and anatomy of the organ are all against any other view. The bile in the cyst is eventually absorbed and in this process it would seem that an unknown something passes into the blood or lymph which has to do with the breaking up—the de-esterization—of cholesterol. The problem must halt here until more is known of the physiology of the latter substance.

Dr. Sweet's hypothesis is very attractive and if his cholesterol data are confirmed there would seem to be no question but that he had made a great advance in the physiology of the gall-bladder and cholesterol metabolism. Further reports will be watched with great interest.

Probably that part of his theory which will meet most opposition from physiologists is the denial of any storage function on the part of the gall-bladder. The formation of bile, related as it is to the breakdown of red blood cells, is a continuous process, while many experiments have shown an intermittent discharge of bile into the intestine. It is also a well established fact that the gall-bladder in starving animals is well filled but after a meal it is nearly empty. The musculature of the gall-bladder is innervated by both motor and inhibitory nerves, and these seem related to similar nerves which innervate the sphincter at the opening of the duct into the intestine. Contraction of the gall-bladder seems to be accompanied by inhibition of the sphincter, phenomena which seem explicable only on the basis of the stor-

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age function of the gall-bladder. It may well be that both ideas are right, the gall-bladder serving to store bile until needed in digestion, and to furnish an internal secretion for the metabolism of cholesterol.

W. J. Meek.

We wish to acknowledge with thanks to the publishers the receipt of the first number of two new magazines:

Progress in Chemotherapy and The Treatment of Syphilis. Editor, George W. Roizers, Ph.D., published by The Dermatological Research Laboratories—Philadelphia Quarterly.

The American Journal of Physical Therapy. The Professional Press, Inc., Chicago—Monthly.

Both of these numbers contain much that is interesting and valuable in their respective fields.

The first Journal consists largely of abstracts from recent (some not so recent) literature on the treatment of lues.

The contributors to the second Journal are well known men who are able to speak with authority upon various forms of Physical Therapy and its application in various marked conditions.

Obstetrics for Nurses. By Joseph B. De Lee. Seventh Edition, 620 pages. Illustrated. W. B. Saunders Company, Philadelphia, London.

The seventh edition of this well known work is undoubtedly better than any of the previous ones. It is as valuable for medical students doing dispensary work as for nurses.

The illustrations are excellent and the reading matter is so descriptive and fully explained that one gains a clear conception of the subject.

It is most up-to-date in various particulars, branching into Public Health and Infant Welfare—outlining and explaining the care of mother and child after her return to normal.

A. W. R.

"The Health of a Neighborhood." John C. Gebhart, Director of Social Welfare, New York Association for Improving Condition of the Poor. A Social study of the Mulberry District of New York City. Published and distributed by N. Y. A.I.C.P. Price, 25 cents.

This 22-page pamphlet, reviewing the results and drawing conclusions of a social statistical survey of a foreign settlement (mostly Italian) within the City of New York is a sane comprehensive fairminded survey of industrial, employment, morbidity, mortality and fluctuation of population phases honestly made to gain facts and not to prove theories. Several points of unusual interest are emphasized; the fluctuation in population due to the migration of the more prosperous, the change in type of population by this weeding out of the more fit and the effect of this condition on types of industries, hygiene problems and morbidity and mortality statistics being stressed.

The falacy of drawing hard and fast conclusions from general facts in any survey without careful analysis of these facts is well exemplified by reference to the effect of this one contributing fact, the migration of the more prosperous young couples just establishing families, and the effect on statistics of both adults and the young child.

Contrary to expectation morbidity and mortality statistics did not show any alarming prevalence of conditions due to lack of pre-natal care in a locality largely Italian with large birth rates but rather to those conditions traceable to infections and neglect in their care and spread, pneumonia and tuberculosis giving much the highest figures. Particularly significant was the pneumonia in the small child under five years of age, apparently associated with a high percentage of ricketts.

The importance of health education is thus again emphasized for all ages, and the importance of the public school as an avenue for dissemination of knowledge through the first generation of native born, the ones who later migrate to other localities, again stressed; while the added problem of a residue of population made up largely of the unfit is pointed out. The author advocates hearty cooperation with already existing agencies, notably the baby clinics in their anti-rachetic programs, and health clinics for dissemination of education toward hygienic living and although the importance of the pre-natal clinics was not emphasized by the survey, he advocates their continuance and hearty support. S. I. M.

The Biology of the Internal Secretions. By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College, Member of the American Philosophical Society, Member of the Academy of Natural Sciences of Philadelphia. W. B. Saunders Co., 1924

This book is a most lucid, logical treatise of physical and mental abnormalities due to endocrine disturbances, and is based upon a very logical and carefully worked out correlation of biologic, embryonic and clinical phenomena.

Great stress is laid upon the embryonic mesoderm from which the lymph and blood, heart and vessels, muscle and bone, connective tissue, the major portion of the sympathetic nervous system, and various glandular structures have their origin. This layer of cells, because of its independence both of external relations and of the intake of food, retains more than the cells of either the ectoderm or the endoderm the generalized properties of the simple, primordial, undifferentiated cell, and in consequence reveals the most marvelous polymorphic possibilities. The role of this layer in lymphatic persistence, lymphatic hyperplasia, and the functions of the thymus is brought out.

With this as a basis the origin and structure of the thymus is given considerable attention, and the inference presented that there is a thymic hormone secreted by the epithelial content of the thymus (the corpuscles of Hassall) which is extremely vagotonic in its action, thus accounting for the phenomena of thymic asthma and thymic heart failure.

From this point on the development of the glandular structures into synergistic and antagonistic groups is very logically drawn, and the powerful influence of the sympathetic and autonomic nervous systems upon physical and chemical cellular activities is given much consideration.

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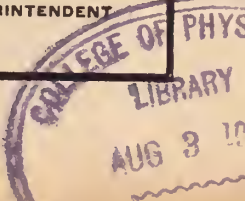


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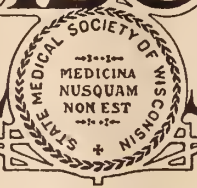
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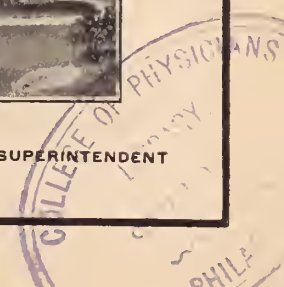


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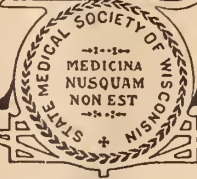
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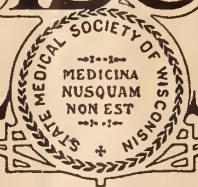
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Incidentally, the smiles produced by S. M. A. are not confined to the babies. They are shared by the physician, pleased at the assistance which S. M. A. gives him in his work, and by the parents, whose smiles are of gratitude to the physician.

We do not distribute samples of S. M. A. broadcast to the medical profession, but to any physician who wishes to observe results in his own practice, we send a supply sufficient to enable him to do so. Please address:

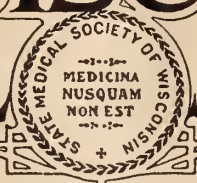
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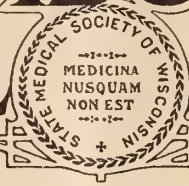
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Waukesha Springs Sanitarium

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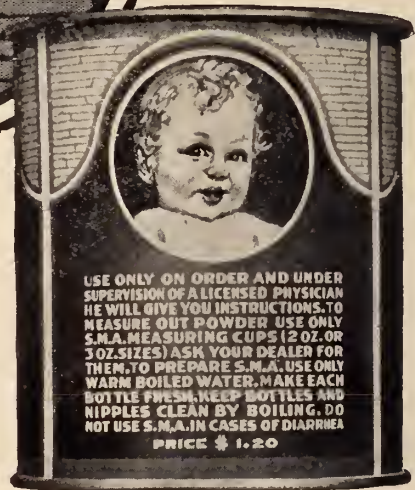
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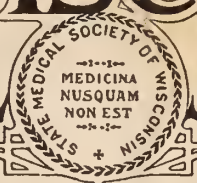
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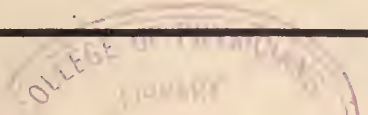


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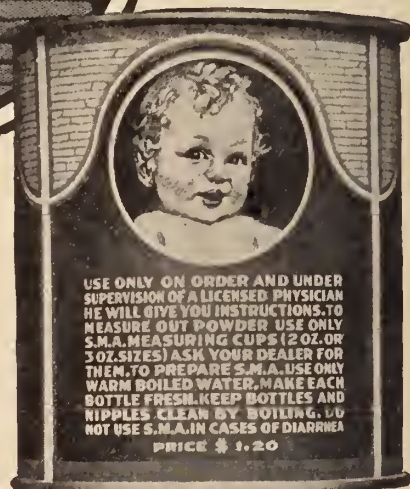


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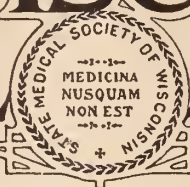


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AFTER months of study, of consultation, and after numerous committee meetings, our Committee on Public Policy and Legislation has presented a program for 1924. This program has been approved by the Council. Based on fundamentals, it seeks to discharge a duty. Because all will be asked to play a part in the accomplishment of this work, all should be conversant with its details. Every member of our Society should read the article describing the broad plans as set forth in this issue.

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Waukesha Springs Sanitarium FOR NERVOUS DISEASES



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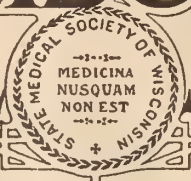
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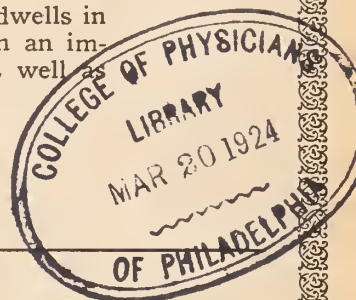
VOLUME XXII
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THE early training of the doctor tends measurably to make us look upon man as a mere machine, on which we work with knife and saw and into which we cast with more or less thought our drugs. It is the fear lest you drift into this materialistic conception which makes me eager that you shall not quite lose touch of the feeling that the soul of a man dwells in this house of clay, and that forever you are dealing with an immensely complicated and ethereal thing, which thinks as well feels.—S. Weir Mitchell.

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Waukesha Springs Sanitarium FOR NERVOUS DISEASES



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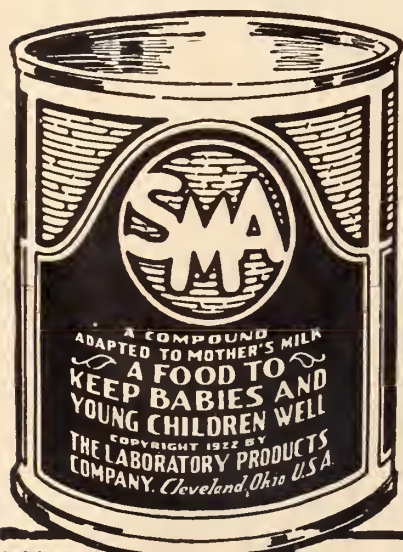
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MORE than three times as much S.M.A. was prescribed in 1923 as in 1922. We believe that the physician who has used it will understand the reason, for he is already aware of the assistance which S. M. A. has given him in his own practice, and he will see in this increase convincing evidence that many other physicians are also obtaining exceptional nutritional results with S. M. A.

From 1915 to 1920 S. M. A. was used only in The Babies' Dispensary and Hospital of Cleveland. In January, 1920 it was made available to all Cleveland physicians. In November, 1921, its distribution was extended so that every physician in the country might obtain it for his little patients. From the time that S. M. A. was first offered to the medical profession, there has been a steady increase in the number of physicians using it, and in the volume prescribed by them.



S. M. A. is a food for infants deprived of breast milk, or who require nourishment in addition to what the mother can supply.

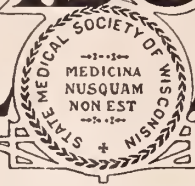
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A MESSAGE TO THE LAY READER.

This, the First Annual Lay Issue, is dedicated to its lay readers. The material contained in this number is published with the hope that you will find it to be of interest and value.

The basic problems of health and disease affect us all alike. The means are now at hand by which we may solve many of these problems. In solving them together we shall add years to our lives, bring material benefit to the communities and state in which we live, and assure for each of us increased happiness.

Known means for the prevention of disease can only be made most effective with the cooperation of men and women in every walk in life. That cooperation will come with a more general understanding of the fundamental problems. We are trying to make that information available to you. Such is the purpose of this issue.

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Waukesha Springs Sanitarium

FOR NERVOUS DISEASES

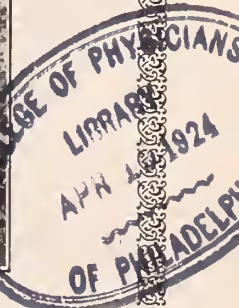


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What is S.M.A.?

S. M. A. is an adaptation to breast milk which resembles breast milk both physically and chemically.

S. M. A. in addition to giving excellent nutritional results in most cases, also prevents nutritional disturbances such as rickets and spasmophilia.

S. M. A. requires no modification or change for normal infants. As the infant grows older the quantity is merely increased.

S. M. A. requires only the addition of boiled water to prepare.

(Orange juice, of course, should be given the infant fed on S. M. A., just as it is the present practice to give it to breast-fed infants.)

Why was S. M. A. developed?

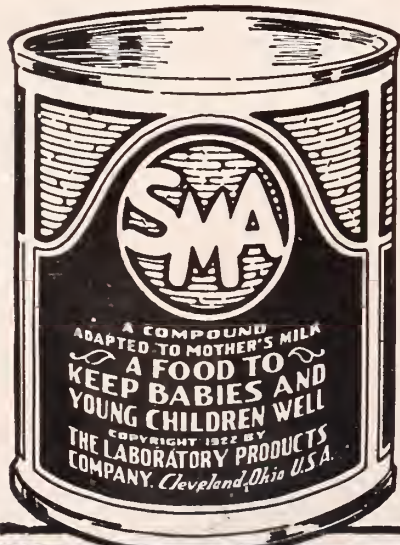
Because there is a real need for an adaptation to breast milk which will give satisfactory nutritional results in the great majority of cases, which includes the preventive factors, and which is, at

the same time, so simple to prepare that the physician can rely on the mother to follow his directions accurately.

How is it possible to feed S. M. A. to infants from birth to twelve months of age without dilution or change?

The answer to this question sounds the keynote of the success which thousands of physicians are having with S. M. A. It is not necessary to modify S. M. A., for *the same reason that it is not necessary to modify breast milk*:—for S. M. A. resembles breast milk not only in its protein, carbohydrate and salt content, but also *in the character of the fat*. Since the very young infant can tolerate the fat, as well as the other essential constituents in S. M. A., it is possible to give this food *in the same strength*, to normal infants *from birth to twelve months of age*.

As the infant grows older, therefore, it is only necessary to increase the *amount* of S. M. A.



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Other Original Articles by

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Results of Child Welfare Work in Milwaukee

By I. F. Thompson

Physicians and the Workmen's Compensation Act

By Hon. F. M. Wilcox, Chairman, Wisconsin Industrial Commission.

The Part the Physician Should Play in Public Life

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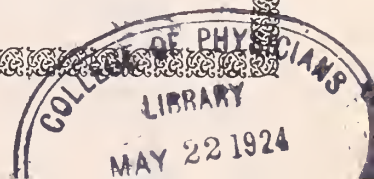


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