

New Mexico Medical Journal

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E . D . I . T . O . R . I . A . L

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FAVOR THOSE WHO FAVOR US.

DOCTOR F. T. B. FEST.

The secretary of the Las Vegas Medical Society reports the death of doctor Frances T. B. Fest at Port Limon, Costa Rica on March 1th last. Bright's disease was the cause.

Doctor Fest was a former president of the New Mexico Medical Society and for a time was editor of this Journal.

A few years ago doctor Fest left New Mexico and took up his work in connection with the United Fruit Company's Medical Department and was assigned to Costa Rica. He continued his membership in the Las Vegas Medical Society and in the New Mexico Medical Society.

In a future issue we hope to give a more extended account of his life and work.

To his bereaved family we offer our sympathy.

THE NOON MEAL AT HOME, WITH SPECIAL REFER- ENCE TO THE CHIL- DREN

There is no reason why the ordinary family dinner should not be suitable for school children or served in a way that adapts it to their needs, according to Farmers' Bulletin 712, "School Lunches," just issued by the U. S. Department of Agriculture. The usual first course of meat and vegetables contains nothing, except the meat, which can not be given even to the youngest children. The vegetables, providing they are carefully prepared by simple methods, are specially needed and can often be made attractive to children by being served with a little meat gravy. As a substitute for the meat itself, milk can be provided in the case of the younger children. These articles, with the bread and butter, provided most of the food needed.

The dessert course is suitable for children as well as for grown people unless it consists of rich pastries or puddings. The latter are not considered wholesome for

children, if for no other reason than that they are likely to lead to over-eating. Such desserts as fruit, fresh or cooked, with cake; cereals with milk or cream, and sugar; custards and custard puddings; gelatin dishes; simple ice cream; water ices; and other simple desserts may be given.

Whether or not the family meal is healthful for children depends not only on the food materials selected, but also on the way in which they are cooked. Simple methods are to be preferred from the standpoint of health as well as from that of the housekeeper's time. All dishes that are likely to contain overheated and scorched fats, such as foods carelessly fried in a pan in a small amount of fat, should be avoided. Deep-fat frying is open to fewer objections, since, if properly done, foods will absorb little fat and the fat will not scorch. Vegetables cooked in water or in their own juices and seasoned with salt and a little butter or cream, are easier to prepare than those that are served with white sauce, scalloped, or cooked in other elaborate ways.

What is said above applies equally to all meals. There is, however, one special precaution that applies to the noon meal when it is hurried. This refers to tough, hard foods that are likely to escape proper mastication. It is a mistake to think that the foods given to children must always be soft or finely divided, for children's teeth need exercise quite as much as their muscles do. When time for eating

is limited, however, it is well to omit foods that are difficult to chew, and in extreme cases it may be necessary to serve only soft or finely divided foods—sandwiches made from crustless bread with finely chopped fillings, for example. Before resorting to this; however, it is well to make sure that the time for eating and for insistence on good table manners is not unnecessarily cut short. The advantage of putting the meal on the table promptly and of having foods served in individual portions, or at least ready to eat when they are brought to the table, should be kept in mind. To have the meat already sliced and the dessert in cups instead of in one large dish from individual portions must be served, and to follow the same general plan with other foods, may change a hurried meal into one at which there is plenty of time for attention to details essential to health and good manners.

If special lunches, different from those prepared for the family in general, are to be given to school children, the following are suggested as bills of fare. They are only typical and many others might be given which would be just as good.

SUGGESTED BILLS OF FARE FOR THE HOME LUNCH.

1. Eggs, boiled, coddled, scrambled, or poached; bread and butter; spinach or other greens; cake.
2. Beef stew with vegetables; milk; crisp, thin tea biscuits; honey.
3. Dried bean or pea puree; toast; baked apple; cookies.
4. Vegetable-milk soup; swie-

back; rice with maple sugar and butter or with milk or cream.

5. Potato chowder; crackers; jelly sandwiches.

6. Cold meat; creamed potatoes; peas; bread and butter; frozen custard or plain ice cream and plain cake.

7. Lamb chop; baked potatoes; bread and butter; sliced mixed fruits; cookies.

8. Baked omelet with spinach, kale, or other greens; bread and butter; apple sauce; cake.

9. Milk toast; string beans; stewed fruit; cake.

10. Boiled potatoes; codfish gravy; bread and butter; lettuce; custard.

PRACTICAL LUNCHESES FOR SCHOOL CHILDREN.

What shall school children be given to eat at noon in the lunch basket, at the home lunch table, or in the lunch room operated by the school authorities? To help answer this question, which almost every mother and many of the educational authorities are asking constantly, the U. S. Department of Agriculture, through the Office of Home Economics, has just issued Farmers' Bulletin No. 712, "School Lunches." This bulletin was prepared by Miss Caroline L. Hunt and Miss Mabel Ward, under the direction of Dr. C. Langworthy of the States Relations Service. The bulletin, after discussing the general principles of feeding school children to provide for activity and develop them into sturdy manhood

and womanhood, gives a number of simple and appetizing menus for the school lunch basket and bills of fare and recipes for preparing inexpensive and nourishing noonday meals or hot dishes for children, either at home, on a school stove, or in the domestic science kitchen.

RELATION OF LUNCH TO OTHER MEALS

In feeding a child or anyone else, the authors of the bulletin point out, it is not wise to think of any one meal apart from the other two. It is seldom convenient to provide at one meal all the materials needed by a growing body, and those which are omitted from one meal should be supplied by one of the other meals. The noon meal for children, however, where food must be prepared at home in the morning to be eaten elsewhere at noon, or where the children must hurry home, eat quickly, and then rush back to school, offers special difficulties and deserves the careful attention of parents.

DIETARY ESSENTIALS FOR THE GROWING CHILD.

Before it is possible to plan a rational basket or other luncheon for children, it is necessary for the mother to understand the general essentials of diet for young people. These essentials in general are an abundance of simple foods, carefully prepared, and of sufficient variety to provide energy, repair waste, provide elements for building bone and tissue, and stimulate growth. To do this most effectively the three meals each day must supply the child with sufficient food from each of the following classes:

1. *Cereal or starchy foods.*—Cereals, eaten principally as bread, supply nearly half of the protein (commonly thought of as tissue-building material) and nearly two-thirds of the fuel or energy in the American diet. The quality of the bread, therefore, is extremely important. Its crust should be crisp and deep (indicating thorough baking) but not hard or burned. It should be light and free from any suggestion of sourness or rancidity. The crumb should be elastic and yet capable of being easily broken up in the mouth without forming a sticky mass, or being too dry to taste good. These qualities can be secured in rolls and biscuit as well as in ordinary bread, provided they are cooked thoroughly. The objection to hot bread is due to the fact that undercooking may leave it soggy on the inside, rather than because such breads are eaten hot. The child's appetite for bread may be stimulated by using different kinds of bread, swieback and crackers, by the addition of raisins, currants, or nut meats, and sometimes by cutting the slices into fancy shapes.

Cereal mushes and ready-to-eat breakfast foods supply nearly the same nutrients as bread, a half cupful of cooked cereal being about equivalent to a good-sized slice of bread. A tablespoonful of cream is about equivalent in fat to a liberal spreading of butter.

2. *Protein-rich foods.*—While bread and cereals come near to fulfilling one of the important requirements of diet—a correct proportion

of nutrients providing fuel only and those useful for body building—other foods which provide protein in larger proportion as compared with fuel should not be neglected. These foods include milk, meat (except the very fattest) fish, poultry, eggs, cheese, dried beans, cowpeas, peas, peanuts, and almonds, walnuts, and other nuts. Nuts, of course, also contain considerable fat. Milk is an absolute essential, not only because it contains a large number of nourishing substances in forms easily assimilated, but also because, in some way not now fully understood, milk seems to promote growth and help the body of a child make good use of other foods. Milk is rich in most kinds of mineral matter, particularly lime, useful in the development of bone and tissue.

Milk should never be omitted wholly from the diet of a child. If not used at luncheon it should appear at other meals. For luncheon, however, it has been found that such dishes as milk toast, milk soups made with vegetables, fish or vegetable chowders, and cocoa are valuable foods, easily prepared at home or in the school, because they require no oven and call only for simple utensils. White sauces made of vegetable juices, milk, or broth, differ from milk soup largely in that they contain more flour. When considering milk, the food value of skim milk, which contains a larger percentage of protein though less fat than full milk, should not be overlooked.

Eggs, the next of the protein

foods commonly given to children, contain much iron and their yolks are rich in fat.

3. *The fatty foods.*—The fatty foods, such as butter, cream, salad oils, bacon, and similar foods, are important sources of energy and nourishment for the growing body. Fats are best given in such simple forms rather than in rich pastries or sweets.

4. *Fresh vegetables and fruits.*—Because ordinary vegetables such as potatoes, greens, lettuce, green peas and beans, asparagus, and others, and the ordinary fruits do not contain much fat or protein, their value in the child's diet is frequently underestimated. These things, however, should be considered a necessary part of the diet of the child for the very important reason that they furnish mineral and other materials required to form bone and tissue as well as to repair waste and supply some energy. Green vegetables are valuable particularly because they contain iron in forms which the body can utilize. Fruits contain a considerable percentage of sugar, especially when they are dried, and sugar is a quickly-absorbed fuel food. As things eaten raw transmit germs, care should be taken to wash vegetables and fruits thoroughly in several waters. Many fruits, especially those with skins, can be dipped safely into boiling water, while those thick skins, such as oranges, bananas, apples, may be safely washed even with soap. Dried fruits when washed and put into an oven to dry absorb some of

the water, and thus are softened and improved in taste.

5. *Sweets and desserts.*—Sugar, as has been said, is a quickly absorbed fuel food and simple sweets have their place in the diet of all children. If not served between meals or at times when they destroy the appetite for other needed foods, there is no objection to them. They may be served in the form of cake not rich enough to be classed as pastry, cookies, sweet chocolate, simple candy, honey, dried or preserved fruits, maple sugar, and loaf sugar. In general, fruits, fresh, baked, or stewed, or raw, and simple sweets are much better desserts for children than rich pastry which contains a large amount of fat.

The following suggested menus for the school lunch basket give the child, as nearly as is practicable in such a meal, the proper proportions of the different classes of foods:

FOR THE BASKET LUNCH.

1. Sandwiches with sliced tender meat for filling; baked apples, cookies or a few lumps of sugar.

2. Slices of meat loaf or bean loaf; bread and butter sandwiches; stewed fruit; small frosted cake.

3. Crisp rolls, hollowed out and filled with chopped meat or fish, moistened and seasoned, or mixed with salad dressing; orange, apple, a mixture of sliced fruits, or berries; cake.

4. Lettuce or celery sandwiches; cup custard; jelly sandwiches.

5. Cottage cheese and chopped green pepper sandwiches, or a pot of cream cheese with bread and but-

ter sandwiches; peanut sandwiches; fruit cake.

6. Hard-boiled eggs; crisp baking powder biscuits; celery or radishes; brown-sugar or maple-sugar sandwiches.

7. Bottle of milk; thin corn bread and butter; dates; apple.

8. Raisin or nut bread with butter; cheese; orange; maple sugar.

9. Baked bean and lettuce sandwiches; apple sauce; sweet chocolate.

The provision of a bottle of milk is suggested in one of the menus, but of course taking milk to school in warm weather would be impracticable unless means were provided for keeping it chilled until it is consumed.

The school lunch container, the specialists point out, should permit ventilation, exclude flies, and should be of a material which permits thorough washing in boiling water. If glasses, paper cups or spoons are provided, the child should be encouraged to wash his hands before each meal, and for this reason paper towels, paper napkins or clean cloths should be provided. Food that does not require ventilation should be carefully wrapped in paraffin paper, and the soft or liquid foods should be packed either in jelly glasses, screw top jars, or paper cups.

It is, of course, very good for the child to have at least one warm dish at noon—a vegetable milk soup, vegetable or fish chowder, meat and vegetable stew, or a cup of cocoa. These things are easily prepared on ordinary stoves with ordinary uten-

sils in a school where interested mothers or teachers agree to do the cooking and serving and where dishes and spoons are available. Almost any school, however, could by cooperative arrangement with the parents see that the children get a cup of good milk at noon.

Soft fruits, such as berries, which are difficult to carry in lunch baskets also might be prepared at school (the meat or milk dish and the fruit) the lunch basket would omit the meat dishes, and provide merely bread and butter or crackers and cake.

PROVIDING HOT DISHES FOR CHILDREN IN COUNTRY AND CITY SCHOOLS.

In the belief that a hot dish at noon, if only a bowl of milk soup or a cup of good cocoa, is highly important to school children, many schools throughout the country are either supplying a regular hot luncheon to school children, or are providing a single hot dish with which the children coming from a distance can supplement the cold food in their lunch baskets. In most cases the children bring money with them and buy the dishes at cost price. Those in charge of the lunch room see to it that nothing is for sale that would be hurtful to the children, and direct them in their purchases so that they will not buy merely sweets or pastry. This overcomes the danger of the child's spending his money unwisely or patronizing an insanitary shop.

To assist schools wishing to undertake this desirable activity,

either through teachers or groups of cooperating mothers, the home economics specialist of the U. S. Department of Agriculture, in Farmers' Bulletin No. 712, suggest the following economical and easily-prepared bills of fare for the school lunch:

1. Vegetable-milk soup, crackers, rolls, fruit, plain cake.
2. Meat and vegetable stew, bread and butter; sweet chocolate.
3. Boiled custard, lettuce sandwiches, fruit, cookies.
4. Dried codfish chowder, crackers, fruit, maple-sugar sandwiches.
5. Bean soup, crackers, baked apples, sponge cake.

In addition the school can serve hot cocoa, cooked fruits, berries, and liquid or other foods which it is difficult to carry in baskets. Almost any school by the use of paper cups can make good milk available to children at non. The school can to children at noon. The school can cookies, swieback, or crackers supplied from the outside.

As the serving of an entire luncheon calls for considerable equipment and dish washing, many country schools will find it easier to supply simply one hot dish, a cup of cocoa, or a glass of good milk. The milk could easily be provided through arrangements with parents or nearby farmers and is particularly useful to children in warm weather when it is impracticable for them to bring bottles of milk in their baskets.

In a number of city schools the pupils are provided with trays and help themselves to foods placed on

a counter. At the end of the meal they return the trays and dishes and thus reduce the amount of help required. In some large cities a trained supervisor is employed to regulate all the public school lunch rooms. In other schools the preparation of lunch is made a practical exercise for classes in cooking and domestic science.

It is in the small country schools with only one teacher, however, that the midday meal presents the most difficult problems. Only a teacher with ingenuity and enthusiasm for her work can carry out the plan, and even with such a teacher the active cooperation of parents is highly important.

The simplest equipment includes a large kettle, measuring cup and spoons, paring knife, mixing spoon, dish pans, and towels. The pupils should be willing to bring plates, cups, bowls, and spoons from home. The boys and girls can easily make curtained shelves for the utensils. A fireless cooker, which permits the preparation of meat stews, meat and bean soups, and cereal mushes, can easily be made by the pupils as a class exercise.

The older girls, taking turns in groups, commonly prepare the special dish for the day. In good weather the luncheon can be served out of doors, but at other times it may be necessary to serve it on the children's desks. This will not be objectionable if the desks are first cleaned and covered with clean paper or paper towels, and if the building is well ventilated and screened against flies. Safe water

for drinking, washing hands, cooking, and washing dishes is essential, and any water that is at all doubtful should first be boiled.

**STATE HEALTH DEPARTMENTS
FIGHTING CANCER**

**New York "Health News" Urges Vigilance
and Early Surgical Removal. Delay
Chief Cause of High Death Rate.**

Among the many agencies now active in the campaign against cancer, several of the most progressive state boards of health are making notable efforts to spread the gospel of hope which is found in the early recognition of the danger signals of the disease and its prompt and competent treatment. The health authorities of Massachusetts, New Hampshire, Ohio, Indiana, Michigan, Virginia, North Carolina, Kentucky, West Virginia and Idaho have been especially active in disseminating trustworthy information and advice about the prevention and cure of cancer.

The New York State Health Department, under the leadership of Commissioner Hermann M. Biggs, is the latest to enlist its forces in the war against cancer. The entire March number of "Health News," the Department's Monthly Bulletin, is devoted to consideration of the nature, prevalence and treatment of malignant disease with the object of creating among the people "a healthy vigilance which leads to the taking of expert advice on the first appearance of danger signals."

"There is nothing that any one of us can do to prevent the occurrence of cancer except in avoiding certain specified causes of local irritation" says "Health News" in an editorial which opens the discussion. "On the other hand, there is incontrovertible testimony as to the probability of its cure in a large percentage of cases if taken in time. That cure consists in the complete surgical removal of the growth at the earliest possible moment. Early diagnosis, early removal—there is not now nor has there ever been any other successful method of curing the disease."

The leading article in this special issue of

the Health Department's Magazine is by Dr. Francis Carter Wood, Director of Cancer Research at Columbia University. Additional papers are contributed by other notable figures in the scientific world, including Frederick L. Hoffman, LL. D., statistician of the Prudential Insurance Company and Chairman of the Statistical Advisory Board of the American Society for the Control of Cancer, and Dr. Harvey R. Gaylord, Director of the New York State Institute for the Study of Malignant Disease.

Writing on "What People Should Know About Cancer," Dr. Wood endeavors to dispel some of the mistaken popular notions which have grown up regarding this disease. He disposes of the stories regarding "cancer villages," "cancer houses," or "cancer belts," briefly showing that the occurrence of a number of cases in a house usually is due to the fact that the occupants are old people; that "cancer villages" usually are small towns from which most of the young people have emigrated, and that in like manner "cancer belts" are found to be sections of the country where the population is distinctly aged.

The idea that cancer is hereditary is likewise made light of by Dr. Wood and he declares that there is no reason whatever to worry because one member of a family has suffered from the disease. "It does not follow that any other member of a family will have it," says Dr. Wood, and quotes from the laws governing statistics to show that if there are two or more cases in a family it is due purely to chance.

The quackery which is practiced by unscrupulous people in the treatment of cancer is severely censured both by Dr. Riggs and by Dr. Wood. It is made perfectly plain that cancer is comparatively easy to cure if it can be taken in time. The Bulletin declares that if the simple truth is thoroughly established that cancer begins in comparatively innocent form and in most instances in a recognizable form, it can be successfully combated. Dr. Hoffman in his paper emphasizes "the supreme importance of the earliest possible diagnosis and the incalculable value of the earliest possible medical and surgical treatment." Dr. Wood puts stress on the declaration that if the disease can be diagnosed in its early stage, the cancer can be removed

with very great possibilities as to permanent cure. "The Commissioner of Health takes this opportunity," says Dr. Biggs, "to warn the people of the state against the expenditure of money—often ill afforded—the raising of false hopes and, above all, the waste of precious time through the use of alleged cancer cures and consultation with their unscrupulous purveyors."

In anticipation of a popular demand for information regarding cancer, a large edition of the "Health News" for March has been printed. Any one who desires the full information as contained in the magazine may secure a copy of the publication, free of charge by addressing the State Department of Health at Albany, N. Y."

Health conditions will be linked with nearly every phase of the problems of charity and correction to be considered at the forty-third annual meeting of the National Conference of Charities and Corrections at Indianapolis, Indiana, May 10 to 17. One section, that on health, will be devoted entirely to a discussion, by physicians, of the part the medical practitioner and surgeon may play in social work.

Dr. J. N. Hurty, secretary of the Indiana State Board of Health, is chairman of the section on health and Dr. Theodore B. Sachs, of the Municipal Tuberculosis Sanitarium of Chicago, is vice chairman. In the general session devoted to subjects of wider popular interest Dr. Eugene L. Fisk, director of hygiene of the Life Extension Institute, New York, and Professor L. J. Rettger, of the Indiana State Normal School, will discuss longer and more effective living.

In the section meetings there will be a symposium on disease, ill health, and sickness, and their bearing upon crime, insanity, and poverty. The speakers will be Dr. David C. Peyton, superintendent of the Indiana Reformatory, and Dr. S. E. Smith, superintendent of the Eastern Hospital for the Insane, at Richmond, Indiana. Dr. E. R. Hayhurst, of the Ohio State Board of Health, will lead a discussion of industrial hygiene. The relation of venereal diseases to public and individual health will be considered by Dr. C. S. Woods, superintendent of the Methodist Hospital, Indianapolis, and Dr. William F. Snow,

secretary of the American Social Hygiene Association. A number of dental surgeons will also participate by giving their views on the relation of oral hygiene to public and individual health.

Other sections allied in subject matter to that on health will take up the problem of inebriety and the relation of feeble-mindedness and insanity to social questions. The former division of the conference will make a distinct contribution by presenting the results of an inquiry among large employers as to the results attained from their prohibition of drinking among employes.

A broad field of community problems will be covered by six other sections of the conference. That on the family and the community will take up the co-ordination of civic effort in small communities. In its general session it will consider conditions adverse to efficient public work under democratic government.

A section on unemployment will examine into the degree to which social workers are prepared for the next period of stress. Graham Romeyn Taylor, of The Survey, is in charge of a section on the promotion of social programs, in which representatives of labor, business men, editors, and public officials, will give their ideas on the relation of social workers' programs to the community in general.

The growing tendency to put relief work in the hands of public agencies will occupy much of the attention of a section on public and private charities. Problems connected with the organization and administration of charity work and the keeping of proper records will also be discussed.

The conference will be opened on the evening of May 10 with an address by the president, Father Francis H. Gavisk, in which the keynote of the entire gathering will be struck. A talk of exceptional public interest will also be given at this inaugural session by Ernest P. Bicknell, director of civilian relief of the American Red Cross. Mr. Bicknell will discuss war relief and his own experiences close to the firing lines in the various European war zones.

There were over two hundred thousand students in the colleges of the United States last

year, counting the number of pupils in the preparatory departments of these institutions, and the number of graduates made up a great army. Six per cent of these college graduates will become doctors. There are among them anatomists, bacteriologists, neurologists, gynecologists, laryngologists, ophthalmologists, allopathists, homeopaths, medico-legalists, mental hygienists and lots of others with just as long names, and yet only one million persons died in this country last year. How many more would have died but for the progress of medical science only a careful examination of incomplete mortality tables could show in a way. It is an encouraging sign that there are fewer and far better medical schools in the United States now than there were eight or ten years ago; for whereas in 1905-'06 there were 123 regular schools of medicine with 4,877 teachers and 24,927 pupils, in 1913-'14 there were only 86 regular schools with 6,466 teachers and 15,789 pupils. The courses of study are harder, the conditions of graduation more difficult, and the equipment of the schools superior to anything ever before known.

Most of the medical students who complete their courses follow their profession in the rural districts. They are not specialists but do what is called a "general practice," and must have a general knowledge of all the 'ologies for which the specialists stand, because, as a rule, their patients do not possess large means and must depend for relief from their ills upon the sound judgment, trained skill and faithful service of the country doctor. There are thousands of him in the United States, which fact inclines the writer to say that every country doctor in this land ought to be an active worker in the good roads movement. It was said recently by a distinguished surgeon, when Congress was paltering with the provision that should be made for the medical branch of the military service, that word was sent out to the doctors throughout the land about it and immediately they began to write letters. The effect was almost instantaneous and the desired provision was made. "There are thousands of them and they represent one million voters," observed a wise old politician. They are closer to more people than the members of any of the other learned professions. They

know what bad roads mean. They travel over them day and night every day and night in the year, and how impossible it is to reach their patients oftentimes when the issues are of life or death.

Even under the most favorable conditions, the life of the country doctor is hard, a life of self-sacrifice, of self-abnegation. He is about his business all the time. He comes when he is called and where. He lives for others and his work is the work of alleviating human suffering, comforting human sorrows, saving human life. He does not receive much applause from the world about him and does not care for it. His charity is unmeasurable, his rewards are insignificant. He practices his profession under the hardest conditions. As a general thing, his patients do not live in luxurious surroundings, but are of the plain people rather more worth the saving than they who dwell in kings' palaces, and he has to deal with them as he finds them, whether in lowly hut or grand mansion. Time with him and with the patient waiting his ministrations is oftentimes the deciding factor in life or death. Only a few days ago, in Washington, the Capital of the Nation, where the streets might well be called golden because of what they have cost, a woman who had been run down by an automobile died, as the attending physician asserted, because under the traffic regulations the ambulance dispatched to the scene of the accident was compelled to run so slowly that death intervened. Scores of cases could be cited doubtless by country doctors of deaths that might have been avoided had it been possible for them to reach the patients in time to minister prompt relief. It would have been possible but for the almost impassible condition of the roads on which they are compelled to travel on their missions of mercy.

Few people who live in the towns with paved and lighted streets can appreciate the fearful darkness that falls upon the roads in the country when the sun goes down, and it is by these ways that the country doctor must travel in rain and snow and wintry weather whenever the call comes for his services. He does his bit faithfully. There are few slackers in this tribe. Dr. William McLure, whose story is told in Ian McLaren's "Bonnie Briar Bush," was typical of his sort,

and there are thousands like him in this country; and when he has worn his life in service to his neighbors, all the people of glen, highland or marsh pay him tribute, even if none thought of making his ways easier when he was riding to their relief. Taking men as they are in the large, the wonder is that there any who would choose the profession of the country doctor, the most devoted and consecrated of all who serve humanity. It is feared that the country people do not think about it, else they would insist for their own protection upon the building of better roads over which not only would they be able to transport their products and transact business but by which in time of sorest need the country doctor could journey with expedition to those requiring succor.

It is for professional reasons and for the sake of humanity that the American Highway Association would invite the practical co-operation of the country doctors everywhere in pressing the good roads movement. If each one of their number would enlist in this great practical work and become an active evangelist of this new gospel, the effect would be almost instantaneous and the office-seekers and politicians would flock to the cause like doves to their windows. The time for working the roads with the best results is at hand, and if the country doctors could prevail upon the people in their respective districts to take hold of the subject in earnest the roads would all be improved before the next season begins. It is not meant that the work could be finished in a few short months but that many of the rough places could be made smooth and that the bottomless pits could be bridged over temporarily at least and until permanent work could be done. That would follow once the people could see for themselves what good roads meant for their personal comfort as well as their industrial profit. Physicians are described by one of the writers in the old Spectator as "a most formidable body of men."

The addition of saponin to food mixtures which are sold for use in place of white of eggs is regarded by the Bureau of Chemistry of the Department of Agriculture as consti-

tuting adulteration within the meaning of the Food and Drugs Act. In "Service and Regulatory Announcements No. 17" it is stated that the practice is usually adopted for the purpose of concealing inferiority and that therefore it comes within the definition of adulteration in the Food and Drugs Act. Saponin is used extensively in so-called substitutes for white of egg for the purpose of producing foam and thus giving the articles a fictitious appearance of body and therefore of food value.

Saponin is a substance that when dissolved in water foams like soap. It is extracted from plants known as soapbark and soaproot, and a few other plants, by boiling them in water. Its name is derived from the Latin word *sapo*, which means soap. When saponin is added to the so-called substitutes for white of eggs it produces a foam similar in appearance to the foam produced by genuine white of egg.

Boards will be convened at the Bureau of Public Health Service, 3 "B" Street, S. E., Washington, D. C., and at a number of the Marine Hospitals of the Service, on Wednesday, May 31, 1916, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of Assistant Surgeon in the Public Health Service.

The candidate must be between 23 and 32 years of age, a graduate of a reputable medical college, and must furnish testimonials from two responsible persons as to his professional and moral character, together with a recent photograph of himself. Credit will be given in the examination for service in hospitals for the insane, experience in the detection of mental diseases, and in any other particular line of professional work. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet, 2 inches, in height, with relatively corresponding weights.

The following is the order of examination: 1, Physical; 2, Oral; 3, Written; 4, Clinical.

Candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

Examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise covers the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Passed Assistant Surgeons after twelve years' service are entitled to examination for promotion to the grade of Surgeon.

Assistant Surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon-generals \$4,000, a year. When quarters are not provided, commutation at the rate of \$30, \$40, and \$50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years up to 40 per cent after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address "Surgeon-General, Public Health Service, Washington, D. C."

The next examination for admission into the Medical Corps of the Navy will be held on or about June 16, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash.

The applicant must be a citizen of the United States, a graduate of a reputable school of medicine, and must apply for permission to appear before a Board of Medical Examiners. The application must be in the handwriting of the applicant, and must be

accompanied by the following certificates:

(a) Letters or certificates from two or more persons of good repute, testifying from personal knowledge to good habits and moral character.

(b) A certificate to the effect that the applicant is a citizen of the United States.

(c) Certificate of preliminary education. The candidate must submit a certificate of graduation from an accepted high school or an acceptable equivalent.

(d) Certificate of medical education. This certificate should give the name of the school and the date of graduation.

(e) If the candidate has had hospital service or special educational or professional advantages, certificates to this effect, signed by the proper authorities, should also be forwarded.

Application should reach the Bureau of Medicine and Surgery not later than June 5, 1916.

Successful candidates are appointed Assistant Surgeons in the Medical Reserve Corps, and if so recommended are subsequently assigned to duty, with full pay and allowances, in attendance upon a course of instruction at the Naval Medical School, Washington, D. C. This course begins annually about October first and lasts about six months. Upon the completion thereof the student officers are given their final examination and, if found qualified, are commissioned as Assistant Surgeons in the regular Medical Corps of the Navy.

Assistant surgeons are examined for promotion at the expiration of three years' service, and, if successful, become passed assistant surgeons. Promotions to the higher grades are made in the order of seniority to fill vacancies as they are created (by resignation, retirement, or death), and for each promotion a physical and professional examination is required by law.

The pay of an assistant surgeon is \$2,000.00 per year on shore duty, and \$2,200.00 at sea. At the expiration of the three years mentioned in the preceding paragraph, if successful in passing the examination for the rank of passed assistant surgeon, pay on shore is \$2,400.00; at sea, \$2,640.00. After a total of five years in the service, pay on shore is \$2,640.00; at sea, \$2,904.00. Both at sea

and on shore, quarters or their equivalent are provided; if these are not available on shore duty, an ample, appropriate allowance is provided for rental, heat, and light of same. An allowance of eight cents a mile is also provided when traveling on orders.

Full information with regard to physical and professional examinations, with instructions how to submit for application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

The following licenses were granted by the Board of Medical Examiners at its last meeting, January 10th:

Upon credentials: Dr. A. S. Cecchini, University of Colorado, 1913; Dr. W. G. Simón, University of Colorado, 1913; Dr. H. R. Taylor, University of New York, 1912; Dr. C. P. Casauranc, National School of Medicine, 1913, Mexico City; Arthur Anderson, University of Kentucky, 1911; Dr. S. D. Austin, Cumberland College of Physicians and Surgeons, 1910; Dr. S. H. Eckles, Medico-Chirurgical, 1913; Dr. J. H. Wiggins, University of Alabama, 1909; Dr. J. A. Stander, University of Denver, 1899; Dr. E. C. McKown, Tulane University, 1896; Dr. A. C. Pratt, University of Southern California, 1904; Dr. E. P. Davis, University of Oklahoma, 1912; Dr. J. C. Darling, Northwestern Medical, 1912; Dr. R. M. Cox, University of Southern California, 1914.

By reciprocity: Dr. C. E. Collins, Gateway City Medical, 1904, Oklahoma; Dr. A. R. Rhonalt, Creighton Medical, Omaha, 1915, Kansas.

By examination: Dr. L. R. Booth, Kansas City Medico-Chirurgical, 1901; Dr. C. M. Hazen, Bennet Medical College, 1911.

W. E. KASER, Secretary.

The following bill has been introduced in Congress:

64th Congress, 1st Session—H. R. 8352.

In the House of Representatives, January 8, 1916.

Mr. Kent introduced the following bill, which was referred to the Committee on Interstate and Foreign Commerce and ordered to be printed.

A Bill to standardize the treatment of tuberculosis in the United States, to provide

Federal aid in caring for indigent tuberculous persons, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That within the appropriations made from time to time for such purposes the Secretary of the Treasury is hereby authorized to aid State authorities in providing care and treatment for indigent tuberculous persons who are citizens of the United States, but not legal residents of the States in which they are temporarily located, and for this purpose may designate such public or private hospitals and sanatoria as may be necessary. Prior to being designated to receive patients, and from time to time, said institutions shall be subject to inspection by officers of the Public Health Service in order to determine the facilities and methods available and in use for care and treatment of patients, and the Secretary of the Treasury is further authorized to prescribe standards to which institutions shall conform in order to obtain the benefits of this Act.

Sec. 2. That hospitals and sanatoria designated in accordance with the provisions of this Act shall be entitled to and may receive from the Federal Treasury a subvention fixed annually by the Secretary of the Treasury, but not exceeding 75 cents per diem for each indigent patient admitted with the approval of the Secretary of the Treasury: Provided, that the State in which said indigent tuberculous patient is admitted to a hospital or sanatorium for treatment shall pay or cause to be paid a subvention, not less than that paid by the Federal Government, toward the cost of caring for such patient in said hospital or sanatorium. Subventions under this law will be granted only in the case of indigent patients who have submitted satisfactory evidence that they were not assisted by any person or institution to leave their legal residence or did not themselves leave in order to receive benefits under this Act.

Sec. 3. That the Secretary of the Treasury is authorized to issue regulations governing the designation of institutions and establishment of standards and for otherwise carrying out the provisions of this Act; and he is further authorized to collect and make available for general use information and descrip-

tive matter relative to the construction, equipment, and maintenance of hospitals, sanatoria, and similar institutions.

Sec. 4. That detailed estimates of the sums required annually to carry out the provisions of this Act shall be submitted hereafter in the usual Book of Estimates.

DRUGS BELOW STANDARD

Some Druggists Found Careless in Compounding.

Several Washington druggists have pleaded guilty to the charge of selling adulterated and misbranded Tincture of Iodin, according to a recent issue of the Service and Regulatory Announcements of the Bureau of Chemistry. Samples of Tincture of Iodin were purchased under authority of the Secretary of Agriculture from a number of Washington druggists by inspectors of the Health Department. Analysis of the samples showed that many of them were deficient in some ingredient essential to a full strength tincture. The Food and Drugs Act provides in substance that, when a drug is sold under a name (such as Tincture of Iodin) that is recognized in the United States Pharmacopoeia, it must conform to the standard of strength, quality, or purity, as determined by the test laid down in the Pharmacopoeia, or contain a statement on the label showing its true standard of strength, quality or purity.

Tincture of Iodin is used largely as an antiseptic in surgical operations. It is used also externally for local irritations and inflammations. Failure to prepare a tincture of standard strength is due usually to carelessness. The druggists pleaded guilty to the charge of selling adulterated and misbranded Tincture of Iodin, and were fined \$10 each by the court.

Realizing the importance of the teeth and mouth infections to systemic disease, the Faculty of the College of Physicians and Surgeons have unanimously voted in favor of the establishment of a dental department, to be connected with the medical school. A committee of prominent dentists of the city have presented plans to the Medical Faculty which have been approved.

The school of dentistry will be closely asso-

ciated with the medical school and the admission requirements will be the same as the medical. The course will be four years, the first two years the same as those in medicine, thus giving the dental student a thorough knowledge of the fundamental sciences necessary to the practice of a specialty of medicine. At the end of the second year the dental student will give all his time to the study of dental subjects, namely, operative dentistry, prosthetic dentistry, oral surgery and oral pathology, orthodontia, etc., and the more technical part of the work required for the well trained dental surgeon. This new school will be the first university dental school in New York City and the second in the State. It will give the first four year course of dentistry ever given in the Empire State.

List of Members in Good Standing in the New Mexico Medical Society, April 1st, 1916.

Bernalillo County.

- Bakes, F. C., Albuquerque.
- Burton, S. L., Albuquerque.
- Brock, C. Leroy, Albuquerque.
- Carnes, D. H., Albuquerque.
- Cartwright-Goode, M. G., Albuquerque.
- Cornish, P. G., Albuquerque.
- Cipes, Jos. S., Albuquerque.
- Clark, S. G., Albuquerque.
- Dill, W. W., Albuquerque.
- Davis, R. E., Bland.
- Easterday, J. S., Albuquerque.
- Elder, J. W., Albuquerque.
- Espinosa, T., Belen.
- Fleming, M. A., Independence, Iowa.
- Frank, C. A., Albuquerque.
- Frisbie, Evelyn F., Albuquerque.
- Fadeley, F. F., Albuquerque.
- Haynes, Jno. R., Park View.
- Hope, W. G., Albuquerque.
- Wigglesworth, A. M., Fort Defiance, Ariz.
- Hastings, Jno. E., Bernalillo.
- Hyde, O. T., Albuquerque.
- Lukens, C. E., Albuquerque.
- Lovelace, W. R., Albuquerque.
- Lockett, W. R., Carthage.
- McCreary, M. M., Magdalena.
- McLandress, G. S., Albuquerque.
- Murphy, Wm. T., Albuquerque.

Osuna, E., Albuquerque.
 Parvis, W. A., Socorro.
 Pearce, J. F., Albuquerque.
 Patchin, J. F., Albuquerque.
 Peters, L. S., Albuquerque.
 Parvines, W. E., Albuquerque.
 Reidy, J. A., Albuquerque.
 Rice, L. G., Albuquerque.
 Shortle, A. G., Albuquerque.
 Spargo, W. W., Albuquerque.
 Sheridan, Wm., Albuquerque.
 Tull, Frank E., Albuquerque.
 Twitchell, David C., Albuquerque.
 Van Atta, J. R., Albuquerque.
 Von Almen, S. G., Albuquerque.
 Wroth, J. H., Albuquerque.
 Wylder, M. K., Albuquerque.

McKinley County.

Boyle, J. M., Gallup.
 Cantrell, W. B., Gallup.
 Cox, R. M., Gallup.
 DeLong, A. H., Gallup.
 Fruth, C. H., Gallup.
 Hutchinson, Wm., Gibson.
 Moore, C. J. K., Indian Wells, Arizona.
 Pratt, A. C., Gallup.
 Stofer, J. W., Heaton.
 Willson, H. G., Gallup.

Chavez County.

Beeson, C. F., Roswell.
 Bradley, R. L., Roswell.
 Brown, H. M., Hagerman.
 Evans, A. J., Fort Sumner.
 Fall, H. V., Roswell.
 Fisher, E. M., Roswell.
 Haymaker, O. R., Roswell.
 Ingalls, H. A., Roswell.
 Joyner, W. T., Roswell.
 Kinsinger, J. W., Roswell.
 Laws, J. W., Lincoln.
 Mayes, C. M., Roswell.
 Montgomery, C. F., Roswell.
 Phillips, W. W., Roswell.
 Pate, L. H., Carlsbad.
 Swearingen, D. D., Roswell.
 Yater, C. M., Roswell.
 Yoakum, F. A., Hope.
 Buchly, W. C., Roswell.
 Cooney, D. C., Roswell.
 Gallatin, H. H., Lovington.
 Hubbard, E. J., Dexter.
 Inman, M. M., Artesia.
 Mozley, C. A., Elk.

Matthews, W. C., Roswell.

Quay County.

Boggs, J. P., San Jon.
 Brown, O. E., Tucumcari.
 Catterson, A. E., Tucumcari.
 Gaines, J. F., Nara Visa.
 Herring, B. F., House.
 Manney, J. E., Tucumcari.
 Noble, F. W., Tucumcari.

Las Vegas.

Chalmers, J. T., East Las Vegas.
 Crail, F. H., East Las Vegas.
 DesMarais, M. F., Las Vegas.
 Fest, F. T. B., Port Lemon, Costa Rica.*
 Gobbel, H. H., Albuquerque.
 Heymann, W. W., East Las Vegas.
 Howe, W., East Las Vegas.
 Kaser, W. E., East Las Vegas.
 Losey, C. S., East Las Vegas.
 Martin, J. G., Anton Chico.
 McClanahan, W. F., East Las Vegas.
 Mills, W. P., East Las Vegas.
 Mueller, H. J., East Las Vegas.
 Shaw, E. B., Las Vegas.
 Smith, H. M., East Las Vegas.
 Tipton, W. R., East Las Vegas.

*Deceased.

Santa Fe County.

Diaz, J. M., Santa Fe.
 Harroun, W. S., Santa Fe.
 Hedding, B. F., Santa Fe.
 James, S. H., San Pedro.
 Livingston, W. H., Santa Fe.
 Massie, J. A., Santa Fe.
 Mera, F. E., Santa Fe.
 Murray, L. F., Santa Fe.
 Rolls, J. A., Santa Fe.
 Tannus, T. F., Albuquerque.
 Ward, E. L., Santa Fe.

Curry County.

Darling, E. L., Clovis.
 Dillon, A. L., Clovis.
 Dillon, F. A., Clovis.
 Maney, J. R., Clovis.
 Miller, H. A., Clovis.
 Scott, J. F., Clovis.
 Westerfield, J. B., Clovis.

Colfax County.

Connett, W. S., Raton.
 Fulton, C. W., Raton.
 Harper, C. S., Cimarron.
 Hobbs, J. L., Gardiner.
 Lyon, T. B., Raton.

Panton, H. H., Springer.
Shuler, J. J., Raton.
Whitcomb, O. J., Raton.

Dona Ana County.

Boyd, Nathan, Las Cruces.
Cornell, H. M., Las Cruces.
Johnson, J. H., Organ.
Lauson, A. E., Anthony.
Minitree, J. N., Las Cruces.
McBride, R. E., Las Cruces.
Sands, C. T., Las Cruces.
Sexton, T. C., Las Cruces.

Luna County.

Barbee, J. B., Deming.
Crocker, M. M., Lordsburg.
Hoffman, R. C., Deming.
Moir, J. G., Deming.
Montenyohl, E. A., Deming.
Reid, F. Janet, Deming.
Spears, R. S., West Plains, Mo.
Steed, P. M., Deming.
Swope, S. D., Deming.
Vickers, F. C., Deming.

Members—Not Members of a County Society.

Becker, H. M., Sedan.
Bergmans, J. J., Taos.
Bessette, A. E., San Marcial.
Black, Lysander, Monument.
Brennan, J. J., San Antonio.
Brown, A. F., Fort Sumner.
Brown, W. T., Watrous.
Edmondson, S. M., Clayton.
Duncan, C. G., Socorro.
Elliott, C. B., Dawson.
Evans, F. B., Dawson.
Fries, C. S., Hot Springs.
Gibbs, M. B., Roy.
Given, F. I., Hillsboro.
Graham, J. Dale, Elephant Butte.
Hatcher, J. O., Hillsboro.
James, P. B., Sugarite.
Lackey, J. W., Carlsbad.
Linder, J. H. Jr., San Antonio.
Parham, E. M., Mogollon.
Plumlee, C., Roy.
Radcliff, W. R., Belen.
Sewell, H. D., Chama.
Self, T. F., Roy.
Watson, T. W., Carrizozo.
Wilkinson, S. L., Belen.
Winchester, J. M., Clayton.
Wittwer, W. F., Los Lunas.

Wycoff, G. L., Dulce.
Smith, C. D., La Plata.
Smith, W. W., Farmington.

COUNTY SOCIETY NEWS.

The Las Vegas Medical Society held a most interesting and instructive meeting on March 22nd. The topic of the evening was School Inspection. A most excellent paper on this subject was read by doctor C. S. Losey. Lantern slide illustrations added to the interest of the paper. The teachers of the various public schools were in attendance by invitation and took an active part in the discussion.

We are pained to record the death of the wife of Doctor C. S. Fries of Hot Springs, New Mexico on March 27th, after a three days' illness of some intestinal trouble. The sympathy of the Journal is offered our good friend in his hour of sadness.

March 1st, 1916—The Bernalillo County Medical Society met in regular session at the Commercial club. The meeting was called to order by President Dr. Lovelace. The minutes of the last meeting were read and approved.

Doctor Clark read an interesting paper on Strabismus.

Members present: Drs. Frisbie, Clark, Dill, Cipes, Twitchell, Fadeley, Cornish, Provines, Von Almen, McLandress, Lovelace and Tull.

Committee on registration of nurses reported progress, also as having taken up same with the Commercial Club. After discussion it was decided that the registration of

nurses be left to the trained nurses to arrange and to organize and the committee was relieved from further duty.

Frank E. Tull, Secy.

March 15, 1916—The Bernalillo County Medical Society met in regular session at Commercial club on March 15th, 1916.

Dr. Dill read an interesting paper on the subject of Medical Nomenclature. The discussion was general.

Members present: Drs. Frisbie, Cipes, Patchin, Von Almen, Hyde, Hope, Wylder, Twitchell, Rice, Dill, Lovelace, McLandress, Clarke, and Tull.

Visitors—Dr. Tannus.

The question of a city dispensary was discussed in a general way.

It was voted that the President of the Society be instructed to tell the Civic Betterment League that the Medical Society would be glad to consider any project presented for the betterment of medical conditions in the City of Albuquerque.

Frank E. Tull, Secy.

Original Articles

STRABISMUS OR SQUINT

S. C. CLARKE, M. D.
Albuquerque, N. M.

Read before the Bernalillo County Medical Society March 1st, 1916.

In the emmetropic eyes with normal muscular equilibrium able to converge and co-ordinate upon an

object and blend the two pictures into one, makes what is generally accepted as normal vision, and any deviation from this is usually accepted as squint. This is not always the case as in paralysis we have failure of co-ordination.

Squint is said, however, to exist when the visual axis does not meet at the object looked at, and must maintain the same angle in whatever direction the eyes are turned, thus distinguishing squint from paralysis.

Hypocrates refers to squint in his writings as being congenital, a conclusion in which he is possibly partly right. Convergent squint being the variety most often seen in clinics is usually associated with hypermetropia or hypermetropic astigmatism while in divergent squint we usually find myopia or myopic astigmatism.

Many guesses were advocated by men who followed Hypocrates, some curious, some ridiculous but almost all without any clinical backing—such as the eye of the evil one imitating other members of the family or friends thus afflicted, thus we come to the evolution of the muscle theory whose advocates did an unlimited variety of cutting of muscles, some men attaining enough eminence to have operations named after them. If sufficient attention had been paid to the clinical results many eyes would have been spared unnecessary pain and suffering, but like the guess of Hypocrates, they were right in part only.

Donders claims that the cause of squint was the failure of the eyes to

accomodate sufficiently to overcome an already existing refractive error and advised as the proper remedy full correction of the refractive error. His deductions cast a few rays of light on what up to this time was a dark subject. Donders' writings seem to deal more with convergent squint as that is the variety most seen at the public as well as private clinics, and these cases always have a certain degree of hypermetropia, hence Donders' deductions. It has been established clinically that one will see a dozen hypermetropics that do not squint for one who does. Donders, like his predecessors, was right in part only.

Worth concludes that we always have in unilateral convergent squint two things, hypermetropia and faulty fusion faculty. He concludes from investigation that at birth our fusion faculty is about nil, gradually developing and maturing at about the sixth year. Worth concludes that when the fusion faculty has once been developed we cannot have squint, and there can be no such thing after the fusion faculty has been once developed.

Worth also concludes that the refractive error if found, must have attention and possibly the muscles if they ultimately fail to co-ordinate. Worth like his predecessors has cast more light upon the subject that was hitherto known, but has failed to clear up the subject entirely.

He also fails to account for cases that have had binocular vision up to ten or twelve years of age and

then squint from no apparent cause. He also fails to account for cases where correction of the refractive error gives binocular single vision for years then almost immediately upon the removal of the glasses we have the return of the squint. Alternating squint to my mind has not been fully accounted for. Anything that will retard bodily development will retard the development of the fusion faculty, and the fusion faculty may not develop until later in life or altogether. Whether the squint is a combination of muscular in-coordination, refractive error or faulty fusion faculty or all three combined, I do not know. We have had strong advocates of all three of these theories and it has been determined clinically that the correction of any one of the three conditions enumerated does not always cure squint, neither does it always effect a cure to correct all three when found.

Whether the missing link in the chain of evidence lies within the nerves or brain defect or faulty nutrition or faulty activity of some of the lesser understood glands of the body I do not know, but with all it still remains a problem for some future investigators to ascertain and prove clinically.

THE RATIONAL TREATMENT OF SNAKE BITE.

E. L. WARD, M. D.
Santa Fe, N. M.

In writing this paper I must plead guilty to the fact that my experience has been largely with Texas

rattle snakes and whether they are more dangerous than those of New Mexico I am unable to state, but if they are like the people, they are much more sociable.

The treatment of snake bite should be to avoid absorption of the poison and combat that already absorbed.

The local treatment should consist of instant and free incision and should include all the tissues penetrated by the fangs. It will often be advisable to extend the incision above the bite or to make incisions above it in an effort to evacuate or neutralize the poison already in the lymph channels. Sucking the wound or applying suction by means of bottles or pumps should only be considered a home remedy, as it is uncertain, septic and not to be classed with the efficiency of free incision. I have seen good results from incisions by the laity but important nerves or tendons are apt to be severed or, as usually happens, the incisions are not free enough. In one case, however, a boy upon being bitten on the thumb immediately chopped the member off with a hatchet. The limb should be ligated at intervals above the bite with an elastic band to prevent the poison from extending upward to the body and even though it passes one ligature it may be arrested by the next. Care should be taken not to apply the tourniquet so tight as to shut off the arterial circulation, as gangrene necessitating amputation has occurred from a ligature which was applied too tight. The ligatures

should be closely watched for a day or two when they can be removed. At times it is advisable to loosen them gradually so that whatever poison is in the limb enters the body in broken doses.

Efforts should now be made to neutralize the poison in and around the wound. For this I use a solution of potassium permanganate one to one thousand. The wound is repeatedly washed or immersed in this solution, changing the solution as often as it becomes reduced. A solution of the same strength is also injected around the wound, especially in the direction of the lymphatics. One of my first cases convinced me of the marked value of this remedy. A Mexican girl having been bitten on the calf of the leg I injected the upper half of the wound and above for several inches but neglected the lower half of the wound. The next day the upper part of the wound appeared clean with a great reduction in the swelling while the lower part showed an increase in the swelling, was dark and almost gangrenous but underwent resolution after applying the above treatment. I have never tried rubbing crystals of potassium permanganate into the bite as you apply a caustic to an already devitalized tissue and its effect would not compare with the results obtained by the injection method.

The amount injected is generally from two to three ounces and I have never observed any symptoms of poisoning from its use but have heard of such a case.

Where the bite has penetrated an

artery death will take place in the majority of cases before anything can be done. The swelling where an artery is penetrated extends downward from the wound instead of upward, as in the patient who was bitten on each leg. In one the swelling extended upward while in the other limb it extended downward. The bite was quickly fatal.

The hemorrhagin of the venom causes a rhexis of the capillaries with a resulting swelling of the tissues in direct proportion to the poison present. If the swelling is sufficient to cause the skin to become tense it will cause great pain. This may be combatted by numerous small incisions which relieve the tension and allows an exit for the disintegrated blood. Moderate doses of morphine are also of benefit.

After the vicinity of the wound has been sufficiently injected and the permanganate solution is no longer rapidly reduced a moist permanganate dressing should be applied. This may be changed in a day or two to one of boric acid or normal salt solution. Care should be taken to keep the dressing moist to promote drainage. Careful asepsis should be used throughout as the venomamboceptor unites with the bacterial complement of the blood and greatly increases the chances of infection. Should infection or necrosis take place it should be treated accordingly.

Where the bite is on the body ligatures can not be employed but the treatment is otherwise the same. A colleague of mine had a patient who was bitten on the prominent part

of the deltoid muscle. He luckily saw the case about twenty minutes after the bite and injected a solution of potassium permanganate in and about the wound. An incision was not made because of the objection to a scar. She made a prompt recovery and did not lose a meal.

After the swelling is abated the joints involved in the swelling are often the seat of an aseptic peri-arthritis which is benefited by massage and liniments externally and salicylates and iodids internally.

The relief of the constitutional effects of the virus is perhaps the most difficult part of the treatment of snake bite. In as much as a large part of the poison is eliminated by the stomach the vomiting which is present should be encouraged. Great relief is often obtained by gastric lavage but lacking this, copious draughts of water should be used. Emetics should not be used because of their weakening effect. Under no circumstances should efforts be made to suppress the vomiting except by gastric lavage. Of stimulants strychnine is the best that we have and is best given hypodermically. Alcohol was formerly a very popular remedy but it has a tendency to add to the symptoms instead of combatting them. This is especially true in the large doses often employed. To be sure alcohol by its benumbing effect lessens the pain and fright but this effect is obtained quicker and more satisfactorily by small doses of morphine given hypodermically. Atropin, camphor and ammonia are often of distinct value. As the temperature

is often subnormal the body should be kept warm and diaphoresis encouraged. After the acute stage has passed the patient should be given reconstructive tonics, especially those containing iron, to supply the large amount of hemoglobin destroyed.

INDICATIONS AND COUNTER-INDICATIONS FOR CHLOROFORM AND FOR ETHER.

— — —
 W. W. PHILLIPS,
 Roswell, N. M.

— — —
 Read before the Chavez County Medical Society, February 10th, 1916.

A surgeon about to operate on a patient should look over the case as carefully as regards the anaesthetic as he would the technic of the operation.

I was much impressed during the discussion on this subject at the last meeting of this society by the marked interest manifest by every member present. When I came here fourteen or fifteen years ago, nearly if not all of us thought very little about the anaesthetic—any doctor was good enough to do this part of the operation. If I remember correctly soon after I arrived I was asked to anaesthetize an appendicatory case before it was known whether I was a doctor, a horse doctor, an osteopath or a scientist.

First, I suppose we all think of the condition of the heart in the choice of an anaesthetic. This should include the blood pressure. With valvular lesions ether is the safest unless there be a marked ele-

vation of blood pressure in which case chloroform carefully given is safest. A case with an irregular beating heart whether you can detect a murmur or not does badly under chloroform while some hearts with badly damaged valves have caused no trouble.

If there be an aneurism or marked arterial sclerosis—in fact in all patients near 70 years of age with a good heart, chloroform should be used. These patients, too, very often have much bronchial irritation and take ether badly.

In nephritis, especially if acute, and in diabetes chloroform should be used; because less is required than ether and we get less irritation, though bulk for bulk ether is less irritating.

In brain surgery, because of heightened blood pressure and in stenosis of the trachea because of the increased swelling of the parts ether is contraindicated. In operations on the mouth and throat; operations for enlarged tonsils and adenoids, chloroform is best, because it causes less increase in secretions, less congestion and, because of the obstruction to breather causes less struggling. In tuberculosis, pneumonia, empyenza, in fact in most cases of chest affections chloroform is the anaesthetic of choice.

In some operations any anaesthetic is dangerous; for instance in goitre, ether causes the blood vessels to become enlarged but chloroform is objectionable because of the fast pulse.

Then there are objections to both

ether and chloroform inherent in the physical properties of the drugs themselves. Ether vapor is highly inflammable. Must not be used with a cautery, near open fires, gas jets or lamps; alcoholics struggle very violently when given ether as do chronic cigarette smokers—chloroform is less irritating to these patients. Chloroform, because of the lesser amount needed for anesthesia, is more convenient for the emergency or where many cases must be anaesthetized in a short time.

Children and women in confinement are supposed to take chloroform especially well and that it is less dangerous to these cases, but this fact has been denied.

My subject was the "Indications and Contraindications for Chloroform and for Ether" but I have treated it rather as if it were "The Choice of an Anaesthetic," for this is what the subject amounts to.

So after all is said the surgeon must decide as to the best anaesthetic for each individual case, taking into consideration the physical condition of each patient, the operation to be done, where he must operate, and the skill of the anaesthetist and last but not least the comparative dangers of ether and of chloroform.

.NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies."

Radium Bromide, W. L. Cummings Chemical Company.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Radium Carbonate, W. L. Cummings Chemical Company.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Radium Chloride, W. L. Cummings Chemical Company.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Radium Sulphate, W. L. Cummings Chemical Company.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. W. L. Cummings Chemical Company, Lansdowne, Pa.

Borcherdt's Dri-Malt Soup Extract.—A powder obtained by adding potassium carbonate 1.1 Gm. to each 100 Gm. of Borcherdt's Malt Extract and evaporating. Borcherdt Malt Extract Co., Chicago.

Borcherdt's Dri Malt Soup Extract with Wheat Flour.—A powder obtained by evaporating 100 Gm. Borcherdt's Malt Soup Extract and 50 Gm. wheat flour made into a paste. Borcherdt's Malt Extract Co., Chicago.

Borcherdt's Finished Malt Soup Powder.—A powder obtained by evaporating 100 Gm. Borcherdt's Malt Soup Extract, 50 Gm. wheat flour, made into a paste and 330 Gm. milk. Borcherdt's Malt Extract Co., Chicago (Jour. A. M. A., March 11, 1916, p. 815).

Saubermann Radium Emanation Activator.—An apparatus for the production of radioactive drinking water by the action of radium sulphate. Each apparatus is designed to furnish about 500 Cc. radioactive water per day. The exact daily capacity and efficiency are guaranteed and are stated for each apparatus. The following strength generators are offered:

Saubermann Radium Emanation Activator, 5,000 Mache Units.—An apparatus which imparts about 1.8 microcurie (5,000 Mache Units) to about 500 Cc. water daily.

Saubermann Radium Emanation Activator, 10,000 Mache Units.—An apparatus which imparts about 3.8 microcurie (10,000 Mache

Units) to about 500 Cc. water daily.

Saubermann Radium Emanation Activator, 20,000 Mache Units.—An apparatus which imparts about 7.2 microcurie (20,000 Mache Units) to about 500 Cc. water daily.

Saubermann Radium Emanation Activator, 50,000 Mache Units.—An apparatus which imparts about 18 microcurie (50,000 Mache Units) to about 500 Cc water daily. Radium Limited, U. S. A., New York (Jour. A. M. A., March 18, 1916; p. 893).

PROPAGANDA FOR REFORM.

Colloidine.—Colloidine (Boracol Chemical Co., agents) is claimed to be "A Colloidal Vegetable Iodine Combination," each tablet of which is stated to represent 1.3 grain iodine. Because of the colloidal character of the iodine compound, Colloidine is claimed to be an especially efficacious iodine preparation. The Council on Pharmacy and Chemistry reports that Colloidine is ineligible for New and Nonofficial Remedies because, as shown by examination in the A. M. A. Chemical Laboratory, the iodine was deficient in amount and in a form of an iodide or in a form which so readily yields iodide that the therapeutic effects of Colloidine would seem to be those of iodides; and because the therapeutic claims were unwarranted (Jour. A. M. A., March 11, 1916, p. 831).

Emetic Action of Drugs.—The investigations of R. A. Hatcher and C. Eggleston show that the nauseant and emetic action of many drugs is not due to their effects of the stomach, but to a central action on the "vomiting center." Practically all alkaloids and alkaloidal drugs which have emetic properties, including morphine and preparations containing it, emetin, cephaelin, quinine, nicotine, lobeline, pilocarpine, aconite and veratrine, ergot and apomorphine, which produce nausea or vomiting as their chief or side actions, do so by direct effect on the vomiting center. Sodium salicylate, picrotoxin and digitalis also produce vomiting through central action. These investigations show the futility of the many devices which have been employed in attempts to avoid the nausea or emesis produced by many drugs as an undesired side-effect (Jour. A. M. A., March 11, 1916, p. 817).

Alarming Symptoms Caused by Diarsenol.—Diarsenol is made by the Synthetic Drug

Company of Toronto, Canada. It is stated to be chemically identical with salvarsan. A. H. Cook, Hot Springs, Ark., reports that he has administered fourteen intravenous injections of Diarsenol. Eleven consecutive doses were without untoward effect or phenomena differing from those attending the intravenous administration of salvarsan. The three subsequent doses produced alarming symptoms, which Dr. Cook never observed from the use of salvarsan or neosalvarsan (Jour. A. M. A., March 18, 1916, p. 865).

Clinical Report on Arsenobenzol.—"Arsenobenzol" is being made by the Dermatological Research Laboratories of the Philadelphia Polyclinic. It is stated to be chemically identical with salvarsan. O. S. Ormsby and J. H. Mitchell report a series of 184 injections given to seventy-five patients suffering with syphilis in its various stages. They report that the action of this drug has been uniform, its toxicity low, and its therapeutic results excellent (Jour. A. M. A., March 18, 1916, p. 867).

Endorse the Council on Pharmacy and Chemistry.—The following resolution was presented at the San Francisco meeting of the A. M. A. and signed by all the members of the house of delegates in attendance: "Resolved, We, Members of the House of Delegates of the American Medical Association, believe that every effort must be made to do away with the evils which result from the exploitation of the sick for the sake of gain. Earnestly believing that the continued toleration of secret, semi-secret, unscientific or untruthfully advertised proprietary medicines is an evil that is inimical to medical progress and to the best interest of the public, we declare ourselves in sympathy with, endorse and by our best efforts will further the work which has been and is being done by the Council on Pharmacy and Chemistry of the American Medical Association in the attempt to eliminate this evil" (Jour. A. M. A., March 18, 1916, p. 910).

The Requirements of the Council on Pharmacy and Chemistry.—New and Nonofficial Remedies contains the rules which govern the Council on the admission of remedies to this book. These rules merely require that the composition of a remedy be nonsecret, that its uniformity be safeguarded, that no

false claims be made regarding its therapeutic properties and that its use shall be at least based on a probability of therapeutic merit. A simple way of determining if a certain preparation complies with the Council's rules, is to see if it is described in New and Nonofficial Remedies (Jour. A. M. A., March 18, 1916, p. 913).

Larkspur for Pediculosis Capitis.—Various formulas for tincture of larkspur for use against pediculosis capitis have been published, but larkspur is poisonous and harm may result where there are abrasions of the skin. Many prefer kerosene. It is applied under a suitable cap. After twenty-four hours the hair is combed to remove nits and then washed (Jour. A. M. A., March 18, 1916, p. 913).

Hexamethylenamin and Uric Acid.—If further evidence were necessary to show the futility of administering formaldehyd derivatives like hexamethylenamin as uric acid solvents, it could be found in the observations recorded by Haskins under the auspices of the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry. While the administration of excessive doses may produce slight solvent action, Haskins points out that the required dose of hexamethylenamin is too large and an equal or better effect can be produced more readily by administration of alkaline diuretics or sodium bicarbonate in reasonable quantities (Jour. A. M. A., March 25, 1916, p. 962).

Venarsen, Venomer and Venodine.—The A. M. A. Chemical Laboratory found Venarsen, which is recommended by the manufacturers, the Intravenous Products Company, for the treatment of syphilis, tuberculosis, pellagra and other diseases, to be "a simple solution containing approximately 9 grains of sodium cacodylate, 1.40 grain of mercury 'biniodide' and 3.4 grain of sodium iodid to each full dose." Sodium cacodylate is inferior to salvarsan or neosalvarsan in the treatment of syphilis. The Council on Pharmacy and Chemistry held the claims made for Venarsen unwarranted and its intravenous injection uncalled for. Venomer, which is also offered as an antisyphilitic remedy, appears to be a variation on Venarsen, containing considerably less sodium cacodylate and considerably more mercury and iodids. It prompts the

comment that a careful physician would not give arsenic and mercury in fixed proportions. Venodine was rejected by the Council on Pharmacy and Chemistry because the claims made for it were found unwarranted and its composition unscientific. The indiscriminate use of intravenous products is objectionable for many reasons: It incurs an unnecessary danger, and it puts the physician to needless trouble and the patient to unnecessary expense (Jour. A. M. A., March 25, 1916, p. 978).

Book Review

NEW AND NON-OFFICIAL REMEDIES, 1916.

Chicago, The American Medical Association,
\$1.

The profession as a whole does not as yet fully appreciate the character, the scope and above all the practical value of this book to the practicing physician. Perhaps it is because its size is so unpretentious, the price asked for it so small and the contents so conservative and unsensational in character that a hasty and superficial examination does not reveal its true worth.

New and Nonofficial Remedies, in the first place, contains descriptions of the newer remedies that are worth the physician's consideration. Being issued by the Council on Pharmacy and Chemistry, which is composed of chemists, pharmacists, pharmacologists and clinicians of the highest standing, it is authoritative; in fact, it is recognized as the standard authority on the newer remedies. When besieged by too persistent detail men, many up-to-date physicians fortify themselves behind N. N. R., taking the stand that they cannot afford to waste time on any preparation which has not gained admittance to its pages.

In the second place, N. N. R. furnishes the physician who has learned how to use it with the answers to a great many perplexing questions that arise in the course of daily practice—and in many instances it is the only book which does furnish this information.

What is the distinction between the action of acetylsalicylic acid (aspirin) and that of the other salicylates? What is the comparative toxicity of the various cocain substitutes? What manufacturers furnish Bulgarian bacillus preparations—medicinal foods—organ extracts? What is the iodine strength of the nonofficial organic compounds of iodine compared with the official iodids? What is the standing of pneumococcus vaccine—of the Schick test—of radium therapy? Look in N. N. R.; it is all there.

SOCIAL TRAVESTIES AND WHAT THEY COST.

By D. T. Atkinson, M. D.
Dallas, Texas.

Vail-Ballou and Company, New York.

Doctor Atkinson is a most interesting writer and in his book he has placed the facts with which he is dealing in a most readable form.

Physicians are in daily contact with living evidences of the need of social reform and realize the necessity of just such contributions as these to help in driving home the naked truth.

The author has, as he says, no panacea to offer but we believe that he will have added his mite to the fight against those things with which his volume deals.

We commend this little book to our readers. We believe a copy should be at the command of every practitioner for many an opportunity presents itself for the diplomatic suggestion to patients that they take it home and read it carefully.

PROGRESSIVE MEDICINE, MARCH, 1916.

Volume XIX, No. 1.

Edited by

Hobart Amory Hare, M. D., assisted by

Leighton F. Appleman, M. D.

Philadelphia and New York, Lea and Febiger.
Six Dollars per annum.

The first number of the latest volume of this popular and valuable quarterly discusses the recent advance and improvements in a number of subjects. The available literature has been thoroughly reviewed and much of interest and value has been recorded.

In this volume Surgery of the Head and Neck; Surgery of the Thorax, excluding Dis-

eases of the Breast; Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia and Influenza; Diseases of Children; Rhinology and Laryngology and Otolaryngology are considered.

A result of the influence of the European war on medical literature is manifest in the articles reviewed, there being a scarcity of German references of a recent date.

THE MEDICAL CLINICS OF CHICAGO.

Volume I Number V (March 1916).

The Medical Clinics of Chicago. Volume I Number V (March 1916). Octavo of 220 pages, 67 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

We feel that the Medical Clinics of Chicago is the most helpful thing that has come to us in recent years. The contents of the March 1916 number are presented in detail below:

Clinic of Dr. Charles Spencer Williamson, Cook County Hospital.

Bronchiectasis with Secondary Cardiac De-compensation. Two illustrations.

Acromegaly of Long Standing without Subjective Symptoms. Four illustrations.

Acute General Tubercular Adenitis (Bovine Type) Simulating Abdominal Type of Hodgkin's Disease. Two illustrations.

Gangrene of Lung. One illustration.

Carcinoma of Stomach Simulating Pernicious Anemia.

Clinic of Dr. Robert B. Preble, St. Luke's Hospital.

Acute Nephritis Following Acute Tonsillitis.

Cellulitis of Chest Producing Profound Sepsis and Delirium.

Clinic of Dr. Isaac A. Abt, Sarah Morris Memorial Hospital.

Congenital Syphilis. 30 pages; two illustrations, one in colors.

Clinic of Dr. James T. Case. (Battle Creek Sanitarium), St. Luke's Hos- pital.)

Röntgenologic Aspects of Intestinal Stasis. 52 illustrations.

Clinic of Dr. Ralph C. Hamill

Northwestern University.

Hysteria in a Strong Man.

Traumatism of Cauda Equina. Six illustrations.

Tumor of Spinal Cord. Two illustrations.

Clinic of Dr. Frederick Tice

Cook County Hospital.

Typhoid Resembling Pneumonia.

Banti's Disease. Three illustrations.

Autopsy Findings in Meningitis and Chronic Endocarditis with Acute Exacerbation.

Clinic of Dr. Charles L. Mix

Mercy Hospital.

Mitral Insufficiency and Stenosis with Embolus to Brain.

Primary Sarcoma of Fibula with Metastases to Brain and Cervical Glands. Wrongly Operated for Appendicitis and Gallstones.

Abscess in Lung.

Candy Medication.

Candy Medication, by Bernard Fantus, M. D., Professor of Pharmacology and Therapeutics, College of Medicine, University of Illinois, Chicago. Cloth, 82 pages, price \$1.00. C. V. Mosby Company, St. Louis.

Doctor Fantus has prepared a short monograph on the subject of Candy Medication which will appeal to the practitioner, particularly to one who has anything to do with the prescribing for children.

The booklet gives all necessary information relative to the construction of candy tablets, a description of the machines used, where they can be purchased and so on.

Infant Feeding.

Infant Feeding, a handbook, by Lawrence T. Royster, M. D., Attending Physician Boney Home for Girls and Foundling Ward of the Norfolk Society for the Prevention of Cruelty to Children, Physician in charge of King's Daughters' Visiting Nurse Clinic for sick babies. Illustrated. Cloth, 144 pages, price \$1.25. C. V. Mosby Company, St. Louis.

A handy manual, easy to understand, brief and to the point. Doctor Royster has dedicated this booklet "To the overworked and underpaid general practitioner who must of necessity be not only the family physician but the all round specialist."

Diagnostic Methods.

Diagnostic Methods—A Guide for History Taking, Making of Routine Physical Examinations and the Usual Laboratory Tests Necessary for Students in Clinical Pathology,

Hospital Interns, and Practicing Physicians. By Herbert Thomas Brooks, A. B., M. D., Professor of Pathology, University of Tennessee, College of Medicine, Memphis, Tennessee. St. Louis: The C. V. Mosby Co. Price \$1.00.

This is the third edition of a most excellent manual. Doctor Brooks has succeeded in boiling his material down to a point of concentration seldom seen in a book of this character and has produced a most practical volume. For ready reference and quick work we commend this volume.

DIPHTHERIA CARRIERS

Cases of diphtheria occurring in six different schools in widely separated communities of California have been investigated by the state board of health, and the results are published by J. C. Geiger, Frank L. Kelley, and Violet M. Bathgate, Berkeley, Calif. (Journal A. M. A., Feb. 26, 1916). The statistics are compiled from examinations by three separate persons which check off each other and eliminate the personal equation. The cultures were taken from all contacts and all carriers were isolated. The taking of nose cultures as was done, as well as those from the throat, is specially mentioned as better insuring the detection of carriers. This is illustrated by the tables furnished, in which 72 per cent of the positive cultures were obtained from the nose and only 28 per cent from the throat alone. Another interesting observation is the total percentage of the positives, 32.8, the majority of which can be classed as diphtheria carriers. Another point of interest was brought out in a group composed of young adult students in a large university. In order to distinguish between the contacts and carriers without waiting for the end of the incubation period, the Schick test was used and proved inside of forty-eight hours that the whole group was immune. They were accordingly classed as carriers, and none of them developed the disease. Another example of the value of the Schick test was shown in another investigation in which several carriers developed diphtheria and in which the test was not used. The Schick test would have detected the non-immunes and they could thus have been immunized in time to avoid the disease.

The New Mexico Medical Journal

Volume XVI

MAY, 1916

No. 2

E . D . I . T . O . R . I . A . L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better Journal
YOU CAN HAVE IT BY WRITING OUR ADVERTISERS: "I SAW YOUR AD IN OUR STATE JOURNAL."
FAVOR THOSE WHO FAVOR US.

TYPHUS FEVER.

We have reason to fear an invasion of the Southwest by typhus fever. A number of cases have occurred in Texas and several in New Mexico. The health officer of Grant County has reported three at Santa Rita and the health officer of Dona Ana has reported one as having been found at Malpais, a section house on the El Paso and Southwestern railroad.

In this issue we are pleased to publish a short summary of the disease prepared for and read before the Dona Ana County Medical Society at its April meeting by doctor H. M. Cornell of Las Cruces.

So few of the physicians of this part of the country are familiar with the clinical picture of the disease that it behooves them all to familiarize themselves with the symptoms they are apt to encounter in Typhus in order that the first

case may not go unnoticed and unrecognized and thereby spread infection broadcast.

The secretary of the State Board of Health has mailed the following letter to the various county health officers. The letter and the report which we are pleased to publish speak for themselves and in speaking emphasize most emphatically the need for a Board of Health Law that will create an effective Board of Health with funds back of it to carry out its mandates.

Dear Doctor:

I am sending you by same mail copies of laws of this State relating to public health. I have included all laws pertaining to such subjects as are usually considered as coming under that head, though in this State their enforcement may not devolve upon the health officers. These laws are given in the order in which they are found in the Compiled Statutes of New Mexico, and the paragraphs are so numbered.

I wish, particularly, to call your attention to Paragraphs No. 4610-11 relating to the reporting of contagious and infectious diseases. It is earnestly requested that you will make particular effort to obtain such returns for your county for the ensuing year. Reports of the following diseases are desired: Small pox; Scarlet Fever; Diphtheria; Measles; Mumps; Whooping Cough; Varicella; An-

terior Poliomyelitis; Typhoid; Malaria; Cerebro-Spinal Meningitis; Pellagra; Typhus.

It is realized that it is difficult to obtain satisfactory returns, particularly in rural communities, but in so far as you are able it is hoped you will keep such records.

We all desire that at the next legislature an adequate public health department for the State may be established and its maintenance provided for. Returns from the different counties and cities included in the annual report of State Board of Health to the Governor before legislature convenes may give some information upon which legislation may be based.

I am sending also a copy of the Report of State Board of Health for 1915, as far as one may be arrived at.

Sincerely hoping we may have your co-operation in this matter, I am

Yours truly,

(Signed) W. E. KASER,
Secretary.

Report.

We have made some effort to make a report of health conditions that would give some definite information rather than deal in general terms. It has been a difficult matter due to the fact that the association between the State Board, counties and incorporated communities, as must necessarily be the case under our present arrangement, is of the loosest. The law expressly states that the county official shall act under the orders of the county board to carry out the regulation of State Board of Health. But the authority lodges virtually, in practice, with the county commissioners. Such a division of authority naturally means inefficiency. No health policy can be efficient for the state that is not centralized.

Vital statistics, as well as morbidity statistics, should also be in keeping of the county health officer. The records with the county clerk now have a different purpose.

Then, too, the relation of the health officer of the incorporated communities to the county officer and to the State Board is not clear.

After considerable correspondence, we have been able to arrive at the following report, which is respectfully submitted:

County Health Officers in the State of New Mexico.

Dr. W. W. Spargo, Albuquerque, Bernalillo County.

Dr. W. T. Joyner, Roswell, Chaves County.

Dr. T. B. Lyon, Raton, Colfax County.

Dr. A. L. Dillon, Clovis, Curry County.

Dr. R. E. McBride, Las Cruces, Dona Ana County.

Dr. L. H. Pate, Carlsbad, Eddy County.

Dr. Wm. McLake, Silver City, Grant County.

Dr. J. B. Van Horn, Santa Rosa, Guadalupe County.

Dr. M. G. Paden, Carrizozo, Lincoln County.

Dr. S. D. Swope, Deming, Luna County.

Dr. G. N. Fleming, Gallup, McKinley County.

Dr. H. J. Hoag, Mora, Mora County.

Dr. J. G. Holmes, Alamogordo, Otero County.

Dr. W. Leming, Tucumcari, Quay County.

Dr. W. E. Paterson, Portales, Roosevelt County.

Dr. M. D. Taylor, Aztec, San Juan County.

Dr. M. F. Des Marais, Las Vegas, San Miguel County.

Dr. David Knapp, Santa Fe, Santa Fe County.

Dr. F. I. Given, Hillsboro, Sierra County.

Dr. W. M. Scott, Socorro, Socorro County.

None—Taos County.

Dr. C. D. Ottosen, Willard, Torrance County.

Dr. W. A. Bristol, Clayton, Union County.

Dr. W. F. Wittwer, Los Lunas, Valencia County.

Dr. J. R. Haynes, Park View, Rio Arriba County.

Dr. Richard Lund, Bernalillo, Sandoval County.

Report of Contagious Diseases.

Bernalillo—Births 257, deaths 360, scarlet fever 6, diphtheria 91, measles 3; vaccination enforced in city; not in rural dist.

Chaves—No information obtained. No report.

Colfax—Births, 335; deaths, 142; smallpox 0; scarlet fever, few; diphtheria 26 (d. 13); vaccination, law not observed.

Curry—Births and deaths, report not made;

smallpox, 1; scarlet fever 10; diphtheria 12; typhoid, 6.

Dona Ana—Births, 251; deaths 39; smallpox 60; diphtheria, few; measles, few; whooping cough, few; typhoid, few.

Eddy—Births, 74; deaths, 17; smallpox, 6.

Grant—Births, 82; deaths, 67.

Guadalupe—Births, 6; deaths, 3; vaccination, law enforced in Santa Rosa.

Lincoln—Births, 34; deaths, 9; diphtheria, few; measles, 24; vaccination, law enforced.

Luna—Births, 48; deaths, 19; vaccination, law not enforced.

McKinley—Births, 71; deaths, 29; smallpox, 0; scarlet fever, 42; diphtheria, 21; typhoid, 139.

Mora—Births and deaths, no reply; smallpox, 1; scarlet fever, 1; diphtheria, 2; vaccination, law not enforced, no money for purpose.

Otero—Births, 89; deaths, 51; smallpox, 0; scarlet fever, 0; diphtheria, 13 (d. 3); measles, epidemic; whooping cough, epidemic; typhoid, some; vaccination, enforced when smallpox is present.

Quay—Births, 80; deaths, 23; smallpox, 12; scarlet fever, some; diphtheria, 3; typhoid, 6; vaccination, enforced in Tucumcari.

Rio Arriba—Report not made; whooping cough epidemic; vaccination, not enforced.

Roosevelt—Births, 70; deaths, 29; smallpox 31 (d. 1).

San Juan—Births, 21; deaths, 12.

San Miguel—Births, 88; deaths, 72. Vaccination enforced.

Sandoval—Births, 24; deaths, 20; vaccination not enforced.

Santa Fe—Births, 44; deaths, 20.

Sierra—Births, 36; deaths, 8.

Socorro—Births, 6; deaths, 0; diphtheria, 66; typhoid, 12; vaccination enforced when smallpox threatens.

Taos—No information obtainable.

Torrance—Births, 18; deaths, 8; smallpox, 0; scarlet fever, 11; diphtheria, 8; measles, 5; whooping cough, 8; typhoid, 9.

Union—Reports not made; vaccination not carried out.

Valencia—Births and deaths, no reply; smallpox, 1; scarlet fever, 0; diphtheria, 102; typhoid, 0; vaccination, not compulsory.

Albuquerque—Births, 268; deaths, 362;

smallpox, 6; scarlet fever, 18; diphtheria, 42; measles, 181; whooping cough, 21; typhoid, 20; vaccination, enforced.

E. Las Vegas—Births, 60; deaths, 79; smallpox, 1; scarlet fever, 9; diphtheria, 1; measles, 20; vaccination, enforced.

Las Cruces—smallpox, 0; scarlet fever, 0; diphtheria, few; measles, 0.

In connection with the report it should be said that the Death and Birth reports from counties include returns from incorporated communities. Morbidity returns from cities and towns are not included in county returns. County returns were obtained from the county clerks.

At best our Vital reports are incomplete. In some counties no returns; in others only a portion of physicians are making returns; but what of that large number of cases both of births and deaths in which physicians do not officiate? Probably not one is reported.

A large portion of my letters of inquiry have gone without reply. Letters were written to each county clerk; to each county health officer; and to each city or town health officer. I was not even able to arrive at the names of a large proportion of the latter. The work done in the counties and cities as shown varies from none at all and no official to really efficient work under discouraging circumstances. One county reports no county health officer at all because, forsooth, the county commissioners did not want to have any. In some cases the arrangement entered into by the county commissioners has not been with a regularly appointed officer, but some one has been selected to do what work was necessary and paid for services rendered. Naturally in such cases no records have been kept.

I wish to call your attention, particularly, to the high mortality of diphtheria. These figures under the circumstances obtaining in the rural districts, of course, are not complete. We can be certain that all cases of this disease are not reported. There were undoubtedly mild cases unreported, unrestricted and carrying the disease further; and numerous deaths of which no account is given.

The local officers with these conditions to contend with have all found it difficult to

obtain antitoxin for treatment of cases.

The counties have been compelled to make appropriations, but all have wished state assistance. In this connection the crying need of a state laboratory to which to send specimens from the first suspicious cases, the prompt recognition of which is so important, demands attention. I beg to suggest some laboratory in connection with one of our state institutions of learning.

To return to the mortality, you will note in the few counties which made any adequate returns at all the mortality ranges from twenty-three to forty-six per cent. Luckily we have had no other contagious diseases with any striking number of fatalities.

The greater part of the state has suffered little from smallpox. The southern counties have been unusually exposed to it.

Some counties report a conscientious enforcement of the law governing vaccination of school children. Others are not enforcing it at all. In some cases the laxity is due, simply, to inertia on the part of the authorities; in other cases, there is a pronounced opposition on the part of county or school officials. If any preventive measure has proven its utility in this state certainly it is that of vaccination.

As no appropriation for health purposes is made by the state and the Board has no sources of revenue, naturally the activities of the Board as a Board of Health have been limited. No meetings as a Board of Health have been held. No remedial measures are suggested at this time. That privilege is reserved for some more opportune time in the future. Tho' this report of mine gives not much information, still its very lack is illuminating. It serves admirably to emphasize our shortcomings and our pressing needs.

In this connection, to show our standing among the states in the line of public health, it is profitable to take note of outside opinion. Some years or so ago, The American Medical Association became interested as to what the different states were doing in this matter of state public health. To arrive at some definite information it commissioned an investigator—a man familiar with public health work—a public health officer of one of the larger cities—to visit all the states to make

inquiries. Just recently this investigator made his report. Naturally we can not hope to rank among the older states. Those of us who are at all familiar with conditions in this commonwealth are not altogether surprised at his rating of us, but it is humiliating to see our standing in print. In a comparison of states, New Mexico stands at the foot of the list with out of a possible 1,000 a total of 0 points. Next above us is Wyoming with 14 points. Then Arizona, not as old as this state nor as populous, with 39 points. While conditions may be peculiar in New Mexico, while we might still be at the foot, certainly we should be able to obtain more than 0.

(Signed) W. E. KASER,
Secretary.

Doctor Charles Turner Sands died at his home in Las Cruces on Sunday afternoon, May 14th, 1916. Doctor Sands was a graduate of Jefferson Medical College, class of 1907, and was licensed in New Mexico in 1910. He was for a time connected with the New Mexico Cottage Sanatorium at Silver City, being associated with doctor E. S. Bullcock. A few years ago he located in Las Cruces for the practice of his profession. A few months ago he retired from active practice on account of failing health, being a sufferer from tuberculosis with diabetes as a complication. He was a member of the Dona Ana County and New Mexico Medical Societies and of the American Medical Association.

We extend our sympathy to his aged father and to his devoted wife who are left to mourn his untimely death.

Under date of May 4th, doctor W. W. Spargo of Albuquerque writes asking that we call the at-

tion of the profession in this part of the country to a clever "worker" in the person of one Homer Freeman "or any other name he may see fit to use" and representing himself to be an adjuster for the Georgia Casualty Company. "He called upon me recently," says doctor Spargo, "stating that doctor Norman Bridge, their medical director in charge of Los Angeles branch, had requested him to see me and make arrangements that I should act as their medical inspector here, and incidentally wrote me for an accident policy—collecting \$10. Too late, I became suspicious and wrote doctor Bridge and the company and find that he is an impostor."

We are glad to warn the profession and would suggest that should the individual make his appearance that he be held and the company communicated with.

Five Sectional Conferences will be held next fall under the auspices of The National Association for the Study and Prevention of Tuberculosis.

The New England Conference will meet in New Haven, Conn., October 12th and 13th; the North Atlantic Conference at Newark, N. J., October 20th and 21st; the Southern Conference at Jackson, Miss., October 27th and 28th; the Mississippi Valley Conference at Louisville, Ky., October 4th, 5th, and 6th; and the **Southwestern Conference at Albuquerque, N. Mex., October 12th and 13th.**

The states comprised in the New England Conference are Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. The North Atlantic Conference states are New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia. The Southern Conference states are, Virginia, West Virginia, North Carolina,

South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, and Louisiana. The Mississippi Valley Conference states are, Michigan, Ohio, Indiana, Kentucky, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Arkansas, Oklahoma, Kansas, Nebraska, North Dakota, and South Dakota. **The Southwestern Conference will take in the states of Texas, New Mexico, Colorado, Utah, Arizona, Nevada, and California.**

Anti-tuberculosis workers are urged now to make plans to attend the conference in their district or the one nearest to them.

Attention, the S. P. C. S.!

The federal trade commission has sent to Congress a preliminary report on the rise in the price of gasoline. It draws no conclusions but presents masses of statistical information. Among the items noted in the press summary are:

Production of crude oil remained virtually stationary; gasoline contents of crude oil decreased; exports of gasoline increased from 188,000,000 gallons in 1913 to 253,500,000 gallons in 1914 and 284,500,000 gallons in 1915; for its 62 per cent of the gasoline produced the Standard Oil Company charged about 1 cent a gallon less than the "independents" charged for their 38 per cent.

The last item ought to move the Society for the Prevention of Cruelty to Statesmen to do something. Consider the hard lot of the member of Congress with a large constituency of automobile owners. Confronted with angry complaints about the "high price of gas" he is deprived of his old familiar explanation.

He cannot dismiss the complaints with the classic vituperation of the "trust"—the "octopus"—for here is the federal trade commission with its cold-bloded price tables! Truly the way of the statesman who deals in oratory meant only "for Buncombe County" grows harder every day.—(Chicago Herald, Apr. 13th, 1916.)

The Growth of Public Health Laboratories

Winslow states that it is difficult to assign priority to any particular state, city or university in the actual establishment of the public health laboratory in America. It was in November, 1887, that the Lawrence Ex-

periment Station of the Massachusetts State Board of Health was established. In the same winter the state of Michigan opened a hygienic laboratory at Ann Arbor; and in 1888 Dr. Gardner T. Swarts founded at Providence what is said to have been the first municipal public health laboratory in this country. According to Winslow, the laboratory established by Dr. Herman M. Biggs in connection with the New York City Department of Health, as the result of the attempt to apply the newer bacteriologic methods to the detection of cholera among immigrants after the Hamburg epidemic of 1892, was probably the first municipal bacteriologic laboratory in this country devoted primarily to diagnostic work—possibly even the first of its kind in the world.

Few of the thousands of physicians who send specimens to the public diagnostic laboratories, and depend on this valuable assistance as one of the fundamentals of their daily routine, realize how this service has grown from its small beginnings a few years ago. Dr. W. H. Park, for example, who early began the examination of throats for diphtheria bacilli about twenty years ago, now has 250 workers under his direction in the New York City laboratories, which annually examine more than 75,000 diphtheria cultures. This, however, is only a single aspect of the diagnostic work now being carried out in many comparable institutions. We may recall the public facilities for the determination of tuberculosis, malaria, typhoid fever, gonorrhea, syphilis, glanders, rabies and cancer; the examination of food and drugs, of water supplies and sewage disposal, and the control of vaccine and serum manufacture. As Winslow has said, the work of the laboratory is one of the chief foundations on which all sound public health work must be based. A casual review of its history shows how its functions are multiplying, and how numerous and taxing are its problems.—*Journal of the American Medical Association*, April 22, 1916

Emetin: A Note of Warning

While it may be accepted as a truism that remedies marketed under fancy proprietary names too often are not what they pretend to be and do not accomplish what they claim, it must not be lightly assumed the

converse is equally true. The physician is rightly suspicious of such products; but on the other hand he should not take it for granted that because a drug bears the name of a definite chemical compound, it is true to name and pure, and therefore trustworthy in its actions. Of this fact we have recent demonstration in respect to emetin. The use of this drug has greatly increased, during the last two or three years, owing to its extensive employment in pyorrhea alveolaris and in amebic dysentery. It is administered in quantities not far removed from the subtoxic dose, while, from the very nature of the maladies in which it is used, the patients are frequently in a condition of exhaustion. These facts combine to render it vitally important that, in prescribing this remedy, we should be assured that it is of uniform composition and pure. Nor, in this particular instance, is there any reason why this standard should not be constantly attained.

The *Journal of the American Medical Association* from which the above statement is taken, then calls attention to a recent report by Levy and Rowntree on "The Toxicity of Various Commercial Preparations of Emetin Hydrochlorid," which appears in the *Archives of Internal Medicine* for March, 1916. These authors report symptoms of poisoning in two cases, in one instance fatal. The *Journal* continues:

It is true that this fatal case is the first recorded in the literature, while instances of grave toxic effects have not often been reported. But these facts must not be accepted at their face value. Two peculiarities of the action of emetin (or of the associated impurities) conspire to mislead. In the first place, certain of the toxic effects closely imitate the symptoms of dysentery, the very disease in which emetin is most extensively used in relatively large doses. Secondly, the maximum poisonous effect tends to be deferred, occasionally manifesting itself some days after the drug has been discontinued. The phenomena of intoxication are, therefore, apt to be interpreted as an exacerbation of the preexisting morbid condition.

The case of emetin is not unique in the history of pharmacology. At one time the products marketed under the name of "aco-

nitin" varied startlingly in their toxicity. At that period the chemistry of aconitin and of its congeners had been very inadequately investigated. No such excuse avails regarding impure emetin. This alkaloid is a well defined chemical compound. It is commercially practicable to ascertain, with precision, the emetin content of the hydrochlorid and to insure its freedom from dangerous impurities. In the article referred to it is proved, clinically and experimentally, that at least one house of repute is supplying, under the name of emetin hydrochlorid, a product so unusually toxic as to prohibit its use, at any rate in anything approaching the ordinary dose.

It is open to the manufacturer referred to to say that its greater toxicity is due to its greater purity. There is, however, nothing in the facts which supports such a contention, and there is much which militates against it. However this may be, one indisputable fact stands out: The products supplied as emetin hydrochlorid are variable in composition and toxicity to a degree which constitutes a serious danger. It therefore behooves physicians to insist on some declaration from the firm supplying emetin hydrochlorid as to its purity and as to the standard employed.

HOUSING AND HEALTH.

Model Homes Planned for Washington. Experience Foreign Cities Proves Sanitary Homes Reduce Sick Rate.

Plans have just been completed for the erection of a series of model homes in the City of Washington for the purpose of demonstrating to the Nation the relationship between good housing and good health. These are to be known as the Ellen Wilson homes, and are not in the nature of an experiment, but are intended as a demonstration to the entire United States.

The intimate connection between bad housing and bad health and good housing and good health is clearly recognized in Washington, where the alley dwellings have long been a matter of concern both to the health authorities and to public spirited citizens who wish the Capital city to be an example to the Nation. The alleys have been

paved, sewers and water mains have been laid in them, they are lighted and cleaned as are the streets. Yet they keep their old lead over the streets when it comes to totaling the figures for disease and death.

In this, Washington's experience has been like that of Liverpool and other European cities which tried unsuccessfully to make badly situated dwellings wholesome by cleaning and fumigating. After thirty-three years of unavailing effort to improve that which was fundamentally bad, Liverpool finally decided that the only hope lay in wiping out its insanitary areas. It demolished the old houses by the acre and in place of them built new houses. Where dwellings have been crowded so close together that there was scarcely passage room for a stout man to squeeze his way to one of the old rear houses, it built new dwellings opening upon wide spaces which provided light and air. Immediately sickness and death decreased—and with them vice and crime. What had seemed a hopeless struggle for more than a generation was won.

Other cities in Europe have done the same and with the same results, but what makes Liverpool's figures of unusual value is that the new houses are occupied by the same people who occupied the old ones. In some cases the population on a given area in the new dwellings is 99 per cent the same as that which lived on the area in the old buildings. So here the effect of housing is not complicated by questions of different occupants, of better food or clothing or a generally higher standard of living. The housing only has been changed and the results are striking.

Washington is attempting much the same work, though in a less dramatic manner. Congress has enacted a law which goes into effect on July 1, 1918, according to which all the alley dwellings in the District of Columbia must cease to be used for dwelling purposes. Meanwhile, in order that there may be accommodation for those who will be forced to seek new homes in street houses, there has been organized a limited dividend company which is to build houses that will be not only sanitary, that will provide not only abundance of light and air, but houses

attractive architecturally, homelike in their arrangements and containing bath rooms and provisions for hot water in place of the old out-door closets and hydrants.

Such houses as these cannot, of course, yield the return upon the investment that the old houses did. In fact Congress in its act incorporating the Ellen Wilson Homes, limited its dividends to five per cent net. But they will yield to their stockholders a dividend in the form of satisfaction because of a needed work well done. To their tenants they will give relief from preventable sickness and death and an increase in the joy of living.

Do You Know That

Walking is the best exercise—and the cheapest?

The United States Public Health Service administers typhoid vaccine gratis to Federal employees?

A little cough is frequently the warning signal of tuberculosis?

Bad teeth and bad tonsils may be the cause of rheumatism?

Unpasteurized milk frequently spreads disease?

The air-tight dwelling leads but to the grave?

Moderation in all things prolongs life?

The careless spitter is a public danger?

Original Articles

LOCAL ANÆTHESIA IN MAJOR SURGERY

O. S. FOWLER, M. D.
Denver, Colorado.

Read before the section on Surgery of the 34th Annual Meeting of the New Mexico Medical Society, East Las Vegas, N. M., September 7-9, 1915.

The desire and effort to relieve pain both in trauma and operative

procedures is as old as the medical profession; that these efforts were attended with more or less danger is proven by a considerable mortality with nearly every one of the different agents so used. General anæsthetic agents date back many centuries, even to the middle ages, when physicians and "Medicine Men" knew of the stupefying effects of the narcotic juices of plants and used them in the form of potions to relieve patients about to undergo surgical procedures, a little later the so-called "Sleep Sponges" were used to induce sleep by inhaling the narcotic juices of the poppy, mandrake, henbane and hemlock. These attempts were all attended by a high mortality.

Attempts at local anæsthesia were also made in these early days, but perhaps should be classified as suggestion or hypnotism thus we should place the custom of putting a poultice of the dried and powdered fat and skin of the sacred crocodile of Egypt, so also the rubbing on of the "Memphis Stone" with vinegar over the area of the operation.

In the light of the past what a wonderful boon was the discovery of ether in 1846 and chloroform a year later, and these two drugs with occasional changes in popularity have remained the standards ever since, notwithstanding a pretty high mortality, at least this mortality has been high enough to stimulate constant effort to find some other drugs or a combination of known agents that would lessen the dangers and discomforts of general

anæsthesia, thus in recent decades we have had the A C E mixture; Ethyl Chloride; Nitrous Oxide and Oxygen or both with Ether; methods of administration have made advances from time to time, but neither the drugs used or the method of their administration have removed the extreme discomfort and ever-present, though possibly slight, dangers of these anæsthetic agents, and at the present time we cannot say with any assurance that any of the recent agents have supplanted in the least the old favorite, Ether. It is true we do tell our bad risks that nitrous oxide and ether are safer and less unpleasant to take, but we are probably over-enthusiastic over the newness of the method, for it certainly does not fill the need of a safe, convenient and comfortable anæsthetic and we believe that it will decrease rather than increase in popularity. Somnoform probably fills a peculiar need and has about the same danger as nitrous Oxide and Ether for short anæsthesia.

However, we may regard the whole question of general anæsthesia, we are forced to admit that it has many dangers, both immediate and remote, that its discomforts are extreme and that it adds materially to the shock both during the operation and in the days immediately following, it undoubtedly often adds to the shock sufficiently to turn the tables against the patient of known bad risk. What a wonderful thing it would be if we only had a general anæsthetic agent that had absolutely no dangers, or discomforts

nor any deleterious effects immediate or remote, but the realization of such an agent is to be placed among the impossibilities.

Local anæsthesia really dates from the introduction of cocaine for this purpose in 1884 and it soon had many advocates and was used almost universally, but it was found to have a high mortality and was given up by many and replaced by Schleich's solution and betaucain, but with the introduction of adrenalin in 1901 by Takamine local anæsthesia received an impetus, for this drug immediately removed the greatest risks of rapid absorption and it has been growing in popularity ever since. Some men still use cocaine in weak solutions, one-fifth of one per cent, and claim to have had no trouble with it but for the most part it has given way to novocain, which is more stable, very much less toxic and better tolerated by the tissues; several years ago quinine and urea were popularized but we believe there are very few men who have not discarded this combination for novocain. There are some advantageous features about this drug but these are all offset by the fact that it quite occasionally produces sloughing, but as to its efficacy as an anæsthetic there can be no doubt, in fact, it is too good, keeping the tissues anaesthetized for a day or two but producing a terrific infiltration which seems to cause a pressure ischemia and gangrene.

Novocain seems to be an ideal drug for this purpose; it has practically no toxicity, especially if it is

used in weak solutions, and the usual strengths now used are one-fourth and one-half per cent, personally we have discarded the higher strengths and use entirely the one-fourth of one per cent in all tissues and for blocking the trunks of nerves, and have found it entirely satisfactory, to this we add two drops of 1,-1000 adrenalin to each ounce of the solution, some men use more adrenalin and some advocate less, but where the solution used is so weak there is probably no danger to it in any amounts in this proportion. This solution can be used, we believe, ad lib., yet we have never used more than twelve ounces at one sitting, though there is recorded in literature where a surgeon used forty-eight ounces in one operation, we almost gasp at this, but he assures us that the patient exhibited no alarming symptoms, but we cannot conceive of the necessity of using more than ten or twelve ounces or at most fifteen. The one-fourth percent solution has many advantages over the one-half, the two and four per cent solutions, in that you can use larger quantities of the drug as well as the advantage of more fluid and thus the slower absorption of it all. This strength is certainly sufficient for infiltration anaesthesia in any part of the body or for intra-neural injection, but for peri-neural application the one-half of one per cent we think better.

The methods of use are:

- (1) Infiltration.
- (2) Nerve blocking.
- (3) A combination of these two

[(1) and (2)].

(4) Peri-neural—preferably in a plexus or at a foramen.

(5) Intraneural — used mainly by sight.

(6) Intravascular—Intravenous or intra-arterial.

(7) Intraspinous.

The use of local anaesthesia demands of the surgeon an accurate knowledge of the anatomy of the part and the technique varies quite a little for each part approached, depending upon the innervation mainly, and less upon the gross anatomy of the region but this much is certainly true, the anatomy may be more or less distorted by the swelling of the tissues and one must be certain here of the structures or he will often become quite confused.

We have found little difficulty in obtaining the consent of any patient to operate with a local, if we ourselves cared to approach it that way, we have had a little more difficulty in convincing some doctors that the method is practicable than we have had with the average layman, on the other hand there are many doctors who would not be operated any other way, but the average layman is dependent upon you for advice and has no prejudices in the matter and does not attempt to follow the operation even though he is conscious, where the physician feels the keenest interest in knowing how you are proceeding and it may have the effect of making him nervous. I feel that there should be a frank understanding between the surgeon and the patient

and I make it a practice to have a talk with the patient in the endeavor to convince him that I can do his particular operation without pain or with no more perhaps than if he were having a tooth filled. I point out the many advantages both during and after the operation; I usually give a hypo of a fourth of morphine with atropine and just enough to remove any apprehension they may have. Oftentimes nothing is given at all and no particular difficulty follows, but I think it is better to give about the same amount before operation, as most surgeons give after a major operation, this gives them a slight drowsiness, but they can move themselves if asked and can bear down to aid in locating a small hernial sac, which kind is the most difficult of all hernias.

The preparation of the patient mentally has been spoken of, and the physical preparation is about the same as before a general anaesthetic except that I let all these cases eat more in the preceding two days than if they were to get a general anaesthetic.

I have many times let these patients eat their breakfast, be operated for inguinal hernia, go back to their room and eat their dinner and not miss a meal from the procedure. Their general condition in any abdominal case is better when they get off the table than a full week after having had a general anaesthetic for the same operation, therefore the convalescence is shorter and the patient is the same as before the operation except for the trauma. The gas gives less

trouble usually, and often there is practically none, the whole post operative picture is as different from the usual post-anaesthetic picture as day from night, in fact you have given him many percent toward a favorable recovery; I am sure that this added advantage would often bring a case through where a general anaesthetic will prostrate them so that they cannot recover.

I can say this: that I believe that operating under local anaesthesia is more difficult upon the surgeon, it takes a longer time and more patience and must be a slow and careful procedure, but I am also sure that none of us are so rushed that we cannot afford to give the patient the added advantage of the method. I know of no surgeon in Denver who could not spend twice as much time in the operating room and still have time to keep up his golf record. Therefore, I feel that this is not a legitimate excuse for not using local anaesthesia in preference to general. It is my practice to inject the superficial layers before starting and work through these and then inject the next layers and while waiting for this to take effect to go back and tie the bleeding vessels already exposed. This takes a little more time but I am sure that some surgeons fail with this method by trying to hurry through an operation from a single preliminary injection, but time is not a factor when the safety and comfort of the individual is at stake. The regime of the operating room should be very different; there should be no

talking of the operation, as to what you are doing now, else the patient might become nervous. The tissues must not be pulled upon with a retractor, nor maltreated by the surgeon; all dissections are better done with a cutting instrument or points of scissors, and instruments should not be scattered around. All authors recommend that a single row of wheals be made in the skin for the incision, but I have noticed that this is not sufficient, for when you are ready to sew up the skin you will find that the solution has leaked out and will require another injection upon both sides of the wound; to correct this I have made it a practice to inject a double row of weals in the skin and make the incision between them, in this way the solution does not leak out and the tissues are yet well anaesthetized when ready to close.

A criticism has been made very often that local anaesthesia has a tendency to delay union or even to prevent union in the healing process. I have no doubt but that this might be true in cases where too much were injected or too much adrenalin were used or following the use of quinine and urea, but I am positive that if novocain is used properly that the above criticism is not substantiated. I am also borne out by the fact that the tissues are less traumatized under local than under general anaesthesia, for all dissection is done with a knife or scissors, the tissues are handled gently at all times and the blood supply is less disturbed and there-

fore all these measures are an advantage, for these reasons: I am sure that this criticism is wrong and that we can say positively that wounds heal quicker under local anaesthesia than they do under general anaesthesia, furthermore the better general condition of the patient aids in an earlier healing process.

I think no logical objection can be made against local anaesthesia, it is better from every angle from the standpoint of the patient's welfare, and it is his welfare only that should be considered, and we will be the last to advocate that the surgeon's convenience or comfort or time spent in the operating room are even to be mentioned when the comfort or safety of the patient is at stake.

The field of application of local anaesthesia has been rapidly widened from minor surgery two decades ago until now practically every operation is included in its domain, and it is always the method of choice, and we should make it the rule to use a general anaesthetic only when it is impossible for us to use a local. It is here that many surgeons fail in its successful use, for they make it their rule to use it only when the patient cannot take a general anaesthetic, consequently they do not use it often enough to develop a familiarity with its technique, and they claim it is too limited for them to adopt, when, as a matter of fact they are either poor anatomical students or are too lazy or are too egotistical or arrogant, or the thought is too absurd that

they should even think of inconveniencing themselves for any poor devil whom they think could not kiss the hem of their garment; and, too, it takes away from the show of the operating room and from the surgeon who takes so much pride in the appearance of being rushed to death; he will hurry to the hospital, wash up with much gusto, hurry into the operating room, give an impressive lecture on his low mortality, work rapidly without making a thorough examination of the other organs in the belly that might be involved, remove a tube, ovary, uterus, appendix or gall bladder, in whose pathology he would be very much in doubt except that he had seen so many just like these; close up rapidly, yank his gloves off and rush away from the hospital to sit around for a week or so until another victim falls to his lot. This, he thinks, may look well, but he is hardly fooling anybody but himself about his busy life.

Too often yet do we see a general anaesthetic given for a circumcision, a fatty tumor, hemorrhoids, a black mole or some other small operation, gentlemen, we think that such a thing should be the basis for malpractice and it probably will be so regarded within another decade.

There is no choice between local and general anaesthesia in the tuberculous, in the aged, in those having kidney lesions, in the arteriosclerotic, in those having heart lesions, or those in shock; they must all be done under local anaesthesia, otherwise you are increasing their risks a hundred per cent.

A friend was in my office the other day, he had always had good health until a year ago when he had appendicitis. Ether was given, pneumonia followed and an empyema followed the pneumonia, another ether anaesthetic was given to resect a rib for drainage of the empyema, a few months later he was sent to Colorado for tuberculosis which was now developed, and it will be a long time before he is a well man, if he ever is, and why all this? Because, we think, he was given ether to remove the appendix when it should have been done, or at least attempted, under a local anaesthetic, and to make the situation worse he had ether to resect a rib, an operation that is so simple under novocain that any interne in any American hospital can do it without more trouble than trimming his finger nails. Gentlemen, that sort of surgery is not only ignorant, it is criminal.

There are certain operations that are especially adaptable for local anaesthesia; among which should be mentioned: Inguinal hernia, whose region is supplied with end nerves and the nerve trunks in the region and are easily reached and injected directly; Gall bladder stones should be placed among the easier operations, especially if it is an empyema of the gall bladder, here the bladder is elongated and as soon as the belly wall is opened it will pop right out of the wound. One should not try to deliver the liver into the wound under local anaesthesia but should leave the liver in place and work down in the belly,

possibly a little less convenient but wholly easy and possible. The resection of a rib for empyema is demanded always under local anaesthesia; it is as easy to do in this manner as it is a circumcision, and it gives the patient control of the coughing, which is a dangerous thing in tending to loosen an embolus by suddenly stretching the solidified lung. Hemorrhoids is another operation that is extremely simple under local anaesthesia, the sphincter can be stretched without the slightest difficulty after proper injection of the area, the hemorrhoids dissected out with the scapel and ligated, and should never be removed with the clamp and cautery by either a local or general anaesthetic, he can leave the hospital in three or not more than four days and go on about his regular work, while with the clomp and cautery operation we have often seen them still in bed ten days or two weeks afterward and some few cases still requiring opiates to relieve the pain due to the intense swelling yet present. Appendectomy is another operation that can be done nearly as easily as a hernia provided the caecum and appendix can be delivered without pulling upon them, but even an appendix that is bound down by adhesions can be handled if you are willing to work slowly under some inconveniences. Amputation of the breast can also be placed in the class of comparatively easy operations, the axilla being the only part that will cause any inconvenience at all. Stones in the urinary bladder and drainage of

the bladder should never require a general anaesthetic, all that is necessary is to use a little care as to your orientation. All phases of kidney surgery are perfectly feasible with a local anaesthesia, and here is probably the largest field, for it in bad cases. We have done all the usual operations here with most gratifying success, especially where both kidneys are at fault, doing one at a sitting, and usually taking the best one first, as the poorer one may be doing work, yet require removal at operation. The upper ureter also comes within this class and it can be transplanted to the skin, or a stone can be removed from it. You can readily see what a big field we have in kidney surgery alone when you remember that these are the very ones that should not take a general anaesthetic. Prostatectomy under a local anaesthesia is among the most difficult procedures, but by doing it suprapubically, which, by the way, is the only method it can be done properly, and by injecting from the perineal as well as intravesically it is perfectly feasible and is the method of choice by far in the most of these poor surgical and anaesthetic risks. Goiters are preferably done under local anaesthesia, as these patients are very poor anaesthetic risks and the operation is one that is not unusually difficult with a local and very much is gained for the patient over a general anaesthetic. Amputations below the middle of the thigh and resections of the knee or ankle are just like going to a picnic—a pleasure. Here the intra-

venous or intra-arterial methods of administering the anæsthetic should be used, and it is extremely satisfactory.

Only to mention other feasible and reasonable operations we will simply enumerate several that can be done with safety and comfort: Repair of perineum in prolapse of the uterus with the abdominal incision necessary to care for the prolapsed uterus; hysterectomy by the abdominal route, ovariectomy salpingectomy; gastrotomy, gastro-enterostomy, entero-enterostomy, enterotomy which is a demanded procedure in the extreme cases of intestinal obstruction where there is so much stock that nothing can be done but to relieve the distension of the intestines; drainage in general peritonitis where the shock of a general anaesthetic is very dangerous, also the drainage of an appendiceal abscess where condition of patient is bad. Resections of the maxilla by blocking the nerves at exit from the cranium. Colotomy in inoperable conditions of the rectum. Excision of the gall bladder is difficult if contracted down upon a single stone with adhesions around it, but its removal in empyema of the gall bladder is among the easier operations.

There are very few contra-indications for local anaesthesia, some men have declared extreme adiposity as such but we have not found is so, it usually simply requiring a larger skin and abdominal incision. Nor have we found that children are impossibilities

here, we have resected a rib in children five and seven years old and in neither case did they even know we were working except in the injection of the fluid. We have done an appendectomy in a child nine years old, smaller operations as circumcision in children a year and a half and several five years old with less fuss than the same aged child makes in taking and coming out a general anaesthetic. About the only insurmountable condition is where there are more than one operation required and where they cannot be separated into two or more sittings, as in gall bladder and stomach lesions combined, or in hysterectomy where there are multiple or large fibroids. We have done double hernias many times and once where there was a very bad hydrocele. Double kidney lesions should be done at two sittings, a kidney and appendix can both be done at one sitting if desirable, but preferably in two; perhaps, in fact, two or more operations can be done at one sitting provided it does not extend the time unreasonably, as these patients often get quite tired lying upon the table, for this reason it is well to put on extra pads on the operating table for all these cases. I have in many cases practically finished a major operation before the patient was aware that I had started to operate. In five cases of interval appendix I have had the appendix off or ready to take off when the patient has asked when we were going to begin. Many others have declared they knew nothing about what was

doing and were surprised to learn that we were through or nearly through with an operation as important as a hernia.

I have now done almost two hundred (196) major operations under some form of local anaesthesia, including all of the serious operations, and in no instance have I ever had a patient to say that if they were to be operated again would they prefer a general anaesthetic to a local, and in many instances they have had a necessary operation done with so much satisfaction that they have come back for some other difficulty that they had not thought of having done if they had to take a general anaesthetic. In this list I have had only one complication, that of stasis following a resection of a large amount of omentum with a double herniaotomy, and a serious infection in one case and this where the solution was not properly kept and sterilized. There has never been a pneumonia, as some claim this may follow a local anaesthesia.

Gentlemen, I hope I have said enough to convince you of the advantages of this method. It is the most reasonable, the most feasible and the most practicable method of surgery ever devised and we believe its quite general adoption in recent years marks the most notable advance in surgery in the last decade.

DISCUSSION.

DR. B. L. SULZBACHER, Kansas City, Mo.: The doctor has so thoroughly covered the field of every operative procedure that it is very hard to add anything. However,

we may justly disagree in many points about certain methods of procedures and solutions. I have used local anesthesia in almost all of the operations, but I am not nearly so radical as the doctor. The greatest trouble with our local anesthesia has been that the patients get so frightfully scared. Now, instead of using simply an injection of morphin, the last year or two we have been combining it and giving a $\frac{1}{8}$ grain of morphin and a 1300 grain of scopolamin. That has helped us a great deal in keeping our patients quiescent, relaxed and free from worry. Within the last year I was operating on an inguinal hernia and it was being done very quietly, as the doctor says, without any rustle or bustle, or any word spoken—we have almost developed a deaf and dumb language—and the man saw the sac ready to be taken off. He said, "Good God, is that mine?" I told him it was, that it was not anybody's else. We had a frightful amount of trouble to keep him on the table; in fact, we could not finish the operation under the local anesthesia, but gave him what the dentists are using so much, an oxygen and gas analgesia. Properly applied, the oxygen and gas analgesia gives us a very large field. Given an anesthesiologist who knows how to use it and a patient understanding how to take it will have no pain. We give it with the monovalve, having it only over the nose. The patient begins to float off and feel rather warm, tells us that. Then we begin and we tell him, "Now if you have pain, breathe through your nose; and if you are going to sleep, breathe through your mouth." We can keep them that way for two hours without any pain with no trouble. We operate using that method only where we have nervous cases and have trouble with our local anesthesia.

The French in taking up local anesthesia were not quite as enthusiastic as the Americans and they called it more the technique of urgency, rather than the technique of selection. If I am not as enthusiastic as the doctor is, I am not quite as pessimistic as the French operators have been.

The doctor is using an adrenalin solution. We used it a long time in exactly the same strength. We found a great many, rather a fair percentage, of secondary hemorrhages, and it occurred to us that possibly the adre-

naline masked the hemorrhage during the stage of operation. We have since then adopted Bowden's solution, which is almost the same as the Schleich, leaving out the adrenalin. Since that time, we have not had so much hemorrhage, although we have encountered a few secondary hemorrhages where we have had to open the wound and drain out a large thrombus. The greatest amount of trouble that we have had in local anesthesia, that is in infiltration, not referring to nerve shock, has been where there was previous inflammatory condition. Take for instance a large carbuncle of the back of the neck. We have infiltrated that thoroughly all around, a single row of wheals because, of course, you use no sutures afterward. Our anesthesia has been very good. They have not felt pain, although we have had to do, for instance in diabetic cases, removal of a large amount of necrotic tissue after our incision and when we attempt to cut out the deeper necrosed portions they have invariably had pain. It seems to me in the presence of large amounts of inflammation or dense, hard tissues that are infiltrated our method of local infiltration has not been quite as successful as we would like.

We have had several cases of delayed union, quite contrary to the doctor's experience, where we have taken out the stitches and the wound simply dropped apart, no suppuration, but no union. We have simply stitched the wound up again and in time it has healed. The dangers of pneumonia, I believe, are rather exaggerated following gas. It is the only anesthesia we use aside from the local anesthesia. The preponderance of the percentage is for general anesthesia as yet.

As to the method of prostatic removal, our plan has been to use local infiltration on the abdominal walls and open the bladder, and when ready to enucleate the prostate we give just a little gas-oxygen.

In the lesser operations, in the minor cases, for instance in throat work, I have noticed and spoken to the men doing this work and they all seemed to prefer as yet a general anesthetic on account of postoperative hemorrhage. There may not be a hemorrhage for six or eight hours, but then it begins. It may be perfectly dry, but during the night

some time, perhaps ten or twelve hours afterward, they get their secondary hemorrhage, although they have used adrenalin with it.

As I said, the doctor has covered the field so thoroughly that aside from giving a little personal experience there does not remain anything left.

DR. LEONARD FREEMAN, Denver, Colorado: Dr. Fowler has certainly given us, as far as I have heard—I came in late—a most excellent dissertation on the subject of local anesthesia and I happen to know that Dr. Fowler is an expert on that line.

I have used local anesthesia for a good many years, I had the honor of introducing Dr. Fowler to the use of local anesthetics and I want to say that I belong to that much despised class which Dr. Fowler has so sarcastically described who prefer to use general anesthetics when possible and to use local anesthetics when you cannot use a general anesthetic. One of the very greatest blessings that we have in anesthesia is unconsciousness. The American people, as a whole, I think, want to be unconscious when they are operated on. I know I did. I was operated on and it was a mighty fine thing to be able to go up to the operating room and take a few whiffs of an anesthetic and the next thing I knew to be back in bed. A general anesthetic is not so dangerous for the majority of people. There are clinics in the United States in which thousands and thousands of general anesthetics are given without a death and even without bad after complications. The same thing could be said of local anesthetics in certain clinics where the local anesthesia is given by great experts, and yet when you have said this you have not said any more for local anesthesia than you have said for general anesthesia. Pneumonias, for instance, occur, as Dr. Fowler said at the very end of his paper in all sorts of operations. Pneumonias do occur following local anesthesia and lots of them occur. It is a well known fact in goiter operations in Kocher's clinic, for one place, that pneumonias occur almost with the same frequency that they do with general anesthesia. The same thing can be said of operations in the upper part of the abdomen near the diaphragm. Pneumonia does not occur with

the general anesthesia perhaps so much, under those circumstances, as it does from the paralysis of the diaphragm or from absorption of septic material, etc.

Abroad, where people are perhaps more phlegmatic or possibly because they have been educated up to the point more than they are in this country, they are willing to accept local anesthesia. They may do that here in the future. After Dr. Fowler has pointed it out to them for the next ten, fifteen or twenty years, they may begin to ask for it in this country, but at the present time most people do not want it and there is no particular reason why they should have it. They want the blessing of unconsciousness while they are being operated on. I do believe in using local anesthesia wherever it is indicated, or wherever anybody wants local anesthesia, whether indicated or not; then it is the proper thing to use the local anesthesia. But where they do not want it, or it is not indicated, there is no object at all in using it upon them, as Dr. Fowler seemed to be anxious to do.

DR. A. W. MORTON, San Francisco, Cal.: I was very much interested in the doctor's paper. He brings out a number of excellent points. While I have not made any especial use of local anesthesia, for the last thirteen years I have used spinal anesthesia, which is along the same line, only to me it has some extra advantages. You can operate on any portion of the body with it. But they are very similar. I think no one who has followed the work of Crile along the line of diminishing shock but will see the great importance of it, because where you block, where you can block the condition and prevent shock, in a very bad case, you are certainly giving the patient a great amount of service.

As to the dangers that have led to the use of local anesthesia, there are a great number of dangers with the general anesthetic that the doctor has called attention to, but those are especially present where you have a bad condition of the heart, lungs or kidneys or where you are going to operate in a general septic peritonitis. There you can take the local anesthetic and open the abdomen and drain it and you prevent the future complica-

tions of vomiting and nausea and scattering infection over the abdomen. Another thing: When you use the local anesthesia, a thing we often overlook, you are able to feed that patient right up to the time of the operation, even during the operation if you want to give him stimulants, etc. That often is the turning point in saving the patient. In a bad condition the anesthetic is oftentimes very much more serious than the operation. A person that has not watched the local anesthetic and has been giving the general anesthetic in all those cases can readily realize the importance of the subject that the doctor has brought before us.

Dr. Fowler brings up another factor which is rather important. He says he wants to see his patient before the operation. The doctor is not a hypnotist—I do not know that—but he understands the laws of suggestion and I want to say this: A man who goes into the operating room and does not understand something about the laws of suggestion and is not in accord with local anesthesia, does not believe in it, he is not able to inculcate into the mind of that patient the confidence that is necessary to bring him through the operation. I do a little differently in my work from the doctor. We talk right along during the operation as though there were nothing to it. You must not show an anxious expression on your face during the operation, if you have any anxiety. Half the time while I am operating I tell the patient I am through or that I am washing him or something of that kind. He does not know the difference unless he watches. The other day I was doing a double hernia on a boy only twelve years old; we were talking and I was working along, and the boy said to me as I was doing the herniotomy, commenced complaining as I was pulling the cord. I said, "What's the matter, lad?" He said, "Doctor, I am just starving." This was five o'clock and they had not fed him that day, contrary to orders. I said to the Sister, "Bring him a glass of milk and some sandwiches." They brought him the glass of milk and two sandwiches. He ate one on the table and just as he was about to leave he reached over and grabbed the other and said: "I will take it to my room and eat it there." Isn't that a different picture from

the anesthesia that leaves the patient vomiting?

It is not so much the danger in general anesthesia, there is not in a great many cases, anyway, but there are such a large number of patients, where there is no especial contraindication, that I have seen vomit for two or three days after, and who of you that is doing surgery has not seen your case run along, as Bevan so vividly described six or eight years ago in a paper, for three or four days, then an acidosis develops and your patient is gone and you do not know just what is the matter. I tell you, gentlemen, under the local anesthesia you do not get it, you do not get it, absolutely. It is the same principle as the spinal anesthesia. I have not used it so much because the other has been so satisfactory to me, but it does not matter which you use. I am reminded of an expression of Sam Jones, the noted evangelist. They were making a great deal of excitement in the community at the time over getting religion, and they asked him how to get religion. He said to them, "Gentlemen, it does not matter how you get it, if you want to, go out to your grandmother's tomb and get it, it makes no difference how you get it."

Gentlemen, I will not fight with Dr. Fowler over his local anesthesia. I do not care how you do it just so you get away from general anesthesia. There is nothing which will do the amount of good that the doctor is doing along that line; not only the doctor, but Crile and these others. Every town from San Francisco to New York, and from the north to the south, and in Europe, has seen the seriousness of general anesthesia and they are beginning to want something to relieve them of those complications. Naturally, we have to resort to some form of cocaine. Personally, I think that the method Dr. Fowler has described is as ideal as the use of local anesthesia can be made.

DR. S. D. SWOPE, Deming: I belong to that aggregation of superannuated individuals who still believe there is a place for general anesthesia. In 1912, I had a most convincing demonstration done in New York upon myself. The doctor made a hole in the back of my neck where there was a car-

buncle, and it did not hurt a bit. I was very comfortable, with the result, though he assured me that with the ordinary scoop he had taken out all of the pyogenic membrane and in the course of time, if I waited long enough, I would be reasonably comfortable. His statement was a fact. I believe also in local anesthesia. I have used local anesthesia. I use local anesthesia just as I use Lane's plates and other things along that line, when I think in my poor judgment that it is better than general anesthesia. Recently I did a hernia on an old gentleman, 87 years old, under local anesthesia. I preferred it in that case because of the danger of general anesthesia in that particular instance. I took the precaution not to allow the old gentleman to see what I was doing. I used the ordinary shield up in front of him which we put up to prevent our patients from soiling the abdomen when we are operating under the general anesthesia. We talked over the situation, the nurse and myself, and all who were present, during the procedure, and the old fellow really did not know how much was done. He insisted after he went to his room on inspecting the arrangement of his room on his feet and we had to tell him how much had been done and when he found out that he had three rows of stitches in his abdomen he got quite highly scared over it, but that was the first time he had been scared. I really believe in local anesthesia. There are few of us who can have the experience of Dr. Fowler with local anesthesia. There are few of us who are so expert as our friend from San Francisco with his spinal anesthesia, but there is a place for them all. Sometimes a revolutionary gentleman like Dr. Fowler comes along and he disturbs the apathy of an evolving community until he does them an immense amount of good if they do not all get too revolutionary.

DR. C. E. EDSON, Denver, Colorado: One incident in the use of local anesthesia which Dr. Fowler did not mention, nor Dr. Freeman, was illustrated by a case in my own experience not long ago. A gentleman had a wen of moderate size to be removed. Certainly, we would all agree that an operation of that extent was pre-eminently suited to local anesthesia. The operation was done by

one of our Denver surgeons—not myself, I do not do surgery—a thoroughly competent man, and the patient proved to be hyper-susceptible even to novocain. We had a very anxious hour before we were sure that the patient was going to recover from his novocain poisoning. Of course, that does not happen once in many many times, but it is something which may happen now and then and you cannot tell that that susceptibility exists until the drug is injected and it is too late.

DR. H. M. SMITH, East Las Vegas: Doc was used in that case?

DR. EDSON: I cannot answer that, Doctor, I do not know. The operation was done under novocain and we had very marked toxic symptoms from it. Of course, that is an exceptional case, but they do occur.

DR. HUGH CROUSE, El Paso, Texas: I have had experience with cocain myself. I had a very beautiful experience of getting 1-24th of a grain injected into the gum for the removal of a wisdom tooth and I had convulsions for seven hours afterward and was in the hospital for several days. No one knew that I had the idiosyncrasy, but I knew it afterward, and I want to say to you it is not a very charming experience.

Discussion.

DR. W. J. KINSINGER, Roswell:

I am another witness on the stand. I was operated on for an infection on my arm under cocain and was in the hospital for 24 hours. I came very nearly being divorced when I got home, because they did not know where I had been—I did not think it was going to keep me, but I was susceptible to cocain and was completely laid up for 24 hours. The solution used was $\frac{1}{2}$ of one per cent, which would seem harmless to anybody, and I was the victim of a serious case of cocain poisoning. That was in a hospital in New York City, 1901. So we see that we are not always perfectly safe in using cocain on everybody. I have used local anesthesia a great deal and do yet in selected cases. I believe in it thoroughly, but it is well for us to be extremely cautious, to feel our way in the amount of cocain in whatever manner

we use it in cases who are susceptible to toxic effects from the drug. I have used Crile's method in recent years a good deal with very satisfactory results and I also use novocain, sterilized novocain previous to using the Crile method. We have used a low percentage of quinin-urea solution in the deeper tissues with the most gratifying results, and while I have had slightly delayed union one can simply allow the stitches to remain a little longer and finally get perfect union. In tuberculous patients, of whom we have a good many in this state, it is frequently impossible for us to use a general anesthetic. In these cases, it is necessary to resort to some of the local anesthesia methods, and I believe that we save the life of a few patients, at least, by the administration of local anesthesia. I believe that as time wags along we shall become more expert in the administration of local anesthesia and more cautious in its use and that in the future there will be a great deal more used, for I certainly think that in many cases it is preferable on account of the bad results that may follow general anesthesia.

DR. E. PAYNE PALMER, Phoenix, Arizona:

This has resolved itself into an experience meeting so I think I had better ad my little mite. Two years ago I had a woman who had a synovitis of the left side. I used the intravenous novocain, one-half of one per cent., 30 c.c. The operation went along very nicely and we had perfect results from the anesthesia, but when the band was removed she immediately developed very serious symptoms, a severe dyspnea, pulse very rapid and weak, cyanosis, dilated pupils. For a few minutes we thought that we were going to have a death on the table. We used oxygen, adrenalin intravenously, salt solution, etc. She finally came out all right, but was in the hospital for a week quite ill. That is the only unsatisfactory result that I have had from local anesthesia.

My experience with local and spinal anesthesia has been comparatively large, because I spent six months in Baur's clinic, where they were using it very extensively. I think you will find that in most of the German clinics they used the local and the spinal

anesthesia whenever they possibly can and only use the general when they think it is absolutely necessary. One reason for that may be that the European men do not understand giving general anesthesia. When I was in the general hospital in Vienna, they were giving a combination of ether, chloroform and benzene and I suggested one day that they allow me to give an anesthetic and I would show them and Hartmann said, "Was haben Sie?" I told him again. "Nein, nein." He did not want to have that administration there, he did not want an anesthetic given and given properly.

I see that there are two sides here, one for the general anesthetic and one for the local. I am on the top of the fence. I study the condition of the patient and consider the anesthetic from the standpoint of the condition, and that is what you have to do in every case, consider not the anesthetic but the patient, and not what the patient wants but what the patient needs always. (Applause.)

DR. JOHN R. ESPEY, Trinidad, Colorado: The question of the effect on the patient has been gone over, but there is one little point which has not been brought out and that is the effect on the surgeon. Of course, that is because we are all such cruel surgeons that nothing affects us at all. We exclude the relatives from the operating room very frequently because we think they may become frightened and that may perhaps have an effect on the surgeon. There is nothing so contagious as fright. I use cocain, novocain, local anesthetics, occasionally, somewhat as Dr. Freeman suggests, in mild or slight operations, but I have enough respect for the graver operation so that I would rather on my account and the patient's account that he should be unconscious while I am doing a more grave operation. I have seen some startling things from slight operations. In my office I gave—that was before novocain came in—cocain to remove an ingrown toenail, quite successfully except that I let it go into that woman's general circulation and she was the drunkest woman I ever saw.

My office was full of people and it was hard to explain to them what was the matter with that lady. She became so talkative that she talked to everybody she could get to. I think that local anesthesia where general anesthesia is contraindicated is a great boon and in the cases where we do not want to take the risk of general anesthesia. I think these is more risk to general anesthesia, but while I am not as old as some of the fellows who are sticking up for general anesthesia I still believe that in the grave cases it is the anesthetic of choice.

DR. LEONARD FREEMAN, Denver, Colorado: Dr. Espey has put me in a class that I do not claim to belong to, nor am I willing to accept what he says about using local anesthesia only in the mild cases. I am a believer in local anesthesia and I use it a great deal, not as much as Dr. Fowler, who uses it a great deal. My position is that I do not want my old friend, general anesthesia, represented as useless.

DR. O. S. FOWLER, Denver, Colorado: I have listened with a degree of interest to your experience of cocain poisoning. I personally think that cocain hydrochloride has caused a great deal of trouble. If you will remember, I am not talking for cocain, but for novocain. It is also interesting to note that you did not say that any of your patients died. Now if you had had a chloroform case, you would be dead, you would not be here to tell the story.

As to the patient seeing the sac, as Dr. Sulzbacher mentioned, I think that was a mistake. The patient should not see anything of the operation, although I have in some cases let doctors see when I felt that they were properly mentally prepared for a procedure of that sort. I think it is wrong. I usually put a screen six or eight inches from the table in front of their faces so that they cannot see what is going on.

As to the matter of pneumonia, I have never seen a case of it following a local anesthesia in the abdomen. I think the theory

is all right, I can readily see how it might be possible, but I can only speak from my experience and not of the statistics of others. I do not think Dr. Freeman said that he had ever seen a case in his own experience. I want to say, too, that I am deeply indebted to Dr. Freeman for my apprenticeship under him for a number of years and I did get the impetus for local anesthesia from seeing his successful results. I have used it more every year and I think that I now do probably 75 per cent of my general surgery under local anesthesia.

In regard to delayed union, I think that will not occur if you do not inject the tissues too tightly; just inject them so that there is a pale wheal and if you do that you have enough anesthesia and I think you will have no difficulty with the union of the tissues. I have not had it, and I suppose that altogether, in major and in minor operations, I have used it in probably more than 500 cases.

Dr. Swope says that there is a place yet for general anesthesia. I am glad to say that that is true, but that place is not on earth. It ought to be used in an asbestos inhaler. I do use it in cases and I use it with the same feeling that you all do, and I suppose that sooner or later you will probably come to a case that you have no control over. As to the dangers of general anesthesia, they are extremely underrated in our books and the records of hospitals, but I know this to be a fact: Dr. Carroll Parsons and myself, in Denver, have kept tab and in the last 11 years in Denver we have had 44 deaths in the early stages of anesthetics and the anesthetics are given there as well as any place on earth. The other places are getting these deaths and they are not telling anything about them. No two ways about it, if they are not getting them they are not doing surgery.

The matter of spinal anesthesia I think has great possibilities. Unfortunately, I have not had a successful experience with it, as Dr. Morton has mentioned; I wish that I could. I have not used it except in a few cases, probably because I have had more success with the infiltration anesthesia and the nerve blocking. Some of the clinics give very good reports. At the Massachusetts General, where Dr. F. gives the anesthetics intraspinally, he reports several hundred without a death. I

have had four deaths from spinal anesthesia.

As to unconsciousness, that is wholly a personal proposition. Well, when I took ether ten years ago for an appendix I was fighting when I went under and when I came out and I was begging for water for three days before they gave me a glass of water. If you think that general anesthesia has a place on earth I do not agree with you, because I was needing water pretty badly for three days and I was not getting it. That feature has been overcome now, because water is given.

The combination of general anesthetic with short anesthesia I think is dangerous, because most patients do not die from a long anesthesia, they die in the early stages, in the first few minutes. I think those who die after a long anesthesia are those who die from shock, in combination with the shock of a long operation.

Dr. Freeman says he wants to be unconscious. I will make a little wager with Dr. Freeman that if in ten years or fifteen years, when he has added a few more years to his life with the added risks that age gives, he has a hernia that he will come to me to have it operated under local anesthesia.

DR. B. L. SULZBACHER, Kansas City, Mo.: Have you ever used gas oxygen with a monovalve inhaler for anesthesia?

DR. FOWLER: No, that is a new thing to me.

ARTERIAL HYPERTENSION.

T. C. SEXTON, M. D.,
Las Cruces, New Mexico.

(Address of Chairman, Section on Practice, 33rd Annual Meeting of the New Mexico Medical Society, East Las Vegas, N. M., September 6th, 7th and 8th, 1916.)

Having had a series of very interesting patients with arterial hypertension, in which the symptoms disappeared when the increased pressure was reduced; these having been seen in close succession aroused my interest acutely in the subject. As far as the material at

my command permitted, I have investigated the subject thoroughly. The result of this investigation is this presentation. Two patients had retinal phenomena predominating. In the first the failing vision was the cause for seeking relief, his vision being 20-200. In the other case albuminuria was known, and he had been under treatment for the same. This had been induced by intestinal stasis, resulting from adhesions from an old appendiceal drainage. In this case the retinal hemorrhages and degeneration of optic nerve were the predominating features at the time that the break came. Neither of them were beyond middle life, and both were in active life when overtaken by the condition. In both cases the tension was chronic and persistent, with the usual periods of quiescence and exacerbations. The patient with vision 20-200 cleared up to about normal under eliminative treatment. In two other cases there has been an epistaxis associated with the hypertension. One of these had an associated headache, the other merely the epistaxis. The alarm produced by the persistent hemorrhage was the cause for seeking the services of a physician. In both, the pulse was under great tension, and as both were seen at night the pressure was not taken, not having my sphygmomanometer with me. Both of these were advanced in years, and in both nitro-glycerine relieved the immediate bleeding, and granted a respite until free intestinal elimination could be accomplished. Another case was that of a male advanced

in years, with symptoms resembling a rheumatic arthritis, greatly simulating gout, without fever. Symptoms were unrelieved by the usual remedies, but magically disappeared upon the administration of nitro-glycerine to reduce the hypertension which had been observed. In this patient there developed during the hypertension a mild delirium, as well as marked manifestations of hysteria, especially marked throughout one night. Another case was that of an aged female who was in convulsion when I was called. My first opinion was that it was a cortical hemorrhage. Her pulse was unusually high tensioned, in fact hard. Because of this hypertension, I administered nitro-glycerine, and repeated it in about two hours. As the pulse became softer, the patient became quieter, the convulsions less severe, and further apart, and in about four or five hours from the onset, she had aroused and asked for a cigarette. Of a necessity my diagnosis was changed the following morning. In another case the picture was that of arterio-sclerosis with hypertension. There was difficult speech, numbness in the limbs, unsteady use of muscles, with hypertension. Free elimination persisted in for several days cleared the patient up entirely only to exacerbate in the course of a year after rather heavy drink, and unrestricted diet. Another patient was that of a young laborer twenty-two years of age. He had been sick for three or four days with some headache and vomiting. He had been picked up on

the street and brought home before I was called. I found him with a pressure of 170, acutely delirious, and restless. He was whistling, blowing, clinching his hands. There was the history of occasional nose-bleeds. He had a mitral regurgitant lesion. He states that he had not been drinking, nor had he had any kind of drug that evening or night. He did not know the next morning that I had visited him. The pressure forty-five days later was 140.

An immense amount of work has been done in the effort to determine the specific cause or causes of arterial hypertension. An abundant literature is to be found relating to this topic, and the profession is yet far from the solution of the problem. High blood pressure is a functional disturbance. Bright believed that increased tension was due to the stimulation of the heart by some alteration in the quality of the blood, which increased the force of the heart's contractions, resulting in its hypertrophy, which in turn added additional force to the pulsation; or that this altered blood also produced a contraction of the capillaries, adding greater work to the heart, in overcoming the resistance to the blood flow. Traube believed that the vessels of the damaged kidneys had been destroyed, which diminished the rate of flow from the aorta, increasing the resistance to the flow through the renal arteries. The result of this mechanical action was cardiac hypertrophy, and permanent high tension. Conheim believed that the amount of urinary

constituents present in the circulating blood determined the calibre of the large and small vessels of the kidneys, in a measure conforming to Bright's idea; a high tension being present when these constituents are increased. He contended that it was a compensatory condition, reasoning that it required a greater pressure to carry the same amount of blood through the resisting vessels. This compensatory idea is the prevailing one at the present time. Clinical evidence bears out the opinion that hypertension is nature's protection of the organism against the effects of renal damage. This is particularly noticeable when an attempt is made to lower the tension by the vaso-dilators, there appears characteristic symptoms of uremia, such as headache, dyspnea, etc. Another feature indicating the compensatory function of hypertension, is that the systolic reading in acute exacerbations is not as high as the reading in the interim periods.

The change in tension from the normal to the high readings is a very gradual one. The tissues in the progression become gradually accustomed to the changes, and so slowly, that the economy is not aware of any change taking place. However slow the change may be, this persistent mechanical pressure with equal sureness makes serious progress against the organs of circulation, which through degeneration and alterations finally fail in action.

Except when associated with nephritis, hypertension is very sel-

dom seen before the fortieth year of age. If not associated with nephritis, whenever it is seen in early middle life, it is a functional indication of a toxic or obscure nutritive disturbance, and as stated by one observer, Russel. "Substances which are absorbed from the alimentary tract and are the products in one form or another of what has been swallowed as necessary food or as unnecessary indulgence," and who believes that "the essential factor will prove to be the digestive competency of the individual and the relative suitability of his diet."

Cook (2) suggests as a name for these cases "essential arterial hypertension." These are, no doubt, more common than we are aware, and in all persons approaching middle life, the sphygmomanometer should be used as a routine, in order to detect them in their incipency, and through appropriate treatment, arrest the condition before the secondary degenerations have become established.

The supposed toxin circulating in the blood producing the hypertonic contraction of the arterioles has been the subject of much experimentation as well as speculation. One investigator merely calls it a bio-chemical. Bain (3) by special extraction, found two pressor bases to which he attributes the hypertension. One is derived from leucine, iso-amylamine; the other a tyrosin derivative, p-hydroxyphenylethylamine. These injected into cats raised the blood pressure. In patients with hypertension they are greatly diminished in the urine, or

absent, and he believes they are retained in the circulation and hence the hypertension. He was unable however to prevent their formation through intestinal putrefaction, either by diet, intestinal antiseptics, or lacto-bacilline milk. Others have endeavored to connect adrenal activity with the hypertension, but in experimentation the extract is so rapidly dissipated that it cannot be detected in increased amounts even when so injected, and in only a few cases has it been conclusively shown to have been the cause.

The phenomena of increased arterial pressure is one of comparatively recent development in medicine. It is of imminent importance, in detecting the incipency of renal conditions; certain toxæmic conditions; and in directing the treatment in certain acute diseases; as well as the relative prognosis in renal and cardiac cases, and certain acute diseases. It is becoming more and more of service to the surgeon, and to the obstetrician. The sphygmomanometer is one other instrument of precision which the profession has already found indispensable. The importance of the determination of accurate tension readings is given emphasis by the increasing application as a routine by the insurance companies. As is true of all other phenomena, based upon human anatomy and physiology, it is however subject to variations, influenced by the varied habits and routines that constitute a living active being. Age, sex, the hour of the day, posture of the body, incidence of meals, condition of di-

gestion, exercise, sleep, the emotions, fear, anger, and excitement, all add to the variations of the arterial tension. These same influences modifying it in health, likewise influence the phenomena in disease.

The symptoms attributable to hypertension, are also variable, and are seldom attributable to the hypertension per se, but rather to overwork, mental worry, or neurasthenia. By careful questioning, Faught (4) states that symptoms may be elicited, "such as fleeting dizziness, tinnitus aurium, disturbed sleep, cold hands and cold feet, gastric distress and flatulency, constipation, lack of interest and of power of concentration, diminished desire to be up and doing, distaste for physical exertion, and weakened tolerance for substances which affect the brain, such as alcohol and tobacco." Elliott (5) states that symptoms of hypertension may be lacking. The first that may be noted is vertigo, or an acute dyspnea upon exertion, or even a cerebral accident. They may be those of nervous manifestation such as irritability, depression of spirits, disturbed sleep. They may be of a bilious origin, as flatulency, constipation, headache, and vertigo. They may be referred to some system, such as praecordial discomfort; excessive voiding of urine, especially at night, when the amount exceeds the daily output. There may be severe paroxysms of nocturnal flatulency, or the flatulency may take place upon exercise or exertion, yet without tympany or dis-

tion. The nocturnal flatulency is noted as beginning soon after retiring, as an oppression across the lower chest; or it may awaken the patient after sound sleep, with the feeling as if the stomach was distended with gas. Being relieved by eructing and hot drinks he credits the disturbance to an indigestion, it being so transient in nature. There may be hurried respiration alone; palpitation alone; or they may be associated and these may be particularly noted upon exertion; soon after a meal; but more especially in the early part of the day. These may also be incited by lifting, bending, or straining at stool, indicating insufficiency of the right heart. All patients with the irregular, paroxysmal flatulency should be suspected of hypertension and the vessels and heart should be carefully examined and watched.

As related to arterio-sclerosis, hypertension is not a constant phenomena. At one time it was believed that it was a constant symptom, but after accurate measurements, Durin (6) found 27.5 per cent were normal or below in tension. Groedel (7) observed that in 35 per cent there was no increase. Ellis and Robertson observed that in only about 50 per cent of cases did the pressure go above normal. It seems that from these figures it is just a bit more than an incidence in the condition whereas, we might assume that it was the original cause. Also that if it is in the least measure a causative agent in the etiology of the disease, it should be a more constant observation. This

in a measure is an obstacle in accepting the toxic origin of arteriosclerosis, unless the toxin can be shown to be an irritant to the intima, and not a pressor in its influence upon the musculature and the vaso-motor system.

There may be absolutely no increased tension in the extremely degenerated and palpable arteries. On the other hand we may find a very high pressure with no sclerosis at all. The conditions as a rule do not go together. The one being an anatomical change, the other a functional disturbance. As a rule patients with a very high blood pressure do not live long enough to develop a highly sclerosed arterial system. (5) Much experimental work has been done to explain the association of hypertension with arteriosclerosis, and the causative relation of the one to the other. Langeope and McClintock (8) found through experimentation that when the inferior mesenteric artery was ligated for a short time that the blood pressure remained high for the time of ligation. If it was permanently ligated at first there was a rise, followed by a drop to normal. That the compression of the aorta at the level of the diaphragm, produced a marked and rapid rise in pressure. That neither compression nor ligation at the bifurcation of one or both renal arteries altered the pressure in the least. Rudolf (9) states that a localized sclerosis of the splanchnic vessels is said to give rise to increased pressure more constantly than the same amount of disease in

the peripheral vessels, as these—splanchnic—are more intimately connected with the regulation of the general blood pressure. He concludes that while the splanchnic vessels are all important in maintaining blood pressure, the vessels below that point are also of great value in the same way. Hasenfeld and Hursh (10) have proven that arterio-sclerosis only leads to increased blood pressure and hypertrophy of the left ventricle when the splanchnic vessels or the aorta above the diaphragm are highly diseased. Associated with arteriosclerosis of the splanchnic vessels, is angina abdominis.

Barker (11) has given us an excellent article upon these conditions where attacks of severe abdominal pain with paroxysmal hypertension occurs, to-wit: (1) Gastric crises of tabes, (2) Lead Colic, and (3) Angina abdominis of arterio-sclerosis. In explanation of these conditions, he cites that some authors assume a primary neurologic pain with secondary hypertension due to the pain. Others regard the hypertension as the result of vaso-constriction of the small arteries of the stomach and intestines, and the pain as due to stretching of the nerves in the arterial sheaths of the arteries proximal to their constricting portions, assuming that in these proximal regions of the gastrointestinal arteries the arterial walls are distended and under very high pressure.

Research of experimental physiologists and surgeons tends to confirm the view that the only pain

nerves in the stomach and intestines, are those in the walls of the blood vessels. The visceral peritoneum is insensitive, while the parietal peritoneum is sensitive. J. Heitz and M. Norero (12) claim that increased pressure is absent in crises in tabes in those cases where pain is slight or absent, and that it becomes less marked in older patients because of the lessened reflexes. Instant relief may be had by inhalation of amyl nitrate, proving the increased pressure as the causative agent.

We must now take up hypertension as it relates to the kidneys. We find it associated more constantly with renal disease than with any other. It was in relation to renal disease that the study of it was first introduced. In 1836 Dr. Richard Bright published his monumental work—"Cases and Observations Illustrative of Renal Disease Accompanied with Secretion of Albumin-out Urine." This was the result of the study of 100 clinical cases, which were followed to the autopsy, where clinical symptoms were compared with pathological findings. This paper was instrumental in setting in motion an inquiry, although diligently pursued even to the present time, and attacked from every possible vantage point, still the condition is imperfectly explainable. This inquiry referred to is that of the associated hypertension. Although increased high pulse tension had been observed, it was not until 1876 that the first instrument, for measuring the exact pressure was given the profession by von Bach. It was

not until 1896 however that reasonably accurate instruments were perfected by Riva-Rocci and others. Upon the advent of such instruments, the profession has been placed in position where work could be done with accuracy, and where this could be compared and recorded. It was not possible to do experimental work for confirming or tearing down the varied theories, and building up one conforming to clinical facts, and pathological findings, until the laboratories and the workers were in possession of these instruments, and a vast amount of it has been done.

This work has been most comprehensively reviewed in an address by Janeway (13). It is one of the most extensive and instructive ones that it has been my pleasure to have read. After reviewing all that has been done towards its solution, in confirming or breaking down prior theories; the study of experiments and their results; and duly considering all the clinical facts relating to the subject; he makes the following conclusions: "To assemble all the facts, as I have tried to do, is surely one of the most melancholy things in the world as long as these facts remain unrelated. No one cares to look at a pile of bricks and stones, but as soon as these take their places in the structure for which they were shaped and assume those relations which were not seen so long as they remained mere building material, they take on real interest. The first step toward the construction of a scientific theory must always be the assembling of

the materials, the next their scrutiny, to see how the parts may be fitted one to the other. The building of the theory comes last, and in the field under discussion must be left for the future. The facts I have outlined, however, impress me as falling logically into certain large groups. In conclusion I shall state my present views about them.

"I cannot entirely agree with Krehl that in the main, nephritis, as such, has no influence on the circulation. To me heart, arteries, and kidneys seem to stand in an intimate relationship one to the other; the influence of the kidney upon the circulatory system appears as unequivocal as the influence of the circulatory system upon the kidney. A disturbance in either may lead to results, which from the functional standpoint are indistinguishable, though the atomic pictures be diverse. If the study of experimental nephritis has taught us anything it is this, that the degree and kind of impairment of kidney function can in nowise be inferred from the histologic changes discoverable in the kidney by our present methods.

"The symptom of hypertension in renal disease can, I believe, arise in three ways:

"1. Hypertension may arise through purely quantitative reduction of kidney substance below the factor of safety. It is difficult to conceive of this as other than a vascular hypertonus due to retained poisons of some kind. Its clinical paradigm is the hypertension accompanying bilateral ureter ob-

struction or the unfortunate surgical removal of the only functioning kidney. Possibly it is one factor which helps to produce hypertension in the contracted kidney.

"2. Hypertension may arise in connection with the unknown intoxication which causes disturbances of the central nervous system and which we call uremia. This intoxication is not one of retention, in a strict sense, though it is most commonly present in those cases of advanced nephritis which manifest marked nitrogen retention. Clinically it is associated with severe acute nephritis, sometimes at its very onset, besides the subacute and chronic inflammatory affections of the kidney.

"3 Hypertension may arise in primary irritability of the vasoconstricting mechanism from unknown, probably extrarenal causes, which lead eventually to arteriolar sclerosis. In this type the disease in the kidney is the sequence, not the cause, of the generalized vascular lesion. When it progresses to a condition of extreme atrophy, resulting in the true primary contracted kidney, a renal element may be added to the existing hypertension. In some cases arteriosclerosis of the larger vessels may spread peripherally and produce a similar form of disease. In these primary vascular diseases it is probable that eventual widespread narrowing of the arterial stream-bed in some cases produces a permanent organic increase in peripheral resistance."

Another conclusion has been re-

cited by Lawrence Jr. (14) in these words: "The culmination of clinical observation and experimentation is in the theory of Fisher—which is, briefly, 'The retention of fluid by living cells is dependent not upon mechanical conditions, but upon the affinity of these cells for fluid. This affinity is increased when the colloids of the cells become more acid than normal. The colloids of the cells become abnormally acid under any conditions that interfere with the proper oxygenation of the tissues. Such a condition is found in nephritis.'"

As a fitting conclusion of this address I desire to present the conclusions of Lichty (15) as to the prognosis in cases of hypertension, which are:

"1. Where hypertension exists with but little or no recognizable disturbed function of other organs the outlook is the most favorable.

"2. Where it is associated with great defect of several other organs, such as kidney insufficiency, cardiac insufficiency, cirrhosis of the liver, and lesions of the gastrointestinal tract, the prognosis is most serious.

"4. When the hypertension is associated with symptoms and physical signs which disappear after a more or less active and prolonged treatment, which, however, fails to lower the tension, a favorable prognosis is not unwarranted. Such cases are rather frequent, and I believe it is just as unreasonable to take an unfavorable view of them as it is to predict a speedy fatality in all cases of pulmonary tubercu-

losis where the bacilli are found in the sputum.

5. When the tension is found in connection with changes in organs producing such extreme symptoms as dropsy, ascites, cyanosis, and orthopnea, and when these symptoms cannot be relieved whether the tension is modified or not modified by heroic treatment covering five to eight weeks, then defeat is sure. And the extraordinary measures, such as drastic purging, venesection, and medication, with excessive doses, are entirely useless, or effectual only for a short time, and sometimes more cruel than humane."

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MEDICAL NOMENCLATURE.

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Having been associated more or less with medical men for twenty years, I have been interested in their sayings and doings. Also, to some extent, I have studied words medical and general, and find that "in many things we all offend." A lapsus linguae may not do our patients any harm; but carelessness in this respect betokens inattention to details in general, and this is not conducive to good work.

For our mutual benefit I have collected a short list of medical terms frequently misused. First, we will consider pronunciation. Foreign proper names are not always easy to pronounce even to those having some knowledge of European languages. Some of these are:

Abderhalden (ob' der-hahl-den)	Bunsen (boon' sen)
Arbuthnot (ar-buth' not)	Charcot (shar-ko')
Auenbrugger (ow' en-broo-ger)	Chopart (sho-par')
Auerbach (ow' er-bahk)	Cloquet (klo-ka')
Baumgarten (bowm' gar-ten)	Corvisart (kor-ve-zar')
Beaudelocque (bo-del-ock')	Credé (kra-da')
Bichat (be-shah')	Curschmann (koorsh' mahn)
Billroth (bil' rote)	Czerny (cher' nee)
Bizzozero (bit-zo-za' ro)	Desault (da-zo')
Boerhave (boor' ha-ve)	Descartes (da-kahrt')
Bordet-Gengou (bor-da-zhan' go)	Descemet (des-may')
Boettger (bet' ger)	Duchenne (deh-shen')
Bourgeois (boor-zhwah')	Dugas (doo-gahs')
Brissot (bre-so')	Dupuytren (doo-pwe-tron')
Broussais (broo-sa')	Eberth (a' bairt)
Brown-Séguard (brown-sa-kahr')	Eustachius (yu-sta' ki-us)
	Ewald (a' vahlt)
	Fahrenheit (fahr' or far' en-hite)
	Fraenkel (fren' gel) changed to
	Fraenken (fren' ken)
	Gerhardt (gair' hardt)
	Gianuzzi (jan-noot' see)
	Glauber (glou' ber)
	Goulard (goo' lar)
	Hanot (han-o')
	Koch (kokh)
	Kussmaul (koos' mowl)
	Labarraque (lah-bah-rack)
	Laennec (lah-a-neck')
	Lieberkuehn (lee' ber-keen)
	Lisfranc (lee-frank')
	Littre (lee-tray')
	Loeffler (lef' ler)
	Loewenthal (lay' wen-tahl)
	Magendie (ma-zhahn-dee')
	Meniere (men-e-air')
	Morgagni (mor-gahn' ye)
	Mueller (mil' ler)
	Naunyn (now' nine)
	Negri (nay' gree)
	Nothnagel (note' nah-gel)
	Osler (ose' ler)
	Pasteur (pas-taeur)
	Pacquelin (pack-lahn')

Pare (pah-ra')

Petri (pay' tre)

Pfeiffer (fi' fer)

Pflueger (flee' ger)

Politzer (po' lit-zer)

Potain (po-tah')

Ramon y Cajal (rah-mone' ee kah hahl')

Ranvier (rah-ve-a')

Reaumur (ray-o-moor')

Riva-Rocci (ree-vah-rot' chee)

Rollier (roll-ya')

Romanowski (ro-man-o' ske)

Salisbury (sawlz' ber-ee)

Toepfer (tep' fer)

Traube (trou' bee)

Tuffier (too-fee-ya')

Tuerck (teerk)

Vichy (vee-shee')

Vicq D Azyr (vick-da-zeer')

Virchow (fear' ko)

v. Behring (fon-bay' ring)

v. Bezold (fon-bay' tzold)

v. Fleischl (fon-fly' shel)

v. Graefe (fon-gra' fe)

v. Hebra (fon-hay' bra)

v. Jaksch (fon-yahk' sch)

v. Koellocker (fon-kehl' lik-ker)

v. Leeuwenhoek (fon-lay' wen-hek)

v. Mikulicz (fon-mick' oo-lits)

v. Pirquet (fon-peer' kay)

v. Struempell (fon-strim' pell)

v. Wassermann (fon-vahs' er-mahn)

v. Ziemssen (fon-tzeem' sen)

Wernicke (vair' ne-ke)

Westphal (vest' fahl)

Widal (vee' dahl)

Winckel (ving' kel)

Wintrich (vin' trikh)

Wolff-Eisner (vulf-ise' ner)

The following common names have attracted my attention in this

connection. Unlike the proper names, with these there may be some difference of opinion as to the best usage.

Adrenalin (ad-re-nal' in)

Aerated (a' er-a-ted)

Agalactia (ag-al-ak' she-a)

Agar (ah' gar) or (ag' ar)

Albumen (white of egg) (al-biu' men)

Albumin (proteid) (al-biu' men)

Alkaline (al' ka-line)

Aloin (al' o-in)

Ampoule (ahm-pool')

Anamnesis (an-am-ne' sis)

Ankylostoma (an-ky-los' to-ma)

Anus (a' nus) or (an' us)

Aphagia (loss of power of swallowing) (af-a' je-ah)

Aphasia (loss of power of expression) (af-a' zhah)

Arsenicism (ar-sen' is-ism)

Atavism (at' a-vism)

Bacteriolysis (bak-te-ri-ol' is-is)

Bidet (be-da')

Bouillon (boo-yon')

Bovine (bo' vine) or (bo' vin)

Biuret (bi' yu-ret)

Bougie (boo' zhe)

Brayera (bray-e' rah)

Bronchiectasis (bron-ke-ek'ta-sis)

Cacodylate (kak-o-dil' ate)

Caffein (kaf' e-in) or (kaf-e' in)

Centigrade (sen' ti-grade)

Cerebro-spinal (ser' e-bro-spi-nal)

Chemotaxis (kem-o-tax' is)

Citrate (sit' rate)

Cocain (ko-ka' in)

Cocainize (ko-ka' in-ize)

Coccus (kok' us)

Cocci (kok' si)

Colchicum (kol' tshi-kum)

Diazo (de-ah' so) or (di-az' o)

- Digitalis (dij-i-ta' lis)
 Diphtheria (dif-thee' ri-a)
 Diuretin (di-yu-re' tin)
 Eczema (ek' ze-ma)
 Emesis (em' e-sis)
 Enema (en' e-ma)
 Euonymin (yu-on' im-in)
 Filariasis (fil-ar-i' as-is)
 Fungi (fun' ji)
 Furuncle (fiu' run-kl)
 Hematin (hem' a-tin) or (hem-a'-tin)
 Hematemesis (hem-at-em' es-is)
 Hemic (he' mic) or (hem' ic)
 Hemoglobin (hem-o-glo' bin)
 Hemolysis (hem-ol' is-is)
 Hemoptysis (hem-op' tis-is)
 Hepatization (hep-at-iz-a' shun)
 Hexamethlenamin (hex-a-meth-il-en' a-min)
 Holocain (ho-lo-ka' in)
 Hordeolum (hor-de' o-lum)
 Impotency (im' po-ten-sy)
 Indol (in' dol)
 Inosit (in' o-site)
 Iodid (i' o-did) or (i' o-dide) Note a tendency to drop the final *e* from salts such as iodid, sulphid, etc., alkaloids such as morphin, etc., and some elements as chlorin, iodin, etc.
 Iodipin (i-o' dip-in) or i-o-dip'-in)
 Iritis (i-ri' tis) or (i-ree' tis) Use either form, but use that consistently.
 Leptothrix (lep' to-thrix)
 Libido (li-bi' do)
 Malingerer (mal-in' jer-er)
 Meatus (me-a' tus)
 Megaloblast (meg' a-lo-blast)
 Meningococcus (men-in-go-kok'-us)
 Methylene (meth' il-in) or (meth'-il-een)
 Micrococcus catarrhalis (mi-kro-kok' us kat-ar-a' lis)
 Murexid (miu-rex' id)
 Neuron or neurone
 Nidus (ni' dus) or nee' dus)
 Oidium (o-id' i-um)
 Ophthalmic (of-thal' mic)
 Paresis (par' is-is)
 Pellagra (pel-la' gra) or (pel-lag'-ra)
 Pelletierin (pel-let-e' ar-in)
 Petit mal (pte' mahl)
 Petrolatum (pet-ro-la' tum) or (-lat' um)
 Phagosome (fa'go-site) or (fag'o-)
 Phenylhydrazin (fee-nil-hy' dra-zin) or (fen-il-)
 Phenolsulphonethalein (fee' nole-sul-fone-thal' een)
 Phenolthalein (fee-nole-tha' leen)
 Phthisis (ti' sis) or (thi' sis) or (tee' sis)
 Pia mater (pi' a-ma' ter)
 Pyoctanin (pi-ok' ta-nin)
 Quinine (qui-nine') or (quin' in) or (quin' een) etc.
 Rabies (ra' beez)
 Rale (rahl)
 Salicylate (sal-is' il-ate)
 Saline (sa' line)
 Salol (sal' ole) or (sal' ol)
 Salvarsan (sal-var' san)
 Schizomycetes (skiz-o-my-ee' tez)
 Scopolamine (sko-pole-am' een)
 Stasis (stay' sis)
 Streptococcic (strep-to-kok' sic)
 Streptothrix (strep' to-thrix)
 Syringe (syr' inj)
 Tabes dorsalis (tay' beez-dor-say' lis)
 Taka-diastase (tak-ka-di' as-tase)
 Tricresol (tri-kre' sol)
 Tuberculosidin (tu-ber-kiu-lo-si'-din)

Umbilicus (um-bil-i' kus)

Uncinariasis (un-sin-ar-i' as-is)

Vertigo (ver' ti-go) or (ver-ti'-go) or (ver-tee' go)

Prof. Thomas McCrae in his chairman's address before the Section on Practice at San Francisco last year made some interesting observations from which I am tempted to quote. He said it might be hard to tell exactly what any given speaker had in mind when he used the words, pneumonia, rhoncus, bruit, pectoriloquy, bronchophony, Bright's Disease, biliousness, bilious fever, etc. When one speaks of asthma does he mean bronchial asthma or the dyspnea of heart failure? In speaking of typhoid pneumonia does he mean typhoid fever with pneumonia, or a low condition occurring during pneumonia? He objected to calling a patient a "case" of this or that. What is meant by the words 'phthisis' and "consumption"? Is it *any* case of tuberculosis, or an advanced case, or one with cavities, or one much emaciated? But he scored most of all the use of the word "rheumatism." Like charity it is made to cover a multitude of sins. It seems that almost any painful condition is likely to be called rheumatism at some time. Here are some of the more frequent of these: Arthritis deformaus, gonorrhoeal arthritis, neuritis, myalgia, bursitis, flat foot; and, lastly, the only thing it should be used for,—rheumatic fever. How many cases of tabes, osteomyelitis, aneurysm, and pleurisy have masqueraded under the name "rheum-

atism'" no one would be bold enough to guess.

I have observed physicians who, when they made a guess at the organ affected, thought their diagnostic duty completed. They would say, "She has stomach trouble," forgetting that a woman's stomach may lie anywhere between her chin and her knees. Or, the doctor would say, "He has it in the bowels." Whether "it" was sauerkraut or a swallowed coin fortunately made no difference. The treatment was the same. The purgative was administered with the philosophical reflection that if the coin was not counterfeited it would pass. The sauerkraut could be trusted to tunnel its way out in any event.

There are some aspects of the matter of terminology which are not simply academic, but which have a direct bearing upon the patient. To make a diagnosis of "sore throat" or "croup" without definitely excluding diphtheria would likely be attended with grave consequences. So also with diagnosing a tuberculous arthritis as "rheumatism" and treating it with salicylates. Personally, I have always made it a rule to put down in black and white a definite diagnosis of every case according to the terminology of standard text books, although I could not always do so at the first examination, and even later often had to follow it by a question mark. We all, I suppose, make plenty of mistakes in diagnosis, but this plan has had the effect with me of clarifying the situation and of suggesting the best treatment,—all of which

redounds to the benefit of the patient. To use the term "paresis" loosely, as some do, for such senile changes in the nervous system as cerebral softening and senile dementia would place the stigma of syphilis upon innocent old people, since paresis is now considered always luetic. Also, since syphilis is the very type of inheritable disease, the tainted name would needs be borne by the offspring, too. When Dr. Dixon was made chief of the Department of Health in Pennsylvania years ago, he strove to reform the manner of recording the causes of death. And when he announced that such diagnoses as "debility," "old age," "heart failure," etc., were passé and would not be accepted on death certificates, some of us had to scratch our fool heads, blow the dust from our books on pathology, and get wise. If the corpse did not benefit by the new regime, future patients probably did.

The words "scrofula" and "struma" are fortunately passing out of use. They were formerly used as blanket terms to cover tuberculous glands, bones and skin, and the so-called exudative diathesis of Czerny including eezema, catarrh, phlyctenular conjunctivitis, keratitis, marginal blepharitis, the facies scrophulosa, and what not. Words embodying such a diversified pathology we are well rid of. The distinction between a vaccine and a serum seems a hard one for some to get. So often do we hear a tuberculin called a serum. The Friedmann episode may have been partly responsible for that.

After the National Association for the Study and Prevention of Tuberculosis was formed in 1905, it took four years to settle upon a scheme for the classification of tuberculosis patients on examination and as to the result of treatment. They then called the first stage "incipient (favorable)." In 1907 the word "favorable" was dropped. At first, in classifying results the word "cured" was used without qualification. In 1912 the Committee on Nomenclature was moved by a burst of frankness to report that "it is most difficult to say who is cured and when the cure is arrived at." Consequently, in 1913 the word "cured" was dropped and "apparently cured" substituted. What had been called "arrested" was then called "quiescent." And in place of calling a patient "well," "isfactory" was to be used. Echoes the term "condition of health satisfactory" with these terms are still being heard. In the Journal of the A. M. A. Feb. 19, 1916, Dr. John Ritter files objections to the way the term "incipient" is used in the schema, since according to that it might indicate a well established condition which may have continued unchanged for months or years. He prefers to say "early" tuberculosis. But this would be getting farther away from the Turban classification which, although admittedly too anatomical, is yet more or less international in its use. Protests have often been made against calling a case "incipient" which shows bacilli in the sputum. Then, according to the schema, the term

"quiescent" may be used to include cases showing bacilli in the sputum. Is there no degree of activity necessarily in such cases? As it stands the word "quiescent" seems to refer more particularly to the absence of constitutional symptoms.

How would you classify a patient without constitutional symptoms, physical signs stationary, but discharging bacilli and having occasional small hemorrhages? Should his case be called "active" or not?

There are three words which we use frequently, and sometimes with confusion. They are "tuberculosis," "tubercular" and "tuberculous." In 1906 the National Association for the Study and Prevention of Tuberculosis adopted a resolution which was designed to straighten us out. It reads as follows, "Resolved, That in the interests of clearness and uniformity of nomenclature the Association employ in its official publications the term "tuberculous" to refer to lesions or conditions caused by the tubercle bacillus, and the term "tubercular" to describe conditions resembling tubercles, but not caused by the tubercle bacillus." Vol. 2, page 12 of Transactions.

If we accept this dictum, we will use the word "tuberculous," and not "tubercular" as many do, in referring to a patient or an organ affected with tuberculosis. The use of the word "tubercular" to describe persons having tuberculosis, they say, is bad English and should be dropped. We may properly speak of a "tuberculosis sanitorium," "a tuberculous patient," "tu-

berculous peritonitis," but a "tubercular leprosy" or a "tubercular syphiloderm." In regard to tuberculosis institutions, it has been recommended, but with indifferent success, that we use the word "sanatorium" for improvable cases and the word "hospital" for the segregation of advanced cases, leaving the word "sanitarium" to be used by those institutions which treat a more general variety of chronic diseases, like the Battle Creek Sanitarium.

In giving a diagnostic name to our cases, the question sometimes arises as to whether the bacteriologist or the clinician should have the most to say. The recent epidemic of respiratory infections was a case in point. My sputum examinations last December showed the streptococcus and the pneumococcus to be the offenders. Later, in the Journal of the A. M. A. of January 1st, Mathers of Chicago came out with the same results obtained by cultural methods. He said, "Before the usual diagnosis of grippe or influenza is justifiable, some attempt at bacteriologic study should be made, for it is a striking fact that the diagnosis of influenza is rarely corroborated by bacteriologic findings." Dr. Nammack of the New York Department of Health, writing in the Medical Record, February 26th, 1916 on the bacteriology of the recent epidemic says he found quite a mixed flora in his cultures. Out of 50 clinically similar cases, only 19 showed influenza-like bacilli. This groupe of 19 he would diagnose as influenza; the rest of

the 50 as gripe. He says, "Grippe and influenza should not be used synonymously, but the latter term should be restricted to cases in which the influenza bacillus is present." How would this medical society feel about that? It would seem to me better to discard the word influenza as a disease, and use the expressive French word "grippe" which is so widely used and so thoroughly detested. But, coming back to our original question, should the clinician or the bacteriologist be expected to attach the diagnostic name to any given case? When such organisms are implicated as the streptococcus and the pneumococcus especially, which we know cause such a variety of clinical manifestations, it would seem that the clinical syndrome should decide the diagnosis. However, with such organisms as the Treponema Pallidum or the Klebs-Loeffler bacillus, it might be different. The bacteriologist then might properly be asked to "name this child."

My excuse for presenting this kind of subject is that it is so rarely discussed. And it seems to me that the language of medicine is important enough to challenge our best efforts at proficiency.

TYPHUS FEVER.

H. M. CORNELL, M. D.,
Las Cruces, N. M.

(Read before the Doña Ana County Medical Society, April 27th, 1916.)

Typhus fever is an acute infectious disease abruptly ushered in and associated with a general erup-

tion and an early and profound involvement of the nervous system. There is no other affection which so strikingly ends by crisis at a definite period. This uniformly occurs on the twelfth to the fourteenth day from the invasion (Doty). The disease is known by the names of hospital fever, spotted fever, camp fever and ship fever.

Post mortem there are no special lesions other than those associated with fever.

Etiology: Typhus fever has been one of the great epidemics of the world. Until the middle of the 19th century it prevailed extensively in all the larger cities of Europe and Mexico and at times extended to widespread outbreaks. As Hirsch has remarked the History of Typhus is written in those dark pages of the world's story which tells of the grievous visitations of mankind by war, famine, and misery of every kind. The work of the lamented Ricketts in connection with the transmission of typhus fever by lice seems to be conclusive. He with R. M. Wilder showed that body lice, *Pediculi vestimentorum* and *capitis*, transmit the disease. Subsequently these two observers showed that neither fleas nor bedbugs can carry the infection.

The specific organism has not yet been fully identified, unless that reported by Plotz, Rotinsky and Baer obtained from endemic cases found in New York City called Brill's disease proves to be the cause.

Incubation. Covers a period of from eight to twelve days although it may be of even shorter duration,

the invasion, however, is very brief, the onset of the disease being sudden. This constitutes an exceedingly important point in the differential diagnosis, for typhoid fever, for which it is commonly mistaken, has a prolonged period of invasion.

Symptoms. The identification of no other disease depends so fully on the eruption. Without it a diagnosis cannot consistently be made. Cases of continued fever without an eruption occurring during an outbreak of typhus fever should always be isolated until a definite diagnosis can be made.

The true diagnostic eruption of typhus fever is petechial and relates to minute hemorrhages in the center of the spots. It can easily be understood that such a condition would occur in the presence of great prostration and weakness of the vascular system. Practically the eruption is general throughout the body and may be particularly well studied on the flexor side of the forearm or about the shoulders. The eruption does not occur in successive crops as in typhoid fever, but as one crop, although it may be irregular in arriving at its completion. It may last eight or ten days and is usually present when death occurs, prior to the end of the second week. In some cases a slight desquamation may sometimes follow. At first it does not assume its true character but appears as a rash which may sometimes be taken for measles. The spots are irregular and vary in size from a pea to those which are much smaller. They may be isolated or rather grouped in

patches. They do not at first present the characteristic dark appearance and may disappear on pressure. The eruption generally presents itself first on the chest and abdomen and afterwards on the arms and thighs. On the face it is not only not pronounced but frequently may not be detected. In addition to the eruption above referred to, a mottling of the skin occurs. The early eruption soon changes its character. It becomes darker in color and does not disappear on pressure. Subsequently there appears in the center of the spots a dark bluish point known as petechial, due to the extravasation of blood. This practically represents the true eruption of typhus. To complete the picture—to this must be added a dusky or congested appearance of the skin in general: in other words the eruption lies on this instead of the skin in its normal color as occurs in the eruption of typhoid fever.

Chills. Typhus fever is rapidly ushered in by chilly sensations, or in some cases the first intimation of the disease may be a chill. There is early and great prostration, the temperature quickly rises, and the nervous system becomes rapidly involved and delirium early appears. This becomes marked and continuous and not uncommonly assumes an active form.

The pronounced cerebral complications is highly characteristic of typhus fever, and it is this which suggested its name indicating a "cloudy" mental condition. The eyes become early and rapidly suf-

fused; this infection of the conjunctiva constitutes a very *important symptom*.

Temperature. The temperature curve is very characteristic. It rises rapidly and usually attains its height about the fourth or fifth day, when it becomes rather stationary, with a more decided diminution in the morning. After the ninth or tenth day in favorable cases the temperature begins to decline, and usually continues so until recovery. There is one factor present which is more prominent and constant than in any other disease, i. e., the termination of the disease by crisis about the fourteenth day. It is very important that this should be borne in mind, particularly in doubtful cases.

Age has largely to do with the prognosis. Children do not often die from it and those who succumb are generally beyond youth. The mortality is very high after middle age, particularly among those who are addicted to the excessive use of alcohol. One attack generally confers immunity.

Differential Diagnosis. Typhus fever may be mistaken for typhoid fever, measles, cerebrospinal meningitis; less frequently pneumonia, and in some instances other acute infectious diseases.

In typhus fever the invasion is abrupt; in typhoid fever it is prolonged, frequently covering an indefinite period. This is an exceedingly valuable point to bear in mind in deciding between these diseases, which most frequently calls for a differential diagnosis. In ty-

phus fever the disease begins with a rapid rise of temperature, chill or chilly sensation, profuse headache and early and great prostration and involvement of the mental faculties, a suffused congestion of conjunctiva and an eruption which appears on the second or third day of the disease. In typhoid fever there is a slow rise of temperature, no decided impairment of mental faculties in the early stage, no injection of the conjunctiva, and the eruption does not appear until the second week of the disease. Besides there are symptoms referable to the abdomen and the "widal" reaction may be obtained in typhoid fever. In typhus fever the true eruption is petechial and generally distributed about the body, and appears in one crop only, and does not disappear on pressure, whereas the eruption in typhoid fever is generally confined to the abdomen, is rose colored and papular, occurs in successive crops, and does disappear on pressure.

The differential diagnosis between typhus fever and measles, malarial fever, meningitis or pneumonia should be easily determined, especially after a day or so.

Treatment. There is no specific for the disease and but little can be done in the way of medication except the use of remedies to relieve the insomnia or delirium, reduce the fever and strengthen the heart (Forchheimer).

The following instructions were sent to physicians in Mexico by Dr. Carlos Husk, who afterwards died of the disease:

Wear silk underclothes including sox. Lice are loth to crawl over or take up quarters on a person wearing silk. Very important.

Clean head and hairy parts of body by using a solution of equal parts kerosene and vinegar. Kerosene kills lice, vinegar kills nits. Wrap up affected parts after rubbing thoroughly with this mixture for one hour only—longer will scald. Wash off 12 hours later with carbolic or tar soap, Repeat operation in 24 hours to be sure none have escaped first treatment.

Wash or spray all infected quarters with solution of kerosene and hot soap suds, equal parts.

Boil all infected clothing and bedding.

Have a linen suit made to cover your entire body to neck. Over this suit put on boots, rubber preferred. Paint a band around these at ankles with crude oil to prevent lice crawling up from floor. Paste strips of adhesive around open ends at wrists and use rubber gloves on hands.

Sprinkle powdered creolin around your neck and waistband or use a cloth saturated with kerosene solution.

Be careful of your head contact.

Either boil these clothes after visits on returning from infected places or place same in closed box in which a small can of chloroform is emptied and after 12 hours all inhabitants are killed.

Use plenty of kerosene; it is the best preventative.—(*Bulletin El Paso Med. Soc.*)

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies":

Styracol Tablets, 5 grains.—Each tablet contains 5 grains styracol. Merck and Co., New York.

Tannalbin Tablets, 5 grains.—Each tablet contains 5 grains tannalbin. Merck and Co., New York.

Stanolind Liquid Paraffin.—A non-proprietary brand of liquid petrolatum, complying with the standards of the U. S. P., 8th ed. and made from American petroleum. Standard Oil Company of Indiana, Chicago (Jour. A. M. A., April 1, 1916, p. 1027).

During April the following article has been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Mead Johnson and Co.: Mead's Dry Malt Soup Stock.

PROPAGANDA FOR REFORM.

Diarsenol.—Dr. E. H. Martin, Hot Springs, Ark., reports that, after giving several hundred doses of Diarsenol without any bad effects whatever, he had two cases in which nausea, vomiting and symptoms of apparent collapse such as have been previously reported by another writer. He found on investigation that the specimens which in his hands gave untoward results as well as those previously reported on and two further accidents were all due to a product bearing the same lot number (Jour. A. M. A., April 8, 1916, p. 1155).

Prescribing of Narcotics.—The Harrison Antinarcotic law exempts from its operations ready-made mixtures containing specified small quantities of narcotics, but requires physicians' prescriptions containing small amounts of narcotics to be registered. The law should be made consistant by requiring the registration of all prescriptions containing narcotics in any amount. The inconsistency in the law should be removed by prohibiting absolutely the sale, except on a

physician's prescription, of preparations containing narcotics in any proportion. The continued use of small doses of a narcotic drug is just as capable of establishing the habit as is the use of larger doses (Jour. A. M. A., April 8, 1916, p. 1156)

Piperazin, Lysidin, Lithium Carbonate, Sodium Bicarbonate and Sodium Citrate as Uric Acid Solvents. H. D. Haskins has studied the uric acid solvent power of urine of persons taking the various substances classed as uric acid solvents. The investigation led to the following conclusions: 1. Piperazin can cause the urine to dissolve more uric acid than it would without the drug, and this effect is most marked if sodium citrate or bicarbonate be also given and if diuresis be avoided. 2. Lysidin can act as a uric acid solvent but is not a practical therapeutic agent because of the large doses required. 3. Lithium carbonate is a uric acid solvent if large enough doses are used, but is unsafe and possesses no advantage over sodium citrate or bicarbonate. 4. Sodium citrate and bicarbonate are reliable and satisfactory uric acid dissolving agents when given in such dosage as to keep the urine alkaline (The Archives of Internal Medicine, March 15, 1916, p. 405).

Emetic Action of Strophanthus not due to Oil.—Hatcher and Eggleston have shown that the digitalis bodies produce nausea and vomiting through action on the medulla and that the direct action on the mucous membrane of the stomach is unimportant. They demonstrated that the fixed oil (fat) of digitalis produced no action and conclude therefore that attempts to avoid the emetic action of digitalis by removal of oil from digitalis preparations is of no avail. Similarly Hatcher has recently determined that the oil contained in strophanthus is not the cause of the nausea sometimes produced by this drug. While removal of the oil renders tincture of strophanthus more "elegant" pharmaceutically, such removal is of no therapeutic importance (Jour. A. M. A., April 15, 1916, p. 1199).

A Much Needed Pharmacologic Investigation.—J. D. Pilcher, University of Nebraska College of Medicine, has investigated the action on the uterus of the guinea pig of a

number of drugs which are widely used as ingredients of proprietary "female remedies," and which so far have been little, or not at all, studied. Blue cohosh (*Caulophyllum thalictroides*) showed a variable tonic effect. Pulsatilla (*Anemone pulsatilla* or *Pulsatilla pratensis*), unicorn root (*Aletris farinosa*), figwort (*Scrophularia marylandica*), valerian (*Valeriana officinalis*) and skullcap (*Scutellaria lateriflora*) were more or less depressant. The following drugs gave negative results: cramp bark (*Viburnum opulus*), black haw (*Viburnum prunifolium*), swamp maple (*Acer spicatum*), false unicorn (*Chamaelirium luteum* of *Helonias dioica*), life-root (*Senecio aureus*), wild yam (*Dioscorea villosa*), motherwort (*Leonurus cardiaca*), passion flower (*Passiflora incarnata*) and squaw vine (*Mitchella repens*). It is to be hoped that Pilcher's work will permit the formation of an opinion as to the therapeutic value of those drugs in which some degree of activity has been found (Jour. A. M. A., April 15, 1916, p. 1205).

Why Glycerophosphates?—The glycerophosphates are split up in the intestines into ordinary phosphates and absorbed and utilized, if they are utilized at all. There is no evidence that glycerophosphates have any pharmacologic action to warrant the belief that they are of use as therapeutic agents. The belief in their value is kept alive by the promotion of certain proprietary mixtures. The glycerophosphates will be continued to be manufactured until physicians refuse to prescribe them. A manufacturer has even substituted glycerophosphates for the potent yellow phosphorus in his elixir of phosphorus, nux vomica and damiana and, so his chemist reports, physicians continue to prescribe the proprietary the composition of which has been altered (Jour. A. M. A., April 15, 1916, p. 1205).

Elixir Calcylates Compound.—Each dessertspoonful of this specialty is said to contain the "equivalent of" Calcylates (calcium and strontium di-salicylate, 5 grains, resin of guaiac $\frac{1}{2}$ grain, powdered digitalis leaves $\frac{1}{4}$ grain, powdered squill $\frac{1}{4}$ grain, extract of colchium seed $\frac{1}{4}$ grain, cascarn 1-16 grain, aromatics. One or two dessertspoonfuls are to be taken 3 to 4 times a day. The mixture

is to be given in cases of "rheumatism, lumbago, neuralgia, sciatica, etc." If a salicylate is indicated it should be given in sufficient amount in the form of sodium salicylate; the patient should not be given a preparation containing ingredients in the way of guaiac, squill and colchicum which are not needed. Digitalis is rarely indicated in inflammatory rheumatism and it should never be given in a multiple mixture (Jour. A. M. A., April 22, 1916, p. 1307).

Emetin Hydrochlorid Variable.—It should not be taken for granted that because a drug bears the name of a definite compound it is true to name and pure, and therefore trustworthy in its action. This fact has recently been demonstrated in regard to emetin hydrochlorid. Two cases in which the administration of emetin hydrochlorid produced symptoms of poisoning (one terminating fatally) at the Johns Hopkins Medical Clinic led to an investigation by R. L. Levy and L. G. Rowntree, in which the emetin hydrochlorid preparations of five pharmaceutical houses were used. This investigation led to the conclusion that the products supplied as emetin hydrochlorid are variable in composition and in toxicity to a degree which constitutes a serious danger. It behooves physicians to insist on some declaration from the firm supplying emetin hydrochlorid as to its purity and as to the standard employed. Levy and Rowntree emphasize also the fact that emetin hydrochlorid medication itself is not an innocuous procedure. To avoid the toxic effects of emetin, the dosage should be carefully adjusted for each individual and the treatment should be given in courses at intervals of several days or a week. The subcutaneous method of administration is to be preferred (The Archives of Internal Medicine, March 15, 1916, p. 20).

Cactus Compound Pills.—A pharmaceutical firm makes Pills Cactus Compound (Heart Tonic) each of which is said to contain: "Cactus grandiflora $\frac{1}{2}$ gr., Sparteine sulphate 1.40 gr., Digitalin, pure (German) 1.125 gr., Strychnine sulphate 1.500 gr., Glonoin (nitroglycerin) 1.500 gr., Strophanthin 1.5000 gr." The combination is irrational and the dosage of the individual drugs, in most instances, absurdly small. Every one of the ingredients

except digitalin may be disregarded either because of inertness or because of the small amount present, and the treatment becomes one of digitalis. The selling name of "Cactus Compound" is a misnomer as the activity of the pill is that of the small dose of the digitalis glucoside. The pill is an illustration of how worthless drugs are perpetuated. At one time it was thought that cactus had therapeutic value. During that time many "specialties" and proprietaries bearing its name were put on the market. Although the drug is now known to be worthless, these specialties continue to be sold (Jour. A. M. A., April 29, 1916, p. 1387).

CLINICAL PHYSIOLOGY

F. S. Lee, New York (Journal A. M. A., Feb. 26, 1916), believes that the average physician knows far too little of the science of physiology and does not consider his pathologic problems as much as he should from the physiologic standpoint. He thinks a change in the existing courses in physiology is desirable and would have what they have established at Columbia School of Medicine, a post-graduate course of clinical physiology, consisting of informal lectures and demonstrations of the application of physiologic facts, principles and methods to problems in clinical medicine. Some of the topics considered are stated as follows: "The respiratory organs in normal and pathologic activity; the factors regulating blood pressure; blood pressure in man in its normal and pathologic relations; the physical features of the capillary blood flow and the early stages of hyperemia and inflammation, various cardiac lesions, their production and physical effects; the consideration of volumetric changes in the output of the heart as affected by various factors, together with an oncometer study of the kidney during these changes; renal secretion as affected by circulatory changes and the chemical conditions of the blood; the respiratory and vasomotor effects of abnormal intracranial pressure; the viscosity of the blood and its clinical relations; lymph, its normal flow and its relation to edema; the blood supply of the abdominal organs and their vasomotor reactions; the vasomotor reactions in their relation to shock; the general phenomena of spinal shock; the sounds of

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FAVOR THOSE WHO FAVOR US.

PROPER FOOD FOR YOUNG CHILDREN

Simple bills of fare, helpful recipes, and practical directions for the preparation of foods for children between three and six years of age are contained in Farmers' Bulletin 717, "Food for Young Children," just issued by the U. S. Department of Agriculture. The bulletin, which was written by Caroline L. Hunt, under the direction of Dr. C. F. Langworthy, Chief of the Office of Home Economics, is easy to understand and should be helpful to mothers who are trying so to care for their children that they will grow up into stalwart and efficient men and women. It is issued at this time as a cooperative contribution to the "Baby Week" campaign conducted by the Children's Bureau of the U. S. Department of Labor.

The author has carefully avoided the use of all technical dietary

terms or systems of grouping and has so classified foods that any mother can meet the following definition of a satisfactory diet for a little child:

"A little child 3 to 6 years of age who is carefully fed in accordance with his bodily needs (as these are now understood) receives every day at least one food from each of the following groups:

1. Milk and dishes made chiefly of milk (most important of the group as regards children's diet); meat, fish, poultry, eggs, and meat substitutes.
2. Bread and other cereal foods.
3. Butter and other wholesome fats.
4. Vegetables and fruits.
5. Simple sweets."

The relation of food to the condition of the bowels is also an important matter. Grains, particularly those containing the outer or branny layers or coats, are laxative; so, too, are such mildly acid fruits as apples, oranges, and grape fruit. So far, therefore, as the important matter of preventing constipation is concerned, coarse grains and mildly acid fruits serve the same purpose. When fruits are

to be obtained in abundance, the kind of cereal served is not of great importance. When they are not, the coarser cereals should be used.

A QUART OF MILK A DAY

The basis of a child's diet should be clean whole milk—at least a quart a day. Such milk, in addition to water contains about half a cupful of the very best food substances—butterfat, milk sugar, lime, and other materials needed by the child to make muscle, bones, and teeth. In addition milk contains a substance thought to promote growth by helping the body make good use of other foods. Where good whole milk is not obtainable, clean, fresh skim milk supplies these substances with the exception of the butterfat, and is, of course, preferable to dirty or questionable whole milk. Milk, however, contains very little iron and therefore spinach and other green vegetables and egg yolks, which are rich in iron, combine well with milk.

The child should drink the milk with the chill taken off, or should consume his full quart a day with cereals and in milk toast, cocoa, milk soups and stews, in cereal puddings, egg-and-milk puddings, custards, junkets, or simple ice creams. Milk stews may be made with vegetables or fish, or to vary the diet these things can be combined with cream sauce and served on milk toast. The bulletin therefore gives a large number of recipes for the preparation of various milk dishes which will help children consume the requisite amount of milk without growing tired of this valuable

food. Those for milk soups will be found particularly useful, as they give the mother an easy means of preparing many vegetables which are essentials in the child's diet.

BREAD AND CEREALS

Well-baked bread and thoroughly cooked breakfast cereals are both good for children and with milk should make up a large part of the diet. Bread and cereal mushes are to a certain extent interchangeable, but neither can take the place of milk, meat, eggs, fruits, and vegetables. An ordinary slice of bread is equal in food value to about half a cupful of boiled or steamed cereal and about a cupful or flaked or puffed cereal. Different kinds of bread may be used for variety.

The yeast-raised bread given to children should be at least a day old and should be toasted or twice baked. Hot breads are likely to be swallowed in large pieces and are therefore not desirable. Hot breads which are almost all crust, like thin tea biscuits or crisp rolls, are best of the hot varieties.

MEAT, FISH AND EGGS

Under the heading "Meat, Fish, Poultry, Eggs, and Meat Substitutes," the author states: "In some families children do not get enough meat and eggs; in others they get too much. A good general rule commonly followed is to give a child 2 years old or over an egg every other day and about the same amount (2 ounces) of meat, fish or poultry on the intervening days. Where meat is omitted, care must be taken to see that other suitable foods take its place—preferably an

extra amount of milk and eggs.”

Fried meats should not be given to a child, because they are likely to be overcooked and tough and also because the fat may be scorched and thus changed in composition. Scorched fat is almost certain to be hurtful to children.

Meat is best given as broiled chop meat or in simple meat stews combined with vegetables. Poultry may be boiled and served with rice. When roasted, only the tender portions should be fed. Highly seasoned stuffing or rich gravy should not be given to a young child.

Dried and other fish, and oysters, may be used in milk stews. Well-boiled fish is good for variety. Eggs must not be overcooked or they are likely to cause indigestion. The best way to cook eggs is to poach or coddle them. Scrambled eggs may be served occasionally, provided care is taken not to scorch the fat or to overcook the eggs.

FATTY FOODS

Fat is an important part of the food of children. There is more than an ounce of fat (at least 2½ level tablespoonfuls) in a quart of whole milk. If the healthy child is given a quart of milk, has butter on his bread, and meat or an egg once a day, he gets enough fat, and that which he receives is in wholesome form. It is well, therefore, not to give such fatty foods as pastry, fried meats and vegetables, and doughnuts or rich cakes. If the child is constipated, the occasional use of cream or salad oil is desirable, for fat in abundance is laxative.

Bacon or salt pork, cut very thin and carefully cooked, may be given occasionally. It is very important not to burn the fat.

VEGETABLES AND FRUITS

Vegetables and fruits are grouped together because they are similar in that both supply iron, lime, and other mineral matters, and also mild acids. Vegetables are an important but often a neglected part of the child's diet. They should be served at least once a day, as they help to keep the bowels in good condition. Fruits are important for their flavoring, for their laxative effects and doubtless for other reasons, and should be served in some form at least once a day. Fruit juices and the pulp of cooked fruit, baked apples and pears, and stewed prunes, are the safest. The child should not be allowed to eat the skins unless they have been made very tender by cooking.

SIMPLE SWEETS

Sugar is a desirable part of the diet provided it is given in simple sweets and not allowed to take the place of other foods and spoil the child's appetite. Simple sweets are such things as lump sugar, maple sugar, sirups, honey, and plain candy, and those foods in which sugar is combined in simple forms with fruit juices (in lemonade, water ice, jelly, etc.), with flour or starch, as in plain cakes (cup cake, sponge cake, cookies), and with fruit, as in jams, marmalades, and similar things.

QUESTIONS EVERY MOTHER SHOULD ASK HERSELF

At the end of the bulletin, as a

review, the author suggests that at the close of the day every mother might ask herself the following questions, to be sure that she has considered the important things in feeding her children:

Did each child take about a quart of milk in one form or another?

Have I taken pains to see that the milk that comes to my house has been handled in a clean way?

If I was obliged to serve skim milk for the sake of cleanness or economy, did I supply a little extra fat in some other way?

Were the fats which I gave the child of the wholesome kind found in milk, cream, butter, and salad oils, or of the unwholesome kind found in doughnuts and other fried foods?

Did I make good use of all skim milk by using it in the preparation of cereal mushes, puddings, or otherwise?

Were all cereal foods thoroughly cooked?

Was the bread soggy? If so, was it because the loaves were too large, or because they were not cooked long enough?

Did I take pains to get a variety of foods from the cereal group by serving a cereal mush once during the day?

Did I keep in mind that while cereals are good foods in themselves, they do not take the place of meat, milk, eggs, fruit, and vegetables?

Did I keep in mind that children who do not have plenty of fruit and vegetables need whole-wheat bread

and whole grains served in other ways?

Did each child have an egg or an equivalent amount of meat, fish or poultry?

Did any child have more than this of flesh food or eggs? If so, might the money not have been better spent for fruits or vegetables?

If I was unable to get milk, meat, fish, poultry, or eggs, did I serve dried beans, or other legumes thoroughly cooked and carefully seasoned?

Were vegetables and fruits both on the child's bill of fare once during the day? If not, was it because we have not taken pains to raise them in our home garden?

Did either the fruit or the vegetable disagree with the child? If so, ought I to have cooked it more thoroughly, chopped it more finely, or have removed the skins or seeds?

Was the child given sweets between meals, or anything that tempted him to eat when he was not hungry?

Was he allowed to eat sweets when he should have been drinking milk or eating cereals, meat, eggs, fruit, or vegetables?

Were the sweets given to the child simple, i. e., unmixed with much fat or with hard substances difficult to chew, and not highly flavored?

Was the food served in a neat and orderly way and did the child take time to chew his food properly?

ABOLISHING SECRECY IN
MEDICINE—FOR LIVE STOCK

The unknown is always awe-inspiring—*omne ignotum pro magifico*. For this reason secrecy of composition is the backbone of the fraudulent “patent medicine” business. Every one who has given the matter any study knows that the disclosure of the names and quantities of the potent ingredients of “patent medicines” would work no hardship on honest manufacturers. But the exploiter of frauds would have his most valuable advertising asset taken away from him should he be required to let his customers know the drugs they are pouring down their throats. The reason for the excitement exhibited by manufacturers of fake remedies when it is suggested that they be required to remove the veil of secrecy from their products was never better expressed than by one of their own defenders. This spokesman of the nostrum business, in urging “patent medicine” makers to fight a law requiring the publication of the names and active ingredients of their products did so on the ground that:

“ . . . it is practically impossible to prove that the therapeutic claims made for a preparation whose composition is not known, are ‘false and fraudulent.’ ”

The same agency said, further, that to publish the names and quantities of the active drugs in “patent medicines” would mean that the manufacturers “will be supplying evidence which may result in their own undoing.” A more barefaced

and cynical admission of the viciousness of a fraudulent business has probably never been penned. It explains, briefly, and succinctly, why the poisoners of the public health fear any law that will turn the light of publicity on their products. So powerful are the interests engaged in debauching the public health, that there is not today on any statute book in the United States—municipal, state or federal—any enforced law that will give the public the knowledge of what is in the remedies that are sold for self-medication. Every attempt either to pass or to enforce such a law is met with overwhelming opposition on the part of those who profit by secrecy and mystery. Curiously enough, although the public has so far been unable to protect itself in this respect, it has found it feasible to protect its live stock, at least in certain states. The laws of Nebraska, South Dakota and Oregon require that every remedy sold for the treatment of live stock shall have on its label the name of each therapeutically active ingredient in it. These laws, however, specifically provide that the term “livestock remedies” shall not include proprietary remedies designed primarily for humans, but used occasionally for the lower animals. Hence, in these states, if the farmer wishes to doctor his pigs with safety he must do so with the medicine that is intended specifically for live stock, and not run the risk of giving a proprietary medicine that was purchased primarily for his baby. A man from Mars might wonder why

a great commonwealth would afford greater protection to its live stock than it does to its own citizens. He would learn, however, that it is characteristic of the Earth-man to hold property in higher esteem than human life.—*Journal of the American Medical Association.*

THYMOL FROM HORSEMINT

Government Specialists Find Commercial Possibilities in Development of New Industry

Washington, D. C.—That the commercial production in this country of thymol from horsemint may be, under favorable circumstances, a profitable undertaking is indicated by the recent investigations of the U. S. Department of Agriculture, the results of which are published in Bulletin 372. Thymol is extensively used in medicine and forms the basis of a number of important pharmaceutical compounds. In the past it has been imported from northern Europe where it is manufactured from ajowan seed grown in northern India. Now that the European war has reduced these importations from over 18,000 pounds in 1914 to a little more than 2,000 in 1915, it is believed that to some extent the demand can be supplied at home. For several years the Department of Agriculture has been conducting experiments with horsemint which occurs as a common weed in many localities. These experiments have resulted in improving the plants by selection to a point which it is said warrants the use of horsemint for the commercial production of thymol.

Horsemint is found wild on light sandy soils over the entire region from southern New York to Florida and westward to Wisconsin, Kansas and Texas. It is probable that it will thrive under cultivation wherever it is found growing wild, but local economic conditions must be considered in determining whether or not its production would be profitable. The investigations of the Department of Agriculture indicate that by distilling the improved plants an average of 20 pounds of oil

per acre may be obtained from first-year plantings, and that in succeeding years the yields should be at least 30 pounds per acre. The phenol content of this oil may be assumed to be about 70 per cent, almost all of which is thymol. The yield of thymol per acre of horsemint, therefore, should be for the first year a little less than 13 pounds, and for succeeding years a little less than 20 pounds. As the average price of thymol for a number of years has been about \$2 a pound, the gross returns per acre from a horsemint plantation are estimated in the bulletin already mentioned, at about \$25.72 for the first year, and \$38.58 for each succeeding year.

It is more difficult to estimate with accuracy the cost of producing the thymol. In the opinion of the investigators it is doubtful whether the profits from the industry will be sufficient to warrant anyone in engaging in it unless the horsemint is grown in connection with other oil-yielding plants for which a distilling apparatus is required. In that event, of course, the entire cost of the distilling plant can not be charged against the thymol industry alone. For this reason in the estimates of cost of production published in Bulletin 372 such items as land rent, taxes, depreciation, upkeep, and interest on the distilling plant have not been included. Excluding these items it is believed that thymol can be produced at an approximate cost of \$23 per acre the first year, and \$19 per acre thereafter. This figure includes the growing of the plants, fertilizer, cultivation, harvesting, and distilling. A plantation of horsemint will not have to be replanted oftener than once in five years, and under average conditions may continue to give a good yield for a still longer time. After the first year a material reduction can be made in the cost of fertilizer if the distilled herb is returned to the soil. These facts account for the reduction in the cost of production after the first year.

Horsemint seed matures in the Southeastern States during August and September and is ready to be gathered as soon as the calyx is dry and has assumed a dark-brown color. The entire heads can be stripped off by hand. They should be spread out on a cloth of tight floor and thoroughly dried. The seed can then be removed by rubbing through a sieve,

common window screening being about the right size. Where the winters are free from severe frost and snow, as in the extreme southeastern States, the best results can be secured by planting the seed about the first of September in a carefully prepared seed bed. About two months after sowing, when the plants are about 2 inches high, they are ready for transplanting to the fields. Fuller information in regard to methods of cultivation, harvesting, and distilling are contained in Bulletin 3.2.

Poverty and tuberculosis—tuberculosis and poverty! These are the essential facts which force themselves to the attention of every investigator who faces the problem of that disease. The tenement house district of Cincinnati yields a tuberculosis morbidity just three times as great as the area where better housing prevails. In 197 families in which tuberculosis existed the average monthly income for a family of four was approximately \$37. After paying the prorata share for food and rent, a balance of \$5.13 remained for each individual to meet all other expenses. Such a low subsistence lever works like black magic in the spread of tuberculosis. Moreover, and this is a point over which the public should ponder, the home of the average wage earner was found to be far less sanitary than the average factory and workshop. In regard to all the factors which make for healthful living, ventilation, sufficient light, proper temperature, and freedom from overcrowding, the score was in favor of the factory in nearly every instance.

The city of Cincinnati realized that her tuberculosis death rate was 50 per cent above the average and that it had failed to manifest a tendency to decline. She felt no qualms in making this admission. Rather, she determined that she would learn why, with an efficient health department and favorable climatic influence, she was suffering from twice the mortality from that disease as her neighbor, Pittsburgh. Accordingly the United States Public Health Service was requested to make a thorough study of the situation and submit a report. To show that something more than mere academic interest obtained, 19,932 workers in 154 factories of the city vol-

untarily submitted to a physical examination.

The conclusions reached, point directly to the close connection between poverty and tuberculosis. The great factor underlying the entire problem was seemingly that of economic conditions. One sixth of all tuberculosis cases came from cheap lodging houses. Alcoholism was a prominent cause, and often accelerated the course of the disease. Occupational hazards and bad working conditions were apparently responsible for about 20 per cent of the cases, but in the majority of instances these hazards were not necessarily inherent in the occupation. Previous tuberculosis in the family occurred in practically a third of all the cases investigated. Dissipation, overcrowding, bad housing, and innate lack of personal responsibility, were also listed as causes.

An interesting feature of the report, and one which has not previously been dwelt upon in studies of this character, relates to the effect of immigration and the rate of growth of the population of the city upon the tuberculosis death rate. It is shown that cities composed largely of racial stock having a limited resistance to tuberculosis are subject to a high mortality rate from that disease, while centers having a slow rate of population increase are likewise subject to a high tuberculosis rate. The evidence is submitted in a comparative table covering sixteen American cities. Almost without exception those with a high percentage of Irish, Scandinavian and German stock, and those in which the negro population is relatively large, have a correspondingly high mortality, while those where the Italian and Jewish element is proportionately great have a low tuberculosis death rate. Similarly, such cities as Detroit and Cleveland, with high rates of population increase, show a low tuberculosis mortality, while Cincinnati and Baltimore with a relatively small population increase have a high tuberculosis rate. Doubtless the true explanation of this discrepancy is that advanced by the authors, namely, that where the population increase is rapid new buildings are erected to take the place of old insanitary structures and better housing conditions prevail.

DO YOU KNOW THAT

Life is a constant struggle against death?

Dirty refrigerators may make sickness?

The U. S. Public Health Service issues free bulletins on rural sanitation?

The defective citizen of today is oftentimes the unhealthy child of yesterday?

Every man is the architect of his own health?

It's the baby that lives that counts?

Tuberculosis is contagious, preventable, curable?

The full dinner pail—the open window—the clean well—make for health?

Do You Know That

Efficient muzzling of dogs will eradicate rabies?

The protection of the health of children is the first duty of the Nation?

Bad temper is sometimes merely a symptom of bad health?

Insanity costs every inhabitant in the United States \$1 per year?

The U. S. Public Health Service has proven that typhus is spread by lice?

Untreated pellagra ends in insanity?

In the lexicon of health there is no such word as "neutrality" against disease?

The death rate of persons under 45 is decreasing; of those over 45 it is increasing?

Do You Know That

Today is always the best day to clean up?

Fresh air, food, rest—these three combat tuberculosis?

The U. S. Public Health Service has reduced typhoid fever 80 per cent in some communities?

Overeating, constipation, lack of exercise, foul air, eye strain, may produce headache?

Polluted drinking water causes many deaths?

An efficient health officer is a good community investment?

Bad teeth handicap children?

Insufficient sleep endangers health?

Do You Know That

Light promotes cleanliness?

A clean mouth is essential to good health?

Physical training in childhood is the foundation of adult health?

The U. S. Public Health Service issues publications on hygiene and sanitation for free distribution?

Isolation is the most efficient means of controlling leprosy?

Headache is Nature's warning that the human machine is running badly?

Bullets may kill thousands—flies tens of thousands?

Obesity menaces longevity?

COUNTY SOCIETY NOTES.

The Bernalillo County Medical Society met in regular session on April 5th, with the president, doctor Lovelace in the chair.

Under the heading of clinical cases doctor Twichell presented a case showing the excellent results of Scheele's operation. Doctor Fadely presented a case in which an empyema followed a pneumonia necessitating a five rib resection, recovery following.

Doctor E. F. Frisbie read an instructive paper on Obstetrical Anesthesia followed by a general discussion.

Doctors Cornish, Hope and other members reported cases of minor importance making the meeting one of the most interesting of the year.

The application of doctor T. F. Tannus, a member of the Santa Fe County Medical Society was read. This was an application for trans-

fer of membership to this society and on vote was granted.

The question of the Medical Society furnishing a room in the new Y. M. C. A. was considered and after discussion it was voted that the society would furnish a room the funds to be secured by subscription and a committee of three, doctors Hope, Cornish and Burton, was named to collect the necessary amount.

F. E. TULL, Secretary.

OBSTETRICAL ANÆSTHESIA AND ANALGESIA.

EVELYN F. FRISBIE, M. D.,

President of the New Mexico Medical Society.
Albuquerque, N. M.

(Read before the Bernalillo County Medical Society, April 5, 1916.)

Just sixty-nine years ago, Simpson first used ether to produce analgesia in midwifery. Later in the same year, Thoreau announced the anæsthetic properties of chloroform. Nitrous-oxide was discovered to have anæsthetic properties by Dr. Humphrey Davy, but it was not used or developed until 1842 and not really developed till Edmund Andrews suggested the use with oxygen in 1853. Since that time ether and chloroform have been about the only obstetrical anæsthesias used until Steinbuechel of Gratz, first used scopolamine-morphine for obstetrical analgesia in 1903. Gauss first published his results in 1906, but little was made of it in this country till after his visit to America which was followed by a magazine publicity such as is

enjoyed by few medical problems. As a result of this extensive advertising among the laity, so many women are demanding some form of obstetrical analgesia that it practically compels the profession to devise some reasonably safe form of painless childbirth.

Probably no innovation in the recent history of medicine has been followed by such varied results and called forth such violent controversy as the "Twilight Sleep" of Gauss and Kroenigs. I shall endeavor to present impartially, as well as I can, the most important opinions pro and con to be gleaned from the recent literature on the subject. From my limited personal experience with it as well as a careful study of it in the Jewish Maternity Hospital in New York at two different times in the last 18 months, I must confess to being decidedly favorable to it.

More recently, nitrous-oxide and oxygen for prolonged analgesia in labor is an innovation which at least has fewer enemies. It was advocated by Arthur Guedel in 1911, for the second stage of labor, but its first use in America for a prolonged period was in 1913 by Drs. Lynch and Hoag who attended a daughter of Mr. Clark, a manufacturer of a gas mixing apparatus. It was used for a period of six hours and both doctors were most enthusiastic concerning its results. Since that time, it has been a most formidable rival of the famed "twilight sleep."

The method of administration in vogue consists of administering six to eight breaths of 9-10 nitrous-ox-

ide with one-tenth oxygen, at the beginning of the contraction about the end of the first stage, followed by a few breaths of straight oxygen. This controls the pain without producing unconsciousness, the patient remaining sufficiently conscious to heed the doctor's directions.

From 30 to 60 gallons of nitrous-oxide per hour are used with about 15 to 20 gallons of oxygen which suffices to secure analgesia and avoid cyanosis.

When the head distends the perineum, the anæsthesia is carried to the surgical degree, and the color of the patient controlled by oxygen.

Some of its advantages are:

1st. Its absolute safety.

2nd. It produces no degenerative changes in the body tissues, nor relaxation beyond normal sleep.

3rd. Its action can be so perfectly controlled and instantly discontinued.

4th. It produces no oligopnea of the infant.

5th. It does not require the same degree of experience and skill to administer as the scopolamine-morphine.

Guedel (1) claims its only drawback is its cost which is approximately \$10.00 for each case besides the very expensive apparatus necessary for its administration.

C. H. Davis (2) says it has not been necessary to maintain analgesia for more than six hours in primipera nor more than two hours in multiparæ. Should operative delivery be necessary, the analgesia is carried on to anæsthesia. By using nitrous-oxide and air, anal-

gesia may be maintained for 3½ hours with a 100-gallon tank of gas. The bags should be only half filled.

L. Craig (3) maintained analgesia for as long as 24 hours. The average second stage of labor in 1500 cases was one hour and 37 minutes.

The literature of the past 18 months on scopolamine-morphine anæsthesia is so voluminous that it will be impossible to touch upon any large proportion of the articles reviewed.

A. J. Rongy says that it does not affect the first stage of labor, but the second is prolonged.

Sudden slowing of the foetal heart calls for immediate delivery.

Women of a higher grade of intellect are best suited to this form of treatment.

J. O. Polak (5) says it is particularly useful in cardiac cases as it relieves fear and secures dilatation with less muscular effort. It does not predispose to post-partum hemorrhage and *real* asphyxia is noted less frequently.

In 400 cases he had no maternal mortality—no child born dead.

E. W. Smith (6) says that large dark women seem to need larger doses.

A prolonged second stage should be avoided; 2 hours perineal stage in primiparæ and one hour perineal stage in multiparæ.

W. F. Morrison, (7) reported 50 cases in which narcosis has been complete with no bad results afterwards.

If the pupils are contracted, face pale and respiration lowered, he

discontinues morphine and gives scopolamine. If patient is restless and face red, he gives morphine and discontinues scopolamine; if delirious, it means the anæsthetic is contraindicated.

R. McPherson (8) referring to 115 cases in New York Lying-in Hospital—all primiparæ—reported complete amnesia in 75, partial in 11, and no results in 25. There were no bad results as regards mortality.

A. Rongy (8) reported 250 cases in which amnesia occurred in 80 per cent and slight oligopnea in 80 per cent of babies.

J. A. Harran (8) reports a marked decrease in lacerated perineæ.

The best article I have ever found on the subject is that by K. E. Schloessingk (9), read before the Chicago Medical Society Jan. 26, 1915, or, it may only appear best to me because it was his work I observed in New York and he who taught me the method personally. His method is to inject 1-140 of scopolamine and one-half of narcophine when the pains are fully established, at intervals of 4 or 5 minutes, in the glutei muscles. An hour later 1-400 of scopolamine is given. The third dose is given after the memory test, one-half to one hour later. Subsequent injections of 1-400 scopolamine are given at intervals of one-half to two hours, according to the depth of the twilight sleep of the patient. Usually only the initial dose contains narcophine. Occasionally, if there is great restlessness, a second dose of $\frac{1}{4}$ and at most a third dose is given. In about

half an hour, after the first injection, the patient begins to feel drowsy and she sleeps between pains. The face is flushed, pupils dilated and the mouth and skin are dry. He advises the use of a half-dark, quiet room, but considers sound-proof doors and felt shoes for nurses unnecessary exaggerations. Hemorrhages are no more frequent, perineal laceration less frequent, eclampsia cases are more successfully delivered, and operative cases are fewer.

The only advocate I find of a combination of methods is Arthur J. Skeelee in J. A. M. A., of March 11th. He uses a combination of morphine, nitrous-oxide and ether. In this happy combination each one of which is ideal in action at certain stages, I believe we have a most ideal method. In normal cases, his technique consists in administering morphine during the first stage as soon as decidedly painful, when labor is expected to last at least four hours longer. One-sixth of a grain is used in most cases and $\frac{1}{4}$ grain only when it is desired to stop nagging pains and produce sleep. If pains are ineffective no morphine is given.

At the beginning of the second stage, or shortly before, nitrous-oxide is begun and continued intermittently in small amounts with oxygen until the head approaches the pelvic floor, when the nitrous-oxide is increased in quantity. As the perineum is distended then the nitrous-oxide is increased still more and given continuously. At this point if greater relaxation is de-

sired, it is secured by switching to ether.

My personal experience with the scopolamine-morphine is limited, but it has been of value to me.

Case 1.—Mrs. J. F., aet. 22, primipara; labor began at 11 p. m. At 12, pains were well established at intervals of 5 minutes. Received 1-200 of scopolamine, and 1-6 of morphine. At this time, she was transferred to the hospital and one hour later 1-400 scopolamine administered. Relief from pain and evident comfort followed the second injection for some time. The labor continued through the day with three more doses of 1-400 scopolamine at intervals of two and three hours, with patient apparently partly conscious, talking at times in a way which showed she heard and comprehended what was said in her presence, but was evidently not fully rational and had no memory of it afterwards. At 5 p. m., I delivered twins at one hour interval, of 8½ and 7½ lbs., respectively. Patient appeared rational within three hours after delivery, but had no memory of what had taken place during the 17 hours of her labor, and “wondered what she had been doing all day Monday.” Puerperium was uninterrupted and the degree of exhaustion seemed far less than we should expect under the circumstances.

The other cases were of shorter duration, mostly multiparæ or easy primiparæ so that they are less interesting in detail.

The last case is the only one in which there was the slightest de-

gree of oligopnea, but was 15 days premature and I had no difficulty in re-establishing respiration which appeared early but seemed inclined to stop so that hot and cold water was resorted to successfully.

In all cases except the last, I had used scopolamine in tablet form, prepared by Merck, with ordinary morphine sulphate, but in the last case I believed I had a better preparation in the ampules of scopolamine alone and scopolamine-narcophine of Merck. I wondered if that fact could have influenced the oligopnea.

I believe that the method can be used with perfect safety to both mother and child and with the greatest relief to the mother by using smaller dosage than I have seen *any* authority recommend, and that we should practically never have oligopnaeic infants if we would give morphine or narcophine *only* with the *initial* dose, but more especially if we would avoid giving it within 3 to 4 hours of *expected* delivery.

I agree with Dr. Schloessing that the method can be carried on in any well regulated home by partially darkening the room and avoiding all unnecessary sounds. Conversation when unavoidable, should be carried on in a subdued voice.

I see no advantage in using the “memory test” as described by Gauss. Instead, I merely ask the patient if she suffers much and judge by the rationality of her reply how much real consciousness of pain she possesses. In this way, I find on questioning the patient af-

terwards that I have secured sufficient analgesia with much lower dosage, than that advocated by all authorities, and the patient awakens to a full consciousness in a short time after delivery. With this lower dosage, I believe the danger of oligopnea is practically nil.

I usually use chloroform during the perineal stage unless the pains are lacking in sufficient force. In this way we secure the desirable relaxation at this time and are able to discontinue the twilight sleep sufficiently early for the infant to eliminate all respiratory depressant drugs while it still receives oxygen from the placenta; therefore, the respiratory reflex is normally active at delivery.

The chief objections to nitrous oxide method are first, it cannot be used during the very painful stage of dilation; second, the additional expense as well as inconvenience of both gas and apparatus. Compared to this, the advantages of scopolamine-morphine are that, first it can be used as soon as the pains are well established. Second, the simplicity and small cost of its administration.

CONCLUSIONS.

1st. We have in scopolamine-morphine or narcophine a valuable method of relieving a very painful stage of labor if used with the necessary care.

2nd. That the dosage advocated by most authorities is higher than needed to secure a sufficient degree of analgesia. Most mothers do not demand complete pain relief, but

merely that the pain be made more easily bearable.

3rd. That its safety and value may be greatly increased by combinations with other anæsthetics such as nitrous-oxide during the second stage, or chloroform or ether during the perineal stage.

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THE INTERPRETATION OF CARDIAC IRREGULARITY

CARROLL E. EDSON, A. M., M. D.,
Denver, Colorado.

(Read before the 33rd Annual Meeting of the New Mexico Medical Society, Section on Practice, East Las Vegas, September 6, 1915.)

Perhaps the greatest advance of recent years in the domain of internal medicine has been in our knowledge of the disorders of the heart. The work of His, Tawara, Wenckebach, Einthoven and Lewis has made positive and clear our understanding of the cardiac mechanism and many of its disturbances. It has all, however, only proved or elucidated the conclusions reached by that master mind of clinical obser-

vation, James Mackenzie, to whose close and reasoning observations we owe our present knowledge. It was his patient and detailed study at the bedside which now enables us to understand the part played in cardiac disease by changes in the mechanism of the heart beat, and to appreciate the difference between the signs of mechanical damage to a valve, disturbance of rhythm, and the evidence of failing cardiac efficiency. Such more accurate knowledge lies at the basis of rational, and hence effective, therapy.

In the time with which you honor me, I shall attempt no review of all this knowledge, but shall present only certain facts which are of clinical importance in our interpretation and management of cases of cardiac irregularity. Life insurance companies ask only, "Is the pulse regular?" quite regardless of our present knowledge that one heart may be seriously impaired in its efficiency,—even far advanced in failure,—and yet be regular in action; while another, with noticeable or annoying irregularity of rhythm, may be perfectly sound so far as efficiency and long life is concerned.

The evidences of cardiac failure,—of inadequacy to its task,—as Mackenzie has so well pointed out, are quite other than the signs of a valvular defect or altered rhythm. The early warnings of a failing heart are general and functional,—not usually cardiac in their localization. Fatigue,—early, and disproportionate to the task, whether bodily or mental; symptoms of inadequacy, or functional disturb-

ances of other organs, as the stomach, liver, kidneys or brain; and only later, breathlessness, cyanosis, beginning œdema, or substernal cardiac discomfort: such are the evidences of a heart failing to accomplish its task.

The signs of a valvular lesion, murmur and irregularity in rhythm, are of themselves not important. Their significance depends wholly upon the testimony they give of local pathologic change; and whether that change, or the disturbed rhythm resulting from it, directly or indirectly, affects the nutrition, the working capacity, or the recuperative power of the heart muscle.

It is to illustrate and emphasize this important difference that I ask your attention to three types of cardiac irregularity of much clinical significance: one, frequently brought to our attention by the patient because of the discomfort or alarm which it engenders,—easily recognized, and, by itself, of little or no serious importance: another, fully recognized only by instrumental analysis, but reasonably to be predicated from careful clinical study, and often of much import: and lastly, a type of irregular action, the recognition of which is of the greatest importance for the patient's welfare; for upon it rests the most striking and efficient results known in cardiac therapeutics.

The normal heart beat depends upon a regularly recurring stimulus arising in the sino-auricular node. This bundle of pale, delicate fibres, situated at the junction of the superior venacava and the free

border of the right auricular appendage, extends along the sulcus terminalis for about two centimeters. It is supplied by a special arterial branch from the right coronary artery, and is innervated by both the vagus and the sympathetic nerves. The stimulus to contraction passing from the "pace maker," as Lewis so aptly terms it, is conducted along the auricular tissue to the auriculoventricular node of Tawara, a collection of similar fine, pale fibers at the edge of the auricular tissue at the posterior and right border of the septum. From this node the bundle of His carries the junctional tissues in unbroken course between the auricle and ventricle in an insulating sheath of fibrous tissue horizontally forward and to the left to the anterior portion of the pars membranacea septi. Here the bundle divides just in front of the anterior end of the attachment of the median segment of the tricuspid valve to its ring. The left branch passes through the septum into the left ventricle below the junction of the right posterior and anterior cusp of the aortic valve, and sub-endocardially along the surface of the septum. The right branch passes immediately downward into the moderator band directly into the papillary muscles. Both branches terminate in arborizations about the network of Purkinje's fibres lining the ventricles. The main branches of the left division are distributed to the mitral papillary muscles. The mechanism of the normal heart beat depends upon the anatomical and physiologic in-

tegrity of the system of conducting fibres. The nutritional condition of the myocardium may be so altered as to seriously impair the contractile force of the heart, and destroy its working efficiency; but so long as the impulse arises in a normal sino-auricular node, and the conducting system is intact, the heart beat will be of an even rhythm. The characteristics of the normal beat are the regularity of the impulse formation in the sino-auricular node, and the evenness of the time occupied in its transmission along the conducting fibers in the bundle of His. Changes in the rate of the heart beat, such as are seen in febrile or emotional disturbances, are induced by toxic or nervous influence upon the sinus node, the pace maker. In such changes of rate it is the interval between the beats which is affected. The construction time is scarcely altered, and the time of transmission through the bundle of His unaffected. Experimental work as well as clinical study has amply confirmed these facts. Any impulse to contraction arising elsewhere in the heart wall than in the sino-auricular node, or any interference with its conduction along the nodal-fascicular fibres, will cause a disturbance of the normal rhythm of the heart's contraction, and be evidenced by a more or less marked irregularity of pulse or heart beat. It is to three types of such interruption, and their interpretation, that I ask your attention.

The first of these is the irregularity caused by the extra or prema-

ture systole, as it has been differently called. This is a contraction of the heart in response to an impulse arising in some point of the heart other than the sino-auricular node,—in some area which, for the moment, has developed a greater irritability than the rest, and which discharges its impulse spontaneously. As a result, the systole occurs earlier than that caused by the normal impulse coming from the sino-auricular node, and replaces that normal contraction. The normal stimulus coming from the pace maker reaches the auricle or ventricle, as the case may be, either during the contraction or in the refractory period following. The heart fails to respond to this stimulus, but but waits for the next succeeding stimulus from the node. Accordingly, the premature or extra systole is followed by a pause longer than the normal. It is this pause, or the stronger beat following, which not infrequently attracts the patient's attention as a palpitation or distress, for which they seek relief, or allayment of their fears. It is due to some cause of local hyper-irritability in the heart wall; and may occur in cardiac disease of aortic or mitral origin, in rheumatic carditis, in which case it is but a part of the general picture, and is evidence of a myocardial localization of the poison. It may be due to areas of toxic irritation, or of degenerative changes from disturbed nutrition. It is found rarely before 20; but with increasing frequency thereafter,—probably being present at times in the majority of

people over 60, in whom it is frequently discovered by chance, since it may occur without causing any symptoms.

The characteristics of this extra systole are its absence of tendency to regular repetition,—though it may be frequent,—and the rapid rate of its impulse formation. Consequently, it is more common in hearts beating at a moderate rate, being found only occasionally if the pulse is over 100, and rarely if over 120. In a slowly beating heart an occasional premature systole tends to disappear, if the heart rate is quickened by exercise; which fact explains its frequently causing the patient more discomfort when he is quiet in bed than when up and about. Indeed, the trouble it causes is largely subjective, though it may be considerable.

The recognition of an occasional or single systole is easy by a study of the pulse and the auscultation sounds at the heart. The long pause is found to be preceded by a beat of the heart following shortly after the previous regular beat. If the premature systole follows very quickly, or is feeble, it may fail to open the aortic valves, and so to give a palpable beat in the radial artery at the wrist. But on auscultation the heart's contraction is heard; there is no absence of apex sound. Moreover, the long pause following the extra systole is usually compensatory to the short interval preceding it, so that the succeeding normal beat occurs at its properly spaced interval. This return to its proper space after the

compensatory pause is readily seen in graphic tracings; but with attention it can be prejudged by the finger and ear. When the premature systole arises in the auricle, the return to the dominant rhythm is not quite so exact, the long pause being usually less than fully compensatory. The difference may be so slight that only careful tracings will show it.

If the extra systole recurs with any regularity, it leads to a grouping of the pulse or heart beats in series of two or three or four, according to the frequency of its occurrence. On auscultation the grouping of the sounds readily discloses the nature of the break in rhythm. If the premature systole opens the aortic valve, there is a group of four sounds before the pause—

— — — — — — — — — —
lub dup lub dup lub dup lub dup lub dup lub dup

If it is too weak to open the valve, the pause is preceded by a group of three sounds only—

— — — — — — — — — —
lub dup lub dup lub dup lub lub dup lub dup

Similarly, a grouping of apical thrusts may give visible evidence. A pulse rate which is half the ventricular rate is almost without exception due to premature systoles failing to reach the wrist.

In cases of valvular lesions, with murmurs accompanying the normal beats, the occurrence of premature systoles makes much confusion; but by remembering the mechanism of the disturbance, it is not difficult to space out the sounds on auscultation. A presystolic mitral murmur fails to appear with the ventricular

extra systole. A systolic mitral murmur is heard with the interpolated beat, but is softer than usual. An aortic murmur will be heard or not, according as the extra systole opens the valves or is too weak to raise the cusps.

In the absence of other evidences of cardiac inefficiency, this irregular beat is of small significance. Its frequent occurrence, or repetition in immediate sequence for considerable runs, could, in enfeebled hearts, disturb the period of diastolic rest and nutrition. Without other evidence of such effects, the condition needs no direct care. To allay the patient's anxiety, or, more important, not to arouse it by attention, is the essential therapy. Proper regulation of exercise and hygiene, with elimination of toxic ingestion or absorption, is all that most cases require. The heart itself needs no attention, if it is found otherwise sound. Temporarily, the mental disturbance may be quieted by simple sedatives of the type of bromides.

The second type of disturbance of cardiac rhythm is of more significance, of less easy clinical recognition. It is also much less common. It is due to an interference with the conducting mechanism of the heart somewhere in its course through the bundle of His, causing a delay in the transmission of stimulus from auricle to ventricle. This delay, if only a slight lengthening of the interval, can be determined only by instrumental study; though it may be suspected in some cases from a slight reduplication of the

first sounds. If the delay is of any length, however, it may bring about an absence of ventricular response to the auricular impulse, owing to the stimulus reaching the ventricle during its belated contraction to the previous impulse, or during the refractory period following. There results a missed beat of the ventricle. This intermission in the pulse, if noted at the wrist, is shown to be due to a missed beat from heart block by a corresponding absence of apex beat and heart sounds at the præcordium; all evidence of ventricular contraction is wanting. The heart misses a beat. Single missed beats are readily recognized, but are not common; for the condition is due, not to casual irritability, but to the depressed or interrupted conductivity of the fibres in the bundle of His. Consequently, the failure of response is apt to recur with a certain degree of system; and to increase in frequency with fatigue or exertion. The ventricle will thus fail to respond to every fourth, third, or second, auricular impulse, or to only two out of three auricular systoles. The pulse may therefore be regular in cases of 2 to 1 block, or in phrased groups of 3 or 4, according to the rate of delay. A sudden halving of the pulse and ventricular rate during an illness or convalescence is very suggestive of heart block,—the more so if the rate becomes between 40 and 50.

In cases of complete block in transmission, the ventricle, receiving no impulse from the auricle, establishes its own rate, and contracts normally from 30 to 34 times a min-

ute. When fully established, this slow ideo-ventricular rhythm maintains a sufficient circulation for a quiet life, but allows little range of activity, bodily or mental. During the period of transition, however, from partial to complete block, there is great risk to the patient from the delay in the establishment of the ventricular rhythm. This does not always take place immediately on the occurrence of complete block; and the period of rest between the last auricular stimulated and the first ideo-ventricular beat may be lengthened to a dangerous degree, leading to syncope, if the period between systoles is 3 to 7 seconds. If this is prolonged to 10 seconds or over, cyanosis, partial convulsions, or death, may occur.

The condition leading to heart block is most commonly the extension of rheumatic infection from the valvular ring in mitral disease to the fibres in the bundle of His. Similarly, it occurs after severe chorea. In lesser degrees it may not infrequently be found following the myocardial degeneration of diphtheria, pneumonia, typhoid, or influenza. Thus a delay in the transmission rate, or an occasional dropped beat, may be the only evidence of such an invasion of the myocardium.

The importance of recognizing this involvement cannot be too strongly emphasized; and though such an infection or toxic weakening usually clears up with a restoration to normal, it is obvious that during its presence a due regard

should be paid to maintaining and conserving the cardiac efficiency. Such dropped beats, therefore, in acute infectious illnesses, should be given careful consideration.

Acute inflammatory infections or ulcerative processes also may affect the bundle with serious results; but aside from the rheumatic involvement, the commonest cause of heart block is probably a syphilitic process of gummatous or degenerative character, occurring in, or encroaching upon, the bundle. It is such a cause which explains many of the cases occurring in later life, when there is no history of rheumatic or previous valvular disease.

The importance of syphilis as a factor in heart disease is not yet sufficiently appreciated. It is much commoner than is supposed, and should always be thought of in these obscurer disturbances of rhythm, as well as in case of cardiac pain and myocardial weakness.

The full recognition of the extent of heart block requires instrumental study by means of tracings with the polygraph of Mackenzie, or, better, the electrocardiograph; but its presence may be suspected when the pulse shows occasional difference in the length of intersystolic periods, with a double first sound, and absence of apex beat. Especially may we feel sure if the pulse is slow, and has dropped suddenly to half its previous or usual rate. Missed or grouped beats, with silent ventricle in the long pause can rarely be anything but the expression of heart block; though the differentiation from the phrasing due to

extra systole is not always easy by ear alone. Another sign which is suggestive of heart block is found in cases of old mitral disease. It is the continuance of the presystolic murmur into, or its recurrence in, the early part of diastole. Such a change in the character of the thrill should suggest an extension of the mitral infection to the tissues of the bundle.

In cases of mild or unrecognized degrees of heart block, the administration of digitalis may provoke a noticeable, or even serious, degree of block; and in marked cases of the trouble, the drug is contra-indicated.

Any recognition or suspicion of heart block calls for a thorough and systematic study of cardiac condition, looking to its ætiology, and an accurate estimation of the heart's efficiency, and the extra burden thrown upon the pump by reason of the disturbance of its rhythm. The mild, toxic cases, after infectious disease, tend to full recovery; and their management requires only the remembrance that the disordered rhythm is an expression of a weakened condition of the myocardium, which should not be subjected to overstrain for the time being. In the advanced cases, the prognosis depends entirely on whether or not the pathologic process, interfering with conduction, is one which is stationary or progressive. If the latter, and the degree of interruption is approaching complete block, due care and warning should be given that syncope with its attendant dan-

ger, or even sudden death, may occur during an attack.

In cases due to luetic infection, to which of course the Wassermann test is of diagnostic help, thorough antisymphilitic treatment should be instituted. Clinical experience has shown that in these cases thorough mercurial treatment is preferable, and far safer at first than salvarsan or its cogenors, which should not be administered until later. Even then they should be given in most cautious doses. Their early or full use has been followed too often by serious and fatal results.

Complete heart block once established is not, with our present means, removable. There is no drug which quickens the ideoventricular rate.

In the two types of irregularity just described, we have seen the results upon cardiac rhythm of an effective but irregular or ectopic stimulus, and of an interruption of the passage of the normal stimulus. The third type I ask you to consider is that due to the absence of any regular stimulus, and its replacement by multiple uncoordinated impulses.

While it is desirable to recognize the nature of an extra systole, that we may allay the patient's anxiety, and avoid placing unnecessary restrictions on his life, and to appreciate the possible dangers lying in heart block, the prompt understanding of the third type of irregularity is of the greater importance. In no form of cardiac disturbance can proper management, early instituted and intelligently carried out, do

so much to avert calamity and maintain the patient's welfare, as in cases of auricular fibrillation.

This form of irregularity is due to the establishment of stimulus production, not at the sino-auricular node, but at innumerable foci throughout the auricular tissue. There results an entire loss of coordinate contraction of the auricle, which remains in a state of tremor and ineffective fibrillation, taking no part in the circulatory action. The many waves of impulse pass irregularly to the ventricle through the bundle of His as it may be able to transmit them, some sufficiently to stimulate a contraction of the ventricle, — others ineffectively, through weakness, or during the refractory periods. The heart's action and the pulse become, therefore, irregularly irregular, without any dominant rhythm, varying in the rate and strength of beats from one to another. The condition may occur at any age,—from 13 to 84, according to Lewis's statistics, which also show that more than 50% of the cases give a history of rheumatic fever. Of these cases the largest proportion have had a mitral stenosis. This delirious pulse has long been clinically recognized as associated with mitral stenosis, though unsatisfactorily explained. With our new understanding of its mechanism, we know the reason for its occurrence. Lewis's figures, already referred to, show that at least 20% of all cases of mitral stenosis ultimately develop an auricular fibrillation.

Aside from this rheumatic origin,

the frequency of fibrillation increases with age, and the presence of fibroid or degenerative changes from local areas of malnutrition in the myocardium.

The importance of auricular fibrillation lies in the fact that nearly 70% of all cases of heart failure are due to it. While the disturbance may occur for shorter or longer periods, with a full return to normal rhythm, it is apt to recur, and finally becomes fully established. It not frequently arises suddenly, and is usually permanent.

The symptoms are those of heart failure, weakness, dyspnoea, cyanosis, distress, and a dilating heart. The patient may be unconscious of any change in the cardiac rhythm, or complain of some fluttering discomfort. His usual account, however, is of the general distress accompanying cardiac failure, which, in the paroxysmal cases, may be very great.

The diagnosis is easily made in well marked cases by the type of the irregularity, and the usually rapid rate of the pulse. While a patient with auricular fibrillation may show a pulse of only 80 or 90 at the wrist, it is usually because many of the beats fail to come through. Auscultation over the heart will disclose the greater irregularity, and in most cases a rate of well over 100. A permanently irregular pulse of over 120 is almost always due to auricular fibrillation; and Lewis says, if accompanied by signs of cardiac failure, is surely due to that condition.

Another evidence pointing to the

diagnosis of auricular fibrillation is the sudden loss of the presystolic murmur in cases of mitral stenosis. There is a disappearance of the crescendo thrill, though a very soft early diastolic suffle may remain.

The prognosis is serious; for the whole burden of the cardiac activity is thrown upon the ventricles, which are deprived of their normal stimulus and regular periods of diastolic rest. The extent, therefore, of muscular impairment, and of nutritive capacity of the myocardium, will determine the degree to which this bones, there is very slight, if any, development of osseous substance. The cranial bones repair less per-irregularity can be supported. Progressive lessening of nutrition from sclerotic coronaries, or weakening from infectious disease, increases greatly the gravity of the condition.

It is essential to recognize early the nature of this form of irregularity; for in no type of cardiac disorganization can greater benefit be given the patient by proper care. It is in these cases that digitalis has its greatest triumphs, if administered in sufficient doses,—larger than are usually given,—until full physiologic effect is reached. The purpose of full dosage is to reduce the pulse rate to 80, or thereabouts, which is brought about by its effect upon the bundle of His. By inducing a partial block, some of the many impulses are kept from passing through. The ventricle is thereby given a due amount of rest; though the rhythm does not become regular.

When, under the influence of the

digitalis, the pulse has become slowed to about 80, the drug should be omitted for awhile, until the pulse rate begins to increase. The digitalis is then given again, and by trial the amount determined which will hold the pulse permanently at the slower rate. This dose may be continued over long periods.

Vomiting or diarrhœa, or the occurrence of coupled beats, call for the temporary stopping of the digitalis. Mackenzie's experience has been that from 6 to 8 drachms of the tincture, given in doses of fifteen minims three times a day, are necessary to obtain full effect. The desired reduction of the heart rate, and the limit of tolerance as shown by gastric disturbance, not infrequently are reached at the same time. I have one patient in whom the last dose of seven drachms brings the pulse from 100 to 84, and produces nausea.

Belladonna and its alkaloids are not well born by these patients, who should also be guarded against pregnancy and influenza.

In this very brief and incomplete account of some phases of cardiac irregularity, I have attempted no setting forth of new facts or original work; but have wished only to emphasize the clinical importance of recognizing the essential difference in the type of disturbance, and the need for rational therapy based thereon, that undue restraint and needless medication may be avoided in the one case, and proper measures exhibited promptly in the other.

Discussion.

DR. W. R. TIPTON, East Las Vegas: We certainly owe Dr. Edson a debt of gratitude for this most excellent paper. It is a paper that I intend to read and read most carefully; it will bear reading carefully. I am sorry that I did not have the pleasure of reading that paper before and preparing myself for the discussion of it. We are certainly indebted to Dr. Edson for having presented such a paper here.

DR. S. D. SWOPE, Deming: It was not my intention to discuss this paper, but the subject matter before us is of too great importance to allow it to go without further discussion. The average country doctor, of which class I am proud to be a member, knows about as much concerning the heart as he does of some of the abstruse philosophy of the ancients. He has a case of heart disturbance, he gives the patient a dose of digitalis or convallaria majalis, and when he says his prayers that night he asks the Lord to do something for that patient. We know so little about the heart that we still take up the idea of the ancients and attribute to the heart a great many things of which it is not guilty at all. The heart and its actions require just such research, just such painstaking elucidation as Dr. Edson has brought before us, and I shall read the paper with a great deal of pleasure. It is to be the beginning of a knowledge which will place us upon a better plane and such things as that are what the medical profession needs today. We have looked too long upon the bricks that construct the walls of its development; we must look deeper, into what the bricks are made of, if we are going to be able to replace broken walls and develop new conditions to greater advantage.

The irregularities of the heart, as the Doctor has described them, are a new book to me. I am among those who have had to do with what little they knew of it. He brings out the fact, beyond a question of a doubt, that intensive study of a special subject must lead to much greater knowledge and that the heart specialist is the man to send our obscure heart cases to, men like Dr. Edson who can examine many cases and formulate from a

varied experience the conclusions that the average doctor may not arrive at.

DR. B. L. SULZBACHER, Kansas City, Mo.: I wish first to give my thanks to Dr. Edson for his very careful preparation of the paper. Personally, I belong in the surgical section, but I cannot help after hearing this paper but make a few remarks on points which strike me as rather important as brought out by the essayist. I am sorry the Doctor did not have time to enter into the peculiar forms of cardiac dilatation in those peculiar cases of loss of heart compensation. The newer heart pathology as given by Keith and Dubarry is not widely known amongst general practitioners.

In regard to therapy, we find, after we have made the careful diagnosis, that conditions are rather varied and peculiar. The only mention that Dr. Edson has made here has been of digitalis; he also mentioned that we get a heart block. Now, I have had occasion to witness these heart blocks, which have turned out fatally, from over dosage. We frequently run across cases which may have an absolute intolerance for any form of digitalis, be it the tincture, the fat free tincture, the infusions, the powdered digitalis leaves given in capsule, the various preparations, digalen, digitalin, and many others. In these cases, we have found it of greatest benefit to use intravenous preparations of strophanthin. The dosage is very, very small, and we must gradually feel our way. I have seen cases of dilated heart in connection with surgical work where the operation had to be postponed until we had some degree of compensation established. In these cases the intravenous injection of strophanthin has been most valuable. Along with that, while the heart becomes slower, as Dr. Edson has pointed out, it sometimes also becomes very weak, and we have found in these cases the administration, either by mouth or hypodermically, as is best borne, either the sodium benzoate or the sodium salicylate of caffeine. The dosage, of course, must be varied according to the tolerance of the patient. We find, also, that enemas are good providing it is towards the latter part of the condition; the tonics then come into excellent use; and, be it empirical or otherwise, we have found that certain

preparations of quinin have given us beautiful results.

DR. C. E. EDSON, closing: Dr. Sulzbacher brought up some questions. I was dealing in my paper only with certain forms of cardiac irregularity, not with weak heart as such, so I may perhaps be excused for not taking up the subject of dilatation in general, or surgical dilatation. I am very glad that he brought up the question of digitalis, because if there is any one thing which, if I may say so, the profession of medicine as a whole, whether it be urban or rural, whether it be medical or surgical, needs to have impressed upon its mind it is that heart disease and digitalis are not conterminous. It has been too much the idea of certain practitioners, both medical and surgical, that whether it is a weak heart or a rapid heart or an irregular heart, it should be given digitalis. He is right when he says that heart block may be brought on by digitalis. Serious heart block, fatal heart block, may be caused by the administration of digitalis, and one of my indications for giving it in fibrillation is that its benefit comes from bringing about just that degree of heart block which will give the heart a little rest without carrying it too far. Unaccompanied by auricular fibrillations in the bundle of His, this can be carried on with very little care, with perfect safety, and with the greatest benefit. Of course, digitalis can give heart block which is fatal, as the Doctor has called attention to. If the patient has an absolute intolerance to any form of digitalis, which is not as rare, I think, in medical experience as the Doctor's remarks would lead us to think, the patient is in a bad way. He is like the lady on a steamer who was complaining of how she felt and Mark Twain told her that he had all those symptoms himself and he got perfectly cured. He said, "All you have to do is to stop smoking, stop drinking and stay at home nights, and you will get perfectly well." "But," she said, "I don't do any of those things." "Oh, well," he replied, "then there is no hope for you." If a patient can only be cured by digitalis and cannot take it, why, I am sorry for him.

I want to take exceptions to what Dr. Swope said as to all these heart cases belonging in the province of the specialist and not

of the general practitioner. He is not fair to himself and I know his patients would not agree with that remark of his. The whole point of my paper is to show that the vast majority of these cases, over 70 per cent of all the cases of cardiac irregularity can be interpreted, when one once appreciates the mechanism of the heart beat as it has been at present elucidated through the work of laboratory men, through the work of the physiologists, through the work of the electrocardiograph of Einhorn. The polygraph elucidated certain forms of weak heart which we could not make out before what they were. Once they were elucidated, we could then interpret many conditions like these ventricular systoles, and we can interpret them practically without the use of the polygraph, without the use of the sphygmomanometer, because we know they occurred and by the auscultation and palpation methods we can determine them. The electrocardiograph has explained certain forms of irregularity which were not made clear by the pulse-tracing curve, but once having determined by your calipers you can space them out by a simple sphygmograph and interpret them. The few cases which can not be interpreted except by the electrocardiograph belong to the curiosities of cardiac pathology. The difficulty is that technical journals are now publishing these studies all in terms of the electrocardiograph. The average man cannot afford to have one, could not work it if he could get it and does not need it.

The important thing is that understanding the mechanism and applying that knowledge to the pathology of the case, you will find that over 70 per cent of all these cases explain themselves and can be just as well interpreted by the man in general practice. He should recognize that some forms are serious and perhaps need for a while hospital care—but they are the exception—that some of them are not serious at all, and that the patient need not be worried about it, and the care of the case belongs not with the specialist but with the general practitioner. The plea of my paper is not for the specialist, but for the general practitioner.

EFFECT OF TRAUMA ON THE DEVELOPMENT OF THE CRANIAL BONES.

(*With Report of Case*)

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Phoenix, Arizona.

(Read before the Section on Surgery of the 33rd Annual Meeting of the New Mexico Medical Society, East Las Vegas, New Mexico, September 6th, 7th and 8th, 1915.)

There are so few infants and children that survive an injury of the cranium of sufficient extent to interfere with the development of the cranial bones, that there are but few cases reported; and as the treatment followed in the case to be reported is different from that in other cases reported, and the results up to this time so promising, I believe it is a subject we should consider; and hope a free discussion will bring out reports of other cases and interesting points upon this subject which I have failed to mention.

In early fetal life, the skull is a simple membranous capsule, and in the subsequent course of its development in the base and lower portion it is replaced by cartilage, and later this ossifies. The portion representing the vault undergoes ossification with no intermediate stage of cartilage formation, and this fact may account for the slowness or failure of repair which occurs after fracture of the vault.

In infancy, the bones are united by sutural membranes, which present a certain mobility by reason of their attachment to each other.

Traumatism acts, then, either by producing a sutural disjunction, a direct fracture localized to the broken bone, or a combination of the two; and often results in an embedding of the bone or a bulging out at some distance from the point struck. After trauma of the cranial feetly than elsewhere, though they are covered externally and internally by periosteum and only a very limited amount of callus is produced after an injury, and this is formed very slowly.

Formerly it was taught that such union as takes place between the fractured bones was by means of a nonvascular, fibrous tissue, but we now know that in children especially when the periosteum has been preserved, osseous repair takes place if the broken edges are in contact or nearly so. When the broken edges are at some distance from contact, the intermediate space is closed by fibrous tissue analogous to cicatricial tissue in other parts of the body.

When the reparative process does not cover the breach, there is left a depression arising from contraction and sinking of the scar tissue, resulting in a disturbance of the brain in situation and form and in functional impairment. This structural weakness is a source of danger proportionate to the extent and situation of the enfeebled parts.

Later, as the infant develops, there is a separation of the edges of the bones and a stretching of the scar tissue with resulting increased intra-cranial pressure. The fissures, particularly when they occur

in the first year, widen gradually and may attain very great dimensions due to the development of the brain and its pressure of expansion. These fissures usually persist during life though they have been known to disappear. Bayerthol reported such a case, in which the loss of substance measured six c. m. wide at the age of twelve years.

CASE REPORT.

History. Pauline P., female infant, age 5 mos. and 3 wks. Family history negative. Normal birth. History of injury being received by being thrown from baby buggy and having head caught under rear wheel of automobile, behind which she had been carelessly left by her mother. This was on May 28th, 1912. Was seen immediately by Dr. J. E. Drane of Mesa, Arizona. Hurred examination showed baby unconscious, pale, rapid respirations and, on way to hospital, breathing ceased and baby became very cyanotic. After an interval, respirations started again.

Examination at Hospital. Baby now having convulsions, with continuous twitching of both arms and right leg and apparent paralysis of right side of face. Convulsions last about thirty minutes, being more severe in left side of face and right leg; pallor extreme with shallow, rapid respirations. Right side of face and head abraded and swollen; right parietal bone depressed over entire surface about $\frac{1}{8}$ inch and sutures seemingly widened. A soft, fluctuating tumor covered the sagittal area and extended down over

right side of head. Treatment: Rest, ice, anodynes.

May 29th: Convulsions continue; temp. 101 a. m.; 104 p. m.

May 30th: One convulsion during day, left arm, leg and face; lasted about 15 minutes. Tumor still prominent, but softer. Nurses well, as it did throughout the entire illness.

Child left the hospital at the end of a week. Still very weak, but tumor was smaller and child was considered out of danger as to life.

On March 28, 1915, I was asked by Dr. Roy E. Thomas, of Phoenix, to see the child who had recently come under his observation. Her mother stated that she did not walk until she was two years of age and had always had some difficulty in handling her left lower limb. She spoke only a few words and those only since she was two years old. Last November, she had a "nervous chill." Her body grew stiff and her eyes fixed and staring. This was followed by trembling. This state lasted about half a minute. There was no repetition until January. Since that time, these convulsions occurred with increasing frequency and were even noticed at night when the child was asleep. During the past week the convulsions have increased to eight or ten per day. Excitement will bring on a convulsion. I saw her in two of the convulsions while she was being examined.

Examination. Physically, she is well developed; mentally, she seems to have the development of a child about one year of age. There is a

motor ataxia of the left lower limb which interferes to a considerable extent with walking. Examination of the head shows an absence of bone extending from the greater wing of the sphenoid on the left side transversely across the vertex, terminating at the same point on the opposite side, and extending back over the anterior part of the squamous portion of the right temporal bone connecting the frontal and parietal bones. This absence of bone is least at the lower angle on the left side, and greatest between the right parietal and frontal bones (a distance of 7 c. m.). Over the latter area is a dense, depressed, nonelastic membrane. X-ray examination of the head confirms the physical findings. It shows an absence of a large portion of right frontal and a small portion of right parietal bones; obliteration of bregma and a good portion of left parietal, making a saddle-shaped defect, with the seat of the saddle in the situation of the coronal and sagittal sutures (Bregma). In this case the trauma produced a sutural disjunction, an embedding of the bone edges, especially marked on the right side; and, as shown later at operation, an adhesion of the membranes to the bone edges, resulting in very little if any development of the osseous substance in the direction of the traumatized area. Plate 1 shows condition of the skull prior to operation.

Operation. April 1st. An incision was made through the scalp and periosteum over the frontal bone one-half inch in front of what should



Fig. 1.

have been the coronal sutures, commencing at the left sphenoid and extending transversely across the vertex to the same point on the opposite side. The tissues were dissected back to the coronal suture line. The periosteum, dura mater and arachnoid, with cicatricial tissue interposed, formed a nonseparable membrane which was adhered to the bony edges throughout. Extending from the right parietal to the frontal, temporal and sphenoid bones was a tense and depressed area of cicatricial tissue. It was impossible to separate this membrane from the suture edges of the bones except by sharp dissection. This opened up the subarachnoid space and caused the loss of a large amount of cerebro-spinal fluid. The patient was carefully watched for a fall in the blood pressure and any other resulting bad effect, but no detrimental effect was noted from the loss of the fluid. This dissection extended to all of the suture edges of the frontal, parietal and temporal bones to which these tissues were attached. There were no adhesions to the pia mater in any of the area exposed, showing that the symptoms were the result of compression from the contracting and nonelastic cicatricial tissue. The edges of the bones were freshened with bone forceps for the purpose of trying to stimulate osteogenesis and to make a fresh surface for the fascia to be implanted. The scalp surfaces were clamped together and the head covered with a moist dressing. A section of fascia lata, shaped after and a little larger than the

space in the skull, was removed from the right thigh and placed over the brain covering and under the edges of the bones, and held in the latter place by gut sutures run through holes drilled into the bones. The periosteum and scalp were then closed. I may mention that in this procedure I used the same precautions of technique as I use in bone transplant; that is, the gloved hand did not come in contact with the tissues or anything that contacts the tissues. For a week the cerebro-spinal fluid leaked under the scalp, but I could see no bad effect from its loss. The child was kept perfectly quiet in bed for four weeks and made an uneventful recovery. Since the operation and to date there has been no convulsion. After the first two weeks the child's nurse noticed a gradual improvement in her mental state which has continued. When she was allowed to get up, after the sixth week, it was necessary to teach her to walk. When she had again learned to walk, it was found that there had been an improvement in her left limb ataxia. This improvement has also continued. Plate 2, taken two months after the operation, shows vault of defect now bulging, whereas it was depressed before; some new bone, shown by pushing forward of margin of right parietal, and slight narrowing of defect.

While it is too early to predict the final outcome of the case, I am encouraged by the results obtained and believe that there will be a continued improvement in her general condition as the operative findings

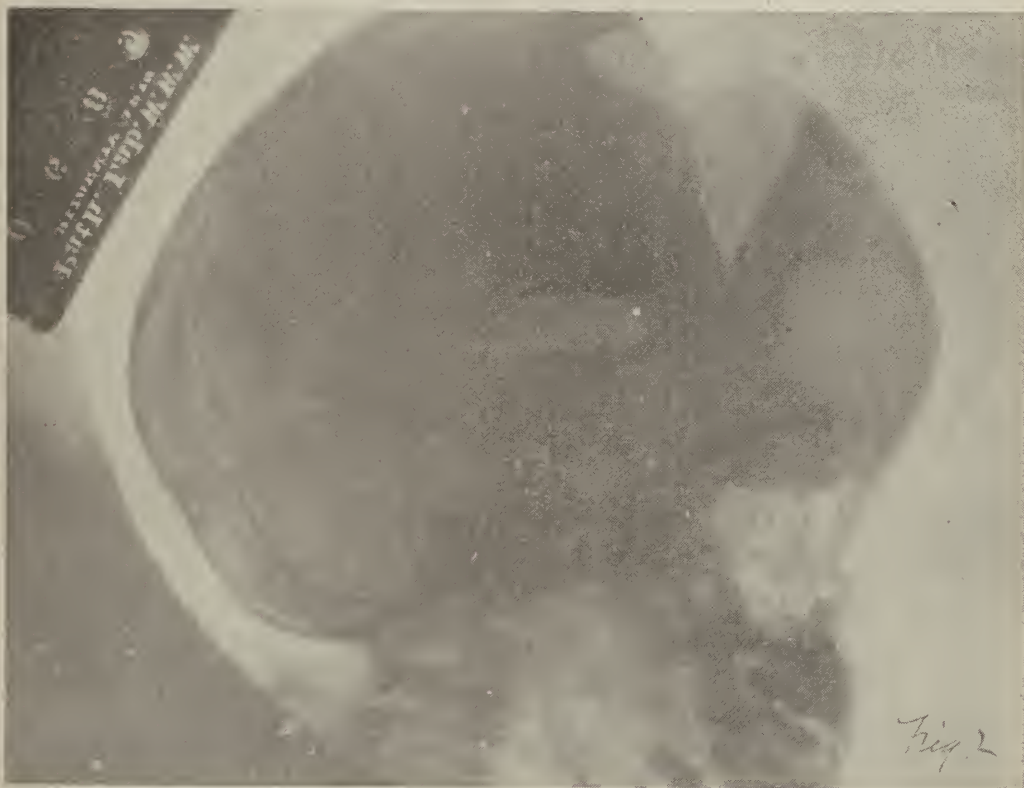


Fig. 2.

show that her symptoms were due to brain compression rather than to brain injury. Should she at any future time get enough scar tissue to cause brain pressure symptoms, it will be an easy matter to locate the scar and remedy the trouble by transplanting another section of fascia lata. It is my opinion that the fascia lata is the ideal transplant to cover over the brain in cases of scar tissue pressure or dura mater defects. Should the child continue under my observation, and if the bone defect does not fill in, which I have no expectation of its doing, when she has reached the age of maturity, I will transplant the infra-spinous section of the scapula into the space as a protection. I believe this to be the ideal bone for filling in bone defects of the skull. The most unfortunate incident in this case was that the parents allowed the condition to go so long a time before operative treatment was permitted.

There are two principles in injuries to the skull and its contents that should be observed religiously: First, complete physical and mental rest for weeks' or months' duration, depending upon the extent and the nature of the trouble; Second, early operative interference when indicated. The medical profession as a whole is too apt to overlook these all-important principles in dealing with head injuries. If they are observed, we will have fewer epileptics and insane patients following the head injuries. Never wait until epileptic attacks call your attention to the injury as a proba-

ble operable condition. The majority of such cases are then only probably operable; the minority will be benefited by operation. X-ray examinations should also be a routine in all head injuries.

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New and Nonofficial Remedies

During May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non official Remedies:

Hyson, Westcott and Co.—Enteric Coated Glycotaura Tablets.

H. C. Merker Co.—Petroagar; Petroban.

Monsanto Chemical Works.—Phenolphthalein-Monsanto.

Standard Chemical Co.—Standard Radium Solution for Drinking (1 microgram Ra).

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Mead's Dry Malt Soup Stock.—A mixture containing desiccated maltose and desiccated dextrin (about equal parts) 47 per cent., wheat flour 47 per cent., potassium carbonate 1 per cent and moisture 5 per cent. Mead Johnson and Co., Jersey City, N. J. (Jour. A. M. A., May 20, 1916, p. 1623).

Phenolphthalein-Monsanto.—A non-proprietary preparation of phenolphthalein admitted to New and Nonofficial Remedies (Jour. A. M. A., May 20, 1916, p. 1623).

Propaganda for Reform.

Controlled Clinical Trials.—At the "Cardui" trial which is now in progress, A. S. Loevenhart, Professor of Pharmacology and Toxicology at the University of Wisconsin, testified as to the conditions under which the clinical trial of a medicine would give results as certain as those yielded by the usual pharmacological methods. Professor Loevenhart had testified that he preferred his students to be familiar with drugs the value of which had been clearly worked out by accurate clinical methods and shown to be useful in the treatment of disease. Asked as to the character of the clinical trials required to demonstrate the value of a drug, he held that there was no difference between a careful clinical test and a careful pharmacological test. Loevenhart explained that to determine if Wine of Cardui had the claimed action an experimenter would take a certain number of cases of amenorrhea, perhaps 50, and divide them into two sets; treat 25 with Wine of Cardui and the others without it and then make an estimate of the amount of the material passed at the time of the menstrual period. Such trials carried out in a hospital, where the physician receives his reports from nurses and is not obliged to depend on the statements of the patients, he explained, would be as reliable as a properly conducted pharmacological experiment (Jour. A. M. A., April 15, 1916, p. 1219).

Diagnosis of Female Disorders.—Manufacturers of "uterine wafers," etc., often advise the use of their preparations without physical examination of the patient when patients are disinclined to submit to such physical examination on the chance that one of the asserted constituents of the proprietary may hit the cause of the trouble. In this connection the testimony of J. Clarence Webster, professor of Obstetrics and Diseases of Women in Rush Medical College, Chicago, in the "Wine of Cardui" case is of interest. He was asked: "...Is it necessary to make an examination of the female pelvis in order to determine the condition, the underlying cause of the condition and the treatment which is necessary?" He replied: "It is necessary... Because from symptoms one can rarely have any accurate idea of the pathological conditions in the body, in this part of the body. ... There are

many symptoms which are common to different conditions and consequently it is necessary in analyzing a case to make a careful physical examination." Again, when asked: "Can you determine, or can the conditions of the uterus, or pelvic organs be determined merely by attention to description of symptoms which a patient gives?", he replied, "I cannot." (Jour. A. M. A., April 22, 1916, p. 1337).

Proper Self-Medication.—In the course of his testimony in the "Cardui" trial, John Leeming, M. D., Chicago, explained the extent to which self-medication is to be encouraged. Asked if it was very dangerous for a person who thinks he has a cold to take some aspirin without going to a doctor, he replied that, while in exceptional cases it might be exceedingly dangerous, in most cases of simple cold it would not be so in that Nature's recuperative powers would in most cases throw off such a cold. He explained that he always advises his patients how to treat themselves for simple ailments and to come to him when there are danger signs. Asked if it was dangerous for a person with a cough to get any medicine without a diagnosis, Dr. Leeming replied that it would not be dangerous at all if the person understood his case and in consultation with his doctor he has been generally advised. In families where he is the attending physician he often advises not to send for him in case of a slight cold, but to take a little medicine that will help Nature to throw it off (Jour. A. M. A., April 22, 1916, p. 1330).

What is a "Medical Authority"?—There has been a tendency to look upon publishers of text books as authorities and not to consider a physician as an authority on a certain subject unless he has written a text book on it. That the publication of a book does not prove its writer to be an authority is the opinion of J. Clarence Webster of Rush Medical College expressed at the Cardui case which is being tried in Chicago. Having referred to Frank Billings as an authority, Webster was asked to define the term "authority." He replied: "As far as a human being can be an authority on anything, I would regard a man who had worked at a particular subject in a scientific manner over a period of time, and who had more experience in that subject than

other people, or most other people, as the best human authority that could be found." Asked if a man was more of an authority if he had written a book, Webster replied: "Often less in the eyes of the world." (Jour. A. M. A., April 29, 1916, p. 1410).

Viburnum Prunifolium Inefficient.—J. Clarence Webster, holding the Chair of Obstetrics and Diseases of Women in Rush Medical College, testified in the "Wine of Cardui" case that he gave up the use of fluidextract of viburnum prunifolium because he believed that the benefit that he obtained from its use in pain in association with menstruation, was due to the alcohol in it. He had never had any reason whatever to believe that viburnum was of any value in warding off a threatened abortion. When in cases of painful menstruation he used the solid extract which contained no alcohol, he could not get the same results that he had obtained before and he gradually gave up the use of the drug altogether. Arthur A. Small, senior physician at St. Joseph's Hospital, Chicago, testified of extensive experience with the use of viburnum prunifolium, while resident physician in the Toronto General Hospital. As a result of his experience there he is of the opinion that viburnum prunifolium is of no value in the treatment of female disease. In these experiments both the fluidextract and the solid extract were used and it was found that the alcoholic solutions would prevent or lessen pain in some cases. In other words the only action was that of the alcohol. J. B. DeLee, holding the chair of Obstetrics at the Northwestern University School of Medicine, testified that years ago he gave large quantities of extractum viburnum prunifolium for the prevention of miscarriage, but found it useless (Jour. A. M. A., April 22, 1916, p. 1338; May 13, 1916, p. 1566; May 20, 1916, p. 1639).

When Medicines are not Required or are Useless.—Promoters of proprietary "uterine tonics" would have their preparation administered to girls and to pregnant women whether indicated or not and in conditions where medicines plainly can do no good. The testimony of E. E. Montgomery, Professor of Gynecology at Jefferson Medical College, Philadelphia, in the "Cardui" trial forcibly brings out the objections to the indiscriminate administration of medicines to girls and women

and the futility of their use in cases which need surgical attention. Regarding the administration of "tonics" to girls at puberty he said that to advise a girl who is undergoing a physiological process that she must take some medicine which contains alcohol or any habit-forming drug at this period of her life, which is the most impressionable period of her existence, is doing that which is placing her future in peril, and is without any possible benefit. Regarding the administration of a "tonic" such as Wine of Cardui is supposed to be, he testified that it can do nothing but harm; that a woman because she is pregnant, pregnancy being a physiological process, does not need medicine, but needs attention. Regarding the use of medicines in uterine prolapse as a means of strengthening the unstriped muscle and thus help the muscle to perform its work to hold the womb in place, Dr. Montgomery explained that the unstriped muscle in the women is not likely to be affected by medicine and that the tissue outside the womb is unlikely to be affected by medicine; to give medicine in the case of a woman who has prolapsus is just about as reasonable as to bathe one's suspenders with a solution when the elastic tissue has been destroyed from them (Jour. A. M. A., May 6, 1916, p. 1481).

Book Review

Pellagra

PELLAGRA. By George M. Miles, M. D., Gastroenterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital and Atlanta Hospital, Atlanta, Georgia. Octavo of 261 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$3.00 net.

We are still wondering as to pellagra.

The second edition of doctor Niles' work brings before us the results of the investigations to date including the work of Goldberger and the Thompson-McFadden Commission.

In this connection it is interesting to note that the studies of Jobling and Peterson reported in the Journal of Infectious Diseases,

1916, XVII, 501, do not bear out the Goldberger theory and tend to show that there are factors other than deficiency in diet which may have an influence. These results are not incorporated in this newest work of Niles, probably because the book was in press before the report was made public.

The author admits that the causation of pellagra is not entirely proved, but feels that the goal of "etiologic certainty, pathologic assurance and therapeutic confidence" is nearer.

Pellagra is, the reviewer believes, much more frequent in this country than the reported cases would indicate. It behooves, therefore, the profession to become more familiar with the clinical picture of the disease and a careful study of doctor Niles' book will be of advantage.

Cancer of the Stomach

CANCER OF THE STOMACH. A Clinical Study of 921 Operatively and Pathologically Demonstrated Cases, by Frank Smithies, M. D., Gastro-enterologist to Augustana Hospital, Chicago. With a Chapter on the Surgical Treatment of Gastric Cancer, by Albert J. Ochsner, M. D., Professor of Clinical Surgery in the University of Illinois. Octavo of 522 pages with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1916, Cloth, \$5.50 net; Half Morocco, \$7.00 net.

The material in this timely book has been gathered from a study of 921 operated and pathologically demonstrated cases of gastric cancer.

It has been quite a time since a work dealing with carcinoma of the stomach has appeared and the wealth of material at the hand of the author, who is eminently fitted for the task, has been used to good advantage.

A particularly valuable chapter is that dealing with gastric cancer in the young—that is in those under thirty-one years of age. 18 instances have occurred in the series reported.

Doctor A. J. Ochsner has written a chapter dealing with the surgical treatment, the success of which depends upon early diagnosis.

We most earnestly recommend this latest work on cancer of the stomach to our readers. Too few general practitioners give this condition sufficient study and too many cases are

allowed to reach an inoperable stage before diagnosis is made. The author wisely says: "When the patient can answer 'yes' to all the signs and symptoms of gastric cancer set down in the textbooks, he would do well to get his affairs in order, for no form of treatment is then of permanent avail."

The printer has done his part of the work particularly well and is to be commended.

The Clinics of John B. Murphy, M. D.

THE CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago. Volume V, Number II (April 1916). Octavo of 176 pages, 32 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

The April 1916 number of Murphy's Clinics contains the usual number of interesting case reports of doctor Murphy's work, bone cases being in the majority. In addition, however, there is a particularly interesting talk on the Surgery of Tendons and Tendon-Sheaths, taking up

- I The Newer Anatomy
- II. Tendons: Rupture
- III. Luxation
- IV. Tumors
- V. Wounds and Infections
- VI. Transference
- VII. The Tendon-Sheaths: Inflammations
Tumors

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The New Mexico Medical Journal

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E . D . I . T . O . R . I . A . L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better Journal
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ING OUR ADVERTISERS: "I
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FAVOR THOSE WHO FAVOR US.

A conference between the National Association for the Study and Prevention of Tuberculosis and an officer of the New Mexico State Society was held in New York City this spring, and it was decided at that time that it would be advisable to hold a Southwestern conference on tuberculosis at Albuquerque during the fall. This conference will embrace the states of Colorado, California, Utah, Nevada, Texas, Arizona and New Mexico. It was also decided to hold this separately and distinctly from the already existing Southwestern Tuberculosis Conference which was organized a few years ago at St. Louis and will be held October 12th and 13th, convening on the morning of the 12th.

The program will be divided into three sociological sections and one medical section. Two of the sociological sections will deal with the general problem of Federal control of tuberculosis, with particular ref-

erence to the indigent migratory consumptive, and one section will discuss the primary efforts at Federal control, taking up such measures as the Kent Bill, Division of Tuberculosis, etc. Another session will deal more primarily with the educational methods of controlling the indigent migratory consumptive problem, discussing plans and educating the press through the signing of passing-on agreements, etc.

Dr. Farrand, President of the University of Colorado and late Executive Secretary of the National Association, will make the principal address in the first of these sessions, and the principal address in the second session will be presented by someone from the Executive Office of the National Association. There will be only one paper with a general discussion following. The third sociological session will deal with community control, taking up a series of ten minute discussions on various problems dealing with community control, such as sanitation, hospitals, dispensaries, open-air schools, legislation, etc. The speakers will be announced later.

A medical session primarily for physicians will be devoted to the

general subject of early diagnosis. It is hoped we will be able to present men of national importance to deliver papers on this subject. We expect to take up the various methods of early diagnosis, including the subject from the clinical standpoint and from the X-ray standpoint. We feel sure that we will be able to offer to the people papers by expert Roentgenologists, as well as by expert clinicians. The sessions of the conference will be held in conjunction with the meeting of the New Mexico Medical Society and the State Tuberculosis Society, and will be held either in the Commercial Club or in the High School Auditorium. This is to be determined at a later date.

There is no question in the mind of the local state organization that this is one of the biggest opportunities the Southwestern States have had in getting together and discussing the various phases of the tuberculosis problem which affects this group of states. It will give an opportunity for the men interested in tuberculosis work, both from the sociological and clinical standpoints, to meet one another and to become better acquainted, and should also offer an excellent opportunity to determine what is best in the way of tuberculosis legislation for this Southwest country. If the conference proves to be a success it can be held yearly, the choice of the next meeting place to be decided upon by the body of men at this meeting.

It is urged that every physician, whether a specialist in tuberculosis or not, should attend and bring as many laymen with him as are inter-

ested in the sociological side. We are desirous of getting members of Women's Clubs, Civic Betterment Leagues, Public Health Departments of any type, to take an active part in this meeting, and to this end a general invitation is extended to all such organizations to send representatives here in October. If they will communicate with the Secretary of the Society (Dr. L. S. Peters, Albuquerque, N. M.), he will be glad to make reservations at local hotels, or give them any other information they may desire relative to the conference.

Later on letters and circulars giving in detail further developments in the conference will be mailed to physicians and others. A large attendance is especially desired in order to stimulate interest in this work.

PETERS.

The 67th Annual Meeting of the American Medical Association which convened in Detroit, Mich., on June 13, 14, 15 and 16 will certainly go down in history as one of the most successful meetings of the American Medical Association. The beautiful city of Detroit with her wonderful water ways, opened wide her doors to the great concourse of medical men. The fence that Mars has built around the European Continent prohibited their run over to Switzerland and they went to the best place that they could have gone, the city of Detroit.

The attendance was very large. The section meetings were well attended. The House of Delegates was full. The hotels of the city,

though noted for their capacity were overflowing. I think everybody found a place to sleep, but one night I surely thought I was either going to have to hang up on a nail or occupy a lobby chair. So much for not having secured my reservation beforehand, but things were so uncertain along the border and the possibility of my not going was so great, that I neglected this important precaution.

Notable among the things of great importance that transpired, was a symposium on splenectomy in which the surgical and medical sections united. I was fortunate enough to be able to hear this symposium. The entertainments were too much for any one man, even though he might still have the alacrity of youth. I did the best I could and had but one regret, that I could not have seen more. A trip through the Parke-Davis Pharmaceutical Manufactory was an education within itself. I saw the Ford machines ground out like sausages through a mill, but I was forced to deny myself the pleasure of the trip to Walkerville and the Canadian Club and Johnny Walker's distilling establishments, which was for lack of time and not want of inclination. The entertainment committee were particularly nice. I was fortunate enough to have one of their number take me under his wing, otherwise, I might not have been able to get around in a great manufacturing city after having lived so long among the mesquite brush and sand dunes of southern New Mexico.

It was a great gathering of medi-

cal men where much learning was displayed. In this great age of rapid development the advance of the medical profession recorded its wonderful progress. SWOPE.

The suit against the American Medical Association brought by the Patten Brothers for one hundred thousand dollars damages for libel resulted in a verdict for the Wine of Cardui Company in the magnificent sum of one cent. The case was on trial for over three months and the jury deliberated for one week before returning a verdict.

The Journal of the American Medical Association (Vol. LXVII, July 1st, 1916, page 41) in commenting on the result of the suit sums the matter up in these words: "Technically guilty; morally justified! To the Association a moral triumph; to the "patent medicine" interests a Pyrrhic victory."

It has not been so very many months since the "greatest American" secured a similar verdict at the hands of a jury and felt himself amply satisfied. The moral as well as the monetary victory was his. We greatly fear that the patent medicine interests may feel the same way about it and be willing to pay the price. While we agree with the Journal of the American Medical Association that "the trial and the facts that led up to it could furnish texts for many interesting comments," we feel that the winners of the Pyrrhic victory will find in the verdict the text for a new campaign of advertising and will

use it to their financial advantage for all it is worth.

This Journal and the members of the New Mexico Medical Society are in full sympathy with the great work that is being done by the American Medical Association to safeguard the public health and we do not hesitate to congratulate the American Medical Association and doctor Simmons on the result even though it be only a "moral victory" and even though the jury said "Technically Guilty!"

The annual meeting of the New Mexico Medical Society will be held in Albuquerque in October. The Bernalillo County Medical Society has appointed the following committee on arrangements:

Doctor L. S. Peters,
 Doctor G. S. McLandress,
 Doctor F. E. Tull.

We call the attention of the profession to the fact that the Southwestern Conference on Tuberculosis will be held at the same time and a most interesting program is being prepared which will include speakers of national reputation. There will be no conflict between the two programs and the members of the New Mexico Medical Society who desire to read papers before the sections of the annual meeting will have every opportunity to do so. The secretary will be glad to hear from those intending to prepare papers and whose intentions have not yet been made known.

Twenty-five out of every 1,000 employees in American industries, according to recent statistics, are constantly incapacitated by

sickness, the average worker losing approximately nine days each year on this account. This "non-effective rate" for the great army of industrial workers in the United States barely suggests the total money loss to employers and employees. The lessened efficiency, the effects of reduced earnings in times of sickness, as well as the cost of medical attention, and the economic loss from deaths, swell the cost to industry and to the Nation to almost incalculable figures.

That much of this loss is nothing less than preventable waste and that this waste can be largely reduced by a properly conducted system of governmental health insurance for wageworkers are conclusions set forth in Public Health Bulletin No. 76, containing the results of a study of "Health Insurance—Its Relation to the Public Health," just issued by the United States Public Health Service.

The preventive value of health insurance is given especial emphasis in this study. "Any system of health insurance for the United States or any State should at its inception have prevention of sickness as one of its fundamental purposes," says the bulletin. "This country should profit by the experience of European countries where prevention is being recognized as the central idea necessary to health insurance if health insurance is to attain its greatest success in improving the health and efficiency of the industrial population."

Such a system, it is pointed out in the bulletin, would

1. Provide cash benefits and medical service for all wage-earners in times of sickness at much less cost than is now possible. Adequate medical relief would thus be placed within the reach of even the lowest paid workers who are most subject to ill-health.

2. Distribute the cost among employers, employees, and the public as the groups responsible for disease causing conditions and afford these groups a definite financial incentive for removing these conditions. This can be done by means of small weekly payments from employees, supplemented by proportionate contributions from employers and government at a rate reducible in proportion to the reduction of sickness.

3. Become an effective health measure by linking the co-operative efforts of the three

responsible groups with the work of National, State, and local health agencies, and by utilizing these agencies in the administration of the health insurance system.

4. Afford a better basis for the co-operation of the medical profession with public health agencies.

5. Eliminate the elements of paternalism and charity-giving by making employees and the public, as well as employers, joint agents in the control of this fund.

"A governmental system of health insurance," concludes the study, "can be adapted to American conditions, and when adapted will prove to be a health measure of extraordinary value."

The next examination for appointment in the Medical Corps of the Navy will be held on or about August 7, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago) Ill., Mare Island, Cal., and Puget Sound, Wash.

Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education.

The first stage of the examination is for appointment as assistant surgeon in the Medical Reserve Corps, and embraces the following subjects: (a) anatomy, (b) physiology, (c) materia medica and therapeutics, (d) general medicine, (e) general surgery, (f) obstetrics.

The successful candidate then attends the course of instruction at the Naval Medical School, which will begin on or about October 1, 1916. During this course he receives a salary of \$2,000 per annum, with allowances for quarters, heat, and light, and at the end of the course, if he successfully passes an examination in the subjects taught in the school, he is commissioned an assistant surgeon in the Navy to fill a vacancy.

Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

THE THREE "C'S" OF CARING FOR MILK IN THE HOME

The three "C's" for the proper care of milk in the home, according to the dairy specialists of the U. S. Department of Agriculture, are:

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Covered

Milk is a highly perishable food and the length of time it will remain sweet and safe, especially for children, depends, the specialists say, almost entirely upon the constant care it receives from cow to consumer. Milk passes through three agencies—the producer, the dealer, and the consumer. If the first two have done their part, clean, safe milk will be delivered, thoroughly chilled, to the consumer. The consumer's responsibility begins the moment the milk is delivered at his doorstep.

Because milk poured from vessel to vessel on the street is very liable to contamination from dust, manure particles and germs, milk is best delivered in capped bottles. If bottled milk cannot be obtained, the housewife should try to have someone in the family receive the milk in a clean, scalded utensil, cover it instantly, and put it without delay into the refrigerator, or the coldest available place. Under no circumstances should an uncovered pitcher, bowl or pan be left out on the porch to receive bulk milk. The vessel, both before and after the milk is poured into it, is accessible to flies and collects particles of dust and dirt.

Even in the case of bottled milk, however, the consumer must see that the bottle is not left out in the heat for a moment longer than is necessary. Milk should be delivered and kept at a temperature of 50 degrees F. or lower—the colder the better. At such temperatures bacteria develop very slowly and milk undergoes little change until consumed. A slight rise in temperature above this point, however, permits bacteria to multiply rapidly and brings about rapid deterioration of the milk, which may render it unfit for ordinary use and make it highly dangerous for babies and little children. For this reason bottled or other milk should not be allowed to remain in a warm place, as on a sunny porch

or in a hot kitchen, for a moment longer than is necessary.

Delivery of Milk in Hot Weather

In hot weather the best plan is to have the milkman put the milk directly into the refrigerator, because at that time of year milk can not be kept properly without ice. If a refrigerator is not available, provide a small box containing ice, and if ice is unobtainable, provide some tight container with insulated walls that keep the heat from getting rapidly to the cold milk. A home-made fireless cooker is admirable for this purpose, especially if partially filled with ice. In the absence of any of these devices, arrange with the milkman not to leave the milk in the sunlight, but to put in in the coolest, shadiest place around the house.

Handling Milk in the Home

In handling milk around the home, do not pour it from one vessel to another until it is to be consumed. Do not let the bottle of milk remain out of the refrigerator a moment longer than is necessary. Keep the milk covered, using paper caps or an inverted tumbler on bottles, or storing it in covered utensils. Any household utensil that is to be used as a vessel for keeping milk should first be cleaned thoroughly and scalded.

Before opening a bottle of milk, wash and wipe the neck and outside of the cap with water and a clean cloth. The little depression on the top of the cap may collect dust or water and any milk that leaks out may attract flies. Lift out the cap with a pointed instrument, so that the outside of the cap, which may be contaminated, will not be pushed down into the milk. Each time the milk is to be poured from the bottle it is a wise precaution to wash the neck as described.

Milk in a Refrigerator

The refrigerator where milk is stored should be cleaned regularly, especial care being given to keeping the drip pipe free and clean. The ice rack also should be cleaned and any place where food is kept or milk stored should be scalded occasionally with sal-soda solution. The refrigerator, even though cold, may quickly be contaminated by a few drops of spilled milk, or by small particles of food. No matter how clean the refrigerator, milk

should never be kept in an open vessel. As milk absorbs odors easily, such food as fish, cabbage, or onions should not be kept in proximity to it.

Clean Empty Bottles

As soon as a milk bottle is emptied, rinse it thoroughly with cold water. Do not return dirty bottles and do not use milk bottles except to hold milk. Returning dirty bottles to the milkman may mean that a few days later either you or your neighbors will get contaminated milk. Milk bottles should never be taken into a sick room. In case of infectious or contagious disease, all bottles should be boiled thoroughly and should not be returned to the dealer without the express permission of the attending physician. Such diseases easily can be made epidemic through disregard of this precaution.

Where There Are Children

Care of milk, important for all, is a vital necessity in a home where there are children. It is absolutely essential to the safety of babies. No intelligent mother will leave to an ordinary servant the task of caring for or preparing the milk for her baby. Mothers of small children should get, from their own physicians, explicit directions for the proper handling of milk and for cleaning and sterilizing nursing bottles. Pamphlets on infant feeding may be obtained from the municipal milk stations or health officers. Milk for babies can not be kept too cold, and too much care can not be given to keeping it clean and covered.

Further information on this subject may be had by writing to the U. S. Department of Agriculture, Washington, D. C., for Farmers' Bulletin 413, "Care of Milk and Its Use in the Home."

ENGLAND WARS ON CANCER

Central Midwives Board Issues New Circular —Cancer of Breast Curable by Early Treatment

That the policy of "business as usual" applies to constructive efforts for the prevention of disease in England is evident from the publication by the Central Midwives Board as recently as March 16, 1916 of a new circular

on cancer of the breast. The practice of midwifery in England and Wales is controlled by this Board and the circular is the newest of a series issued for the instruction of all women practicing this profession and registered with the Board as required by the law. The leaflet on cancer of the breast was prepared by the Chairman, Dr. F. H. Champneys, F. R. C. P., and is distributed to the public as well as to midwives.

Pointing out that cancer of the breast unless treated by early removal always ends in death, Dr. Champneys states that the disease is at first only in the part affected and not in the system. "Every day and every minute," the circular says, "is of importance and no time at all should be lost. The earliest symptom is a lump in the breast which is usually painless and may be quite small. It may remain without seeming to grow for some time. The only cure for it is early removal. Although it is often easy to be sure that a lump is cancerous, many lumps which begin by being innocent turn into cancer some times after many years."

Dr. Champneys advises that all lumps except those caused by undoubted and recent inflammation should be removed as soon as they are found and advises all women who discover a lump in the breast to consult at once a surgeon who is in the habit of dealing with them. If the lumps are not removed and are cancerous the disease sooner or later spreads through the body and becomes incurable, while if the lumps are not cancerous they may become so. "The removal of an early lump," the leaflet goes on to say, "is generally simple and if microscopic examination should show afterward that it was not cancerous a danger for the future will have been averted and the anxiety of the patient and her friends will be relieved." From such an operation there is generally "practically painless recovery in a few days. If the lump proves to be cancerous, however, a further operation is necessary, which, if undertaken early saves many lives."

According to Dr. Champneys, if women would follow the above advice much loss of life, many regrets when too late, and much misery would be saved.

THE CAUSE OF TYPHUS FEVER

Much progress has been made in recent years in solving the problem of the cause of typhus fever. Perhaps the most important demonstration from a practical point of view is the discovery by Nicolle, Ricketts and others that the disease is transmitted by the body louse. The demonstration also that apes, monkeys and guinea-pigs are susceptible to the typhus virus makes it possible to conduct systematic experiments on animals, and in the course of such experiments it has been shown quite conclusively that the disease is not caused by a filterable virus as we ordinarily understand it. And so the search for a bacterial cause has continued.

In 1914, Plotz described a gram-positive anaerobic bacillus obtained in culture of the blood from patients with endemic typhus in New York and of typhus fever in immigrants in quarantine. The medium consisted of glucose agar and unheated, unfiltered ascitic fluid with a specific gravity of about 1.015. Subsequently the same bacillus was recovered from guinea-pigs and monkeys inoculated with typhus blood, and specific agglutination and complement fixation obtained with the blood typhus patients after the crisis. The evidence is consequently strongly in favor of at least some close relationship between this bacillus—the *Bacillus typhi-exanthematici*—and typhus fever; it can hardly be asserted, however, that it has been demonstrated conclusively to be the specific cause of typhus fever. It is not apparent that injections of this bacillus in animals give rise to the same reactions which occur after the injection of typhus blood; of course it must be acknowledged that failure to produce reaction and failure to protect animals against the virus in typhus blood do not necessarily imply that the bacillus is not the cause of typhus, but they make the demonstration of the true relation of this bacillus to typhus fever difficult.

The extensive outbreaks of typhus in European countries involved in the war, especially Serbia, would seem to offer unexcelled opportunities for the further work necessary to settle the etiologic problem of this disease; in spite of the abundance of material, however, the conditions in war do not seem to

be favorable for scientific investigation. Thus we are informed that the American Red Cross Commission found it practically impossible to do systematic work during the last typhus epidemic in Serbia, and the recent work in Mexico by Olitsky and others was interrupted very soon after it had been started. From the latest Mexican work we see that the results again indicate the close relationship between the bacillus of Plotz and typhus, and we may hope that independent workers under favorable conditions will secure results before long of definite significance.

In connection with this work on typhus we note the melancholy fact that another investigator has died from the disease. Carlos E. Husk died, March 20, 1915, from typhus fever contracted in the course of the work mentioned in the foregoing. There is probably no disease that has claimed so many victims among physicians and nurses as typhus. It is said that during twenty-five years, of 1,230 physicians attached to institutions in Ireland, 550 died of typhus. Since the war, again, typhus has claimed many victims from physicians, among them, for instance, Jochmann, who was doing splendid work in the study of infectious diseases. And the martyr roll of typhus now includes three American investigators who have died from typhus contracted while voluntarily investigating the disease in Mexico—Conneff of the Ohio State University expedition, Ricletts, who accomplished so much, and now Husk.—*Journal of the American Medical Association.*

DO YOU KNOW THAT

It's worry, not work, which shortens life?

A cold bath every morning is the best complexion remedy?

Poor health is expensive?

The U. S. Public Health Service has reduced malaria 60 per cent in some localities?

The death rate from typhoid fever in the United States has been cut in half since 1900?

Pneumonia kills over 120,000 Americans each year?

Flyless town has few funerals?

The well that drains the cesspool is the cup of death?

Licenses were granted the following at the meeting of the Board of Medical Examiners, April 10 and 11, 1916.

Upon Credentials

Dr. James D. Cochran, University of Maryland, 1912.

Dr. Jesse H. Phillips, Hahnemann Medical, Chicago, 1897.

Dr. Ora K. McKittrick, College of Physicians and Surgeons, St. Louis, 1899.

Dr. Elmo J. Hay, Bellevue Hospital and Medical College, 1896.

Dr. James A. Van Horne, Memphis Hospital and Medical College, 1893.

Dr. Chas. P. Bull, Jr., Medical College of S. Carolina, 1905.

Dr. Arno Klein, Jefferson Medical College, 1911.

Dr. Albert L. Stubbs, College of Physicians and Surgeons, Keokuk, 1895.

Dr. Augustus B. Stewart, University of Michigan, 1912.

Dr. Muhanna E. Barakat, Central College of Physicians and Surgeons, Indianapolis, 1902.

Dr. Peter M. Shaver, Barnes Medical College, 1900.

Dr. Harold E. Blazer, Wooster University Medical Department, 1890.

Dr. John F. Cramer, Missouri Medical College, St. Louis, 1886.

By Reciprocity

With Tennessee, Dr. Edward M. Loyd, University of Tennessee, 1907.

With Oklahoma, Dr. Clarence L. Miller, Ensworth Medical College, 1905.

With Oklahoma, Dr. Abraham L. Hatcher, University of Tennessee, 1892.

By Examination

Dr. Shelby A. Turner, Memphis Medical College, 1904.

Dr. Francis P. Dolan, Marquette University, 1914.

W. E. KASER, Secretary.

COUNTY SOCIETY NOTES

Bernalillo County Medical Society

June 3, 1916—Bernalillo County Medical Society met in called ses-

sion at the Commercial Club, to take action on the death of Dr. E. Osuna.

Meeting called to order by Vice President, Dr. Cipes.

Members present: Drs. Carnes, Hope, Frank, Dill, Fadeley, Easterday, Wroth, Burton, Frisbee, Provines, Van Atta, Cipes and Tull.

It was voted that a committee of four be appointed to draw suitable resolutions, a copy to be sent to the family, one also to be spread on the record book of the Society:

Dr. J. H. Wroth, Dr. J. S. Easterday, Dr. D. H. Carnes, Dr. W. G. Hope, Committee.

It was also voted the Society send a floral offering and the Society attend the funeral of Dr. Osuna in a body.

RESOLUTIONS.

"Whereas, it hath pleased Almighty God in His Divine wisdom to take unto Himself the soul of our fellow laborer, Dr. Eligio Osuna, and

"Whereas, Dr. Osuna had endeared himself to his associates by his uniform courtesy and his unusual ability, therefore,

"Be it resolved that we bow with humble submission to the Divine Will, confident that our deceased brother has entered into the fulness of joy, and,

"Be it resolved, that we tender to the stricken family our heartfelt sympathy, and,

"Be it resolved, that the Bernalillo County Medical Society pay the last sad duty by attending the funeral in a body and that a copy of these resolutions be given to the

widow and spread upon the minutes of the society.

"J. H. Wroth, M. D.,

"J. S. Easterday, M. D.,

"D. H. Carnes, M. D.,

"W. G. Hope, M. D."

June 7, 1916.

June 7, 1916—Bernalillo County Medical Society met in regular session at the Commercial Club. Meeting called to order by Vice President, Dr. Cipes in the absence of Dr. Lovelace.

Minutes of called meeting read and approved.

Clinical reports, none.

Dr. Murphy read an interesting paper, subject: "The Family Physician in Reference to the Early Diagnosis of Tuberculosis.

Discussion was general and *active*.

Visitors present: Drs. Van Orsdall, Gobbel and Austin.

Members present: Drs. Hope, Cornish, Dill, Van Atta, Peters, Burton, Hasting, Frisbie, Hyde, Cipes, Murphy, Clark, Von Alman and Tull.

Y. M. C. A. Committee reported having collected the amount necessary to furnish room and money having been turned over to Y. M. C. A. for same.

Application of Dr. Van Orsdall read and referred to Censors.

June 21, 1916—Bernalillo County Medical Society met in regular session at the Commercial Club.

In the absence of the President and Vice President, the meeting was

called to order by the State President, Dr. Evelyn Frisbie.

Minutes of last meeting were read and approved.

Clinical report, none.

Paper: Dr. Patchin reported history of case; as regards diagnosis being in question; it was interesting and the discussion was of a general nature.

Visitors: Dr. Farr.

Members present: Drs. Hyde, Hope, Rice, Dill, Hastings, Patchin, Frisbie and Tull.

The Y. M. C. A. Committee were voted thanks for their work and Committee dismissed.

Application of Dr. Van Orsdall was reported favorably by the Censors and by vote Dr. Van Orsdall was elected a member of the Bernalillo County Medical Society.

FRANK E. TULL, Sec'y.

Pecos Valley Medical Association

Program, Pecos Valley Medical Association, Clovis, N. M., June 6, 1916—

Convention 9:00 a. m.

Address of Welcome—Dr. A. I. Dillon, Pres. Curry County Medical Society.

Safeguarding the Special Senses—Dr. D. D. Swearingen, Roswell.

Country Obstetrical Practice, with Reference to Use of Pituitrin—Dr. C. L. McClellan, Texico.

Floating Spleen, with presentation of case—Dr. J. B. Westerfield, Clovis.

Alkalinization in Medical and Surgical Affections, Its Index—Dr. H. A. Miller, Clovis.

A Reproach to Our Profession—Dr. Howard Crutcher, Roswell.

Lunch Harvey House, 12:30.

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Meeting called to order by President Dr. J. B. Westerfield, at 11 a. m. Minutes of the previous meeting were read and approved.

The ordinary rules of business were suspended and a clinical case was presented by Dr. J. B. Westerfield, of Clovis, and examined by all members.

An address of welcome was then made by Dr. A. L. Dillon of Clovis, President of the Curry County Medical Society.

The case presented by Dr. Westerfield was discussed by Dr. Scott, McClellan, Handy, Dunway, Miller, and Younger.

Adjourned for luncheon, to convene at 7:30.

Meeting called to order by President Dr. J. B. Westerfield, at 7:30.

Paper read by Dr. C. L. McClellan, "Country Obstetrical Practice with Reference to Pituitrin."

Discussed by Drs. Dunway, Williard, Dillon, Miller, Haney, Scott, and McClellan.

Dr. D. D. Swearingen being absent, his paper, "Safeguarding the Special Senses," was read by title.

"Alkalinization in Medical and Surgical Affections," was read by Dr. Miller.

Discussed by Drs. Dunway, Westerfield, Haney, McClellan, and Miller.

Paper "A Reproach to Our Profession" was read by title, Dr. Crutcher being absent.

The program being concluded a

motion was seconded and carried by visiting members that a vote of thanks be extended to the Curry County Medical Society for their entertainment.

The election of officers was then called for; Dr. Wallard of Portales was nominated for President. A motion was then made that nominations cease and he be declared elected by acclamation; same was carried.

Dr. E. T. Dunway was nominated for Secretary-Treasurer; on motion nominations ceased and he was elected by acclamation.

Dr. Gormony of Portales was elected Vice President in the same manner.

Dr. J. B. Westerfield was elected Censor for three years to fill the place of Dr. H. A. Ingalls, whose term had expired.

It was then determined that the next annual meeting would be held at Portales, New Mexico.

On motion the meeting then adjourned.

Dr. H. A. MILLER, Sec'y.

Original Articles

RENAL INFECTIONS.

F. F. FADELEY, M. D.,
Albuquerque, N. M.

(Read before the Bernalillo County Medical Society, April 19th, 1916.)

Kidney infection is much more common than most of us realize, often being overlooked, or treated

for other conditions. We see many more cases of renal infection today than ever before, leading us to the belief that they are on the increase, which is not the fact, but the seeming increase of these cases is due to the improved instruments and more accurate methods of diagnosis.

The introduction of the cystoscope and ureteral catheterization has revolutionized urology, and lesions of the kidney and ureter, whose diagnosis formerly were mere guesswork, are now diagnosed with accuracy and precision.

It is now a simple matter to positively determine when a kidney pelvis is infected, except in tubercular infection and in this, though difficult, the deciding factor is the ureteral catheter. The exception is made in tubercular infection of the kidney, because it is difficult to find tubercular bacilli in the urine as the lesions are in the cortex of the organ and do not drain into the renal pelvis until the lesion is far advanced.

Infections within the kidney other than that of tuberculosis are observed, either as an acute or a chronic process, the infection gaining access to the kidney either by extension of an infection in the bladder along the ureter, or being brought to the kidney by the blood stream, or by far the most frequent, the lymphatics.

Until recent years it was generally considered that most pyogenic infections of the upper urinary tract were "ascending," that they had their origin in the bladder and invaded the kidney by way of the

ureter. Ascending infections of the kidney cannot take place without a defect in the ureteral orifice associated with back pressure or obstruction, such as urethral strictures, vesical calculi, enlarged prostate, etc., whereby the infectious material in the bladder is forced back into the ureter by the extraordinary effort of the bladder to overcome the obstruction and thereby gains access to the upper urinary tract. In ascending infections the subjective symptoms are referable to the bladder and are much more pronounced subjectively than those referred to the kidney, and urinalysis shows a predominance of bladder elements.

More recently it has been evident that many of the acute renal infections come by way of the blood stream (hematogenous), and many are inclined in the light of this new knowledge to minimize the role played by the ascending infections. It is impossible to say which is the more common, but infections by either route are common enough. The ascending infections are more important, that is, they threaten the kidney the most, as they are associated with back pressure by obstruction of some character to the free outflow of urine from the bladder, a factor that tends to make a renal infection especially destructive. The most frequent organism producing this form of renal inflammation is the *B. Coli*, and is usually chronic in its course, except when secondarily infected by some of the pyogenic organisms.

In renal infections of hematogen-

ous origin the infection gains access to the kidney by the blood stream and presents an entirely different clinical picture. The onset is acute, there is an active progressive toxemia, high temperature, pulse and leucocyte count; the subjective symptoms are referred to the region of the kidneys, both to the back and to the abdomen on the affected side. It is in this class of cases that a diagnosis of appendicitis, gall-bladder infection, liver abscess, gastric and duodenal ulcer is too frequently made.

In lymphatic infections the infection travels from the bladder to the kidneys and perinephritic tissue by way of the lymphatic capillaries of the periureteral sheath.

The constant finding of evidences of infection in the immediate vicinity of the rich network of periureteral blood vessels makes it seem plausible that infection can travel to the kidney from the female genitalia and other abdominal viscera which lie in close relation to the ureter. Franke has shown how the lymphatics of the ascending colon communicate with those of the right kidney, and thus explains some, at least, of the renal infections in children. The assertion of Baureisen and others that there is a free communication between the lymphatics of the bladder and those of the ureter, and that the lymph current is in an upward direction, and that cystitis and renal infections following gynecologic operations take place via the lymphatics, seems quite plausible.

Eisendroth and Kahn say: "The

older view, that infections from the lower to the upper urinary tract travel within the lumen of the ureter, that is, against the secretory current, must, we feel, be abandoned, except when the ureter is completely obstructed by a calculus, stricture or external pressure. We find that the inflammatory infiltration follow in a most accurate manner the course of the lymphatics."

The connecting link between the lymphatics of the ureter and those within the kidney is along the lymphatics of the subpelvic areolar tissue which surrounds the blood vessels as they enter the kidney tissue. They follow within the organ itself the intertubular, periglomerular and perivascular lymphatics. In the kidney pelvis the infiltration is first seen in the subpelvic areolar tissue, and around the blood vessels, the overlying mucosa remaining intact. In the cortex the infiltration is seen between the tubules and around the glomeruli, and as the infection advances the medulla is invaded in the same intertubular manner and finally the infiltration breaks into the lumen of the tubule in the more advanced stages.

Bauereisen found that in animals whose bladders were injected with emulsion of tubercule bacilli the infiltration followed the course of the lymphatics from the bladder to the ureter and then invaded the coats of the ureter from without inward.

The organisms found in these pyogenic infections include most of the common ones and some that are not especially common. The colon bacillus has been more frequently

met than any other organism, especially in children. Next in frequency have come some of the staphylococci. Another rather striking organism is the pyocyanus. In fact there are few pyogenic organisms that may not serve as the medium of an infection of the upper urinary tract.

There is no constancy of the lesion brought about by the infection of a kidney with a given organism. Neither does the route of infection produce a definite lesion. It is perfectly evident that an infection that began in the cortex may extend to the pelvis and persist there after the original cortical focus has healed, producing the effect of an original pelvic lesion. In the same way, an infection that began in the pelvis of a kidney may extend into the secreting tissues and there lead to a focus of suppuration though the process in the pelvis clears up.

The lesions that are commonly seen in pyogenic infection of the kidney are pyelitis, pyelo-nephritis, abscess of the kidney, and pyo-nephrosis.

The diagnosis of these pyogenic infections often presents much that is confusing. In the acute stage, if the swelling of the kidney tissue is enough to cause pressure on the capsule, one sees pain and tenderness as well as temperature—usually the temperature is rather out of proportion to the apparent illness of the patient. Often, if the invasion is not very acute, there is little to localize the process, and exceptionally it may be recognized only by the condition of the urine.

This is especially likely to happen with young children when the question of an acute renal infection must always be considered in a patient presenting an indefinite illness with temperature.

In the chronic renal suppuration where there are abscess cavities, or even pyo-nephrotic sacs, provided the pus is not under tension, there are often no symptoms that point to the renal origin of the process. What subjective symptoms there are may, in fact, point more to the bladder than to the kidney. The sure way of diagnosis is the catheterization of the ureters. It allows not alone the localization of the suppuration, but the differentiation between kidneys showing foci of suppuration and kidneys that have been turned into pyo-nephrotic sacs. In the same way collecting a urine from the ureter of a suppurating kidney will give a very fair idea of the secretion and consequently of the extent to which the suppuration has destroyed its function.

The requirements for successful cystoscopy cannot always be complied with, consequently failures are prone to occur. The conditions necessary to its successful performance may not be present, they are not the fault of the cystoscopy, but rather the misfortune of the patient. These conditions are a urethra large enough to admit the passage of a cystoscope, a bladder not too irritable to retain a moderate amount of fluid, and a bladder in which the fluid can be kept transparent. Fortunately, all requirements can usually be complied with

and failure at one sitting can frequently be made a success at another by previous preparation of the patient.

The predisposing causes of kidney infections are debility, infectious diseases, trauma, irritating drugs and foods, exposure to cold and wet, displacements, any obstruction to the urinary flow.

The prognosis in the acute pyogenic infections of the kidney is good, as a whole. More especially so in the hematogenous ones. Those of ascending origin are much more dangerous than the acute hematogenous, since the back pressure has already greatly crippled the kidney, and its persistence prevents the kidney from freeing itself of its infection.

Besides the chronic suppurations that follow acute invasions of the kidney there are others that are chronic from their inception. They occur for the most part in organs that do not drain perfectly. The prognosis in these cases is not good; without surgical interference the progress will be slow but steady until a greater part, if not all, of the kidney has been destroyed.

The treatment of acute infections of the kidney should be expectant, with rest in bed, removal of the cause if possible, all avenues of elimination kept active, patient should be encouraged to drink large quantities of water—distilled water is best and when hot its efficacy is enhanced, and in way of drugs alkaline diuretics and urinary antiseptics.

The underlying principle for the

treatment of the chronic infections with suppuration is the securing of adequate drainage, therefore, it is surgical.

THE STATUS OF A PHYSICIAN
UNDER THE LAWS OF THE
STATE OF NEW MEXICO.

By HON. L. O. FULLEN,
Roswell, New Mexico.

(Read before the Chaves County Medical
Society on May 25th, 1916.)

Mr. President and Gentlemen:—

I have been asked to read a paper outlining and defining the legal status, or, in other words, the rights, powers and the liabilities of a man engaged in the practice of medicine in the State of New Mexico, in so far as the same are controlled or affected by the laws of this state.

It has probably never occurred to you, gentlemen, that this is an impossible task. If I was imbued with such knowledge and wisdom that I could define the correct status of a physician in New Mexico, I could also define the correct status of every other profession, and would be capable of construing and announcing correctly the law affecting all matters, and things and offences, in so far as they were covered by the laws of this state, with a consequence that I would stand out pre-eminently over and above all my fellow practitioners, and the volume of my business would be state-wide, while they would sit and wait in vacant and idle offices.

The true status of a physician in New Mexico, as in every other state, will never be determined. An effort will be made from time to time, as the years roll, to determine this, and, in a measure, it may be determined, but the same condition will prevail in so far as the law affects you as men of a profession, as it does in all other branches and lines of the law: it changes from time to time, and will ever change, and ever ahead of you will stand up the conditions that the law to be determined will be the last guess of the last man on the supreme bench.

An examination of the statutes of this state will show that other than the general practice act, under the head of "Public Health," there has been very little legislation which affects your profession, and we have very few statutes specifically setting out what you may or may not do. Most states, perhaps because they are older, have been more specific in this respect. It may be that the legislature of New Mexico has never been composed of members who felt themselves competent to legislate upon so important a subject, although of late years, and since I have had knowledge of the personnel of the legislative body, I have known many able men from out your ranks who have occupied seats in that body; or it may be due to the fact that you, gentlemen, individually and collectively as a profession and as an organization, have not given the matter the legislative consideration or attention which its importance deserves; and it may be that as a consequence of what I now

say to you there will come some effort on your part to secure at the coming session of the legislature action which will more clearly define your standing, and result in benefit, both to yourselves and to the people generally.

It is not my purpose to refer to the general medical practice act, as I assume, and as I have been advised, that the act mentioned has been printed in pamphlet or leaflet form and is in the hands, or can be secured, by every practitioner. It is my intention to refer more particularly to the few statutes that we have affecting the medical profession, and then to outline the features that are covered by the common law.

As a general proposition, other than in so far as you are directed and controlled by the act last referred to, a man engaged in the practice of medicine in New Mexico, stands in a very little different position than an ordinary layman or citizen. There are a few exceptions; none of them of very notable consequence. I will refer to them briefly.

You enjoy a little extra consideration over and above the ordinary citizen, and it is a very little, in the matter of exemptions. By statute it is provided that in addition to the property exempt from execution, attachment or sale, for any debt, damage, fine or amercement, granted every citizen, it is provided that every head of a family who is engaged in the practice of medicine shall, in addition, hold one horse, one saddle and bridle, and also

books, medicines and instruments appertaining to his profession not exceeding \$100 in value. This act was passed in 1887, and, presumably, it was in the minds of the members of the legislative body at that time that the practitioner was pursuing his profession and visiting his patients astride a horse, with his pill bags across in front. They did not look ahead to this day when you, gentlemen, ride comfortably and speedily in the automobile. If at that day and time it was felt necessary to preserve the physician's mode of transportation, so that visits to his patients might not be interfered with, it would seem that the same reasoning would apply to means of locomotion today, and that in the interest of speedy treatment your automobile should be preserved. You might try this on the next legislature, though I have misgivings and doubt as to your success.

In the matter of jury service, you can be called upon the same as any other citizen; but by statute it is directed, that if you are a practicing physician, engaged in actual practice, you may claim that fact as an exemption, and the same shall operate as an excuse from jury service. It is not a disqualification which prevents you from serving as a juror, but it is a right which you may claim if you so desire; and if it is your wish to waive the same, you are a qualified juryman and can serve the same as any other person.

As a witness in any case pending in court, and especially cases of a criminal nature, you enjoy no priv-

ileges above other citizens; you are subject to the same process and can be compelled to attend and testify in any case on trial, receiving therefor, in so far as is authorized by statute, no more per diem for your attendance than any other witness, to-wit, \$1.00 per day if you live within the county wherein the case is tried, and \$2.00 per day if you live in a county other than the place of trial. The statutes of this state make no provision for the payment of what is generally termed "expert fees." Either the state or the defense, if it so elects, can call you as a witness and have the benefit of your knowledge and skill as practitioners at the very low rate of \$1.00 and \$2.00 per day, if they so desire. This is done, however, only in very rare instances, as the prosecuting officer, as well as the attorney who represents the defendant, would be very deficient mentally if he prepared his case, which depended very largely, perhaps, upon the testimony of medical experts, without first having made some satisfactory arrangement with the physician whom he expected to call as a witness, so that there would be complete harmony between attorney and witness, and to the end that the man who by reason of his attendance would necessarily neglect his business and suffer loss financially, should be reasonably compensated therefor.

It has been the practice in some instances where a physician has been called as a witness on behalf of the state in the prosecution of a case, that the court has allowed pay-

ment out of the court fund as reasonable compensation to the witness, but I know of no statute which permits or authorizes the same to be done. It is one of those instances where the wisdom of the practice is recognized, and, although not authorized, it has been without protest and acquiesced in generally.

I expect to refer later to your standing in the capacity of a witness on the point of your right to claim exemption from testifying on the ground of privileged communications from your patients; but, before passing to that point, I desire to exhaust the statutory law.

I find on examination what I believe to be a serious defect in our statutory law, in so far as it affects you gentlemen, and that is in the matter of holding inquests and autopsies. The statute clearly defines how an inquest shall be held, setting out fully the duties and powers of a justice of the peace in conducting said inquest, providing, among other things, that witnesses shall be examined and their attendance compelled as in other cases before justices of the peace. This provision is sufficiently broad, in my opinion, to authorize the justice to compel your attendance and your evidence in any inquest which he may hold, with the same remuneration that goes to any other witness, to-wit, 50 cents a day. There is no provision made for the payment of special fees to a man of the medical profession, and no provision is made for the payment of the costs of an autopsy when one is deemed necessary. Like the payment of expert

witness fees heretofore referred to, the practice has been that when the district attorney deemed it necessary that an autopsy be held, that a competent physician was secured and his bill for services was approved by the district attorney, and upon such approval, payment was made either by the Board of County Commissioners out of the county funds, or by the judge of the district court by an order on the court funds. It would be a very simple matter to amend this statute so as to provide specifically what fees were to be paid for services of this character and in what manner they were to be paid, and I am sure that if this was done, you, gentlemen, would feel more disposed to undertake this character of work when called upon than you are now when payment for your services is problematical.

I desire to call your attention to another statute, with which some, or perhaps all, of you gentlemen, are acquainted, but which is more or less of an important one in view of the great agitation which is ever with us, and that is the selling, or the prohibition of sale, of intoxicating liquors. I know, as a matter of course, that all of you gentlemen were and are familiar with the ordinances of the City of Roswell covering this point and question, and are fully advised as to what your rights are thereunder, and how you may prescribe and dispense intoxicating liquors, but over and above the ordinances referred to we have a specific state statute, enacted March 15, 1913, covering this ques-

tion, which is superior to and controls any action of a city council. The statute is short, and in order that you may be fully advised, I quote it. It is Section 2934, sub-section 61 of the Codification of 1915.

"It shall be unlawful for any person to barter, sell or exchange intoxicating liquors at any place in this state where the barter, sale or exchange of intoxicating liquors is prohibited, except that licensed druggists or apothecaries may sell such liquors at such places for medicinal, scientific, mechanical or sacramental purposes, as hereinafter in this article provided. Every retail druggist and apothecary shall keep a book in which he shall enter at the time of every sale of liquor, the date thereof, the name of the purchaser, and the kind, quantity and price of said liquor, the purpose for which it was sold, and the residence or postoffice address of said purchaser. Such sales by licensed druggists, except wine for sacramental purposes, shall be made only upon prescription by a licensed physician, and then in quantity not exceeding one pint; and for every such sale the entry shall show the name of the physician, the use for which said liquor was prescribed, and the quantity to be used for such purpose, and the prescription shall be cancelled in like manner as the certificate in this section provided for. * * * * *

"Any physician who shall prescribe liquor other than for medicinal purposes as aforesaid, upon conviction thereof shall be punished by a fine of not more than one hundred dollars or by imprisonment for not more than thirty days, or by both such fine and imprisonment."

This statute would seem to apply only in those places where the sale of liquor is prohibited; but, as no man knoweth what hour the bars of prohibition may be put up, I thought it might be well to call this statute to your attention.

While on this question of liquors and their effect, and what consequence might result to you, gentlemen, if you prescribe same in too

large doses, it might be well also to call your attention to the statute which deprives you, in a degree, of liberty and freedom that is accorded your fellows, to-wit, that while they may indulge in the privilege of imbibing to an unrestricted limit, you are required to be modest and circumspect in your indulgence; though how a legislative body of New Mexico in the remote year of 1854 could have extended its vision across the miles of years to the present day, and conceived or imagined that so learned a group of men as now comprise the medical profession would look too long upon the juice of grape and corn and indulge over muchly, is beyond me; but it did. In February, 1854, it was enacted: "If any physician while in a state of intoxication shall prescribe for any other person, poison, drug or medicine, he shall be punished by imprisonment not exceeding one year, or by fine not exceeding five hundred dollars."

The legislature of later days, too, must have thought that, however exalted your calling, there might be those among you whose feet would slip, and, as a further precaution, in March, 1907, placed this law upon the statute book: "If any physician while in a state of intoxication shall, without design to effect death, administer any poison, drug or medicine, or do any other act to another person which shall produce the death of such person, he shall be guilty of manslaughter."

This last statute also becomes important in connection with the sub-

ject to which I shall now refer,—abortion.

There has been considerable discussion and question as to just what the law is in this state, in so far as it pertains to the practice of abortion. Practically every state has statutory laws covering this matter, some of great, others of less severity. New Mexico has its own statute, which, used in connection with other statutes which are to be read with and harmonized with it, define the matter with reasonable clearness.

It was not a crime at common law to operate upon a pregnant woman for the purpose of procuring an abortion, unless she was actually quick with child. If a woman quick with child killed it herself, or was beaten so that she was delivered of a dead child, it was not murder. The same principal applied when the acts with an intention to produce abortion, were by another; even when the mother died as a result of an attempt to procure an abortion, the killing was not regarded as murder for the death was collateral, and aside from the principal design, and the procurement of the abortion was not a felony, and the common law did not interfere to prevent a pregnant woman, before a child quickened, convicted of a capital offense from being executed, although it would interfere to prevent execution after the quickening of the child.

These provisions of the common law, as has been heretofore stated, are now generally changed by statute. In most states it is now equally criminal to produce abortion before

and after quickening, and if the statute, as is usually the case, makes abortion a felony, then the death of a woman as a result of the crime is murder.

New Mexico by its statute has adopted part of the common law and has rejected it in part. The statute is as follows:

“Every person who shall administer to any woman pregnant with a quick child any medicine, drug, or substance whatever, or shall use or employ any instrument, or other means, with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, and shall have been advised by a physician to be necessary for such purpose, shall in case of death of such child or such mother being thereby produced, be deemed guilty of manslaughter.”

It will thus be seen from a reading of the New Mexico statute that the procuring, or the attempting to procure, an abortion is not an offense, unless the woman is quick with child, and you, gentlemen, of course, as medical men are better informed as to when that period occurs than myself, although Bouvier's Law Dictionary, which is a standard law authority, quoting from a medical work, states, “That the period when quickening is first experienced varies from the 10th to the 25th, but is usually about the 16th week from conception.” It will thus be seen that we have practically in form adopted the old common law, with its construction, its consequences and its resulting ef-

fects. This act was passed in March, 1907, so that it is a comparatively recent statute.

A section of the same statute attempts to afford protection to an unborn infant in that it provides as follows:

“The willful killing of an unborn infant child by any injury to the mother of said child, which would be murder if resulting in the death of such mother, shall be deemed murder in the second degree.”

This section, however, read in connection with the section covering abortions, and construing the two together, forces the conclusion that the penalty would not attach to this latter section unless the child has quickened. That is, there could be no killing of an unborn infant unless the child had quickened to life. But there should be remembered the statute that says that a physician, being intoxicated, who shall administer any poison drug or medicine or do any other act, which shall produce death, shall be guilty of manslaughter.

The whole question, therefore, to be determined in this very important subject, under our expressed statutory law, and in determining whether or not the procuring of an abortion is or is not an offense punishable, is, if the physician is sober, whether the child has quickened, and that is a matter for each practitioner to determine for himself, if calls or demands are made upon him for this service; and, of course, the necessity and wisdom of a physician acceding to these calls and demands is a mooted question, upon

which there has been and is much argument, and upon which there is much to be said on either side.

I now desire to revert to a topic heretofore mentioned in this paper, —and that is as to your capacity when called as a witness in cases on trial in courts of law.

It has been suggested to me that you desire to be informed and advised as to whether or not you are entitled to claim any privilege as a witness in that you can refuse to testify as to statements or disclosures made to you by a patient whom you are or were attending or treating in a professional capacity, or whether you are without any option in this matter and may be compelled to make a full disclosure of everything that was said or done between the patient and yourself, irrespective of the humiliation or the disgrace which might result to your patient by reason of such disclosures, and irrespective of perhaps what the legal consequences or result might be to said patient.

I have advised you that New Mexico has no statute whatever upon the subject, and it is, therefore, governed by the rules of the common law. The only statute which New Mexico has pertaining to privileged communications, exempting a person called as a witness from testifying to or disclosing, is the communications made to or passing between husband and wife. Neither are permitted to disclose communications or testify against the other, unless the privilege is waived, save and except in the prosecution of

cases wherein the offense alleged is committed upon one by the other.

New Mexico by legislative enactment has expressly provided that the common law is adopted as the rule of practice and procedure in this state. It is therefore necessary in order to determine the question now under discussion, to refer to and ascertain what the common law is.

At common law attorneys were protected; it being well established that an attorney or counsellor could not disclose communications made by his client to him, or the advice given by him in the course of his professional employment, without the consent of his client. The common law being in force in this state, therefore, this rule still applies, and attorneys cannot be called as witnesses and forced to disclose communications and secrets of their clients. This provision affecting attorneys, and the common law provision affecting communications between husband and wife, were about the only protection afforded by the common law to witnesses in according them a privilege to refuse to testify.

Communications made to clergymen or priests in confessional were not respected, and they could be forced to disclose what was said to them, and, the common law prevailing, this is true in New Mexico, although in many states statutes have extended the privilege to confessions made to a clergyman or a priest in his professional character.

Coming now directly to the point touching communications between

physician and patient, it can be said that although there was no very good reason for the distinction, in common law, no such privilege extended to communications with physicians as that which protected the confidence of attorney and client, hence, it is the recognized rule that in the absence of statutes, physicians when called as witnesses are compelled to disclose communications, if relevant, although made in confidence and in the course of professional employment. The defect in the common law rule, as has been said, has been remedied by statute in many states of this country, (but the remedy has not yet reached New Mexico), and there is considerable similarity in the statutes of different states; and, while on this point, it may be interesting if I give you a general summary of the common law rule, and also the rule as applied to the statutes of different states after they have been construed by the courts. New Mexico some day, if you gentlemen are sufficiently energetic, may have a statute protecting yourself and your patient in this respect, and, therefore, you may like to know how other statutes have been construed.

Every consideration that furnishes a basis for affixing a privilege to communications or information passing between attorney and client applies with equal force to the relation of physician and patient. Aside from the benefit to the patient, encouraging him to make a full disclosure by means of which he may receive better treatment, the danger that the truth will be perverted or

concealed, perhaps unconsciously, by the physician who is compelled to disclose medical secrets on the witness stand in the struggle between professional duty and medical duty, is removed.

Of course, wherever located, the practitioner to determine his right and privilege must consult the statutes of that jurisdiction. The burden is upon the one objecting to show that the relation of patient and physician existed, and where the physician is acting in the discharge of duties performed for some other person, the privilege does not arise: for example, if an examination is held at the instance of the adverse party or by direction of the court to ascertain the physical or mental condition of the person for the purposes of a trial. But the privilege arises if the physician actually treats the patient, whether employed by him or by some other person. These statutes generally render physicians incompetent to testify as to such "information" acquired while attending the patient as was necessary to enable him to prescribe or act, although in some states the statutes are less general in form and only exclude "communications" made by the patient. The statutes, generally, provide that the privilege may be waived by the consent of the patient, although in some states the statutes contain no such clause, and those where the statutes provide in substance that the physician cannot be examined as to any "information" gained in the course of his professional relation with the patient, it is immaterial whether

such information is gained from the words or the communications of the patient, or whether it is the result of examination or observation, or derived from the statements of those who may surround the patient. The secrets of the sick chamber cannot be revealed because the patient was too sick to talk, or was temporarily deprived of his faculties by delirium or fever, or any other disease, or because the physician asked no questions. The statute usually seals the lips of the physician against divulging in a court of justice the intelligence which he acquired while in the discharge of his professional duties; but even in those states where the statute prevails, he is a competent witness as to information or knowledge acquired by him while acting in other than a professional capacity, even though he has previously been called to treat the patient. On the same principal the privilege extends, as in the case of attorneys, to the communications necessarily made to the physician's assistants.

The privilege is *confined to information gained in the performance of professional duty*. Nearly all of the statutes on this subject require that the statement of the patient, in order to be privileged, should be necessary for the performance of the professional duty, although the mode of expressing such requirement varies in the different states, and the fact that the statements are necessary may be inferred from the circumstances without formal proof. These statutes have frequently been construed; and it has been held that

communications or advice relating to the procuring of an expected abortion or other crime are not "necessary," within the meaning of the statute, and are not privileged. But the rule is otherwise where the communication is not for an unlawful purpose, as in the case of a miscarriage to save life. When the patient makes admissions to his physician in respect to the time at which an alleged injury was received, such statements may be received, unless it appears that they were necessary to obtain professional advice or treatment. On the same principle, it has been held that a physician who has attended a woman in confinement, might disclose her statement to him that she was not married, as well as such other statements not necessary to the performance of his duty as have no reference to the condition of the patient. The physician may also testify to any knowledge obtained from personal acquaintance with the deceased, either before or after the relationship of physician and patient began, or to the simple fact that he has treated or attended the patient, and as to the number of his visits.

As to the waiver of the privilege. As has been said, statutes generally provide that the information shall not be disclosed without the consent of the patient. The privilege is for his protection, and not the physician's, and if he sees fit he may waive it, either by express consent or by calling the physician to testify as to the privileged matter, or by failing to object to such testimony as incompetent under the statute.

It has also been held that the privilege may be waived, although the statute makes no provision for such waiver. The statutes apply to criminal, as well as civil actions, and the accused may claim as privileged, communications made by him to his physician in the course of professional employment; but in New York in actions for murder, it was held that the defendant could not invoke the privilege to exclude the testimony of the physician who attended the victim as to his condition before death. It was the opinion of the court that the object of the statute is to protect the patient and not to shield one who is charged with his murder, and that in such case the statute is not to be so construed as to be used as a weapon of defense to the party so charged instead of a protection to his victim.

So much then on this question and subject. Now for another and my concluding one.

I have heretofore referred to members of your profession being called as witnesses in the trial of cases as experts and testifying in that capacity. It has occurred to me that it might be of interest and benefit to you gentlemen if I briefly outlined to you the qualification necessary for you to testify in that capacity, and also some of the principal rules governing testimony of that character. New Mexico has no statute on the matter, but the procedure is governed by the general rules of evidence under the common law, subject to whatever change or modification may have perhaps been

made by our different courts, district and supreme.

In a great variety of cases where the subjects under investigation are wholly unfamiliar to the jury, or even to the judge, there would be no adequate mode of arriving at any satisfactory conclusion if expert testimony were rejected. In recognition of this fact, the courts have adopted the rule of admitting the opinions of witnesses whenever the subject matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment upon it without such assistance; in other words, when it so far partakes of the nature of a science to require a course of previous habit or study in order to obtain a knowledge of it.

While it is clear that the witness in order to be competent as an expert must show himself to be skilled in the business or profession to which the subject relates, there is no precise rule as to the mode in which such skill or experience must be acquired. Thus, the witness may have become qualified by actual experience or long observation, without having made a study of the subject. On the other hand, he may be an expert, although his knowledge has been derived from the study of the subject, and not from actual experience in the business or profession. Thus, it has been held that a physician may give opinions as to matters connected with his profession or with medical science, although in his own practice he may not have had experience as to such matters, and although his knowledge in res-

pect thereto is derived from study only, even though he may not have made the disease under inquiry a specialty. On the same principal, one who is familiar with the diseases of man may be allowed to testify as an expert concerning the diseases of animals. Courts will take notice that certain pursuits are so intimately connected with others as to give to those following one of such pursuits unusual facilities for becoming acquainted with the other, and if the occupation and experience of the witness have been such as to give him the requisite means of knowledge of the subject, he may be competent as an expert, although engaged in some other occupation. It is necessary that the witness should possess the requisite skill, either from actual study, experience or observation.

When the witness is offered as an expert, it becomes a preliminary question for the court to determine whether he has the requisite qualifications, and, for the purpose of determining this question, the witness himself may be examined as to his opportunities and means of knowledge of the subject under inquiry, and other witnesses may be called, but the expert can not give his own opinion as to his own qualifications. There is a diversity of opinion as to whether the decision of the court as to the qualifications or non-qualifications of a witness offering himself as an expert can be reviewed by a superior court, there being authorities both pro and con.

It may be plainly inferred from what has already been stated, that

the testimony of those found qualified as experts is not confined to facts within their own personal knowledge, but that they may give their opinion upon an assumed state of facts. Indeed it is probably true that in a majority of cases in which experts are examined, their testimony is based upon hypothetical questions, or upon views assumed for the purposes of the trial and presented in some other form.

It is not the province of the expert to act as judge or jury, hence, all questions calling for his opinion are so formed as not to call upon him to determine controverted questions of fact or to pass upon a preponderance of testimony.

It is not necessary that the question should be hypothetical in form when the opinion of the witness is based, not upon assumed facts, but upon his personal knowledge or observation, as where a physician is called to give his opinion as to the mental or physical condition of one whom he has examined; and in cases where the opinion of the expert is based upon his personal knowledge of the facts, such facts must be first stated by him so that the court and jury may determine whether the alleged facts on which the conclusions are based are real, and whether they justify his conclusions.

The opinions of physicians and surgeons are admitted to show the physical condition of a person; the nature of a disease, whether temporary or permanent; the effect of the disease or physical injuries upon the body or mind, as well as in what manner or by what kind of in-

struments they were made, or at what time wounds or injuries of a given character might have been inflicted; whether they would probably be fatal or actually did produce death; the cause, symptoms, nature and peculiarities of the disease, and whether it would be likely to cause death; the probable future consequence of an injury, when the consequences anticipated are such as in the ordinary course of events may be reasonably expected to happen and are not merely speculative or possible. It has generally been held to be improper to ask a physician how certain wounds or injuries were actually given, and after a surgeon had described the location and nature of wounds upon the body of a deceased person, it was held that he could not be allowed to testify as to the positions of the parties to the homicide when the fatal blows were given. But the supreme court of New Mexico has departed from this rule in the case of *Miera v. Territory*, 13 New Mexico, 192, wherein the witness, a doctor who conducted the inquest, after describing the wound which he said caused death and the position in which he found the body, was permitted to give his opinion that the victim was sitting down when the bullet was fired that caused his death, and that it would have been impossible for the victim to have fired the shot.

A physician may be asked by what kinds of weapons wounds of a given description might be caused, or whether wounds of a given character were caused before or after death, and after having made a

post-mortem examination, a physician may testify whether a woman was pregnant at the time of her death, or whether the conditions disclosed indicate the cause of death. He may also testify as to the probable effect of a given course of treatment or medicine; what would be the proper treatment under a given state of facts; the probabilities of the recovery from the effects of an injury; what, under certain circumstances, might cause death or a physical condition of a given character; as to questions of sanity or insanity; also whether under a given statement of facts insanity is real or feigned, and whether or not great mental anxiety and suffering would tend to develop insanity where there is a hereditary predisposition. It has frequently been held that the training and experience of physicians are such as to give them knowledge superior to that possessed by ordinary witnesses concerning the diseases of animals, and partly on this ground, and partly because of the difficulty of procuring other expert testimony upon the subject, ordinary physicians are allowed to give opinions as to the causes, nature and effects of diseases among animals; and, on the same principal, physicians who are qualified by proper study and experience may testify as to the nature of poisons and their effect on the system and the symptoms which they produce, but the fact that the witness is a physician does not necessarily qualify him to testify as an expert concerning the presence of poison in the human system,

since he may be wholly lacking in the requisite knowledge of chemical science. Although there is some conflict on the question, it has usually been held that he is not qualified if his knowledge on the subject has been obtained wholly from medical or scientific books or medical instruction and not from personal observation or experience.

These are the general rules prevailing in the courts of New Mexico controlling the introduction of expert testimony offered by physicians, and you gentlemen will find that if you are called upon at any time to testify on behalf of either the prosecution or the defense, that your testimony will be rigidly measured by the rules here announced.

I might say further, that my observation has shown that in the last few years there is less disposition on the part of counsel engaged in the trial of cases to avail themselves of expert testimony, as the fact has developed, although an effort may be made to decry it, that a prejudice has arisen and has grown in the minds of the average layman and citizen, upon whom the burden of jury duty principally falls, against expert testimony, and not altogether without reason, as I view it, because it is a notable fact that in almost every criminal case of state or national notoriety, medical men of equal prominence and ability can be found upon opposite sides in the same case, each testifying for the side in whose behalf they are called, honestly and conscientiously, as I believe, but each, apparently, advancing the most thorough and

scientific reasons for the conclusions which they have reached. The layman jury does not understand this and gives it little weight.

He prefers to meet and know the members of the medical profession in their capacity as practitioners and not as expert witnesses in a court of law.

In that capacity he pays them proper respect and reverence; for, as was said by Byron, "Physicians mend or end us; for though in health we sneer, when sick we call them to attend us, without the least propensity to jeer."

New and Nonofficial Remedies

During June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Abbott Laboratories: Galactenzyme Tablets; Galactenzyme Bouillon.

Schlesinger Radium Co.: Radium Bromide; Radium Carbonate; Radium Chloride; Radium Sulphate.

Vitalait Laboratories: Vitalait Starter.

Enteric Coated Glycotauro Tablets.—Each tablet contains glycotauro 2 grains and is coated with salol. Hynson, Westcott and Co., Baltimore, Md.

Petroagar.—Each 100 gm. contains petrolatum 72 gm., agar 22 gm. with powdered licorice, cocoa and oil of anise sufficient to flavor. H. C. Merker Co., Chicago, Ill.

Petroban.—Each 100 gm. contains petrolatum 74 gm., bran 22 gm. with powdered licorice and "oil of pineapple" (ethyl butyrate) sufficient to flavor. H. C. Merker Co., Chicago, Ill. (Jour. A. M. A., June 10, 1916, p. 1857).

Propaganda for Reform.

Vaccine Treatment.—Hektoen (Jour. A. M. A., May 20, 1916, p. 1591) traces the stages by which vaccines, which were first employed with attempted scientific control, have come into indiscriminate and unrestrained use, with

no guide beyond the statements which commercial vaccine makers are pleased to furnish with their wares. Already most physicians are realizing that the many claims made for vaccines are not borne out by facts, and that judging from practical results there is something fundamentally wrong with the method as at present so widely practiced. As clearly shown by Hektoen, "the simple fact is that we have no reliable evidence to show that vaccines as used commonly, have the uniformly prompt and specific curative effects proclaimed by optimistic enthusiasts and especially by certain vaccine makers, who manifestly have not been safe guides to the principles of successful and rational therapeutics" (Jour. A. M. A., May 20, 1916, p. 1625).

English Prescriptions.—Bernhard Fantus, professor of pharmacology and therapeutics, University of Illinois School of Medicine, favors the abandonment of the so-called "Latin" prescription. He holds that the usual arguments in favor of the "Latin" prescription are fallacious and points out the advantages of the use of English. He concludes: "By far the most important reason for writing prescriptions in English lies in the difficulty medical students have in learning the Latin form. To the student prescription writing is a bugbear. When one thinks of the crowded medical curriculum and the comparatively small number of hours set aside for pharmacology and therapeutics, it seems a pity to waste any of it on the acquiring of an antiquated form of expression." In regard to the claim that Latin prescriptions guard a patient from knowledge which might be prejudicial, he replies: "Inasmuch as it is the popular opinion that doctors use Latin in prescription writing to keep the laity in ignorance for selfish ends, it seems high time that we antagonize this idea; and we can do this most emphatically by using English. This we can also do with perfect safety, for secrecy is very rarely, if ever, essential in the practice of the up-to-date physician, who generally prefers to take his patient into his confidence than to keep him in ignorance. Deception is not practiced by the true physician. Therein lies the special difference between the quack and the honest medical

man." (Jour. A. M. A., May 27, 1916, p. 1696).

Ichthyol.—The American agent for ichthyol—the sole importer—announces that his supply of ichthyol is exhausted. As fraudulent substitutes are offered for sale, this state of affairs should be known to physicians (Jour. A. M. A., May 27, 1916, p. 1734).

Nonspecific Treatment of Disease.—Evidence is accumulating that certain therapeutic effects ascribed to specific treatment with vaccines or serums, have been due to nonspecific effects produced by these preparations. Jobling and Peterson (Jour. A. M. A., June 3, 1916, p. 1734) review the evidence along these lines. They conclude that too much reliance has been given to the idea of specificity and that we have refused to consider evidence of nonspecific therapeutic results. We should, however, not cast aside all ideas of specificity in disease, a conception which has been the foundation of vaccine therapy. Miller and Lusk (Jour. A. M. A., June 3, 1916, p. 1736) in a paper dealing with one phase of nonspecific therapy, report improvement in cases suffering from arthritis following venous injection of typhoid vaccine. It would be of interest to know how permanent the improvement was and in how many cases the cause of the arthritis was found and removed. Also, we must bear in mind the query of Theobald Smith: How much energy does a reaction of this sort cost the patient, and is the final result worth the cost? (Jour. A. M. A., June 3, 1916, p. 1784).

A Case of Beta-Eucain Poisoning.—T. G. Orr, Kansas City, Mo., reports a case of beta-eucain poisoning. Toxic symptoms appeared after an operation in which 3 ounces of a 0.25 per cent. beta-eucain hydrochloride was used for the local anesthesia. After the toxic symptoms have completely disappeared, the patient died suddenly five days later. Necropsy showed an embolus in the left coronary artery (Jour. A. M. A., June 10, 1916, p. 1857).

Efficiency and Nontoxicity of "Arsenobenzol."—Udo J. Wile, Ann Arbor, Mich., reports that during the last six months 612 injections of "Arsenobenzol" from the Philadelphia Polyclinic have been administered at the University of Michigan Hospital. Wile concludes that the immediate therapeutic re-

sults from the use of Arsenobenzol are fully as good as those following the use of Salvarsan and that, given with proper precaution, the drug has shown itself fully as little toxic as Salvarsan. The conclusions refer to intraspinal medication as well as to intravenous (Jour. A. M. A., June 10, 1916, p. 1880).

Book Review

WARNING

We are advised that a very clever swindle is being worked by a young man calling on physicians in various sections of the country. He is fraudulently soliciting orders and collecting money for subscriptions to medical journals and for medical books published by various firms. He usually represents himself as a student, working his way through college and trying to get a number of votes to help him win a certain contest. He sometimes uses the names of L. D. Grant, H. E. Peters, R. A. Douglas and F. C. Schneider and he usually gives a receipt bearing the heading of some Society or Association, such as United Students Aid Society; the Alumni Educational League; the American Association for Education, etc.

The description given of this swindler is— young man of the Jewish type, rather slender, with very dark hair combed straight back and shows his teeth plainly when talking.

The whole scheme is a fraud. The Societies mentioned do not exist. The idea is to collect money by offering special discounts and prices on medical books and journals and skip with the money.

This young man does not represent W. B. Saunders Company, whose name he frequently uses. He is a fraudulent subscription agent and physicians, generally, should be on the lookout for him.

A Valuable New Catalogue.

Parke, Davis & Co. announce the publication of their 1916 price list, which is said to be an improvement in many respects over any previous issue of this valuable catalogue. The book is divided into three parts: Part 1—

Fluid Extracts, Pills, Elixirs, Syrups, Tablets, etc.; Part 2—Specialties, into which have been merged Special Preparations; Part 3—Biological Products. The nomenclature of the U. S. P., Ninth Revision, has been adopted in the new list, the term "milliliter" ("mil") being substituted for the cumbersome "cubic centimeter." The standards of the new U. S. P. applying to fluid, solid and powdered extracts and tinctures, together with the doses, have also been adopted. All Harrison-act items (products that must be ordered on official order forms) are clearly distinguished. Its amplitude, its handy classification, its comprehensive general index, all serve to make the new catalogue a reference book of the utmost value to medical practitioners. We understand that the book will be ready for distribution about August 1st. Physicians are advised to write for a copy, addressing their requests to Parke, Davis & Co., Detroit, Mich.

Rules for Recovery from Pulmonary Tuberculosis.

A Layman's Handbook on Treatment. By Lawrason Brown, M. D., of Saranac Lake, N. Y. Second edition, revised and enlarged. 12mo, 184 pages. Cloth, \$1.25 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

The first edition of this valuable handbook for laymen met with a prompt and wide acceptance and was soon exhausted. A constant and growing demand has required a second edition, in which the author has revised and enlarged his book and the publishers have issued it in a convenient and attractive volume.

Having for years been associated with the late Dr. Trudeau in his tuberculosis work at Saranac Lake, New York, Dr. Brown knows the problems which confront the consumptive who would live a life that shall make him an acceptable member of society, rather than a person to be shunned. If a permanent cure is to be effected it is necessary that the patient shall learn how to co-operate intelligently with those who prescribe and care for him. This handbook gives in brief and simple form all that is necessary for the patient to know in order to render such co-operation.

Dr. Brown has no fads nor any pet theories to exploit. He has written in simple language, that is clearly intelligible to the average layman, just the things which his long experience has proved to be best for the welfare of the patient and most necessary for him to know if he would expedite his own permanent recovery and at the same time safeguard those about him.

This book is an ideal one to put into the hands of consumptives, and of those who have to care for them.

Progressive Medicine.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., and assisted by Leighton F. Appleman, M. D. Volume 11, June, 1916. Hernia—Surgery of the Abdomen, exclusive of Hernia—Gynecology—Diseases of the Blood. Diathetic and Metabolic Diseases. Diseases of the Spleen, Thyroid Gland, Nutrition, and the Lymphatic System. Ophthalmology. Lea and Febiger, Philadelphia and New York, 1916.

The chapter treating hernia is prepared by Dr. William B. Coley. Considerable space is devoted to this subject, which is prepared very comprehensively. Surgery of the abdomen, exclusive of hernia is prepared by Dr. John C. A. Gerster. This is a very interesting chapter, and has demanded a considerable amount of space. Considerable matter is found pertaining to abdominal wounds in war, and all the latest literature of value pertaining to the different abdominal organs is abstracted in this chapter. The chapter on gynecology prepared by Dr. John G. Clark, begins with a very interesting treatise upon cancer of the uterus. Much literature has been reviewed, and abstracted. The subject is handled in all its ramifications, and is a very valuable and comprehensive contribution to this subject. Considerable space and attention is likewise devoted to non-malignant conditions of the uterus. The varied organs of woman are treated individually, likewise menstruation. The chapter closes with the review of the literature and work done upon the urinary organs, terminating with miscellaneous topics. Under diseases of the blood, diathetic and metabolic diseases, dis-

eases of the thyroid gland, spleen, nutrition and lymphatic system, prepared by Alfred Stengel, M. D., much material of a very valuable kind is to be found. The chapter is a very interesting one, and reveals a great amount of work as having been done in this field. The chapter on Ophthalmology by Dr. Edward Jackson is up to the usual standards set in the corresponding issues treating this subject. The work is indexed, which makes its contents easily accessible.

T. C. S.

As a contribution to the campaign against cancer the Prudential Life Insurance Company has prepared a most extensive study of the cancer mortality throughout the world. The compilation has been made by Mr. Frederick L. Hoffman, the statistician of the Company.

The New Mexico Medical Journal acknowledges, with thanks, the receipt of a copy of this valuable reference work.

Gynecology.

Gynecology. By Wililam P. Graves, M. D., F. A. C. S., Professor of Gynecology at Harvard Medical School. Octavo volume of 770 pages with 424 original illustrations, 66 of them in colors. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$7.00 net; Half Morocco, \$8.50 net.

A most excellent volume is a new work of Gynecology just from the press of the W. B. Saunders Company and from the pen of the Professor of Gynecology at Harvard University.

We commend the arrangement of the text—part I being devoted to the physiology of the pelvic organs and the relationship of diseases of the pelvic organs to the general organism. Part II deals with Gynecologic Diseases and is most complete. Part III is devoted exclusively to the technic of gynecological surgery.

The book is well illustrated, the illustrations being particularly clear and admirably adapted to the use for which they are intended.

This is a book that will appeal not only to the advanced student and to the general practitioner but to the specialist as well.

The New Mexico Medical Journal

Volume XVI

AUGUST, 1916

No. 5

E . D . I . T . O . R . I . A . L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better Journal

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FAVOR THOSE WHO FAVOR US.

THE ATTENTION OF THE MEMBERS OF THE NEW MEXICO MEDICAL SOCIETY IS CALLED TO THE DATE SET FOR THE 35TH ANNUAL MEETING.

THE FIRST SESSIONS WILL BE HELD ON OCTOBER 11TH AND WILL CONTINUE THROUGH THE REMAINDER OF THE WEEK. AN ADDED INTEREST WILL BE GIVEN THE MEETING THIS YEAR BY THE SOUTHWESTERN CONFERENCE ON TUBERCULOSIS. THIS CONFERENCE WILL BE HELD AT THE SAME TIME AS THE ANNUAL MEETING AND WILL BE ADDRESSED BY MEN OF NATIONAL REPUTATION AS WELL AS BY THOSE WHOSE NAMES MEAN MUCH TO THE PROFESSION IN THIS SOUTHWESTERN COUNTRY.

WE URGE ALL THE MEMBERS WHO CAN POSSIBLY BE WITH US TO ATTEND THE 35TH ANNUAL MEETING.

Members of the New Mexico Medical Society desiring or intending to present papers before the 35th annual meeting in Albuquerque, October 11th, 12th and 13th should notify the secretary before the 25th of the present month, giving title of paper, a short abstract of contents and stating the probable length of time to be occupied in reading—this should not be over 20 minutes.

The first examination of the National Board of Medical Examiners will begin October 16, 1916, at the Army Medical Museum, Washington, D. C., and will cover a period of one week. No charge will be made for the examination itself, but a registration fee of \$5.00 will be required. Further particulars can be had by writing to the Secretary, Dr. J. S. Rodman, 2106 Walnut St., Philadelphia, Pa.

ADVISORY COMMITTEE OF CIVILIAN PHYSICIANS AND SURGEONS ON MEDICAL PREPAREDNESS

Informally, it was brought to the attention of a number of civilian physicians that a consulting committee on medical preparedness would be desirable. This resulted

in a suggestion that the presidents of the American Medical Association, the American Surgical Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America, and the American College of Surgeons should jointly appoint an ad interim committee which could co-operate in developing the civilian and reserve medical resources of the country to the highest point of efficiency. As a result of these suggestions, a committee was appointed in the manner indicated, the presidents of the various societies acting as members of the committee; with doctor William J. Mayo, Rochester, Minn., as chairman.

This committee met in Chicago for organization on April 14. Dr. William J. Mayo was elected Chairman of the Committee, Dr. Frank F. Simpson, Secretary, and an Executive Committee chosen as follows:

George E. Brewer, George W. Crile, J. M. T. Finney, Robert G. LeConte, Fred B. Lund, William J. Mayo, Franklin H. Martin, Frank F. Simpson, William S. Thayer, Albert Vander Veer.

On April 26, the Executive Committee met in Washington and presented in person to President Wilson the following memorandum:

Washington, D. C., April 26, 1916.

Dear Mr. President:—We, the undersigned, acting as a committee of the medical profession appointed by the joint action of the presidents of five national societies, to wit: the American Medical Association, the

American Surgical Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America, and the American College of Surgeons (having an aggregate membership approximating 70,000 medical men), have the honor to present our greetings and to tender to the Federal Government our services toward the medical welfare of the Army and Navy, being prompted to do so by the following considerations:

1. In times of peace as well as in times of war, the medical profession has always held itself in readiness, out of a spirit of patriotism and co-operation, to serve the best interests of the Federal Government.

2. The European war, especially during the first six months, demonstrated a greater need both of medical supplies and of more efficient organization of medical resources, in connection with military and naval activities than was formerly deemed adequate or necessary.

3. Every soldier and sailor in the service of the Federal Government is entitled at all times to protection in sanitary matters, and to proficient medical and surgical care.

Prompted, therefore, by these considerations, this committee respectfully offers its services in co-operation with the existing medical agencies of the government. Among the services for which at this time the committee specifically tender their co-operation, in conjunction with existing facilities of the Army and Navy for such purposes, are:

1. To establish, through the mem-

bership of the above named medical organizations and their affiliations with local medical societies of the states and territories, an organization that would be in a position to make a comprehensive survey of the medical resources of the country.

2. To make a complete invoice of such resources available in peace and in the emergency of war. This invoice would include not only the names of men available for field or home duty who are trained in the specialties of medicine, surgery, and sanitation, but it would also include in minute detail for each community the equipment of the institutions with which these men are connected, such as hospital facilities, buildings available for hospital use, facilities for transporting wounded men, food supply and drug supply on hand and available, lists of trained nurses and other persons essential for hospital work, etc., etc.

3. To aid in the care of the sick and wounded and the elimination of preventable diseases.

We would respectfully submit that thorough organization of the national civilian and reserve medical resources is of primary importance in the proper preparedness of the country.

For the accomplishment of these ends we desire unreservedly to offer our services.

Respectfully submitted,

WILLIAM J. MAYO,

Chairman, Committee of American Physicians

ALBERT VANDER VEER,

President, American Medical Association

WILLIAM S. THAYER,

President, Congress of American Physicians
and Surgeons

FRED B. LUND,

President, Clinical Congress of Surgeons of
North America

J. M. T. FINNEY,

President, American College of Surgeons

FRANK F. SIMPSON,

Secretary, Committee of American Physicians

GEORGE E. BREWER

GEORGE W. CRILE

FRANKLIN H. MARTIN,

FRANK BILLINGS

JOHN F. BINNIE,

JOSEPH C. BLOODGOOD

CHARLES L. GIPSON

ROBERT G. LECONTE

EDWARD MARTIN

RUDOLPH MATAS

CHARLES H. MAYO

ROBERT E. NOBLE

LEWIS S. MCMURTRY

JOHN B. MURPHY

ALBERT J. OSCHNER

CHARLES A. PORTER

CHARLES A. L. REED

EMMET RIXFORD,

HUBERT A. ROYSTER

HENRY SEWALL

RICHARD P. STRONG

VICTOR C. VAUGHAN

G. E. DESCHWEINTZ

A few days later President Wilson replied to the committee's communication as follows:

My dear Dr. Mayo: Some days ago, your committee of the medical profession, appointed by the joint action of the presidents of the five national bodies, called upon me and offered to the Federal Government your services and that of the bodies represented toward the medical welfare of the Army and Navy. I immediately took the subject up with the Secretary of War and the Secretary of the Navy, and they have

directed the preparation of a plan for availing ourselves of this generous and patriotic offer, which plan, when prepared, will be submitted to you and your associates for comments and suggestions before its final adoption. Surgeon General Gorgas of the Army tells me that he will present the matter to you directly and that whenever a plan can be matured which meets with your approval it will be presented to me for any action I ought to take.

In the meantime, I beg leave again to assure you and your associates of my appreciation of this public-spirited action on your part and my pleasure in the thought that the Army and Navy are to have the great advantage of your co-operation and help.

Cordially yours,

(Signed) WOODROW WILSON.

Dr. William J. Mayo,

Chairman, Committee of American Physicians

The General Committee, in pursuance of its plan for a general survey of the medical resources of the country, has selected a committee in each state to aid in the work. Members of the General Committee are also members of the state committees for the states in which they reside. To the General Committee have been added the following:

HONORARY MEMBERS

W. C. Gorgas, Surgeon General, U. S. A.

W. C. Braisted, Surgeon General, U. S. A.

Rupert Blue, Surgeon General, U. S. A.

EX-OFFICIO MEMBERS

Colonel Jefferson R. Kean
President, American Medical Association

President, American Surgical Association

President, Congress of American Physicians and Surgeons

President, Clinical Congress of Surgeons of North America

President, American College of Surgeons

ASSOCIATE MEMBERS

J. F. Anderson, President American Public Health Association

Winford Smith, Baltimore, President American Hospital Association

Eugene Smith, Dean, Harvard Dental School

Edward C. Kirk, Dean, University of Pennsylvania, Dental Department

Thomas L. Gilmer, Dean, Northwestern University, Dental Department.

The Committee for New Mexico is as follows:

Dr. J. W. Elder, Albuquerque

Dr. E. F. Frisbie, Albuquerque

Dr. R. E. McBride, Las Cruces

Dr. G. K. Angle, Silver City

Dr. R. L. Bradley, Roswell

Dr. F. N. Corrier, Santa Rita

Dr. A. D. Catterson, Tucumcari.

INFORMATION FOR PHYSICIANS REGARDING POLIOMYELITIS (INFANTILE PARALYSIS)

Early Diagnosis.

The attention of physicians is called to the necessity of an early diagnosis of all cases of poliomyelitis.

Reporting of Cases.

All suspicious cases must be reported to the Department of Health by Telephone, to

be followed within twenty-four hours by a written report. The ability of the Department of Health to limit the spread of the infection depends upon the immediate reporting of every suspicious case.

Age of Persons Affected.

It should be remembered that this disease may occur at all ages, although the great majority of the cases are found in children between the ages of one and five years.

Type of Disease.

Peabody, Draper and Dochez, of the Rockefeller Institute, give the following classification of the disease:

1. The abortive cases, which do not become paralyzed;
2. The cerebral group, with spastic paralysis;
3. The bulbo-spinal group.

Abortive cases are very frequent. The children have the early symptoms just mentioned, perhaps also the muscular tenderness and spinal pain. If carefully observed it may be noticed that they develop a paralysis of one or more groups of muscles, but that instead of the paralysis continuing it all disappears within a few hours. Many of these cases develop no paralysis whatever. It is obvious that the recognition of such cases is of extreme importance in controlling the spread of the disease. The diagnosis of such is greatly facilitated by an examination of cerebrospinal fluid obtained through lumbar puncture.

Methods of Infection.

The experiments of Landsteiner and Popper in Germany, Kling, Pettersson and Wernstedt in Sweden and of Flexner and Noguchi in this country, have proved that the disease is transmitted from the secretions of nose and mouth, and the bowel discharges of an infected person. The infection is transmitted through the mouth, tonsils and nasal mucous membrane.

Secondary Cases.

Secondary cases in the same family are comparatively rare but occur often enough to warrant insistence upon preventive measures.

Contacts and Carriers.

It must be remembered that while the transmission of the disease from a patient to other members of the same family is rare, transmission of the virus is common. Ex-

perience regarding the occurrence of poliomyelitis warrants the assumption that the disease is spread by contacts and carriers who may be children or adults, who are themselves immune but who harbor the infective material in their nasal or mouth secretions.

Symptoms.

Early symptoms to be regarded as suspicious are: Fever, vomiting, slight diarrhoea, listlessness, unusual fretfulness and drowsiness. Later, and more characteristic symptoms, are: The appearance of weakness in any extremity, skin and muscular sensitiveness, spinal pain, especially on flexion, apparent or real rigidity of the neck muscles Kernig's and MacEwen's signs.

Course and Duration of Disease.

Paralysis appears usually before the sixth day of the illness; it may occur as early as the first day. Other symptoms, except spinal and muscular pain and rigidity and skin sensitiveness, rarely persist.

Abortive Cases.

Abortive cases are very frequent. In some epidemics they constitute from 25 to 50 per cent. of the diagnosed cases. The children have the early symptoms just mentioned, perhaps also the muscular tenderness and spinal pain. If carefully observed it is noticed that they develop a paralysis of one or more groups of muscles, but that instead of the paralysis continuing it all disappears within a few hours. It is obvious that the recognition of such cases is of extreme importance in controlling the spread of the disease. The diagnosis of such cases is greatly facilitated by an examination of cerebrospinal fluid obtained through lumbar puncture.

General Care of Patient

Complete rest is of the utmost importance for either paralyzed or weak muscles for the first five or six weeks. Every effort must be taken to make this rest complete. The limb must not be allowed to drag on a paralyzed muscle. It should be supported by pillows or pads or bandages. There seems to be a greater tendency to atrophy if casts are used. A dropped foot may be supported by a sandbag or pillow; small rolls placed under the knee often hold the leg in a more comfortable position. The weight of the clothing should be kept off the legs by hoops or other devices. If the head is somewhat

retracted and the patient desires to lie on his back, he may sometimes be made more comfortable by a small pillow placed under the shoulders, allowing the head to fall back. The value of electricity for treatment in the first six weeks is very doubtful. In many instances, it may do harm. Massage or passive movements should not be begun for at least five or six weeks and then should be used with great care. In cases that show a tendency to clear up rapidly, the child should be kept in bed for some time after the ability to use the muscles returns. It should never be encouraged to try to stand or to use the muscles other wise until a considerable time has passed.

Period of Incubation and Duration of Disease.

Non-immune, infected persons usually manifest symptoms of the disease in from five to ten days after exposure. The average period of incubation is seven days. The early symptoms, noted above, usually last from one to seven days. Quarantine should be maintained for a period of at least eight weeks.

Prevention of Spread of Infection.

1. The children from an infected house should be allowed out of doors but should be kept by themselves and away from large groups of other children. In one and two-family houses it is advisable not to allow the children from an infected family outside of the yard for several weeks after onset of the case.

2. During the continuance of an epidemic of poliomyelitis children should not be allowed to cogregate in public places.

3. Fresh air outings or vacation camps are allowed, if kept under competent medical supervision, with an adequate physical examination of each child before enrollment and the exclusio of any child from an infected family.

4. Absolute cleanliness of all homes is essential; such cleanliness should include:

- (a) screens in all windows;
- (b) flies kept out of all rooms;
- (c) thorough cleanliness of all floors, woodwork, bedding and clothing;
- (d) avoidance of dust (all sweeping should be done after the floors have been sprinkled with sawdust, bits of newspaper or tea leaves, all thoroughly moistened);
- (e) garbage cans kept covered and washed

out in hot soapsuds after they have been emptied;

(f) no refuse, either of food or other waste, allowed to accumulate.

5. Personal habits of cleanliness are essential; the hands should be washed before each meal, after each visit to the toilet, and before going to bed. Children should be warned about putting the fingers into the mouth or nostrils.

6. When sneezing or coughing, a handkerchief should be held over the mouth. Kissing of children is also a dangerous practice and should be avoided.

PROCEDURE TO BE FOLLOWED IN EACH CASE.

Isolation of Patient.

1. Complete isolation of the patient must be maintained until terminated by order of the Department of Health.

2. A separate room must be provided for the patient. No one must be allowed in this room except the attending physician, the nurse and the representative fo the Department of Health.

Care of Patient's Room and Surroundings.

3. (a) All rugs, carpets, draperies and unnecessary furniture must be removed before the patient is placed in the room.

(b) All windows must be screened or a mosquito netting placed over the bed so as to protect the patient from flies or other flying insects.

(c) The sick room mst be kept well aired at all times.

(d) The woodwork must be wiped daily with damp cloths. Under no circumstances must the floor be swept when it is dry. It should be sprinkled with sawdust, bits of newspaper or tea leaves, all thoroughly moistened and then carefully swept so that no dust may arise.

(e) Toys and books used by the patient must be destroyed by burning after recovery or death.

(f) Household pets must not be allowed in the room.

Care of Bedding.

4. All cloths, bed linen and personal clothing which have come into contact in any way with the patient must immediately be immersed in a five per cent. solution of carbolic acid and allowed to soak for three hours.

They may then be removed from the room and must be boiled in water or soapsuds for fifteen minutes.

Care of Discharges from Body.

5. A sufficient supply of gauze or clean linen or cotton cloth must be provided and all discharges from the nose and mouth of the patient received on these cloths. After use, they must be immediately burned.

Bowel discharges and urine must be covered at once with chloride of lime and then disposed of by emptying into a water closet.

Care of Utensils Used by Patient.

6. Plates, cups, glasses, knives, forks, spoons and other utensils used by the patient must be kept for his exclusive use and under no circumstances removed from the room or mixed with similar utensils used by others. They must be washed in the room in hot soapsuds and then rinsed in boiling water. After use, the soapsuds and water must be thrown into the water closet.

Nurse.

7. A trained nurse or competent attendant must be in sole attendance upon the patient. She must not be allowed to mingle with the rest of the family but must be isolated with the patient. The hands of the nurse must be carefully washed in hot soapsuds after each contact with the patient and before eating.

Termination of Case.

8. After the case has been ordered terminated by the Department of Health, the following procedure must be followed:

(a) The entire body of the patient must be bathed and the hair washed with hot soapsuds. The patient should then be dressed in clean clothes (which have not been in the sick room during the illness) and removed from the room;

(b) The nurse should also take a bath, wash her hair, and put on clean clothes before mingling with the family or other people.

ACTION TAKEN BY THE DEPARTMENT OF HEALTH IN EACH CASE

Placarding.

Every case of poliomyelitis reported to the Department of Health will be visited promptly by a physician of the Department of Health. If the case is actually one of poliomyelitis, the premises will be placarded and a quarantine will be established lasting for

eight weeks, or, in case the patient dies or is removed to a hospital, until after renovation and cleansing of the apartment.

Removal to Hospital.

The Department of Health will insist on removing patients ill with poliomyelitis to one of its hospitals unless isolation and care of the patient are equivalent to that afforded by the best hospitals. This means a separate room for the patient, and a trained nurse or other competent attendant who does not mingle with other members of the family. The question of removal to hospital will be decided by the inspector visiting the case.

Deaths.

In case of death prompt burial is required, the body to be sealed as in deaths from other contagious diseases, and the funeral will be strictly private. Church funerals are prohibited.—(Bulletin, N. Y. Department of Health, July 15th, 1916.)

Information for the Public Regarding Infantile Paralysis (Poliomyelitis).

Infantile Paralysis (Poliomyelitis) is a catching disease. How it is spread is not yet definitely known, but the disease may be taken directly from a sick person, or, indirectly, through a third person who has been taking care of the patient, or who has been living in the same household.

The early symptoms are usually fever, weakness, fretfulness or irritability, and vomiting. There may or may not be acute pain at this time. Later, there is pain in the neck, back, arms or legs, with great weakness. If paralysis is to occur, it usually appears from the second to the fifth day after the sickness begins. Many cases do not go on to paralysis.

The germ of the disease is present in discharges from the nose, throat and bowels of those ill with infantile paralysis, even in the cases that do not go on to paralysis. It may also be present in the nose and throat of healthy persons from the same family. For this reason you should not let your children play with children who have just been sick, or with other children from a family in which there is a case of infantile paralysis.

How to Guard Against the Disease.

In order to prevent the occurrence of this disease, parents should observe the following

rules:

Keep your house or apartment absolutely clean.

Go over all woodwork daily with a **damp** cloth.

Sweep floors only after they have been sprinkled with sawdust, old tea leaves, or bits of newspaper which have been thoroughly dampened. **Never allow dry sweeping.**

Screen your windows against flies.

Do not allow garbage to accumulate.

Do not allow refuse of any kind to remain in your rooms.

Kill all forms of vermin, such as bedbugs, roaches and body-lice.

Pay special attention to bodily cleanliness. Take a bath every day and see that all clothing which comes into contact with the skin is clean.

Keep your children by themselves as much as possible. Do not allow them to visit stuffy moving picture shows or other places where there may be a large gathering of children.

Children should not be kept in the house; they should be out-of-doors as much as possible, but not in active contact with other children of the neighborhood.

Do not take your children with you when you go shopping.

Do not allow your children to be kissed.

It is perfectly safe to let your children go to the parks and playgrounds if only two or three of them play together; they should not play in large groups, and you should not let them come into contact with children from other parts of the city.

Remember that children need fresh air in the summertime, and outdoor life is one of the best ways to avoid disease.

If there is a public shower bath in a school in your vicinity, send the older children there every day for a shower bath. This is perfectly safe and will help keep them in good health.

Give your children plain, wholesome food, including plenty of milk and vegetables.

Keep the milk clean, covered and cold.

Do not allow the milk or any other food to be exposed where flies may alight upon it.

Wash well all food that is to be eaten raw.

In Case of Sickness.

Remember that during the hot weather

children are apt to have stomach and bowel trouble. If your child is taken sick with loose movements of the bowels, or with vomiting, do not at once fear that it must be infantile paralysis; it may be simply digestive disturbance. Give the child a tablespoonful of castor oil and plenty of cool water to drink, and **send for the doctor at once.**

If you cannot afford a doctor's services, telephone the Department of Health and one will be sent free of charge.

If a doctor or nurse from the Department of Health visits your home, give them all the information you can. They are sent to show you how to keep your children well.

Do not give your children patent medicines or buy charms of any kind to ward off the disease. The best preventive is cleanliness and strict observance of the rules that have been given.

Although there is no specific cure for the disease, much can be done to reduce the amount of crippling caused by the paralysis. It is important to remember that this requires the services of a trained physician and the care of a competent nurse. Unless you can give these to your child, send word at once to the Department of Health, so that the patient may receive proper care in a well-equipped hospital. Of the children cared for in hospitals, only one-quarter as many died as of those treated at home. Give your child a fair chance and let the hospital doctors care for it.

What the Health Department Will Do.

If a case of infantile paralysis occurs in your home, your doctor must at once notify the Department of Health. An inspector will be sent to investigate. He will paste a sign on the door of your apartment warning all people not to enter. This sign must not be removed except by some one sent by the Department of Health. The inspector and nurse will tell you just what to do to protect yourself and the others in the family.—(Bulletin, N. Y. Department of Health, July 22nd, 1916.)

Prevention of Infantile Paralysis.

To control the present epidemic of infantile paralysis, according to a statement issued by the United States Public Health Service, the chain of infection between persons har-

boring germs of the disease and the well members of the community should be broken. Infantile paralysis is probably caused by a very minute organism found in the nasal, mouth and bowel discharges of those who have the disease or who are carriers of the germ without themselves suffering from the ailment. All of the steps in the spread of the infection are not known but if this germ can be prevented from passing from the infected to the well person, the disease will cease.

Infantile paralysis is not a disease of recent origin. Sporadic or scattered cases have occurred throughout the country for many years but it is only during the last decade that the infection has assumed epidemic proportions in the United States. The present epidemic in New York City, on account of its magnitude and virulence, has awakened the residents of many communities to the danger of the importation of the disease into their own midst. This danger is real, but if due precautions are exercised it is believed that the epidemic will subside.

The actual control of the present epidemic must be left to the city, State and Federal health authorities. These organizations will properly quarantine and care for affected persons, prescribe sanitary measures and limit as may be necessary the travel of individuals in order to protect neighboring districts from the infection. Individuals and communities, however, can do much toward their own protection.

Poliomyelitis is probably spread directly or indirectly, through the medium of infective secretions. Account must therefore be taken by communities of every means by which such secretions are disseminated. Promiscuous expectoration should be controlled. The common drinking cup affords a method for the interchange of material of this nature and should therefore be abolished. Rigid cleanliness of glasses and utensils at soda fountains, in saloons and other public places should be enforced. Flies, roaches and other vermin, by coming in contact with infective secretions, may possibly convey them to our food and thus directly bring about the development of disease. Therefore eliminate insects. Street and house dust bear a definite relation to the spread of many infections and it is not unreasonable to presume that they

may be a factor in the dissemination of infantile paralysis. Maintain strict cleanliness of streets, yards and alleys in order to prevent the breeding of insects and other vermin. See that all garbage and waste are properly cared for and collected at regular and frequent intervals. Guard all food supplies, especially milk and other perishable products. Digestive troubles of children arising from the ingestion of food of questionable quality may lower resistance. Assemblies of children in infected localities are to be discouraged, if not actually forbidden. While the above measures are in a sense general, and applicable to many epidemic diseases, their importance should not be overlooked.

Individual preventive measures may be thus summarized:

Summon a physician at once and immediately notify the health officer of the presence of the disease. If the disease is present in the community, medical aid should be sought whenever a child is sick no matter how light the illness; many cases of infantile paralysis begin with a slight indisposition. Should the illness prove to be infantile paralysis isolate the patient, place a competent person in charge, and reduce all communication with the sick room to a minimum. Hospital care is preferable, not only for the child but in order to better safeguard against the spread of the disease. The sick room should be well ventilated and screened. Nasal and mouth secretions should be received in cloths, placed in a paper bag, and burned. The clothing of the child, the bed linen, and the secretions should be disinfected in the same manner as for typhoid fever, that is by boiling, the long continued application of 5% carbolic, or other well recognized disinfectant. The same is true for dishes and drinking vessels. Nurses should exercise the same precautions as regards cleanliness of hands in caring for infantile paralysis patients as for those afflicted with other infectious diseases.

A child may convey the disease to others even after a lapse of several weeks. For this reason quarantine should be maintained for a considerable period, usually from six to eight weeks, and the above precautions should be adhered to during this time. Disinfection of the room following recovery is advisable.

**FRAUDULENT INFANTILE
PARALYSIS CURES**

**The Department of Agriculture Instructs
Food and Drug Inspectors to Watch Inter-
state and Foreign Shipments for
Fraudulent Remedies.**

Officials of the Department of Agriculture charged with the enforcement of the Food and Drugs Act expect that the outbreak of infantile paralysis will tempt unscrupulous persons to offer for sale so-called "cures" or remedies for this dread malady. They, therefore, have issued special instructions to the Food and Drug inspectors to be particularly alert for interstate shipments or importations of medicines, the makers of which allege that they will cure or alleviate this disease, for which, at the present time, no medicinal cure is known. The officials also warn the public that any preparation put on the market and offered for sale as being effective for the treatment of infantile paralysis should be looked upon with extreme suspicion. Inspectors, accordingly, have been instructed to regard as suspicious, and to collect samples of, all medicine in interstate commerce for which such claims are made. Makers of such fraudulent remedies will be vigorously prosecuted whenever the evidence warrants action under the Sherley Amendment to the Food and Drugs Act. So-called remedies for infantile paralysis which are offered for import into the country will be denied entry.

The Food and Drugs officials are particularly watchful in this instance because it has been noted in the past that whenever a serious epidemic exists, unscrupulous dealers prey upon the fear or ignorance of the public by flooding the market with worthless, hastily prepared concoctions, for which they assert curative properties which have no foundation whatever in fact. In the present instance, inspectors already have discovered shipments of a few such mixtures.

The Department will do everything it can under Federal law to protect that portion of the public which is extremely credulous in times of panic and which will grasp at anything which promises protection or relief. The sale of such products at this time, the officials point out, is particularly threaten-

ing to the public health because many persons, relying on the false statements of impostors, neglect to secure competent medical advice. As a result, not only is the safety of the patient endangered, but in the absence of proper sanitary precautions, the likelihood of contagion is greatly increased.

It must be understood, however, that the Federal Food and Drug Act applies only to products which are shipped in interstate commerce, that is, from one State to another, or which are offered for import or export, or which are manufactured or sold within a territory or the District of Columbia. Products which are made and consumed wholly within a single State are subject only to such State laws as may apply and are under the control only of State health officials. The Federal law does not apply, for instance, to patent medicines made within the State of New York and sold in New York City. Persons buying or using a "remedy" made in their own State, therefore, must rely on the protection accorded them by their local health authorities.

Do You Know That

Better wages make better health?

Better health makes better citizens?

Better citizens make a better nation?

The U. S. Public Health Service found 78% of the rural homes in a certain county unprovided with sanitary conveniences of any kind?

Cholera is spread in the same manner as typhoid fever?

Scarlet fever kills over 10,000 Americans each year?

Hookworm enters through the skin?

He who builds up health lays up treasure in the Bank of Nature?

**The United States Public Health Service Asks
Do You**

Clean your teeth and then

Expectorate in the washbowl?

Omit lunch to reduce weight and then

Overeat at dinner?

Go to the country for health and then

Sleep with your windows shut tight?

Wonder why you have earache and then

Blow your nose with your mouth shut?

Think dog muzzling cruel and then

Marvel at the spread of rabies?
 Carefully select your brand of liquor and then
 Feed your children unpasteurized milk?
 Repeat the Golden Rule and then
 Sneeze in somebody's face?
 Go camping for your health and then
 Place your toilet so that it drains into your water supply.

Original Articles

THE FAMILY PHYSICIAN IN REFERENCE TO THE EARLY DIAGNOSIS OF TUBERCULOSIS

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(Read before the Bernalillo County Medical Society, June 7, 1916.)

Sir Wm. Osler has said that the family physician is the most important factor in the eradication and control of tuberculosis, since he is the first to be consulted when illness arises.

Modern medical literature deals constantly with this subject of early diagnosis, which is all-important from the standpoint of the results of treatment, and urgent is the call for its detection at a stage, when the condition is still within the reach of arrest. Yet it is a notable, almost notorious fact, that the diagnosis is too seldom made in the incipient stage.

When this disease, which is responsible for nearly 200,000 deaths annually in the United States, has reached the stage which justifies the use of the term "Consumption," its

discovery, which can then be made by a layman, makes no demand on our diagnostic skill, and offers little assistance to our therapeutic efforts. The physician who seeks to be of service to his patient, knows that his results, save in the acute pneumonic type of cases, will be in direct proportion to the earliness of his diagnosis, and if it is not an early diagnosis, the rest cure, sanatorium care and treatment, a change of climate, the customary, archaic, "Colorado, New Mexico, Arizona," advice, will be of little avail or benefit to the patient.

Failure to diagnose the disease early is the factor which tends more than any other to defeat the cure of tuberculosis, and this same factor, by allowing the disease to extend and reach the open stage before it is recognized, needlessly exposes countless numbers to the dangers of infection—new victims for future sacrifice. No results will be obtained until the disease is universally recognized early, instead of late, as it is today.

The physician who makes a diagnosis of early pulmonary tuberculosis is assuming responsibility. To stamp a person as actively tuberculous is a grave matter; to advise such a person to give up his work and to leave his home and family, if home conditions are unsuitable and unsatisfactory for treatment, and to go to a sanatorium or a distant health resort, is a serious matter; while on the other hand, failure to recognize and treat tuberculosis in the early and curable stage is almost criminal.

There is something radically wrong when a very large percentage of men in the practice of medicine are unable to recognize not only in its incipiency but even in the moderately advanced state the most common disease on the face of the earth today. Why this state of affairs should exist is to most minds, I believe, unaccountable, and it must be put down in a great many cases to nothing more than carelessness.

Dr. Adolph Abrahams, in a recent article on "Errors in Diagnosis," puts down those due to an incomplete examination as the most prolific cause of all, and he further states that many avoidable blunders result from this. He speaks, especially, of the haste with which physicians work; of not carefully examining the seat of trouble; that sometimes patients object to special examination, and adds that it is far better to relinquish such a case, lose a patient, and save your reputation; he especially refers to the examining of patients through their clothing, and asks how it is possible in such cases to distinguish slight modifications of breath sounds and to discern fine rales which are present in the early cases of tuberculosis.

It now seems as if there should be an awakening of the general practitioner to the part he is to play or should play in the overcoming of pulmonary tuberculosis and he should not be allowed to sit supinely by and see his cases left at home or sent to sanatoria in an incurable condition, when, by a little work on his part, such a case might have had

a chance for an arrest and be able to return to his work and family.

There may be some excuse for a man who carefully examines his case but makes a wrong diagnosis, but there is absolutely no excuse for the man who takes neither time nor trouble to go over his patient.

This brings us also to the undoubted fact of the lack of sufficient clinical instruction, at present in most, if not all, our medical schools, in methods of examination for tubercular disease in its pulmonary form. This is due, not to lack of ability in the teachers themselves, but to lack of time given to the subject and insufficient clinical instruction as to the various degrees or stages of this disease. I think it is not too sweeping an assertion to say that the ordinary medical student upon graduation can perhaps easily recognize a sonorous rale and the difference between absolute flatness in percussion and normal pulmonary resonance, but when launched upon the world, it is the exception when he is able to diagnose an incipient case of tuberculosis with its delicate shades of abnormal symptoms, although doubtless he can, with comparatively slight medical knowledge, usually recognize one that is in the later stages.

The medical schools are not without blame for this above state of affairs, for until very recent years the teaching of tuberculosis was done wholly in a haphazard manner. Few if any of the men who acted as instructors in this disease had any special training either in its diagnosis or treatment; there were no

special clinics for the patients suffering from tuberculosis nor was any attempt made to systematically follow up these unfortunate sufferers. Even today there are but a small number of medical schools in the United States that give an adequate course in tuberculosis, and up to one year ago but one school in Canada thought this disease of enough importance to have a chair for the teaching of it. Such conditions must be materially remedied if we hope to have the newly graduated medical men recognize incipient tuberculosis and to intelligently treat it.

What symptoms are important to put physicians on their guard lest disease is beginning? In general, one may say, if a patient presents himself with a history of malaise for a number of weeks, loss of appetite and flesh; and if there has been ever so slight a cough or "clearing of the throat," with or without expectoration; and if upon trial a slight rise of temperature and an accelerated pulse are found, make a thorough examination of the chest at once, or as soon as possible after the visit if unable to give the proper time at first.

If, upon examination of the chest, a difference is found in the percussion note, at the apices other than what normally exists consistent with health in a great number of people, viz: a heightened pitch in the right apex; if there be any special departure from normal in the character of the respiration at either apex or locally elsewhere, combined with the symptoms above

mentioned, watch the patient and keep him under supervision, with occasional examination to detect any possible development.

If, moreover, a "click," a wheezing sound, or a rale of any nature, is found in one or the other apex of the lungs, watch carefully; and if the sign persists, you may be moderately certain without further assurance that trouble is brewing.

"If, with a history of abnormal symptoms lasting for a longer or shorter space of time, upon examination you find anything out of the normal at one or the other apex, watch your patient closely, for the chances are that there is or has been tubercular trouble there."

How many tragedies are caused by the hyperconservative attitude on the part of some of us in awaiting a positive sputum? The physician and patient are lulled into a false security on receipt of a postal card from no less an authority than the State Board of Health, bearing the words, "Sputum Negative," or "Tubercule Bacilli Absent," and the physician reassuring the patient has persuaded himself that a careful stripped chest examination and a detailed history record and closer observation of the patient is unnecessary because of the negative sputum report. This, calamitous as it is, comes to us too often in the histories of tuberculous patients, who when finally diagnosed or after they have made their own diagnosis and are accepted for treatment, are the usual stereotyped moderately advanced second staggers. The organism does not appear in the spu-

tum until after caseation and softening of a tuberculous deposit situated near the bronchus into which tuberculous material finds its way by necrosis of intervening tissue. The closed period may extend over months.

Far more important, to my mind, than the results of tuberculin, tests or x-ray examinations, is the patient's history, past and present, which usually throws a vivid light upon the whole question; his general condition, and his appearance, combined with the signs found upon the examination of the chest by auscultation, percussion, palpation, etc.

In the present stage of civilization tuberculosis must be looked upon as the great social disease of modern life. Every third death during the working period of life is caused by it. Every other working man who becomes incapacitate must ascribe his condition to it. The only way to prevent it is to keep people from coming in contact with open cases. Seventy per cent. of all afflicted can be traced to previous cases. But, tuberculosis is so wide-spread that the co-operation of the state with political and social institutions as well as with private citizens is necessary in combating the disease.

There can be no tuberculosis without tubercle bacilli; the prevention of tuberculosis means the prevention of infection.

There is probably no disease whose onset is so insidious. Morton 200 years ago said, "There is no malady which assumes so many protean forms and which is attended by such diversified symptoms

and complication." Lennee, in an old treatise (Forbes translation) says of latent or incipient phthisis, "It very seldom happens that phthisis is latent throughout its whole course; but it is by no means rare to meet with cases in which the characteristic symptoms show tuberculosis only a few weeks or even days before death; and which have previously been mistaken for disease of quite a different nature."

The problems of the eradication of tuberculosis have been put wholly up to the physician, and Miller said last year before the Canadian Medical Society that "It is not only the delay and ignorance of the patient in seeking advice, but the inability of practitioners to diagnose the disease in time that is today the greatest clog in the forward movement to meet and cope with tuberculosis."

ETIOLOGICAL FACTORS.

1. The demonstrable tuberculous infection in large numbers of living children increases with each year of age.

2. At puberty almost all children of the poorer classes have already been infected by the tubercle bacillus.

These conclusions were fully confirmed later by post mortem studies in many parts of the world. One must believe then, that this is the most common of all diseases in childhood.

That this universal infection leads to the most terrible fact of the whole problem is undoubted. The fact is: "For youth and early manhood and womanhood (15 to 29 years of age) one third (33.2%) of

all the deaths are due to tuberculosis in some of its forms." (U. S. Census.)

One must lay especial emphasis here upon the distinction between tuberculous infection and tuberculous disease. The one of course must always precede the other, and once lodged, tuberculous infection may remain latent for years, to become clinically active only when the defensive powers of the body are for some reason exhausted.

INFANCY.

So susceptible are infants to this infection and so universally fatal are the results, that it seems little short of criminal to expose and infect to the dangers of residence in the same house with an expectorating case.

Fortunately we have in the von Pirquet skin reaction a test of great usefulness for this age. In any illness following exposure; and in nutritional defects or chest diseases without obvious cause, a von Pirquet should always be made. Up to the age of three years, a positive result is sufficient clinical evidence of tuberculosis disease. A negative result may occur in the presence of tuberculous infection if a severe tuberculous process is present or if some acute infection, such as measles is present in the incubation stage. The outlook in infancy is certainly bad. Sixty-seven per cent. of all cases of tuberculosis meningitis die under five years of age, and about 45 per cent. of infants who die from tuberculosis, develop terminal meningeal symptoms. Before no infection, at present, does the

medical attendant stand more helpless than when confronted with tuberculous meningitis.

CHILDHOOD.

After the age of three years the von Pirquet reaction is less valuable, but is still of considerable import. The diagnosis, however, must be confirmed by other signs and symptoms. These are both (1) constitutional and (2) local.

1. Malnutrition, failure to gain in weight; lassitude, pallor, loss of appetite, irritability, irregular temperature, daily range abnormal; increased rate of pulse; anemia. These are common to many other forms of illness. When present and persistent without obvious cause they should lead promptly to a thorough examination of the chest.

2. Cough without evident cause. Evidence of increased mediastinal density and intrathoracic pressure; cervical glands which can be felt enlarged down to the clavicle are almost certain to lead to more enlarged intrathoracic glands. In later cases of course there are the usual signs of pulmonary involvement. The symptomatology of these later cases is too much involved to discuss here. It varies from the purely miliary type to a frank pneumonic process.

PHTHISIS-SYMPATOMATOLOGY.

The time has passed when with symptoms of malaise, loss of flesh, and cough, no matter how slight, whether accompanied or not by feverish symptoms, the patient can be put off lightly with some hasty and often erroneous diagnosis. Too many patients, who, without proper

examination, have been told they have a "stomach cough," or a "bronchitis," consult some one else, often the specialist, who finds definite evidence of tubercular disease. With our present knowledge, such superficial decisions are nothing short of culpable, and the harm done to the patient is often incalculable. It is, however, still a source of regret and surprise to many a specialist to note the number of patients who come to him with supposedly incipient disease which is really in a well-advanced stage, the extent of which has not been recognized by the attending physician until too late to accomplish anything than a more or less temporary arrest of the disease, with little hope of permanent recovery.

Fatigue on slight exertion is as a rule an early symptom. The patient complains of inability to attend to his daily duties and states that the sense of fatigue is out of all proportion to the amount of work done. In contra-distinction to the apparent fatigue associated with certain nervous conditions, in which the individual feels very tired in the morning, much stronger in the afternoon and best of all at night, the tuberculous fatigue is due to the true exhaustion from work done. Thus the tuberculous person as a rule feels well in the morning and is tired out in the afternoon after a slight exertion and is perfectly willing to retire as early as possible at night.

Instability of temperature, instability of pulse, loss of weight, unexplained and moderate anemia and

a low systolic blood pressure, all occurring in early adult life and not due to other demonstrable cause, may be considered as quantitative signs and symptoms of early tuberculosis and are sufficient to justify a probably diagnosis and to call for the institution of proper hygienic treatment and careful observation over a prolonged period of time. When in addition the qualitative deviations from normal as represented by pleurisy exclusive of empyema and the initial pleurisy associated with lobar pneumonia or pulmonary hemorrhage are discovered the diagnosis becomes assured.

Cough and expectoration, especially the latter, are not necessary adjuncts of early pulmonary disease. When first manifest, cough is apt to be hacking, dry, paroxysmal in type and associated with little if any expectoration. As the disease process advances, expectoration appears, the sputum at first being mucoid in character, later becoming muco-purulent and finally distinctly purulent in type. Tubercle bacilli are as a rule absent in the sputum of early cases, as they do not make their appearance until breaking down of pulmonary tissue has taken place. In fact the very absence of bacteria, particularly when associated with the presence of a large number of mon-nuclear cells in the sputum of an individual showing slight afternoon temperature above the normal is strong presumptive evidence of tuberculous trouble. Again the manner of onset of cough and expectoration are suggestive. Many individuals suffer

from attacks of acute illness which start as an infection of the upper respiratory passages associated with coryza and subsequently are followed by a diffuse bronchitis with cough and profuse expectoration over a limited period of time. The tuberculous individual, however, usually begins the cough and expectoration without a previous "cold in the head," and the observing patient will frequently make mention of this peculiarity of onset at his first visit.

Suffice it to say that the physician who insists upon the presence of rales before arriving at a diagnosis of active tuberculosis is led into grave error. It is true that localized rales at one apex are the earliest physical signs, still rales are notoriously evanescent in character, heard at one time and not at another. They are of slight importance compared to the changes in the fundamental breath sounds, such as harsh inspiratory murmur, prolonged expiration at one apex, or localized cog-wheel breathing which represent fixed and definite changes which may be observed in a given area at any time and which when associated with an afternoon temperature of 99 degrees or above, justify a diagnosis of active tuberculosis.

PREVIOUS HISTORY INDICATING TUBERCULAR INFECTION.

1. Prolonged intimate association with a tuberculous individual.
2. History of pleurisy with the exception of empyema and the initial pleurisy of lobar pneumonia.

3. History of pulmonary hemorrhage.

4. History of fistula in ano.

5. Previous attacks of pneumonia not frankly lobar in type, particularly when recurrent.

6. Frequent and prolonged attacks of "grippe" associated with cough and expectoration and profound prostration.

PRESENT SYMPTOMS INDICATING ACTIVE TUBERCULOSIS.

1. Quantitative deviations.

- (a) Instability of body temperature.

- (b) Instability of pulse rate.

- (c) Increase of fatigue sense.

- (d) Loss of body weight.

- (e) Unexplained and moderate anemia.

- (f) Low blood pressure.

2. Qualitative deviations.

- (a) Pleurisy.

- (b) Pulmonary hemorrhage.

- (c) Chronic cough and expectoration.

- (d) Physical signs of disease of the lungs.

In conclusion, I would lay stress upon the following points which I have endeavored to make:

First: The most important factor in the diagnosis of a tubercular patient is the history—past and present; exposure to infection; pre-disposing causes of infection to environment or occupation; personal history; onset to present illness, and present symptoms.

Second: We should bear in mind that most persons with whom we come in contact have at one time been infected by the tubercle bacillus and we should have tuberculosis

in mind when making a diagnosis in every obscure medical case.

Third: Examination must never be hurried but must be slow and methodical.

Fourth: The patient should be examined with the chest fully exposed.

Fifth: The chest should be carefully examined by all means at our disposal, inspection, percussion, auscultation. In auscultation, coughing before inspiration is a valuable aid in eliciting rales.

Sixth: A single negative sputum examination is not conclusive. Several negative sputum examinations should not outweigh results obtained by other methods.

Seventh: A positive tuberculin test means that tubercle formation has been present in the person reacting to the test but does not necessarily indicate the need of treatment.

Eighth: A diagnosis in early tuberculosis must be made only after a careful weighing of the patient's history, his symptoms, his physical signs, the examination of his sputum, and his reaction to tuberculin. It is here that judgment and experience find their highest expression.

It is not within the scope of this paper to go further into detail in the points touched upon, but in conclusion, if I have in a measure brought out and impressed certain facts which may lead to a more careful examination, i. e., to a detailed history, to a careful study and analysis of the case, which is of far greater importance than is often thought, and if we shall take noth-

ing for granted before we have at least attempted to the best of our ability to trace objective signs and subjective symptoms to their pathological source, then and then only, shall we err less in our diagnosis of the incipency of the Great White Plague.

THE USE OF PITUITRIN IN OBSTETRICS

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Farwell, Texas.

(Read before the Pecos Valley Medical Society, Artesia, N. M., May 20th, 1916.)

Pituitrin is the trade name of a proprietary product marketed by a well known pharmaceutical firm.

It is derived from the posterior lobe or infundibular portion of the pituitary gland. It is located at the base of the brain or celli tursica of the sphenoid bone and consists of two lobes, anterior and posterior, each of which seems to have a distinct physiological action and directly opposite to each other—the posterior raising, the anterior lowering the blood pressure.

Our subject deals with the posterior lobe or infundibular portion of the gland.

Embryologically and physiologically, the infundibular portion of this gland is very closely associated with the suprarenal gland, both being epiblastic in origin and both exerting a common influence on the sympathetic nervous system, acting as vaso constrictors by producing muscular contractions of the involuntary fibers—adrenalin producing

muscular contractions of all involuntary fibers, while pituitrin has a selective action on those muscle fibers where there is already some mechanical stimulus, such as the pregnant uterus, intestinal canal and urinary bladder.

Hence it is in this light that we wish to treat the subject today—more especially its action on the pregnant uterus.

Before we enter into the subject proper, allow me to digress long enough to say that pituitrin acts as a diuretic and obviates the necessity of catheterizing women, both in obstetrics and surgery.

It is given now by many of our surgeons where post-operative ileus is feared. It is given in many conditions where low blood pressure is present, such as the infectious diseases. I am now treating a case of hyper-thyroidism in which the blood pressure has been raised from 70 to 110 by the use of pituitrin and the nervous phenomena decidedly improved.

It is also highly recommended as a galactagogue but my experience in this line has been very limited but in view of lack of other therapeutic agents for this purpose, I think it is well to give pituitrin a chance.

Pituitrin is also highly recommended in metrorrhagia, especially of the fibroid tumors, etc.

Now to my subject proper—the use of pituitrin in obstetrics. It is here that we find its widest field of usefulness—especially in that class of cases called uterine inertia.

It is in this class of cases that it

is the remedy, *par-excellance*, seeming to exert a peculiar action of increasing the irritability of the hypogastric nerve to the uterus and increasing the severity of the uterine contractions.

Fortunately it will not initiate labor or abortion and only acts as an assistant to the natural or artificial stimuli.

It will not bring on abortion but after it is instituted it will naturally aid in the complete evacuation of the uterus, thereby obviating the necessity of instrumentation. It also prevents hemorrhage in these cases.

Pituitrin is indicated mostly in those cases in which normal labor has existed a sufficient length of time to bring about a sufficient dilatation—say three fingers—but has insufficient force to expel the fetus. It should be given in the later part of the second stage of labor and exerts its greatest influence during the height of labor pains. It often causes severe pains, often tetanic in character, lasting from 2 to 8 minutes and at times producing a veritable labor storm as one author has aptly put it.

In my own experience, I gave it to a primipara who had been in labor 36 hours with only about two fingers dilatation and she had a veritable labor storm lasting about 8 minutes in one continuous pain when an 11-lb. baby boy was born, placenta and all at one time. The baby was very much asphyxiated and was resuscitated with much difficulty. In justice to pituitrin, however, I will say that this patient had

had 1 cc. of pituitrin about three hours before, which failed to give the desired results and was followed by a hypodermic of morphine and atropine which might have accounted for the spontaneous expulsion of the placenta and the asphyxiation of the child.

This patient also suffered a severe bilateral tear. I have had a similar unpleasant experience in two other cases in which the child was asphyxiated but was each time resuscitated. I have had at least three tears in my 48 cases which might have been prevented by allowing a little more time.

Some authors speak of repeating the dose when the first does not have the desired effect with little or no result on account of the atony of the uterus, and I have been able to overcome this condition by giving the patient a hypodermic of morphine and waiting about three hours, having the room darkened and quiet. Then wait until labor pains begin.

Always before giving pituitrin, be sure that there is no disproportion between the passage and the passenger.

The severity of these tetanic contractions and the danger of tears may be minimized by the administration of a little chloroform during the latter part of the second stage of labor.

Some authors speak of a bowel movement of the fetus previous to birth but such has not been the universal rule in my cases, but quite a few of them do have them and so do the mothers, but I do not attri-

bute that directly to the use of pituitrin but to the increased severity of the pains.

One patient of mine, a primipara, experienced tetanic contractions of all the muscles of the body except the sphincter ani, the pulse became very rapid, the lips cyanosed, the eyes protruded, cold perspiration stood out on her and she vomited very profusely and had a condition simulating angina pectoris.

In the third stage of labor, pituitrin prevents postpartum hemorrhage by contracting the uterus firmly, expelling all secretions and clots spontaneously, thereby obviating the necessity of mechanical manipulation and instrumentation, thereby minimizing the danger of infection.

It has been used with much success in placenta previa lateralis and in caesarian section but I have had no experience in this line.

Some authors speak of the liability of post partum hemorrhage when the transient effect of the drug passes off. This may be obviated by reinforcing it with a dose of ergot for a more lasting effect.

Summarizing I would say that pituitrin is a very valuable drug in any condition of low blood pressure.

That it is the best known oxytotic, rapidly terminating labor or abortion when conditions are right for its administration.

That it is the remedy *par excellence* in uterine inertia.

That it is very valuable in placenta previa, in connection with the Vorhees bag.

That it usually renders catheterization unnecessary.

That it is the best prevention against post partum hemorrhage but should be reinforced with ergot.

That its effect as a galactagogue is sure but only transient.

That its use in menorrhagia and metrorrhagia is very valuable.

Contraindications:

No man should give a dose of pituitrin with any mechanical obstruction either in the passenger or the passage any more than an engineer should open the throttle of an engine with another train standing on the track in front of him. Be sure you are right, then give pituitrin.

The man that gives pituitrin before the presenting part is well engaged and at least three fingers of dilatation is doomed to disappointment and his patient to a tear.

It is contraindicated in asphyxia neonatorum, in tetanic contractions, in postpartum relaxations, and atony of the uterus where one dose has been given.

Where there is a likelihood of a uterine rupture and contracted pelvis.

It should be used with much caution in primiparas—especially elderly patients.

Heart murmurs, advanced nephritis, and tuberculosis in advanced stages; also arterio-sclerosis.

The more I use pituitrin the less I use it as I become more conservative and study my patients more before I administer it.

PRESENT STATUS OF SALVARSAN IN THE TREATMENT OF SYPHILIS.

— — — —
C. F. MONTGOMERY, M. D.,
Roswell, N. M.

— — — —
(Read before the Pecos Valley Medical Society, Artesia, N. M., May 20th, 1916.)
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The discovery of the spirochaeta pallida by Schaudinn in 1905, quickly followed by the announcement of Wasserman of the complement fixation reaction, led to much new interest in syphilis. To have Ehrlich announce a synthetic remedy that would produce extraordinary results, at least, in many syphilitic lesions might be expected to call forth extravagant claims by the over-enthusiastic. These extravagant claims, along with the misuse and misinterpretation which any new remedy must survive, might be expected to bring it into bad repute in some localities and so it has. Sufficient time has not elapsed to make one cocksure of the position salvarsan must occupy in the treatment of syphilis in its many forms; enough is known, however, in regard to its indications and contraindications to give it the first place in the treatment of this disease.

It may not be out of place to say that the handling of a case of syphilis has been subjected to great change by the unparalleled laboratory achievements of the past seven years; not only by the introduction of salvarsan as a treatment but our ideas of mercurial treatment have undergone many changes. By means of the Wasserman and other

sero reactions we have learned that many apparent cures were found to be non cures. Coming on at this laboratory stage salvarsan was made to measure its cure by the more exacting method while those of mercury were largely measured by clinical observation, putting salvarsan at a disadvantage.

By means of the dark field illumination or by stained specimens a diagnosis of a chancre can be made without doubt by finding the spirilla in the serum taken from the initial lesion even before the Wasserman reaction becomes positive, and by this means a diagnosis can be made and treatment instituted as the spirilla are entering the blood stream. In the very early primary stage we find salvarsan, by repeated injection, to completely cure syphilis. So much so, that several reinfections have occurred. The treatment giving the best hope of quick and radical cure is two injections of salvarsan with one course of mercury hypodermically. This method of treatment is being followed in many of the clinics and large hospitals with very gratifying results.

After the appearance of the positive Wasserman reaction this method of treatment gives good results but not such a high percentage of cures as in the earlier stage. It must also be noted that the treatment must be continued longer to get complete recovery. Here salvarsan with the mercury treatment gives the best results.

The treatment of the secondary state of syphilis with salvarsan has aroused a great deal of discussion,

as salvarsan has been charged with the production of meningitis. Ehrlich and his followers charge that the meningitis is syphilitic and therefore coincident with and not the result of the injection of salvarsan. Benario has collected statistics showing that such nervous relapses occur under mercury. In this stage of syphilis the treatment with salvarsan gives satisfactory results if alternated with hypodermatic use of mercury. The salvarsan should be given in dosage from .3 to .5 grams every five to ten days, then a course of mercury and salvarsan again and the mercury repeated. Treatment should not be stopped when the Wasserman reaction becomes negative but should be given at infrequent intervals. The treatment must be persisted in and a high percentage of cures will result.

In the third stage many of the lesions are quickly cured by the use of salvarsan. Interstitial keratitis is more completely cured than by any other method. The lesions of the nervous system are relieved often very quickly. In the third stage when the lesions have a protective wall, the use of the iodids is indicated as they have a tendency to break down this wall of protection so that salvarsan and mercury may do their work. It is advisable to use both. It is believed that salvarsan does not exert any influence, when given intravenously, after five days, therefore mercury should be given. In the third stage most men advocate large doses of salvarsan given at infrequent intervals rather

than smaller doses at frequent intervals. The mistake should not be made of considering a case cured when the manifestations disappear. Even a negative Wasserman for a considerable period of time does not prove the cure, while a positive reaction calls for more treatment. There can be no doubt that nervous lesions of syphilitics can be effectively treated by salvarsan. Like other lesions they are best treated by the combined mercury and salvarsan treatment with the addition of the iodids, more especially in the old cases. Through the Wasserman reaction we are finding that many of the old cases of syphilis that had been apparently cured were not. It is barely necessary to mention the fact that claims have been made that could not be expected to prove correct in regard to the degenerative lesions of the nervous system, from any remedy.

CONTRAINDICATIONS

Acute inflammation of the eye, kidney, heart or nervous system prohibit the use of salvarsan if these lesions be non-syphilitic. A most vigorous objection to the use of salvarsan has been made on the ground that it produced a great amount of pain. It is true that the subcutaneous injection is attended with too much pain. Unless the preparation is very carefully neutralized the deep muscular use is productive of too much pain for most patients. The intravenous injection, when properly prepared and given, does not produce sufficient discomfort to offer any bar to its use. The claim is made that

the new salvarsan, neosalvarsan, being a neutral salt, eliminates this objection and produces the same therapeutic results as salvarsan. If so it should show better results as the intramuscular injections can be given allowing of a slower absorption with a prolonged effect.

CONCLUSIONS

Syphilis should be diagnosed in the early stage.

The treatment of this stage looking to a permanent cure can best be done with salvarsan followed by hypodermic use of mercury.

The secondary stage should be treated with more persistency with the same remedies notwithstanding the alarm felt by some in regard to the possibility of nervous disease following the use of salvarsan in this stage of the disease.

The third stage should receive salvarsan, mercury and in some cases the iodids.

All treatment should be gauged by the sero reactions.

Treatment should be given if possible hypodermically whether salvarsan or mercury be used.

Syphilis may be cured by either mercury or salvarsan.

KIDNEY EFFICIENCY.

H. A. INGALLS, M. D.,
Roswell, N. M.

(Read before the Pecos Valley Medical Society, Artesia, N. M., May 20th, 1916.)

It is our object to discuss two of the important tests now before the profession for the determination of the renal function, and to try, if pos-

sible, to emphasize their value in diagnosis and prognosis.

Phenolsulphonephthalein and indigocarmin both have their advocates, their advantages and disadvantages.

The phthalein test has the advantage of being easier of determination than the indigocarmin and is by far the best for those without extensive laboratory equipment and training.

Thomas, who is a staunch advocate of the indigocarmin test, has given us an index by dividing the quantity of indigocarmin eliminated during the first hour by the quantity of the third hour.

If the elimination for the third hour is equal to or exceeds that of the first hour, the functional power is low and contradicts major operations unless the total elimination for the three hours is greater than 20% of the total amount injected.

Personally, I am impressed with the phthalein test and use it almost exclusively as the result of class study of the work of Cole and others and from my own observations.

It has been found by experiments, as well as in practice, that sulphonephthalein when injected into the tissues, is eliminated almost entirely by the kidneys. The kidneys, when normal, will excrete fifty percent of the entire dosage within a period of one hour, no matter how great the dilution.

The phthalein test is conducted as follows:

6 mg. of the drug, in a 1 cc. solution, is injected deep into the lumbar region. After a period of one

hour the urine is voided or, in atony of the bladder or an enlarged prostate, drawn with a catheter. The amount of urine secured is rendered alkaline and diluted to 1000 cc. Of this a small amount is transferred to an empty bottle or cup and compared to phthalein dilutions of a known percentage. Calorimeters of various types are to be had of the supply houses.

If the percentage of elimination is less than 50% it is an indication that the kidney function is below par in direct ratio to the percentage of elimination.

By the aid of these tests we are more able to select our operation risks and to clear up our prognosis in medical cases, especially when used in connection with our other diagnostic and prognostic symptoms, as blood pressure, examination of the blood and urine, etc.

We are all able to recall cases of the past in which Bright's disease was diagnosed as the result of albumin casts, oedema and uraemia. With these tests we are able to separate that big class of toxic conditions from those of true Bright's, as well as to secure definite knowledge of the result of our treatments.

I had the pleasure, a few months ago, of meeting Dr. Kinsinger of this society, in the case of one of our own profession. His kidney efficiency was found to be 15%. Under the doctor's treatment the elimination increased to 45%. When first seen, the aspect of the patient was bad—anemic and confined to bed. Improvement on the part of the patient was testified to by the

increase in the pthalein excreted.

In all serious cases the test should be made frequently. In a case of acute nephritis the first test revealed an elimination of but 5% in the first hour. After a few days' treatment the elimination increased to 40% and the patient was given a favorable prognosis. In a case of acute scarlatinal nephritis reported by Geraghty, the sympeoms from the clinical standpoint were those of a very grave toxaemia, but on finding an elimination of 44% he gave a favorable prognosis and had the satisfaction of having a very prompt recovery.

On the other hand, one may have a case in which the urine is free from albumin or casts, the blood pressure not much above normal and the general clinical picture of the individual good and find an efficiency that forces a grave prognosis.

In the case of one of my friends, a man but little past the prime of life, where the urine was practically normal, a prostatectomy resulted in death, due to an unsuspected nephritis. Had his efficiency been worked out and the operation postponed, he might have lived to old age. As the result of this improvement in our diagnosis the mortality in prostatectomies has been reduced from fifty to five per cent. Thomas has a record of but 3.3 per cent.

These tests have a wide range of usefulness, in pregnancy, in all cases showing albumin or casts, before all genito-urinary operations and Bright's disease. If they had accomplished nothing but the reduc-

tion of mortality of prostatectomy they should have their place in the daily routine of your practice.

THE AUTOBIOGRAPHY OF AN OLD SILK HAT

S. D. SWOPE, M. D.,
Deming, N. M.

(Read before the 1916 meeting of the Arizona
State Medical Society.)



In the year of our Lord eighteen fifty-one, my master graduated from the Transylvania University.

I remember well when he came into the store and purchased me. I had been in the show window just three days and a great many people had stopped to look at and admire me. I was terribly scared one day when a young lawyer with a wicked gleam in his eye looked at me for a long time, then counted his small change and passed on. I did not like his appearance and did not want him for a master.

A young journalist also took a squint at me. The merchant said,

"No Henry, I guess that's too swell for your purse." And the journalist scowled and he, too, passed on.

Then came my master and I was so afraid that he would not take me, that my silk fur stood out with anxiety. I loved him from the time he took me up and turned me gently in his hands. He was a fine specimen of manhood, six feet and one inch tall. He weighed one hundred and eighty-five pounds and did not seem to have an ounce of fat on his body. His light hair was rather thin and a little wavy, and his big blue eyes, set well back, looked like two miniature Swiss lakes. His nose and mouth were as large as were his face and chin. His smooth shaven ruddy cheeks seemed aglow with health, happiness and moral beauty. My! but he was good to look at. After inspecting me carefully, inquiring my price, and deliberating for some time, he said to the merchant, "Yes, I will take this; you may send it out," giving the address of a cheap boarding house for students down on Walnut street. "What is the name, please?" inquired the merchant. "Dr. Anthony J. Hodge," my master replied with some dignity, and took out of the side pocket of his home spun jeans coat, a well worn wallet and paid for me. My, but I was happy, and kept thinking of those clear blue eyes, that big nose and mouth, and that massive chin, which I was so proud to adorn.

The merchant bowed and asked, "Are you just graduating, doctor?" and it was then I saw my master's smile for the first time, a dignified, self satisfied, kindly smile—as he

answered, "Yes, I received my degree yesterday."

I think he showed me to no one before we reached home. We started the next day by boat, and sailed for two days, down the grand old Ohio. Then we had nearly a day's journey by stage until we arrived at one of the quaint old towns that Opie Read delights to tell about. My master had donned a long black coat and just before we reached his home town, he took me from my box and adjusted me on his fine head. It was then he called the driver's attention by saying, "Jim, what do you think of this?" Jim's admiration was apparent in several ways and he blurted out, "You surely look like a doctor." We drove up in front of a grand old colonial house. My master was very nervous and went rapidly up the walk to the door, where a lovely old lady grabbed and hugged him with such force, that I was knocked from his head and rolled on the floor. I was feeling somewhat neglected until the lady picked me up, smoothed down my ruffled surface and exclaimed, "Why, Anthony, this is a beautiful hat."

I was put away to be preserved for special occasions and the fact that I still exist is due to the honesty of my construction and the care that I have had.

Yes, I have had many experiences and seen many sights. Were I to attempt to tell of them all it would fill several volumes. I will, however, relate a few of the incidents in which I would expect you to be interested.

I went regularly to church and frequently to prayer-meeting. During most of the time I rested on top of a clothes press, where I could see and hear much that was going on.

I soon began to look for a black-haired young woman, whom my master seemed to meet frequently and we walked together on Sunday afternoons.

One evening in the fall, when I was dozing on a center table where I had been carefully set upsidedown, my master, who had been rather careful not to get too close to the black-haired young lady, reached over and took her hand and, as I became wide awake he said, "Sue, I love you, I have loved you ever since we played together as boy and girl and I have worked hard to become worthy of you. Now I want you to be my wife." My mistress-to-be picked me up, looked long and steadily into my crown, smoothed down my silken nap with her beautiful white hand and said, "Anthony, I have been waiting five years for you to say this. I will try to be a good wife." And she did.

Many are the rubbings and dustings she has given me and many are the times she has put me on my master's head and given him an affectionate good-bye, when he was going away.

A few years later I went with my master to a great meeting of medical men of the Central States and I heard much discussion on the relative virtues of blue mass and calomel, some holding that broken doses of blue mass, given in five grain

doses, two hours apart, until three were taken, was vastly superior to the time honored dose of ten grains of calomel and ten grains of jalap; though possibly more liable to salivate.

It was at this meeting that my master met and conversed with four men that impressed me greatly: Ephraim McDowell, J. Marion Sims, Samuel D. Gross, and a young fellow just back from France, whom they called Yandel. I heard much of these men in after years, and saw Gross, when he was a foxy looking old man with frizzly gray hair, and gray side whiskers. My master thought him the greatest man of his age and was never tired of reading his books.

In 1861, I thought I had lost my beloved master. He went away and was gone about a year, and my mistress cried a great deal. She had two little girls then and when he came back there was much talk of battles, of hospitals, of Forrest and Morgan, Lincoln and McClellan, secession and Yankees.

But the master stayed at home for a short time only and when he went away, I heard much of war and field surgery.

In 1864, my master came home to stay but he was so lean, and his eyes were so far back in his head, that I hardly knew him. He was very sad and silent and I heard much of dead and wounded when the logs burned low in the great fire place and the candles were low in their sockets. I heard much of David Yandel, and of his untiring body and mind, as he labored in the

battle-fields and hospitals of the south.

I heard much of the young surgeon, W. W. Keen, who neither ate nor slept for days at a time. Some years later my master made a trip to the east. When in New York we met a tall slender young man with a badly set colles fracture, and I heard my master say that night, when he laid me away, "That man John A. Wyeth is surely a surgeon." Later on we went to Philadelphia, where we saw a short, stocky little man, with a big head and quick moving restless eyes and my master exclaimed when first he saw him, "Well, is that Keen?" Soon after this visit to the eastern city my master moved to a larger city. He laid aside his saddle-pockets, and procured a case and a bag. He drove a fine bay horse to a handsome phaeton and I was his constant companion. He was growing stouter now and chewed a large amount of tobacco and sometimes a small stream of stain would trickle down the crease at the corner of his mouth. This was the source of much concern to my mistress, but the young ladies thought Pappy was so perfect that the tobacco juice did not matter.

It was about this time that I began to hear of cocaine and appendicitis, but it took my master several years to be convinced that inflammation and congestion of the stomach and bowels could not in some cases be appendicitis. Though I heard my master read in history of the time where Richard the Third, of England, was ripped from his

mother's belly by the horns of an angry bull; in view of the great mortality my master was slow to believe that abdominal section was a feasible operation. He was a great believer in iodine and nitrate of silver. Lobelia was a favorite remedy and calomel was the never failing sheet anchor of hope. He did not know that mosquitos caused malaria but he did know that bark, and later, sulphate of quinine in sufficient doses would cure most cases.

And now I come to the painful part of my narrative, my master grown old in years, became feeble and had few of the luxuries of old age. Though he had served the public for nearly half a century, he had used much more of his time studying out methods of relieving human ills than in looking after the business side of the profession.

A long procession followed the simple black casket to its resting place and many sorrowing debtors shed tears over a green sodded mound. An age of faltering steps had been buried in the past. An age of medicine and surgery had passed away.

I now became the property of a new master but I was seldom honored in the wearing. I was out of date. I was out of shape and it seemed I was out of place. My new master was a student, a believer in new things and seldom wore a frock coat and a silk hat. He loved and honored my age of usefulness, but he also quoted Ella Wheeler Wilcox and said, "Let the dead past bury its dead."

He leaves me on a shelf most of

the time, but once in a while he strokes my nap and I fancy he is dreaming of the days of medical chivalry, medical honor and medical dignity and wishing some of them could be given hypodermically to the present medical age.

New and Nonofficial Remedies.

During July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

E. R. Squibb and Sons:

Solution Hypophysis—Squibb.

Roberts' Occult Blood Test—Squibb.

Ampules Mercuric Salicylate—Squibb, 0.065 gm.

Ampules Quinine Dihydrochloride—Squibb, 1 gm.; 0.5 gm.; 0.25 gm.

Ampules Quinine and Urea Hydrochloride—Squibb, 1 gm.; 0.5 gm.; 0.25 gm.; 1 per cent.

Ampules Sodium Cacodylate—Squibb, 0.13 gm.; 0.05 gm.

Standard Radium Solution for Drinking (1 microgram Ra).—Each bottle (60 cc.) contains radium chloride equivalent to 1 microgram Ra, and 1.3 mg. of barium chloride. The solution contained in one bottle is taken after each meal. The Radium Chemical Co., Pittsburgh, Pa. (Jour. A. M. A., July 1, 1916, p. 35).

Radium Bromide, Schlesinger Radium Co.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

Radium Carbonate, Schlesinger Radium Co.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

Radium Chloride, Schlesinger Radium Co.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

Radium Sulphate, Schlesinger Radium Co.—It complies with the standards of N. N. R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo. (Jour. A. M. A., July 8, 1916, p. 121).

Vitalait Starter.—A culture in vials of the *Bacillus bulgaricus* and the *Streptococcus acidilactici* in symposium. It is intended for the home preparation of fermented milk. Sufficient to prepare from 1 to 3 quarts of fermented milk is sent on request of the physician to the patient twice a week. The Vitalait Laboratory, Inc., Newton Centre, Mass. (Jour. A. M. A., July 15, 1916, p. 203).

Propaganda for Reform.

Aromatic Spirits of Ammonia.—This is an old fashioned complex mixture. Its reputation has little scientific basis. Its effects probably are psychic, in the main. Such effects might be expected from the irritation of the nasal mucosa by the ammonia and to the flavor and odor of the lemon, lavender and nutmeg oils. The physical effect is probably due to the alcohol, though the ammonium carbonate and uncombined ammonia may have some restorative action by the irritation of the gastric mucosa or by their neutralizing of nauseating acids in the stomach. When the effects of ammonium carbonate are desired, this is better given in aqueous solution. When the effects of alcohol are desired, whiskey is to be preferred (Jour. A. M. A., July 1, 1916, p. 65).

The Pharmacopoeia Revision.—As usual the Pharmacopoeia about to be issued will be antiquated when it comes out. Some of the drugs in it will have become more or less obsolete, while many new ones which have proven of value will not be there. Since all the publications of the A. M. A. are issued promptly and in excellent style, and are complete, correct and up to date, it is suggested that the U. S. P. should be taken over by the A. M. A., and be henceforth published by it. It may be extreme to say that the world would be almost as happy without a Pharmacopoeia, but at least we could get along very nicely with a Pharmacopoeia about one half the size of the present one. A good deal of the matter it contains is quite superfluous and its deletion would prove distinctly advantageous to (1) the book, (2) to the medical profession, (3) to the pharmaceutical profession and (4) last but not least, to the students of medicine and pharmacy (Critic and Guide, July 1916, p. 239).

Wine of Cardui Verdict.—Anent the verdict

in the recent "Wine of Cardui trial" awarding one cent damages to the Chattanooga Medicine Company, a medical journal offers condolences to the American Medical Association, declares that the verdict is "a very decided victory for the 'patent medicine' association," and asks "is publicity the way to accomplish the true end?" The outcome of the case was a moral victory for the Association and publicity is the only rational means of attacking the nostrum evil, whether of the "patent medicine" or of the "ethical proprietary" variety. Until the public is given definite and specific facts no great strides will be made in preventing unscrupulous cupidity from preying on the sick and suffering. The faith of the public in patent medicines of all sorts continues because no small part of the medical profession is itself under the blight of the "patent medicine" business—albeit the preparations in question are euphemistically spoken of as "ethical proprietaries" (Jour. A. M. A., July 15, 1916, p. 206).

Cocaine substitutes.—Treasury Decision 2194 places "alpha and beta eucaine or any of their salts or any synthetic substitute for them" under the provisions of the so-called Harrison Narcotic Law. To this ruling the Farbwerke-Hoechst Company, the manufacturers of novocain, a synthetic substitute for cocain, took exception and, by agreement, a test case was argued before the United States District Court of New York. It is reported that the court took the case from the jury and ordered a verdict for the Farbwerke-Hoechst Company on technical grounds (Jour. A. M. A., July 15, 1916, p. 208).

Aromatic Spirits of Ammonia in Shock.—Horatio C. Wood, Jr., explains that any stimulating effect which may be observed after the oral administration of aromatic spirits of ammonia is due either to a psychic effect or to its local irritant action on the gastric mucosa, just as the irritation by ammonium carbonate, in the form of smelling salts, of the mucous membrane of the nose may reflexly excite the medulla (Jour. A. M. A., July 15, 1916, p. 321).

Phenol Antidotes. — Various substances, fixed oils, glycerin, diluted sulphuric acid, the soluble sulphates of the alkalis and alkali earths, have been recommended as antidotes

or prophylactics of phenol poisoning. M. I. Wilbert discusses the value, or lack of value, of the various reagents proposed as antidotes to phenol poisoning. He points out that glycerine will not prevent the production of gangrene or the absorption of phenol. Wilbert points out that the other substances mentioned have been found inefficient as detoxicants for phenol, and in many instances distinctly harmful. He further notes that, while the value of alcohol as an antidote for phenol poisoning has been scientifically disproved, yet even as late as 1915, the fallacy that ethyl alcohol is an antidote to phenol has been embodied in state laws designed to restrict the sale of phenol. Recent investigation, carried out in the Hygienic Laboratory, shows that in the presence of water neither alcohol nor glycerin has any detoxicating effect on phenol (Jour. A. M. A., July 15, 1916 p. 233).

Poisoning from Lead Paints.—The report of the British departmental committee, appointed to investigate the dangers of the use of lead compounds in the painting of buildings, shows the principal source of poisoning to be dust, produced during the mixing of dry white lead with oil and in the dry rubbing down process. While the first danger is done away with by the use of ready mixed paints, the committee proposes drastic legislation to remedy the second evil. The committee recommends the enactment of a law prohibiting the importation, sale or use of any paint material containing more than 5 per cent of its drug weight of soluble lead compounds (Jour. A. M. A., July 15, 1916, p. 234).

Poisonous Properties of the Garden Daffodil.—The bulbs of the garden daffodil (known botanically as *Narcissus pseudonarcissus*) contain an alkaloid (or alkaloids) whose physiologic action differs according to the stage of growth of the plant. The alkaloid extracted from the flowering bulb produces dryness of the mouth, checks cutaneous secretions, dilates the pupil, quickens the pulse, and slows and weakens the heart contractions. The alkaloid extracted from the bulbs after flowering produces copious salivation, increases cutaneous secretion, contracts the pupil, and produces slight relaxation of the pulse, slight faintness and nausea. Such

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E . D . I . T . O . R . I . A . L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better Journal

YOU CAN HAVE IT BY WRITING OUR ADVERTISERS: "I SAW YOUR AD IN OUR STATE JOURNAL."

FAVOR THOSE WHO FAVOR US.

The managing editor desires to call the attention of the members of the New Mexico Medical Society to the reduced size of this issue of the New Mexico Medical Journal.

In common with all publications, medical and otherwise, we have felt the advance in the price of paper. Unfortunately with the increased cost of publication there has not been a corresponding increase in revenue, hence we are driven to the necessity of issuing a number that is not rightly a medical journal. The proposition before the managing editor was either to issue no September number or to issue such as this is. After consultation with the Council it was deemed best not to interrupt the chain and we ask the members of the Society to bear with us.

The annual meeting is almost at hand. The entire matter of the Journal's affairs will be before the Council and the House of Delegates for discussion and it is to be hoped that some plan may be devised

whereby the Journal may be continued. We have had before us a proposition to consolidate the New Mexico Medical Journal with the Arizona Medical Journal and the Bulletin of the El Paso Medical Society. This plan has much to commend it but the managing editor has not yet been able (for reasons too lengthy to go into at this time but which will be taken up detailedly at the meeting) to commit the New Mexico Medical Journal to the consolidation. If this consolidation be effected a larger and better journal will be the result and the combined efforts of the three societies should be able to produce a journal representative of Southwestern Medicine and a credit to the profession of these parts. Should, however, it be deemed best to continue the New Mexico Medical Journal as a separate and distinct publication then ways and means must be provided to increase the revenue. This is not the only state medical journal that feels itself cramped for lack of funds. We know of one (and of a large state with a large and prosperous society) that has been conducted at a distinct loss for the past two or three years. Recently the editor of the Pennsylvania Medical

Journal warned the membership of the Pennsylvania Medical Society that more support would have to be forthcoming for the Journal or the size would have to be materially reduced. It is not only the New Mexico Medical Journal, therefore, that is begging its members for support or for better support.

We appeal, then, to the members of the New Mexico Medical Society to take this matter under serious consideration and to help us to find a way to maintain the identity of the Society's official organ and mouthpiece.

We call attention to the program of the annual meeting as published in this issue.

The Southwestern Conference on Tuberculosis will be held in Albuquerque at the same time as the annual meeting and both meetings should be attended by as many of the physicians of New Mexico as can possibly get there. There will be much to learn from the discussions and much to be told by "our men" if they will come and speak out.

A BIOGRAPHICAL SKETCH OF FRANCIS T. B. FEST, M. D.

Francis T. B. Fest, M. D., aged 55, died at Limon, Costa Rica, March 12, 1916. Dr. Fest was born in Wiesbaden, Germany, November 1, 1860. His father, who was Dutch minister to Wiesbaden, was transferred by his Government to Frankfurt am Main soon after the birth of his youngest son Franz (Dr. Fest.) In Frankfurt a Main, Dr.

Fest attended school and graduated from the Gymnasium, afterwards attending the Universities at Marburg and Heidelberg, where he received his doctor's degree.

He made his first visit to America in 1876, accompanied by his father, to visit the Centennial Exposition, and to study.

In 1889 he came to America again and settled in Detroit.

In 1894, Dr. Fest took a post graduate course in gynecology and obstetrics in Indiana college.

In 1896, he was sent to China by the Dutch Reform Mission to take charge of their hospital at Sio-Ki. At this time he was bacteriologist for the British Government. After about two years' work here his health failed and he went to Yokohama where he was Port Physician for a year and a half. During this time a terrible epidemic of diphtheria broke out in Yokohama and he was commissioned by the Japanese Government to build a hospital and superintend the care of the victims of the disease, for which services he was decorated by the Mikado in 1899. Later the Empress of Japan also presented him with a medal.

The same year he returned to America and located in Honduras where President Sierra appointed him head of the Medical School at Tegusigalpa in 1901. As Surgeon General he was with Sierra in the revolution of 1903-4, and organized the first Red Cross hospital service in that country.

In the spring of 1904, he came to the States once more, (because of

the poor health of Mrs. Fest) as private physician to Jose Julio, Spanish Counsel to Honduras. Some months later he engaged in private practice in Las Vegas, where he continued till his appointment as Surgeon for the United Fruit Company, in the fall of 1914.

In October, 1914, he was appointed delegate to the International Congress of Tuberculosis and to the International Congress of Military Surgeons at St. Louis.

In 1907, he was appointed Medical Examiner for the Supreme Lodge, K. of P.

In 1908, he became companion to National Volunteer Emergency Service, and in July of the same year he was appointed Colonel in the Medical Corps of the National Volunteer Emergency Service.

In September, 1908, he was chosen delegate to the International Congress of Tuberculosis at Washington, D. C., where he was elected 2nd Vice President.

In June, 1911, he was appointed 1st Lieutenant Medical Reserve Corps, U. S. A. (Taft).

He was a fellow of the American Medical Association, a fellow of the Royal Society of Surgeons, an ex-president of the New Mexico Medical Association, an ex-president of the Las Vegas Medical Society, etc. He also held the position of Editor in Chief of the New Mexico Medical Journal.

Dr. Fest was a prolific writer, a physician and surgeon of unusual ability. He was not only learned in his chosen profession, but a man possessed of wide knowledge in the

collateral sciences. He spoke many languages and was an historian of no mean ability. He possessed a marvelous memory, nothing that he had ever learned seemed to have escaped him; his mind was a veritable store-house of information. He enjoyed the warm personal friendship, of which he was justly proud, of that distinguished surgeon, Dr. Senn.

He was married in Detroit in 1889 to Miss Eming Meni Harting, a talented lady of a distinguished family. Mrs. Fest has been a faithful, loving wife and mother. She bore him five children, two of whom are living.

While a resident of Las Vegas, Mrs. Fest endeared herself to all her friends because of her high ideals, sweet and loving disposition. She, together with her two sons, is living in Detroit.

CLEAN HANDS

Disease germs lead a hand to mouth existence. If the human race would learn to keep the unwashed hand away from the mouth many human diseases would be greatly diminished. We handle infectious matter more or less constantly and we continually carry the hands to the mouth. If the hand has recently been in contact with infectious matter the germs of disease may in this way be introduced into the body. Many persons wet their fingers with saliva before counting money, turning the pages of a book, or performing similar acts. In this case the process is reversed, the infection being carried to the object han-

dled, there to await carriage to the mouth of some other careless person. In view of these facts the U. S. Public Health Service has formulated the following simple rules of personal hygiene and recommends their adoption by every person in the United States:

Wash the hands immediately—
 Before eating,
 Before handling, preparing or serving food,
 After using the toilet,
 After attending the sick, and
 After handling anything dirty.

PROGRAM

Of the Thirty-fifth Annual Meeting of the New Mexico Medical Society, Albuquerque, New Mexico, October 11th, 12th and 13th, 1916

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Scientific Committee

The Secretary.

S. G. Von Almen, M. D., Albuquerque.

T. C. Sexton, M. D., Las Cruces.

Local Committee of Arrangements

L. S. Peters, M. D., Albuquerque.

G. S. McLandress, M. D., Albuquerque.

F. E. Tull, M. D., Albuquerque.

Papers limited to twenty minutes.

Discussions limited to five minutes.

PROGRAM

Wednesday, October 11th, 1916.

- 9:00 A. M.—Meeting of Council.
 9:30 A. M.—Meeting of House of Delegates.
 10:00 A. M.—General Meeting.
 Call to order by President E. F. Frisbie.
 Invocation, Rev. Hugh Cooper, Albuquerque.
 Address of Welcome on part of City, Mayor Henry Westersfeld.
 Address of Welcome on part of Bernalillo County Medical Society, David Twichell, M. D.
 Response to Addresses of Welcome, R. E. McBride, M. D., Las Cruces.
 Address of President, Dr. E. F. Frisbie—Some of Our Problems in the Southwest.
 Scientific Program—
 1. “Alkalinization,” *Its Uses and Index*—H. A. Miller, M. D., Clovis.
 Abstract.—Action of individual cell in acid and alkaline media, further with grouping of cells as organs surrounded by connective tissue capsule and the organism as a whole. Relative acidity and alkalinity of the organism with reference to kidney secretion.
 Discussion opened by C. F. Beeson, M. D., Roswell.
 2. Title to be supplied—R. L. Hust, M. D., Albuquerque.
 Discussion opened by E. D. McKinley, Alamogordo.
 Announcements.
 Recess.
 1:30 P. M.—Meeting House of Delegates.

2:00 P. M.—Scientific Program—

1. *Diffuse and General Peritonitis* (20 minutes)—Wm. Howe, M. D., East Las Vegas.

Abstract.—Early diagnosis; some reasons for delayed diagnosis. The un-united views of the profession as to the time to operate and the manner of operative procedure. Drainage.

Discussion opened by W. R. Tipton, M. D., East Las Vegas.

2. *Parotitis Secondary to Suppurative Appendicitis, with case reports* (20 minutes)—F. W. Noble, M. D., Tucumcari.

Discussion opened by L. G. Rice, M. D., Albuquerque.

3. *Early Symptoms of Upper Abdominal Disease* (20 minutes)—H. A. Black, M. D., Pueblo, Colorado (Fraternal Delegate from Colorado Medical Society).

Abstract.—Importance of early recognition and correct interpretation. Reflex symptoms, those arising from and those manifested in the upper abdomen. Interlocking symptoms and their distinguishing features in certain diseases.

Discussion opened by P. G. Cornish, M. D., Albuquerque.

4. *The Neglected Prostate* (10 minutes)—E. L. Ward, M. D., Santa Fe.

Abstract.—Diseased prostate often overlooked. Necessity for examination. Congested and infected prostate. Causes and results of congested prostate; association with disease of veru montanum. Infection of prostate often mixed; associated with posterior urethritis. Case reports. Treatment.

Discussion opened by F. F. Fadeley, M. D., Albuquerque.

5. *The Country Surgeon* (10 minutes)—J. H. Wroth, M. D., Albuquerque.

Abstract.—The country surgeon the pathfinder.

Discussion opened by W. A. Parvis, M. D., Socorro.

6. *Public Health* (10 minutes)—W. G. Hope, M. D., Albuquerque.

Discussion opened by T. C. Sexton, M. D., Las Cruces.

7. *Suggestions to Life Insurance Examiners*—C. A. Frank, M. D., Albuquerque.

Discussion opened by J. A. Reidy, M. D., Albuquerque.

Thursday, October 12th, 1916.

9:30 A. M. to 12:30 P. M.—Medical Session of the Southwestern Conference on Tuberculosis held under the auspices of the New Mexico Medical Society, primarily for physicians and health officers.

1. *The Infectiousness of Tuberculosis*. Principal Address—W. Jarvis Barlow, M. D., Los Angeles, Cal.

Leaders in Discussion—

Walter G. Holden, M. D., Denver, Colo.

Robert B. Homan, M. D., El Paso, Texas.

J. Metzger, M. D., Tucson, Arizona.

(Seven minute discussions.)

2. Symposium—*The X-Ray in Tuberculosis*. Principal Paper—Edward H. Skinner, M. D., Kansas City, Mo.

Leaders in Discussion—

Col. Geo. Bushnell, M. D., Fort Bayard, N. M.

Gerald B. Webb, M. D., Colorado Springs, Colo.

Jno. W. Flynn, M. D., Prescott, Arizona.

(Seven minute discussions.)

Recess.

2:30 P. M.—

3. *Duodenal Ulcer, Differential Diagnosis and Treatment* (10 minutes)—M. K. Wylder, M. D., Albuquerque.

Abstract.—Symptoms; differential diagnosis. Treatment, Medical and Surgical.

4. *Gastric Ulcer, Differential Diagnosis* (15 minutes)—T. C. Sexton, M. D., Las Cruces.

Abstract.—Types; Symptomatology; Diagnosis.

5. *Roentgenology,—A Method of Differential Diagnosis of Gastric Symptoms* (20 minutes)—Crum Epler, M. D., Pueblo, Colo.

Abstract.—Patient's complaints referred to stomach. Normal stomach. Pathologic stomach, how determined. Action of stomach during digestion. Gastric symptoms, reflex and true to pathology. Influence of pathology of the abdominal organs upon the stomach. Conclusions. A few slides.

Discussion opened on papers of Drs. Wylder, Sexton and Epler by Wm. Howe, M. D., East Las Vegas.

6. *Roentgen Diagnosis for Focal Infections About the Face*—W. Warner Watkins, M. D., Phoenix, Arizona (Fraternal Delegate from Arizona Medical Society).

Discussion opened by M. K. Wylder, M. D., Albuquerque.

7. *Hay Fever* (15 minutes)—S. C. Clark, M. D., Albuquerque.

Discussion opened by C. S. Losey, M. D., East Las Vegas.

8. *Differential Diagnosis, Report of Cases* (15 minutes)—F. J.

Patchin, M. D., Albuquerque.

Discussion opened by H. G. Willson, M. D., Gallup.

9. *Mental Inferiority in the Child*—C. E. Lukens, M. D., Albuquerque.

Discussion opened by J. S. Cipes, M. D., Albuquerque.

8:30 P. M.—Banquet, Alvarado.

Friday, October 13th, 1916.

- 9:30 A. M.—Joint Session New Mexico Medical Society and New Mexico Society for the Study and Prevention of Tuberculosis.

1. Address of President of New Mexico Society for the Study and Prevention of Tuberculosis—A. G. Shortle, M. D., Albuquerque.

2. *Reactions to Altitude in the Tuberculous* (15 minutes)—David C. Twichell, M. D., Albuquerque.

Abstract.—Review of observed blood changes, etc., in altitude, personal observations of the difference of symptoms in the tuberculous in altitude compared with lower levels; theoretical discussion of causes for this difference.

Discussion opened by F. E. Mera, M. D., Santa Fe.

3. *Heliotherapy and Pulmonary Tuberculosis* (minutes)—O. T. Hyde, M. D., Albuquerque.

Discussion opened by L. S. Peters, M.

4. *Some Common Medical Problems of the Southwest, with Special Reference to Tuberculosis*—C. L. McClelland, M. D., Farwell, Texas (Fraternal Delegate from the Texas State Medical Society).

Discussion opened by J. H. Wroth, M. D., Albuquerque.

5. *Rest and Exercise in the Treatment of Tuberculosis* (15 minutes)—W. T. Murphey, M. D., Albuquerque.

Abstract.—Rest and exercise each have a place in therapy of tuberculosis. Physiology, chemistry and therapeutical principals of rest and exercise, autoinoculation treatment, graduated exercise.

Discussion opened by O. T. Hyde, M. D., Albuquerque.

Recess.

2:30 P. M.—

6. *Nomenclature in Tuberculosis* (15 minutes)—W. W. Dill, M. D., Albuquerque.

Abstract.—Discussion of Schema of Classification of the National Association for the Study and Prevention of Tuberculosis, Immunity, Reinfection.

Discussion opened by E. B. Shaw, M. D., Las Vegas.

8. Title to be supplied—J. R. Van Atta, M. D., Albuquerque.

Discussion opened by H. A. Ingalls, M. D., Roswell.

Report of Secretary.

Announcements.

Introduction of President-elect.

Adjournment.

HOUSE OF DELEGATES

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F. E. Tull, M. D.

J. A. Reidy, M. D.

M. K. Wylder, M. D.

E. O'Suna, M. D. (Deceased).

Chaves County Medical Society

C. F. Beeson, M. D.

H. A. Ingalls, M. D.

1 Vacancy.

Colfax County Medical Society

T. B. Lyon, M. D.

Curry County Medical Society

J. B. Westerfield, M. D.

Dona Ana County Medical Society

T. C. Sexton, M. D.

Grant County Medical Society

Vacancy.

Las Vegas Medical Society

C. S. Losey, M. D.

Wm. Howe, M. D.

Luna County Medical Society

S. D. Swope, M. D.

McKinley County Medical Society

H. G. Willson, M. D.

Otero County Medical Society

E. D. McKinley, M. D.

Quay County Medical Society

Vacancy.

Santa Fe County Medical Society

E. L. Ward, M. D.

Book Review

**The Clinics of John B. Murphy, M. D.
 Volume V Number 4 (August 1916)**

The Clinics of John B. Murphy, M. D. at Mercy Hospital, Chicago, Volume V Number 4 (August 1916). Octavo of 222 pages, 59 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

The August, 1916, number of Murphy's Clinics contains much valuable information along the lines of Dr. Murphy's work.

The recent death of Dr. Murphy destroys the possibility of many more numbers dealing with his wonderful work in surgery and gives an added value to the volumes which have already appeared.

This recent number is fully up to the standard of former issues and gives many points of interest and importance.

Skin Cancer

Skin Cancer, by Henry H. Hazen, A. B., M. D., Professor of Dermatology in the Medical Department of Georgetown University;

Professor of Dermatology in the Medical Department of Howard University, etc. Ninety-Seven text illustrations and one colored frontispiece. St. Louis, Mo., C. V. Mosby Co., 1916, \$4.00.

Dr. Hazen has prepared a most acceptable monograph on the subject of Skin Cancer. The importance and wide prevalence of cancer and the campaign which is now being waged to eradicate it makes the appearance of this book most opportune. The illustrations gathered from many sources are clear and the press work most acceptable.

Diseases of the Skin

Diseases of the Skin, by Richard L. Sutton, M. D., Professor of Diseases of the Skin, University of Kansas School of Medicine, etc. Six hundred and ninety-three illustrations and eight colored plates. St. Louis, Mo., C. V. Mosby Company, 1916, \$6.50.

In Diseases of the Skin, by Dr. Sutton, we have a most excellent work. There is much in the book to commend itself to the general practitioner and to the specialist in that line. The illustrations are numerous and clear and we particularly wish to commend the plates illustrating Foot and Mouth Disease. There are several other of the rarer dermatoses pictorially represented, a feature which is found

in no other work on the skin dealing with these diseases and this adds value to a most valuable book.

The press work is all that could be desired.

Diseases of the Digestive Tract

Diseases of the Digestive Tract and Their Treatment, by A. Everett Austin, A. M., M. D., former professor of Physiological Chemistry at Tuft's College, University of Virginia, and University of Texas; present Assistant Professor of Clinical Medicine, in Charge of Dietetics and Gastrointestinal Diseases, Tuft's College, etc. Eighty-five illustrations, including 10 color plates. St. Louis, Mo., C. V. Mosby Co., 1916, \$5.50.

Dr. Austin presents a book upon a subject with which the general practitioner is none too familiar. Diseases of the Digestive Tract do not receive the attention which they deserve from the general practitioner. The author tells us in his preface that his purpose has been "to tell in a clear and not too fulsome fashion the facts pertaining to our branch of internal medicine—the digestive tract—" and in this he has succeeded particularly well. A feature of this book is the attention which the author has given to the physiological chemistry of the digestive tract.

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New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, Managing Editor Las Cruces, New Mexico.

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NEW MEXICO MEDICAL JOURNAL

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The New Mexico Medical Journal

Volume XVII

OCTOBER, 1916

No. 1

E . D . I . T . O . R . I . A . L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better Journal

YOU CAN HAVE IT BY WRITING OUR ADVERTISERS: "I SAW YOUR AD IN OUR STATE JOURNAL."

FAVOR THOSE WHO FAVOR US.

The thirty-fifth annual meeting of the New Mexico Medical Society is history. A splendid meeting it was, too. The registration was the largest the society has ever had. A feature of the meeting was the joint meeting with the medical section of the Southwest Conference on Tuberculosis. Doctor Webb of Colorado Springs, Colorado and doctor Skinner of Kansas City, Missouri, contributed the leading papers for this joint meeting.

Rain marred the pleasure of the delegates, but the spirit was in no wise interfered with. The House of Delegates disposed of all matters before it and determined to use the influence of the society toward securing legislation in the line of a Board of Health law with a full time State Health Officer. This Journal believes that this is the most important step that the society has ever taken. New Mexico needs a Board of Health law that will give efficient service and we sincerely trust that

the next legislature will pass the desired bill.

Las Cruces was chosen as the next meeting place, the time to be determined by the Dona Ana County Medical Society.

A full report of the proceedings will appear in the November issue.

It is a remarkable fact, confirmed by many observations, that many physicians who have devoted considerable labor to the study of a particular disease have themselves died of that disease. One of the most interesting examples is that of John Daniel Major, born August 16, 1634, in Breslau, a physician and naturalist of no mean ability. Bitten early by the wanderlust, he studied at Wittenburg, took courses at many of the schools in Germany, and finally went to Italy where he received the degree of doctor of medicine at Padua in 1660. Returning to his own country, he resided for a short time in Silesia, and in 1661 married at Wittenburg, Margaret Dorothy, a daughter of the celebrated Sennert. The following year, his young wife was stricken with plague and died after an illness of eight days. Distracted by his loss, Major wandered up and down Europe

studying plague wherever he found it in the hope that he might discover a cure for the disease which had bereaved him. Spain, Germany, France and Russia were visited by him. He settled in 1665 in Kiel, where he was made professor of botany and the director of the botanical gardens. He made frequent voyages, however, always in quest of the remedy for plague. Finally in 1693, he was called to Stockholm to treat the queen of Charles the Eleventh, then ill with plague. But before he could render her any service, he contracted the disease and died on the third of August.

The bubonic plague of today is identical with the black death of the Middle Ages. Primarily a disease of rodents caused by a short dumb-bell shaped microscopic vegetable, the pest bacillus, it occurs in man in three forms; the pneumonic, which has a death rate of almost 100 per cent.; the septicaemic, which is nearly as fatal, and the bubonic in which even with the most modern methods of treatment the mortality is about 50 per cent. It is a disease of commerce, spreading around the globe in the body of the ship-borne rat. It is estimated that every case of human plague costs the municipality in which it occurs at least \$7,500. This does not take into account the enormous loss due to disastrous quarantines and the commercial paralysis which the fear of the disease so frequently produces.

The disease is now treated by a serum discovered through the genius of Yersin. This is used in much

the same way as is diphtheria antitoxin.

Plague is transferred from the sick rodent to the well man by fleas. The sick rat has enormous numbers of plague bacilli in its blood. The blood is taken by the flea which, leaving the sick rat, seeks refuge and sustenance on the body of a human being to whom it transfers the infection.

Since plague is a disease of rodents and since it is carried from sick rodents to well men by rodent fleas, safety from the disease lies in the exclusion of rodents, not only seclusion from the habitation of man but also from the ports and cities of the world. Those who dwell in rat-proof surroundings take no plague. Not only should man dwell in rat-proof surroundings, but he should also live in rat-free surroundings. The day is past when the rodent served a useful purpose as the unpaid city scavenger. Rats will not come where there is no food for them. Municipal cleanliness may be regarded as a partial insurance against plague. The prayer that no plague come nigh our dwelling is best answered, however, by rat-proofing the habitations of man. Modern sanitary science has evolved a simple and efficient weapon against the pestilence which walketh in darkness and striketh at noonday, and the U. S. Public Health Service has put this knowledge into practical operation and thus speedily eradicated plague wherever it has appeared in the United States.

What profiteth a man that he

gain the whole world yet lose his health?

Naturalists say that long ago the prehistoric waters were infested with a species of enormous shark which finally became extinct by reason of the workings of its voracious appetite. Thus Nature eliminates the over-fed.

The desire for ease of life and plentiful diet is universal and is the great stimulus of man and animals alike. When man becomes greedy and takes more ease and food and drink than is his share, Nature discards him.

In the race for power and place, for ease of circumstance and relief from the stimulus of hunger, the modern man is apt to forget that unless he is careful of his body he will soon be made to suffer for the infraction of Nature's inexorable physical law. With the loss in body tone comes an equal loss in mental acuity and the brain which for a time was able to operate despite the complaints of an over-fed, under-exercised, self-poisoned body, stops working.

Statisticians have discovered that the mortality rate of persons in the United States over 45 years of age is increasing. The strenuous life of today is not alone responsible for this. Lack of health-giving exercise, superfluity of diet, lack of restoring sleep, over-stimulation, the high pressure of the race for power, wealth and position, plus physical neglect,—these bring early decay. The goal is reached,—wealth is amassed, honor, position and power are just being grasped when the

apple of accomplishment turns to the ashes of dissolution. The brilliant mind becomes clouded, the steady hand is no longer accurate, the eye which once gazed fearlessly on the whole world is dimmed and it is not long before the final break up occurs. All of this was entirely preventable.

(Other things being equal it is the man who leads the well-balanced life who lasts the longest, whose work to the end is uniformly the best, he who neither over-works nor over-plays, neither over-eats, over-drinks, nor over-sleeps, he who maintains a standard of healthy diet in moderation, who offsets mental work with physical recreation, who is as honest with his own body as he is with his own business. When success comes to such an one his physical and mental condition is such that he can enjoy in peace of mind and contentment of body the fruits of his labors.

The regulations of U. S. Public Health Service state: "It is the duty of officers to maintain their physical as well as their professional fitness. To this end they shall be allowed time for recreation and study whenever their official duties will permit." If the Government regards it as essential that its sanitary experts shall be safeguarded in this way, is it not equally important to every citizen that he similarly maintain a high standard of physical integrity?

DO YOU KNOW THAT

One million two hundred thousand Americans die each year, it is estimated?

Heart disease, pneumonia and tuberculosis cause more than 30% of deaths?

Sickness lowers earning capacity?

The U. S. Public Health Service is the nation's first line of defense against disease?

Disease is the nation's greatest burden?

Sunlight and sanitation, not silks and satins, make better babies?

Low wages favor high disease rates?

A female fly lays an average of 120 eggs at a time?

It is dangerous to put anything into the mouth except food and drink?

Sanitary instruction is even more important than sanitary legislation?

The U. S. Public Health Service issues free bulletins on tuberculosis?

The continuous liberal use of alcoholic beverages lowers efficiency and menaces longevity?

Moderate exercise in the open air prolongs life?

"Mouth breathing" makes children stupid?

Fish cannot live in foul water nor man in foul air?

Smallpox is wholly preventable?

The Constitution of the United States doesn't mention health?

Procrastination in sanitary reform is the thief of health?

A book on "Exercise and Health" may be had free for the asking from the U. S. Public Health Service?

Not everybody can achieve greatness but everybody can be clean?

If you sow a hygienic habit you

reap health—reap health and you attain longevity?

Railway cars would be sanitary if it weren't for the people in them?

America's typhoid fever bill is more than \$270,000,000 a year?

The full dinner pail is the enemy of tuberculosis?

The United States Public Health Service asks:

DO YOU

Believe in national preparedness and then

Fail to keep yourself physically fit?

Wash your face carefully and then

Use a common roller towel?

Go to the drug store to buy a tooth brush and then

Handle the entire stock to see if the bristles are right?

Swat the fly and then

Maintain a pile of garbage in the back yard?

Maintain a polluted well and then

Complain about the undertaker's bill?

Think screening is too expensive and then

Blame your malaria on the climate?

Insist on sanitary cigar factories and then

Use a public cigar cutter?

Carry a fine handkerchief and then

Forget to cover your mouth when you cough?

AN IMPOSTOR

A man who styles himself B. F. Little has recently been collecting money from physicians in Oregon and Washington under the pretense of being a representative of D. Ap-

pleton & Company, the medical book publishers of New York. The man's plan is to say that he is collecting for the Western Students Benefit Association of Denver, Colo. Doctors in Payallup, Wash. and Coquille, Ore., are reported to have been his victims.

D. Appleton & Company are endeavoring to have the fact made known to doctors in the far West that this man is an impostor and has no connection whatever with their firm, and that any payments which are made to him are of course at the risk of the doctor.

Original Articles

SOME OF OUR PROBLEMS IN THE SOUTHWEST

E. F. FRISBIE, M. D.,
Albuquerque, N. M.

(Address of President, 35th Annual Session of the New Mexico Medical Society, Albuquerque, New Mexico, October 11th, 1916.)

There are many conditions dependent upon our geographical location in this great Southwest, with its most wonderful climate in the world;—in this the youngest State in the Union, with its marvelous resources still to be developed, which give us peculiar problems, as well as peculiar opportunities for moulding conditions best suited to the physical welfare of its people.

It is a virgin soil, the wondrous possibilities of which we should not overlook at the psychological moment, which for some things is *now*.

In our Society work, I find the greatest problem we have to meet is in the sparsely settled communities supporting so few physicians, and these so isolated, that County Society work is almost an impossibility. However, I am sure that much more association could be had, with enormous amount of mutual benefit, if only sufficient interest might be aroused to secure the necessary effort. If the isolated physician would give to this phase of his professional work as much attention as he does to his calls, he would find himself *even* better paid for the effort, not only in professional benefit, but in the social relaxation which helps make life worth living. The boon of companionship with our colleagues in work does much to make our professional relations more cordial.

In emphasizing the case of the isolated physicians, I do not mean to imply that the larger county societies are all that they should be. Far from it. In our own, for instance, probably the largest in the State, I regret to confess that we have an average attendance of less than half the members. Our chief neglect is in our own failure to establish a library, with a meeting place of our own, with more interest in scientific research work. The enormous saving in both books and periodicals, of which we now need individual copies, together with the obvious advantage of access to

many books of reference, would greatly stimulate medical research, the neglect of which I consider one of our greatest faults. This is one thing I wish to urge upon all members, that we do more research work, of which we are quite as capable as are our brethren in the larger centers of civilization. We should form the habit of making more accurate observations and tabulating them more methodically. In neglecting to do this, we are robbing science of a wealth of valuable material to an extent almost criminal.

We so-called *smaller* physicians are so prone to *think* "we haven't time," when, as a matter of fact, this is a purely mental state. It is a well-known fact that the most valuable scientific work is done by the busiest men, and that the busiest of us waste sufficient time each day to do much valuable scientific work.

The fundamental principle underlying all our progressive activities should be the ultimate physical welfare and upbuilding of the people of this region both now and to come. It is not an easy task, nor one that is rewarded by so much as gratitude, but we are so accustomed to this attitude towards prophylactic work that it need give us no personal concern. The service must be its own reward.

The fact is that society in general is enlarging its interest in the individual, and is beginning to show more humanitarian foresight, expressing itself in large cooperative social undertakings and restrictive measures formerly considered impossible because of interference

with personal liberty. We are fast adopting a biological point of view, which is leading us to associate biological and social forces, which in turn make for physical well being.

Because of our wonderful climatic conditions for the treatment of tuberculosis, and opportunities to do valuable prophylactic work in the anti-tuberculosis crusade, one of the problems peculiar to our geographical location is in connection with the most prominent national medical problem—Tuberculosis. In fact, the situation is such, in consideration of the large proportion of children of tuberculous parents and the danger to those of normal parents from the large number of careless and ignorant tuberculous patients in our midst as a source of infection, that unless we give this subject more attention we shall soon have a larger proportion of tuberculous children and young adults than any civilized community has a right to permit.

The tuberculosis situation in New Mexico is a very peculiar one, for in spite of the unusually large number of consumptives per capita of population in our State, there is an apathy on the part of our citizens, the public and press, and even a section of the medical profession that is very difficult to understand. This lamentable circumstance, I believe, is in no small degree accounted for by the fact that there is even yet a deplorable lack of information, so far as the public generally is concerned, regarding the actualities of the situation brought about by the enormous influx of healthseekers

into all sections of our State.

True there is in the public mind a certain vague impression that tuberculosis is something to be shunned, but of information that is definite, that is authoritative, that is really useful, there is an astonishing lack. In fact, as I go about my professional duties, I am daily impressed with the unpleasant truth that there is much more misunderstanding in people's minds about this disease than those not in daily contact with the tuberculous would believe possible. This mis-information creates a situation at once so pernicious and far reaching in its possibilities for harm that it has caused many a physician to advise a form of treatment that has worked to his patient's detriment, and has caused many a healthseeker to do things that were extremely unwise and often actually harmful.

Another equally baneful phase of the situation occasioned by the possession of this mis-information is that state of the public mind which we have come to know as phthisiophobia. This needless fear of the disease makes it clear to us that the time has come to educate the public as to what the disease is *not* and that it is quite as important to do so as it was some years ago to tell people what it is.

Now, how is this to be righted? I believe that the spread of accurate information is the answer to this problem, and farther that this can best be accomplished by the carrying out in New Mexico of the plans of the National Association for the Study and Prevention of Tubercu-

losis. This association has for years worked incessantly to disseminate dependable information on the general subject of tuberculosis. But without a strong State organization to carry out and mature the plans they initiate, all the time, energy, brains, and money expended will be in vain. The New Mexico Society for the Study and Prevention of Tuberculosis is the logical medium, and its officers are ready and willing to do their part, but they have not received the moral and financial support necessary to maintain the society on the plan of usefulness that would otherwise have been possible.

Anti-tuberculosis societies are formed primarily to fight the disease and the New Mexico Society is no exception to the rule, but without the sinews of war an anti-tuberculosis society can no more conduct a campaign of publicity than can an army invade a hostile country. That there is a very considerable demand for accurate information on tuberculosis was recently demonstrated when the society through its official organ, "The Herald of the Well Country," announced the free distribution of the American Medical Society's booklet, "What You Should Know About Tuberculosis." The secretary was swamped with requests for the booklet from all parts of this country and Canada. In fact, so great was the demand from points outside the State, that the secretary wrote a personal letter to the superintendent of each of the twenty-two sanatoria in the State, in order that they might be served

before the supply was exhausted. This one instance of the Society's work is all that I have time for, but it shows conclusively the wonderful opportunity we in New Mexico have, not only to furnish reliable information on tuberculosis, but to let the world know of our remarkably curative climate. The Society has done much. Each year it conducts the Red Cross sale; it conducts an educational campaign among the school children; it sends out press stories on tuberculosis, and many other forms of publicity; it, through its official organ, reaches practically every State in the Union.

This brings us to the consideration of the most productive field in which to concentrate our efforts to secure the best results.

The fact that tuberculosis is so largely a social and educational problem causes us to turn naturally to the public school as the rational and most hopeful field in which to work out this national problem.

If we consider it from the baser, but more convincing, financial standpoint, we may bring to the public a stronger argument for the necessity of more radical measures for stamping out this disease, which more than any other, is sapping our national vitality. Every civilized nation is coming to realize the necessity of conserving and adding to its vital resources as the only foundation for real progress.

Just a moment with statistics. The annual loss of life from tuberculosis in the United States is 150,000—probably more than all the soldiers killed in battle in all the

four years of the Civil War. Five hundred thousand people are constantly ill with the disease. More than two million children now attending our public schools will contract the disease unless *we*, as physicians, do something soon to give them greater protection than they have ever had. This is several times as many as will die of smallpox, diphtheria and scarlet fever together.

One reason why the economic loss from tuberculosis is so very great is because the majority of its victims are in the years of greatest productivity, when society has already met the cost of rearing and educating them with very little or no return for this expenditure. The average shortening of life from each case of this disease is twenty-four years, seventeen of which should have been highly productive. The average period of total disability is about three years. The annual loss in wages, medical attendance, etc., is more than one billion dollars. This is interest on a capitalized sum of twenty-two billion dollars, equivalent to an average annual tax of fifty dollars for each family in the United States,—*twice* our annual expenditure for public education and more than twice the cost of our army and navy.

When we consider that *most* of this loss is ultimately preventable, and half of it immediately so, we can readily see the necessity for immediate and efficient measures for striking at the root of the matter. That this root is the period of childhood from the ages of one to fifteen

years there can be no question. Although you are all more or less familiar with the approximate figures for the predominance of this infection at this age, a short review of them will be a most convincing argument for the importance of directing our efforts to this period of life.

Autopsies on bodies of children who have died of other causes than tuberculosis tell us of the large percentage of children who have a latent tuberculosis. Ganhofer in 1800 found the following percentage of latent tuberculosis:

0-1 yr.,	7.1 per cent.
1-2 yr.,	16.0 per cent.
2-4 yr.,	24.2 per cent.
4-6 yr.,	25.9 per cent.
6-9 yr.,	25.8 per cent.

Heubner, Cornet, Harbitz, Comby and Still give similar figures and others give even higher percentages.

Von Pirquet secured positive reaction to his test, on 693 apparently healthy children of 2—35 per cent from 2-9 years.

Medical examinations by Graucher of Paris demonstrate a high percentage varying from fourteen to seventeen per cent tuberculous. Kelynaek says twenty-five per cent are definitely predisposed, half of whom later succumb to the disease.

Most authorities now agree that nearly all tubercular infections date back to early childhood, and when they become manifest in adult life they are merely a continuation of a latent infantile tuberculosis or a tertiary stage of the disease, of which the bone and gland infections

of children is the secondary form.

Since we cannot at present prevent the infection of the infant, which probably occurs in the home, we must wage a more active campaign against the secondary stage which occurs during the years of public school life. Efforts in this direction must come through the system of medical inspection in the public schools, in which measure our State has been most unprogressive. We have an idea that this is something practicable only in large cities.

An excellent local demonstration of the need in this community of physical examination and some sort of clinical treatment connected with the schools was the clinic held by the Albuquerque Woman's Club last March, in connection with the Child Welfare Week. It was a source of the greatest surprise to all concerned to see the interest displayed by parents who wished to ascertain the physical condition of their children, as well as to note the large proportions of physical defects in great need of correction where the financial conditions prohibited private means of treatment.

The need of inspection in general is forcibly demonstrated by the results of its operation in cities where it has been established, and by the large proportion of physical defects found as a result of the examinations. These figures are almost unbelievably large but are absolutely authentic.

To review the more important ones: 50 per cent. are or have been infected with tuberculosis, of whom

10 per cent. will later succumb to the disease; 20 per cent have defective vision; 5 per cent have defective hearing; 10 per cent are suffering from grave malnutrition; 50 per cent have defective teeth interfering with health; 10 per cent. have obstructed breathing, due to adenoids or enlarged tonsils; 10 per cent. have cervical glands which need surgical attention; 5 per cent. have spinal curvature or other deformity; $2\frac{1}{2}$ per cent have organic heart lesions; and 5 per cent. are predisposed to some serious nervous disorder.

Our own country has been slow to adopt any plan of medical supervision of public schools. Russia began this work in 1871; Hungary in 1885. In this country Boston was the pioneer in 1894. New York State adopted it in 1913. At present more than five hundred American cities have some plan more or less complete for carrying on this work.

We are all too familiar with the great need of this work and with the infinite good that has been accomplished through its means to dwell long on the details. Although our methods of examination are very much less thorough than those in vogue in some of the European countries, sufficient good has been accomplished to demonstrate its need, its benefits, and its wondrous possibilities in the conservation of our national physical resources and the attainment of a higher national vitality.

One of the most important phases of this work is the system of open

air schools, which is slowly growing out of it, the benefits of which, when the plan becomes fully developed, will be infinite in its effect upon the tuberculosis problem.

This is the phase of the work which should particularly appeal to us in the Southwest for two reasons, 1, because of the larger proportion of children of tuberculous predisposition, and 2, because our climatic conditions are so much more favorable for the purpose than are those of the average American city.

The outline of the plan for improving the health of the public school children of Saranac Lake, New York, comprised the position of one physician and one nurse and an open-air room for those children recommended for fresh air treatment by the medical inspector for tuberculosis, anaemia, and some nervous conditions. Lunches were served in the mid-forenoon, of milk and biscuit.

The application of such a plan to present public school conditions in New Mexico, especially having in mind the rural schools, would very probably throw the emphasis on the position of school nurse.

Such a school nurse in her work of supervision of the health of the children could cover a wide circuit of rural schools by automobile. The outline of her work in a visit to each individual school would mean on the first visit an examination and record of each and every child. The examination to include, the general condition of the child ("well-nourished," "poorly-nourished," "anaemic," etc.), mental condition as

reported by the teacher ("bright," "stupid," "defective"), weight, examination of teeth and throat, examination of sight, examination of hearing. On the discovery of serious mental or physical defect the nurse could, through the teacher, send a written notice to the parents advising that the child be taken to a doctor.

On subsequent visits the nurse could follow up the record of children discovered to be below par on her first visit, and any other cases suggested by the teacher, and examine all new scholars. On these routine visits the nurse would also give short health-talks before each school. She would, as time would allow, get in touch with the parents and home condition of the children, by actual visits to the homes. By these home visits the instruction and influence for better health conditions in a community can cover a much wider field and more effectively, than when the nurse confines her activities within the school. In addition to these duties, the nurse, on her visits, is constantly on watch for cases of infectious disease among the children.

For the larger towns a plan, which is a trifle more elaborate, could very easily be inaugurated. It might include the part-time services of practicing physicians supplemented by the work of the nurse.

The open-air department is one of such remarkable benefit, so greatly needed here and could be so easily and simply arranged in this climate, that it is surprising that

we have remained so apathetic in the matter.

The whole subject is merely a matter of the profession taking the trouble to educate the people to understand its necessity and results in physical improvement and added safety to their children.

Our neglect of this most important age is shown by the fact that during the last thirty years the mortality among adults has decreased 50 per cent., due to more rational methods of treatment by rest, fresh air, diet, etc., while for the period of life under twenty years, the per cent. has remained practically stationary during the same time.

The solution of this problem can be attained only after generations of cooperation of medicine politics, statesmanship, industrial reform and education, of which education is not only the most efficient but the only one feasible at present.

PUBLIC HEALTH.

Aside from our very special duties in reference to tuberculosis we have as many obligations, although somewhat different, along the lines of public health in general.

We are burdened with almost no laws along these lines and will find a prolific field for prophylactic work.

Although so sparsely settled we have many a peculiar problem which is in crying need of consideration. Notably, the question of rural sanitation.

You are all familiar with the frequency of typhoid fever arising from contaminated water in isolated mountain settlements where

many times no physician is employed. The spread of all contagious disease is difficult to control among the more ignorant native population. In these matters the remedy is both educational and legislative. Both must of necessity move slowly, but the most efficient legislation possible will aid greatly.

Of course so new a State cannot have as efficient health organizations as the older States, but we can make small beginnings, and should at least look forward to the progressive idea of full time health officers, even if only a few to the state. How much we here in Albuquerque would have appreciated an expert sanitarian this summer to locate the cause of our typhoid infection.

INDUSTRIAL LEGISLATION.

Since our State has so few of the manufacturing industries we have less immediate need along these lines than probably any other State; however, we do need more than we have and should be preparing for the future needs while there is less opposition from short-sighted business interests.

The same statement may be made concerning child-labor laws and we could do much at present to prevent serious conditions from arising if the situation remains without restriction until there has been prolonged abuse.

HEALTH INSURANCE.

Health insurance is one of the most recent progressive measures for the improvement of health conditions which has been in vogue in many European countries for some years, and is being inaugurated in

this country as rapidly as such a distinct innovation could be. We may consider it too remote from our present needs to deserve any attention at this time, but its importance as a factor in improving health conditions among the working people without the pauperizing influence so often attached to the present dispensary and charitable plans for caring for the sick.

The briefest outline I can give you of the plan is to quote from the address of Whitridge Williams before the Medical and Chirurgical Faculty of Maryland:

"In Russia and England. . . sickness insurance is compulsory, and the National Health Insurance Act which Lloyd George forced upon the latter country in 1911, is in many respects a model for such legislation, and should be read by all intelligent persons.

"Under the Act, which Lloyd George prefers to call health insurance, as its object is to promote the health quite as much as to provide care for the sick, all persons, with certain exceptions, in receipt of a yearly income of \$800 or less must insure. During the period of insurance weekly payments of 9 pence are demanded, of which the State contributes 2 pence, while the remaining 7 pence are paid by the workman and his employer in proportions varying according to the amount of wages. When these are very small the entire contribution is paid by the employer, but when large, entirely by the workman.

"The funds are handled in two ways; in great part by acceptable

friendly societies, which are under strict governmental supervision; while in the case of persons who are not members of such societies, the matter is entirely in the hands of the Government. It would take more time than is at my disposal to go into the details of the scheme and I shall merely state that it provides for medical, sickness, disablement, and maternity benefits.....

"I feel that some such system must ultimately be adopted in this country, and that the question of dispensary and hospital abuse will not disappear until after it has been put into operation. Owing to our political organization, the necessary legislation must be inaugurated by the individual States, instead of being nationwide as in Great Britain."

Probably our most crying need at this moment is for adequate legislation.

For years we have incurred the just scorn of our more advanced neighbors in allowing our state to be a veritable dumping ground of the least competent members of our profession, who had not sufficient knowledge and ability to "get by" other State boards. Had it not been for the fact that our vantage point of climate attracted many men of marked ability who could not live elsewhere, the standard of our profession in this State would be exceedingly low. It behooves us to place ourselves in line to be and keep on a par with the best.

Three years ago we made a desperate effort to secure a Medical Practice Act, and allowed it to be

defeated by elaborate and expensive anti-lobbying of the national organization of Christian Scientists.

At the last session of the legislature a fairly good bill, thanks to the hard work and sacrifice of both time and money on the part of some of our members with the gratuitous services of some of the most able members of the legal fraternity, was passed by both branches of the State legislature, only to meet with humiliating defeat at the hands of our Governor by the veto route, through the most gross misrepresentation of the scope of the measure and the old threadbare cry of religious persecution.

I would like to urge that the Legislative Committee be selected after a conference with the prospective membership and ascertain before appointment whether or not they are willing to devote the necessary time for work at Santa Fe when the proposed Act is presented for action in the House and Senate. The enemies of the people will be there to fight any and all measures that provide for improved health conditions and to urge those that promote retrograde conditions, and for this reason we must select from among our membership those gentlemen who will be self-denying enough to enter upon this duty with the "do or die" spirit of American patriotism.

The next step in importance is the securing of a sufficient fund to defray the expenses of the committee membership while on this duty, as we most certainly cannot be selfish

enough to ask them for more than their time and hard, faithful labors.

It is understood upon good authority that the Christian Scientists expended several thousand dollars in their fight against good health and providing a competent attention during physical trouble, at Santa Fe during the winter of 1914-1915. We will not need so much as they and the other irregulars contribute, but in my judgment we should have a fund of approximately one thousand dollars.

Some of our members may feel that they are unable to contribute so much as five dollars to this fund, even though they should assist the cause of humanity to this extent, and for this reason I suggest that an assessment of two dollars be made for every member, with the request to those in fair financial condition to increase their remittances to ten dollars. I know of no small investment that can be productive of so much good.

If the committee membership is selected from widely separated portions of the State it would seem that its sphere of influence would be enhanced by reason of a more intimate acquaintanceship among the personnel of the legislature. This fact, coupled with the success of our former committee, with the assistance given them by some of our enthusiastic and patriotic members, in the passage of the Act at the last session, will add great weight to the requests made by the members of our committee to the law makers then assembled for action.

The new Medical Practice Act

must, in our opinion, be made as drastic as possible. The fight with the unscrupulous will be hard and bitter, no matter for what we ask; their money will be in evidence everywhere, so we may as well request all that the people of this State should have.

It should provide adequate pay for the members of the Board of Medical Examiners in order that they may take the necessary time for thorough examination of every candidate for admission to New Mexico, without financial loss to themselves. They are the principal guardians of the public health, and to them must the people turn for protection from the incompetent and unscrupulous and for this reason they should be well rewarded for their faithfulness and unpleasant labor.

Every candidate appearing before the Board for license to practice within the State should be required to submit to both oral and written examination, being given credits for each five years of practice since graduation, and no one should be permitted to take the examination who is not a graduate of at least a Class "A" school, unless the graduation was prior to the general readjustment of 1910.

The Christian Science organization is fighting all the influence being used by the medical profession for the physical uplift of the general public, and if we remain inactive they will most certainly take advantage of our passive state and put through some measure that may require years of earnest effort to

correct. Time for action is now. In fatal cases the penalty should be at the very least manslaughter and both fine and jail sentences for failure to report infectious diseases and observe the quarantine laws.

A provision to impose the most extreme penalty that is possible in the event of a fee, in any form, for the so-called "treatments," both present and absent, would do much to mitigate the evil, for if they are not permitted to openly avail themselves of the financial graft their activities will be very much lessened, and the unfortunate neurotics who come under their influence will be benefitted in every way, as will our safe and sane population by the decreased danger of contagion.

I want to emphasize the importance of good team work. To safeguard our citizens from quacks of all kinds and descriptions we must be fully prepared to fight evil with good; to fight long and hard. Right must be coupled with might.

No doubt we have all been fully alive to the need of our State for an adequate Medical Practice Act, but I am sure that most of us have had slight realization of the most deplorable lack of laws upon our statute books which are at all adequate to any modern conditions until the paper by Hon. L. O. Fullen of Roswell, read before the Chaves County Medical Society last May (and published in the *New Mexico Medical Journal*, July, 1916,) which proved a veritable eye-opener to our own legal status and lack of legal pro-

tection to lives and health of the people.

You have all had access to this article by Fullen, so I shall not take up its points in detail, but merely discuss some of the most glaring inadequacies in our medical legislation to which we should give attention in the very near future.

First of all in the matter of abortions. It is almost inconceivable that there is absolutely no penalty provided for producing abortion before the time of quickening, and it is a well known fact that *nearly all* criminal operations are produced *before* the period of quickening.

Of course, criminal work will be done in spite of all the laws that can be made, and no physician of standing among us would take advantage of the woeful lack of law on the subject—nevertheless it is a disgrace to our profession that we allow such a state of affairs to exist.

Another matter of importance to ourselves and our patients, which stands in urgent need of correction, is that of protection on the witness stand regarding professional confidences. At present we have only the common law governing the situation, according to which we may be compelled to disclose every confidence of our patient or go to jail, and most of us do not care to do either. According to the common law, we are not granted even the same treatment as our brothers, the attorneys, who *are* protected in this matter.

Still another matter of great injustice to ourselves is that of expert testimony. According to present

statute we can be compelled to give expert testimony at the rate of from one to two dollars per day.

Also, while of minor importance, but showing the obsolescence of the legal situation, we are allowed an exemption from attachment for debt, in the case of the head of a family, one horse, bridle and saddle, books—medical—and instruments not to exceed \$100. How many of us could carry on our professional work *efficiently* under *present* conditions with this equipment? This Act was passed in 1887, and at *that* time in *this* State it *may* have been adequate, but to bring the same intentions up to date would require considerable revision.

These, ladies and gentlemen, are some of the problems that confront the medical profession in New Mexico, and I sincerely commend them to you for your earnest consideration.

In conclusion, I wish to remind you that it is in *us* that the trust and confidence of humanity for the alleviation of their sufferings is placed. We are at the outpost of civilization, guarding the community against the invasion of disease, and showing the individual the right road to health.

It is our duty to be vigilant, alert, and ever watchful lest we prove unworthy of the faith that is reposed in us.

So let us be brave and fearless in the practice of our profession, and may it never be said that any member of the New Mexico Medical Society was ever craven or negligent in the performance of his duty.

EARLY SYMPTOMS OF UPPER ABDOMINAL DISEASE

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(Read before the 35th Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 11th, 12th and 13th, 1916.)

It is impossible to condense within the confines of a twenty minute paper the entire subject of diagnosis of disease of the upper abdomen. I shall therefore limit myself to certain salient features in connection with some of the more frequent disorders arising from the structures in this section of the body.

While three decades have passed since Forster uttered that metaphorical simile, "The Abdomen is the Temple of Surprise," and the fruitage of these years has been rich in surgical achievements yet today we must bow in deference and admit in humility that such is still all too true. The brilliancy of an operation depends largely upon the accuracy of the clinical diagnosis and it is not unfair to say that great diagnosticians are few in comparison to the number of those whom we may justly class as eminent surgeons. It is appalling to contemplate the volume of mistakes made by the general average when we consider that in one of the great clinics there are approximately ten per cent. of gross errors in the primary diagnosis of the clinicians and when also it is considered that the

majority of these inaccuracies occur in diseases of the upper abdomen, then indeed should we as surgeons seek with care for means to reduce and eventually eliminate those errors which the profession has been content to believe were unavoidable mistakes in clinical diagnosis.

In upper abdominal diseases it has been all too common to find an accurate diagnosis made only after some complication had drawn aside the screen and revealed the true character of the complaint and unfortunately the occurrence of this additional and oftentimes unnecessary factor signifies that an opportunity has passed when proper treatment could promise the most for the patient. For this condition there are causes: anatomic, physiologic, and clinical. Not elsewhere in the trunk cavities is there such an interlocking and overlapping of essential structure as found in the upper abdomen, especially in the right quadrant. Many of the physiological functions of these organs have been clarified only in recent years and we have reasons to believe that the physiologist will in the future contribute further knowledge that will be of no small aid in solving the clinical problems encountered in diseases of these viscera. The close anatomic association and the coordinating physiologic processes of the upper abdominal organs explain why some of these diseases present such interlocking and confusing symptomology and it is only through careful interpretation of an accurately taken case history and to no less a degree the considera-

tion of the individuality of the patient, that we may reach a clinically reasonable and logically sound diagnosis which will be post operatively correct.

The one great warning signal on the highway of health is that of pain, for this more than any other one thing will cause the individual to pause and turn from his daily routine of life long enough to consult the physician or surgeon and in abdominal disease the distribution, character and the time of onset of pain is of great value in diagnosis. Primarily we encounter two varieties of pain, the one manifested by the patient and the other brought on by the diagnostician in the course of physical examination. Unfortunately the latter does not always confirm the former and still more regrettable is the fact that the former is not uniformly confirmed by the latter. That clinical entity, pyloric spasm when occasioned by acute inflammation of the appendix will give rise to severe epigastric pain, while deep pressure over that region will not elicit the tenderness which is the usual accompaniment of inflammatory pain and only when the examiner's finger palpates the southwest quadrant of the abdomen will the patient be cognizant of the actual source of his distress.

In the distribution of pain it should be remembered that referred pain while usually traceable from the point of lesion to some other abdominal structure, as we would expect from the nerve supply of these organs, yet not infrequently

is the pain located at some point without the abdomen and more rarely, though of the utmost importance to bear in mind when working out a diagnosis, do extra-abdominal lesions cause most severe pain in locations within the abdomen. A Wasserman test of the blood and spinal fluid of a sufferer from the gastric crisis of tabes will not infrequently save the patient from an unfruitful laparotomy and, as has been the case with more than one, a careful auscultation of the chest of a patient suffering from an acute pneumonic process with referred severe abdominal pain, would have spared him the dangers of an obviously regrettable operation. No less important than the distribution is the character of abdominal pain. Obstruction of a hollow viscus occasions always severe and sometimes rhythmic pains which arise from the violent contraction of its muscular coat in an effort to overcome the offending condition; particularly true is this in acute renal and gall bladder colic and in obstructive appendicular disease, while inflammatory conditions of the serous membrane are more generally characterized by a less severe but more steady pain, although perforation of the serous covering of an abdominal organ, which may occasionally occur early though usually is a late complication of a lesion, is heralded by pain, sudden, lancinating and overwhelming and which is at first local but soon becomes general in extent and attended with marked collapse. Beckman calls attention to the fact that since

the stomach and duodenum do not often become obstructed, severe pain is rarely met with in lesions of these organs unless perforation has taken place; therefore severe colicky pain should, in the absence of the other symptoms of perforation, direct attention to structures other than the stomach and duodenum and here may be mentioned that as a rule in inflammatory lesions the more acute the ailment the more severe the pain, as if it was the S. O. S. call from the tissues in danger.

The time of the onset of pain in relation to taking of food is of striking clinical significance. The distress arising from two to four hours after the taking of food indicates, but is by no means pathognomonic, of duodenal ulcer; while the pain developing immediately upon or soon after the taking of food is likely to be more severe than from ulcer, also perhaps it may be accompanied by gas and vomiting and is indicative of a lesion outside the stomach, more likely in the bile tract or appendix and reflexly causing pylorospasm and reverse peristaltic waves of the muscular coat of that viscus.

With or without vomiting and oftentimes not directly associated with pain, nausea is probably the second most common symptom of disease of the organs of the upper abdomen. The more closely this factor is connected with pain the more probable is it the product of an acute disturbance. A persistent nausea may be the sole symptom of a low grade appendicular disease and until thor-

oughly examined be treated for an indefinite period for nervous dyspepsia. Nausea and vomiting due directly to a stomach lesion is not usually protracted but is generally relieved as soon as the stomach has unburdened itself, while the prolonged persistent type suggests gall bladder disease, tubercular lesion of the iliocecal region, tabes, pernicious anaemia or pregnancy. In these cases there may not be as large a volume of vomited matter, neither will there be afforded the same degree of relief as results in cases of peptic ulcer. Haematemesis usually signifies ulcer, carcinoma, cirrhosis of liver or trauma arising from a severe spasm of the pylorus.

Peptic ulcer, which includes both the low gastric and the duodenal types, presents certain distinctive symptoms which if searched for through the medium of a carefully taken history, a thorough physical examination, laboratory analysis and a competently interpreted roentgen examination, may be diagnosed with much certainty. Rigidity and tenderness are early symptoms and the pain is rarely referred. Occult blood may be found in the stools in the early stages and also in acute exacerbations. The presence of blood in the stools or in the vomit means an abrasion or a break of small capillaries or some of the larger vessels and in duodenal ulcer when the haemorrhage is extensive it is probable that the lesion is located on the posterior surface. In a large percentage of peptic ulcers the periodicity is a most prominent and striking symptom. Pain comes

usually from two to four hours after the taking of food. Its onset is generally earlier after a liquid meal than following a more solid one. Also according to Graham the longer the period between the taking of food and the onset of pain the lower will be found the ulcer. The daily recurrence of discomfort is noticeable at almost an exact time after the taking of food, often the distress awakening the patient in the early morning hours. The tendency for the complaint to follow the same routine of symptoms day after day and then, without change in mode of living or manner of treatment, to disappear and the patient feel and believe himself well only to be, after a few weeks or months, rudely aroused from his fondly fancied security. Many writers mention the tendency for these periods of renewed activity termed attacks, to occur in the spring and autumn and I have not seen a single case of long standing in which careful questioning did not bring out the history of this peculiarity although there may be an interval of several seasons between the attacks. Vomiting as well as pain in these cases is more noticeable during acute exacerbations and both symptoms are generally occasioned by severe pylorospasm. Gastric analysis usually shows a so-called hyperacid condition but too much confidence must not be placed on this factor as any irritation of the midgut may produce a spasm of the pylorus which results in a prolonged retention of the gastric secretions, giving rise to conditions

often erroneously termed hypersecretion and hyperacidity. In the hands of an experienced operator the roentgen ray findings when correctly interpreted will in ninety per cent of the cases make a positive diagnosis and is, next to a carefully taken history, the most valuable single diagnostic agency we possess at the present time. Any surgeon operating for suspected upper abdominal disease except in cases of emergency without a previous roentgen examination is not giving his patient the full measure of care and protection.

In gastric cancer it is impossible to make an early diagnosis from the symptomology. When the patient presents himself to the surgeon with cachexia plus anaemia, loss of weight, impaired appetite and a readily palpable tumor there is little to be done except make comfortable his few remaining months. While had the case received the early attention it deserved, a roentgen examination would probably have discovered while there was still opportunity for beneficial surgical interference, an irregularity in the stomach or an absence of peristaltic waves at the site of the lesion. It is in such cases that the general practitioner may, by early referring them to the roentgenologist and the surgeon, rob that insatiable monster of many whom it had marked for its own.

Gall bladder disease, as does chronic appendicular involvement, presents in some cases a train of symptoms which may very perfectly imitate disorders of almost any

structure within the limitation of the upper abdomen. From my experience we have thus far in this class of cases comparatively little aid except in a negative way from the X-ray, while perhaps more than in any other disease of the abdominal viscera, the case history will be found the great factor in correct diagnosis. The light attacks of gas noticeable soon after taking food, with sudden onset and short duration, eased by belching and food regurgitation, point almost unmistakably to commencing gall bladder disease but at this period of its development the symptoms may be so slight that the patient does not consult the physician and the history is only obtained when more severe symptoms have caused the sufferer to seek aid. The periods of discomfort are usually described as "slight attacks of indigestion," but come on at more and more frequent intervals and develop in intensity until the feeling of tightness early experienced becomes an actual pain which may, when it subsides, leave a soreness of which the patient will be cognizant. Pain in these cases is often mentioned as being referred to the right scapular region but careful questioning will elicit the fact, almost without exception, that the pain was first noticed in the right hypochondrium. Frequently there is associated with the pain of gall bladder disease a distinct sense of chilliness. At this stage of development there is apt to occur pylorospasm with the resulting condition which we may term mechanical hyperchlorhydria and the other symp-

toms of chronic gastric disturbance. In fact so closely may the symptomatology resemble that of a chronic peptic ulcer that a differential diagnosis is impossible except by a careful consideration of the early history and development of the case; and in this connection it should be kept in mind that actual ulcer of the stomach or duodenum may be directly caused by conditions arising from gall bladder and chronic appendicular diseases as well as from the primary foci whence, as Rose now in his work on the elective action of the streptococci so conclusively demonstrated, these lesions at times originate.

Every case calls for its own particular consideration, for gastric, duodenal, gall bladder, and appendicular disease may each in turn present a syndrome typical to any one of the others at some period of their development. So finally since in every disease of the upper abdomen an early diagnosis offers the best promise of successfully dealing with the disorder, we should by every means available endeavor to arrive at a diagnosis and apply promptly the proper treatment. We should no more wait upon a peptic ulcer to perforate than we would upon an inflamed appendix or infected tube to rupture. Every symptom of distress in the upper abdomen should receive most painstaking attention, supplementing the carefully taken history with a complete physical, laboratory and at least in every questionable case, a roentgen examination.

Propaganda for Reform

Chemotherapeutic Treatment of Tuberculosis.—In the August issue of *The Journal of Experimental Medicine* Koga, Otani and Takano report on a new treatment of tuberculosis and leprosy. Koga reports that the treatment of animals inoculated with a preparation of copper and potassium cyanide produces healing changes in tuberculous lesions. He also reports on the treatment of sixty-three cases and thinks that his preparation, which he calls "cyanocuprol," greatly improves or cures pulmonary tuberculosis in the first or second stages and even is beneficial in the third stage. Otani also gives a favorable clinical report of tuberculous cases. Takano treated cases of leprosy with "cyanocuprol" with what appear to be beneficial effects. The Japanese investigators give no clear statement in regard to the composition of the copper-cyanide preparation which they used (*Jour. A. M. A.*, Aug. 5, 1916, p. 443).

Tartar Emetic and Sodium Bicarbonate Incompatible.—The *A. M. A. Chemical Laboratory* reports that when an aqueous solution of tartar emetic is added to a solution of sodium bicarbonate a clear solution results at first, but that on standing a precipitate of antimony hydroxide is formed (*Jour. A. M. A.*, Aug. 5, 1916, p. 462).

Ambrine.—An article "War Letters of an American Woman" in the Aug. 2 issue of "Outlook" contains a glowing account of the use of "Ambrine" in the treatment of burns by a Dr. Barthe de Sandfort, Hospital St. Nicholas, Paris. Ambrine is a proprietary preparation which has been on the French market for years. It is a secret nostrum in that the proportions of the ingredients—"wax, paraffin and resin"—are not given. There is nothing original in an application of melted resin, beeswax and paraffin, although the correspondent of the Outlook seems to have been carried away with the idea that it is one of the great miracles of the day (*Jour. A. M. A.*, Aug. 12, 1916, p. 535).

Sodium Sulphate as an Antidote to Phenol Poisoning.—Sodium sulphate in strong solution is one of the best known antidotes for phenol poisoning. At one time it was erroneously thought that the antidotal effect was due to the formation of sodium phenol-sulphonate. It has been suggested that what-

ever action sodium sulphate has as an antidote for phenol may be due to some hindrance to absorption, and possibly also to added purgation. (Jour. A. M. A., Aug. 12, 1916, p. 535.)

Aspirin.—The patent on aspirin will expire next year. The Bayer Company, the American agents, view with disfavor the prospect of losing the right to the sole manufacture of acetylsalicylic acid. This may explain the campaign of publicity which the Bayer Company has inaugurated in the lay press in which the public is urged to buy the Bayer brand of acetylsalicylic acid (aspirin) only. There can be no better time than the present for the medical profession to substitute for the non-descriptive name "aspirin" the descriptive and correct name acetylsalicylic acid. (Jour. A. M. A., Aug. 12, 1916, p. 515.)

A Study of "Uterine" Drugs.—Dr. J. D. Pilcher, W. R. Delzell and G. E. Burman, working in the Pharmacologic Laboratory of the University of Nebraska Medical School, have studied the action on the excised guinea pig uterus of a number of drugs which are constituents of proprietary and "patent" "female" remedies, drugs for the value of which there is little evidence and which would have fallen into disuse but for their exploitation. The following drugs lessened the amplitude of the contractions of the uterine strips, or in stronger solutions caused a complete cessation: Unicorn root, pulsatilla, Jamaica dogwood and figwort. Somewhat less active were valerian and lady's-slipper. The drugs having very weak actions were wild yam, life root and skull-cap. Blue cohosh was most active and put uterine strips in a state of tonic contraction or tetanus. The following drugs were quite inactive: black haw, cramp bark, squaw vine, chestnut bark, false unicorn, passion flower, blessed thistle, St. Mary's thistle and motherwort. The authors are confident that the actions observed would also be produced in the intact human uterus provided the drug reached the uterus in a similar concentration but that it is improbable that the concentration of drug could ever be attained in the body. Work which is under way indicates that these drugs do not act specifically on the uterus but on smooth muscle in general and that this general action would over-

balance any favorable action on the uterus. The authors conclude that the drugs examined are practically worthless and that their use is harmful as well as futile since such use tends to perpetuate therapeutic fallacies. (Jour. A. M. A., Aug. 12, 1916, p. 490.)

Radio-Rem.—The Council on Pharmacy and Chemistry reports that those who are well informed on the subject of radium therapy are of the opinion that the administration of small amounts of radium emanation, such as those generated by certain outfits, is without therapeutic value. Having voted not to admit to New and Nonofficial Remedies any radium emanation generator which produces less than two microcuries of emanation during 24 hours, the council voted not to accept Radio-Rem outfit No. 3, Radio-Rem outfit No. 2 and Radio-Rem outfit C., each of which composition; and because the mixture is an is admitted to produce less than 2 microcuries of emanation per day. (Jour. A. M. A., Aug. 19, 1916, p. 631.)

Olio-Phlogosis.—The Council on Pharmacy and Chemistry reports that Olio-Phlogosis (The Mystic Chemical Co., Kansas City, Mo.) is not eligible for admission to New and Nonofficial Remedies. Olio-Phlogosis is to be applied externally by means of a cotton pad for pneumonia, bronchitis, pleurisy, etc. According to information sent to the Council it consists of glycerine to which has been added small amounts of essential oils, iodine, resorcinol, boric acid, quinine bisulphate and sodium thio-sulphate. The Council concluded that the claims for Olio-Phlogosis are unwarranted, that its composition is complex and irrational and that the non-descriptive and therapeutically suggestive name is likely to lead to uncritical use. (Jour. A. M. A., Aug. 19, 1916, p. 631.)

Novocain.—Novocain was introduced about twelve years ago with the claim that it was from one sixth to one tenth as toxic as cocain. Hatcher and Eggleston have recently shown that the toxicity of cocain varies widely with different individuals and with the rate of its absorption into the circulation, and that novocain shows far greater variations. The authors are of the opinion that novocain has a distinct field of usefulness, but call attention to the fact that death has followed

the clinical use of small doses and that toxic symptoms have been reported by numerous observers. (Jour. A. M. A., Aug. 26, 1916, p. 685.)

Quality of Chlorinated Lime.—J. P. Street, chemist in the Connecticut Agricultural Experiment Station, reports that of twenty-five samples of chlorinated lime (bleaching powder) which, according to the United States Pharmacopoeia, should contain "not less than 30 per cent. of available chlorin," only three were found of full strength. Eight contained but traces of available chlorin. This is a dangerous situation when it is recalled that the public as well as the medical profession puts great dependence on the disinfecting powers of this inexpensive material. (Jour. A. M. A., Aug. 26, 1916, p. 695.)

The U. S. Pharmacopoeia, IX.—The ninth revision of the U. S. Pharmacopoeia became official Sept. 1, 1916. It is a book of standards for drugs, but it is not a book of standard drugs. The pharmacopoeia includes substances which have been shown to be inert like the hypophosphites, complex and obsolete mixtures like the compound syrup of sarsaparilla, and drugs which have been tried and found wanting like saw palmetto berries. There is one great advantage in specifying U. S. P. preparations: to do so, is to invoke legal standards of identity and purity. The only way to be sure of obtaining substances of therapeutic efficiency, however, is to exercise discrimination; the pharmacopoeia is no guide to therapeutically valuable drugs. (Jour. A. M. A., Sept. 2, 1916, p. 750.)

The New National Formulary.—The National Formulary, 4th edition, becomes official September 1. It is published by the American Pharmaceutical Association. The preface says frankly, "The scope of the present National Formulary is the same as in previous issues, and is based on medical usage rather than on therapeutic ideals. The committee consists entirely of pharmacists, or of men with a pharmaceutical training, and it cannot presume either to judge therapeutic practice or follow any particular school of therapeutic practice. The question of the addition or deletion of any formula was judged on the basis of its use by physicians and its pharmaceutical soundness. The con-

siderable use by physicians of any preparation was considered sufficient warrant for the inclusion of its formula in the book, and a negligible or diminishing use as justifying its exclusion." The National Formulary contains a large number of formulas for preparations which in the main are complex and superfluous. From the pharmacist's point of view, the book is a valuable one. Physicians who have a scientific training in the pharmacology of drugs will not want it; others will be better off without the temptations offered by its many irrational formulas. (Jour. A. M. A., Sept. 2, 1916, p. 764.)

The Hypophosphite Fallacy.—The Council on Pharmacy and Chemistry reports that the introduction of hypophosphites into medicine was due to an erroneous and now discarded theory as to the cause of tuberculosis and the properties of the hypophosphites. After a review of the literature and in view of experimental work the Council concludes that there is no warrant for the use of hypophosphites in medicine, unless it be to secure the calcium effect from calcium hypophosphite and the ammonium action of ammonium hypophosphite. The Council reviews the claims made for the following and declares them ineligible for New and Nonofficial Remedies: Fellows' Syrup of Hypophosphites, Fellows, Medical Mfg. Co., Syrupus Roborans (Syrup Hypophosphites Comp. with Quinin, Strychnin and Manganese), Arthur Peter and Co., Schlotterbeck's Solution Hypophosphites of Lime and Soda (Liq. Hypophosphitum, Schlotterbeck's), The Schlotterbeck and Foss Co., Robinson's Hypophosphites, Robinson-Pettet Company, Eupeptic Hypophosphites, Nelson, Baker and Co., McArthur's Syrup of the Hypophosphites Comp. (Lime and Soda), The McArthur Hypophosphite Co. Though in general no therapeutic claims so far as the hypophosphites are concerned are made for the following, the Council held their use irrational and directed their omission from New and Nonofficial Remedies which now describes them: Borchardt's Malt Olive with Hypophosphites, Maltzyme with Hypophosphites, Maltine with Hypophosphites and Maltine with Olive Oil and Hypophosphites. (Jour. A. M. A., Sept. 2, 1916, p. 760.)

Pulvoids Calcylates.—The Drug Products

Co., Inc., New York, markets tablets under the name "Pulvoids Calcyates 5 gr." with claims as to composition which, though vague, suggest that the product is a mixture of calcium salicylate and strontium salicylate. The Council on Pharmacy and Chemistry found that there was no evidence that a mixture of the salicylates of calcium and strontium is superior to sodium salicylate and declared Pulvoids Calcyates ineligible for New and Nonofficial Remedies because unwarranted therapeutic claims were made for the mixture; because the name does not describe the unessential modification of an established remedy (sodium salicylate). (Jour. A. M. A., Sept. 9, 1916, p. 827).

Secretogen.—The Council on Pharmacy and Chemistry has reported that commercial secretin preparations examined (Secretogen and Duodenin) contained no secretin and also that secretin is inert when given by mouth. While practically admitting the correctness of the Council's findings, the manufacturer of Secretogen (The G. W. Carrick Co.) in a letter to the Council sets forth the company's claims for secretogen on a new and altogether improbable basis. Since the arguments are purely speculative, the Council reaffirms its previous action declaring this preparation ineligible for New and Nonofficial Remedies. (Jour. A. M. A., Sept. 9, 1916, p. 828.)

Arsenobenzol and Diarsenol.—The Council on Pharmacy and Chemistry reports that it found Arsenobenzol, made by the Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia, and Diarsenol made by the Synthetic Drug Company, Toronto, Canada, substantially identical with salvarsan in composition, and equal to salvarsan in therapeutic efficiency. The Council reports that these products have not been admitted to New and Nonofficial Remedies because there is a doubt as to the legality of their sale in the United States. But for this doubt as to their legal status, both products would be entirely eligible to N. N. R. (Jour. A. M. A., Sept. 16, 1916, p. 879.)

Sulfuryl Monal.—According to the label these "pastilles" contain "Sulfuryl (combined polysulphurets)" which "Liberates nascent sulphuretted Hydrogen." The A. M. A. Chemical Laboratory reports that the tablets had

the taste of licorice extract, an odor of hydrogen sulphide and that a tablet liberated about 6 c.c. hydrogen sulphide. The Council on Pharmacy and Chemistry reports that sulphides are practically ignored in modern textbooks and declared Sulfuryl Monal ineligible for New and Nonofficial Remedies because unwarranted and dangerous therapeutic claims were made for it. (Jour. A. M. A., Sept. 16, 1916, p. 894.)

Bi-Taride Tablets.—These are dark brown tablets with a strong tarry odor, sold by the Germicidal Products Corporation, New York. The Council on Pharmacy and Chemistry reports that the preparation was found ineligible for New and Nonofficial Remedies because the composition of the tablets is essentially secret, because the therapeutic claims made are exaggerated and an invitation to the public to depend on them in serious diseases and that the combination of coal tar derivatives and boric acid (said to be constituents of the tablets) is irrational. (Jour. A. M. A., Sept. 16, 1916, p. 895.)

Glyco-Thymoline and Poliomyelitis.—The manufacturers of Glyco-Thymoline are circularizing physicians, advising dependence on Glyco-Thymoline as a preventive against poliomyelitis. A report of the Council on Pharmacy and Chemistry pointed out that this preparation is simply a weak antiseptic, so feeble that even in full strength it does not kill *Staphylococcus aureus* in four hours and is of little, if any, greater therapeutic value than sterile salt solution. (Jour. A. M. A., Sept. 16, 1916, p. 895.)

Naphthalene for Automobiles.—The A. M. A. Chemical Laboratory reports that "Inajiffi" tablets are pure, or nearly pure naphthalene. The tablets are to be added to gasoline for automobiles, etc. The increase of energy produced by the addition of the tablets is probably too slight to be appreciable. Even if the addition of the small quantity advised by the dealers of "Inajiffi" did give an appreciable augmentation of energy, naphthalene might be bought in the form of moth balls. (Jour. A. M. A., Sept. 16, 1916, p. 897.)

Mark White Goiter Treatment.—The Council on Pharmacy and Chemistry reports that Mark White Goiter Serun and Mark White Iodinated Oil, submitted by the Mark White

Goiter Serum Laboratories, Chicago, was not admitted to New and Nonofficial Remedies because the sale in interstate commerce of the "serum" has not been authorized by the Treasury Department, because the statements regarding composition are indefinite and contradictory, because the therapeutic claims were not substantiated and because the routine treatment of goiter is irrational. Mark White is a veterinarian and, in association with various physicians, has exploited his treatment, at one time called "Goiterine" from different cities. In Chicago he has been associated with Dr. Rachel Watkins. (Jour. A. M. A., Sept. 23, 1916, p. 967.)

The Therapeutic Value of the Glycerophosphates.—In view of the very convincing evidence that the glycerophosphates do not possess the therapeutic properties attributed to them and are not superior to ordinary phosphates, the Council on Pharmacy and Chemistry examined the following proprietary glycerophosphate preparations: Tonols (Schering and Glatz) comprising Iron, Lime, Lithium, Magnesium, Manganese, Potassium, Quinine, Sodium, and Strychnine "Tonols," Duotonal Tablets, Triotonal Tablets, Quartonol Tablets, Sextonol Tablets, Phosphorcin Compound (Eimer and Amend), Robinol (John Wyeth and Bro.), Phosphoglycerate of Lime (Fougera and Co.), Elixir Glycerophosphates, Nux Vomica and Damiana (Sharp and Dohme). The Council reports that unwarranted therapeutic claims are made for all of these preparations. In addition the composition of Robinol and Elixir Glycerophosphate, Nux Vomica and Damiana is semi-secret, and Tonols, Phosphorcin Compound and Robinol bear objectionable names. (Jour. A. M. A., Sept. 30, 1916, p. 1033.)

Kora-Konia.—Kora-Konia is a dusting powder advertised to the medical profession by the "House of Mennen." It is claimed to be indicated in the treatment of acne, dermatitis, eczema, intertrigo, etc., and is said to possess germicidal qualities. The A. M. A. Chemical Laboratory reported that the powder essentially consists of talcum and zinc stearate in about equal proportions to which small quantities of magnesium carbonate and boric acid have been added. The Council on Pharmacy and Chemistry believes that the

extravagant and unwarranted therapeutic claims made for this simple dusting powder are likely to lead the public, as well as the thoughtless physician, to place unwarranted confidence in it and therefore declared Kora-Konia ineligible for New and Nonofficial Remedies. (Jour. A. M. A., Sept. 30, 1916, p. 1034.)

Book Review

Parke, Davis and Company have issued a "Jubilee Souvenir" in commemoration of their 50th anniversary which takes place on the 26th inst. This souvenir recounts the history of the firm from the year 1866 and is a neat, well illustrated booklet. We congratulate this reliable firm and wish for them many years more of successful business.

The Medical Clinics of Chicago.

Volume II Number II (September, 1916). Octavo 196 pages, 22 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Price per year, paper \$8.00; cloth \$12.00.

The September number of The Medical Clinics of Chicago is a particularly interesting number. Doctor Williamson contributes a most interesting report of A Case of Miliary Tuberculosis while from the clinic of doctor Abt comes a particularly timely article on Feeding the Normal Baby with Artificial Foods. Doctor Strouse contributes a study of Glycosuria in the Young which is full of information. The other clinics report several interesting cases and the issue is well up to standard.

Half a Century's Progress.

October 1916 points an epoch in the history of Parke, Davis & Co. The house was founded in 1866—just fifty years ago this month—largely upon the optimism of three or four determined men, backed by a capital that would seem insignificant today. There was nothing in its unpretentious origin to foretell the success of after-years. And by success we mean not merely material prosperity, but also that broader and more en-

during success that is based upon good-will and confidence.

Manufacturing pharmacy was then a crude, imperfect art. Bacteriology, pharmacology and biological pharmacy were as yet unborn. There were no curative sera or vaccines in those days. Prophylaxis was in its infancy. Standardization was unknown.

Fifty years have wrought marvelous changes in means and methods for the treatment of human ills. The materia medica has been amplified beyond the dreams of the earlier investigators. Knowledge of pathology has immensely broadened. The empiricism of the past has given way to rational therapeutics, and medicine is taking its rightful place among the sciences.

In all these forward movements Parke, Davis & Co. have had some part—notably as

discoverers of new vegetable drugs, as inventors of new chemical compounds, as pathfinders and producers in the field of biological manufacture, as investigators in original research, as pioneers in both chemical and physiological standardization.

The past half-century, as we have intimated, has been remarkable in its contributions to the newer materia medica. What will the next fifty years bring forward? Time alone can write the answer. Ours is a progressive age. The science of medicine has not reached its highest development. The physician's armamentarium will be further enlarged and fortified. New remedial agents will come into being. Many existing products will be improved. And with the fulfillment of these conditions, Parke, Davis & Co. (if we may judge the future by the past) are certain to be identified.

The New Mexico Medical Journal

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E . D . I . T . O . R . I . A . L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better Journal

YOU CAN HAVE IT BY WRITING OUR ADVERTISERS: "I SAW YOUR AD IN OUR STATE JOURNAL."

FAVOR THOSE WHO FAVOR US.

A recent investigation made by the U. S. Public Health Service in connection with studies of rural school children showed that 49.3 per cent had defective teeth, 21.1 per cent had two or more missing teeth, and only 16.9 per cent had had dental attention. Over 14 per cent never used a tooth brush, 58.2 per cent used one occasionally and only 27.4 per cent used one daily. Defective teeth reduce physical efficiency. Dirty, suppurating, snaggle-toothed mouths are responsible for many cases of heart disease, rheumatism, and other chronic affections. The children are not responsible for the neglected state of their teeth. The ignorant and careless parent is to blame for this condition—a condition which hampers mental and physical growth and puts a permanent handicap on

our future citizens. School teachers can and are doing much in inculcating habits of personal cleanliness on the rural school child but this will fail of the highest accomplishment unless parents co-operate heartily and continuously. This is a duty which we owe our children.

NEW HEAD FOR FRANK S. BETZ CO.

Mr. Louis R. Curtis, Formerly of St. Luke's Hospital, Chicago, Elected President of Well Known Surgical Instrument House

Considerable interest has been aroused in medical circles by the announcement of the election of Mr. Louis R. Curtis, for 18 years Superintendent and Secretary of St. Luke's Hospital, Chicago, as president of that institution.

Mr. Curtis was born in 1865 in Philadelphia. He obtained his college training at Stevens, graduating as mechanical engineer. In 1889 he entered the hospital field as Assistant Superintendent of the New York Hospital. During that period he attended medical college, not with an idea of practicing, but to better fit himself for his hospital work. From the New York Hospital, Mr. Curtis went to the General

Hospital of Elizabeth, New Jersey, staying there for about one and one-half years. From there he came to St. Luke's Hospital, Chicago, as Superintendent and has been the dominating figure in that institution, both as Superintendent and Secretary, until recently, and is now Vice-President in charge of the operation of the institution. During the last years Mr. Curtis has also been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experience among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Mr. Frank S. Betz, under whose control the concern bearing his name assumed its present proportions, will continue with the company as chairman of the board of directors and give the organization the benefits of his long experience and training. His many and diversified interests are given as reasons for his retiring as active head of the company.

Items Concerning the Profession in Roswell.

The Chaves County Medical Society has gone back to a modified "old plan" of conducting the society work, after following the A. M. A. plan of weekly meetings about six years, so, hereafter the Journal may expect some good papers from Roswell.

The meeting nights of the Society are the 2nd and 4th Thursday nights in each month and any physician who may be visiting in Roswell on either of these nights is cordially invited to be present.

Dr. R. L. Bradley, an enthusiastic member of the society is in New York doing post-graduate work and will take occasion while in the East to attend the meeting of the Clinical Congress of Surgeons of North America to be held in Philadelphia Oct. 23 to 28.

Drs. Kinsinger, Pressley, Joyner, Fall and Crutcher attended the recent meeting of the N. M. M. S. in Albuquerque.

Dr. H. A. Ingalls, a member of the C. C. M. S., is with the New Mexico troops on the border.

Dr. Yater has assumed control of the Evans rooming house, 310 N. Richardson avenue, and has transformed it into a nice little hospital and has made especial facilities for the care of obstetric cases from out of the city, an enterprise that has long been needed in Roswell. The hospital is open to the reputable profession for the care of any sickness other than highly infectious cases.

Rain, mud and slush is the order of the day now in Roswell and unless you want to sink out of sight you would better stay on the paved streets, of which, thanks to our enterprising citizenship, we have quite a supply.

Mrs. Yater, wife of Dr. C. M. Yater, and her son, Max, are visiting friends in El Paso.

NEW MEXICO MEDICAL SOCIETY

Thirty-Fifth Annual Meeting, Held at
Albuquerque, New Mexico,
October 11-13, 1916.

Minutes of the House of Delegates.

The first meeting of the House of Delegates was held in the rooms of the Commercial Club October 11th, 1916. President Frisbie called the meeting to order with a quorum present representing the Bernalillo, Chavez, McKinley, Santa Fe county and the Las Vegas Medical Societies.

The minutes of the 1915 meeting were approved as printed in the Journal.

The secretary read his report.

Doctor Joyner moved to amend Section 2 of Chapter 5 of the By-Laws by changing the word "last" in the 5th line to the word "second."

The amendment, on motion duly seconded and carried, took the usual course.

On motion duly seconded and carried a committee of three, consisting of Drs. H. G. Willson, E. L. Ward and W. E. Kaser was appointed to consider a certain communication from the Indian Service Association.

After discussion and on motion duly seconded and carried a committee of three consisting of Drs. W. T. Joyner, G. S. McLandress and M. K. Wylder was appointed to consider the question of social insurance.

The House then recessed until 2 p. m.

Wednesday Afternoon, Oct. 11.

The House of Delegates met at the Commercial Club and was called to order at 1:30 p. m. by President E. F. Frisbie.

On roll call, a quorum was found to be present.

Secretary McBride read the following report from the Council:

To the House of Delegates: The Council of the New Mexico Medical Society having examined the accounts of the Society and of the Journal of the Society beg to report that it finds a balance to the credit of the Society on hand, \$63.80; and that there is outstanding against the Journal bills to the amount of \$48.66; that there is due the Journal bills receivable to the amount of \$111.89, leaving a balance to the credit of the Journal of \$63.23; and that it finds the accounts correct.

(Signed) L. S. PETERS,
W. E. KASER.

On motion of Dr. W. G. Hope, duly seconded, the report was approved as read.

The following proposed amendment to the Constitution came up for action:

Article 9, Section 1. Amend by adding after the words "shall be" the word "President-Elect," and changing the word "three" before the word "Councilors" to the word "five," the Section to read:

"The officers of this Society shall be a President-Elect, a President, three Vice-Presidents, a Secretary, a Treasurer and five Councilors."

Moved by Dr. Hope that the amendment be adopted as read. Seconded and carried.

After some discussion as to the terms for which councilors might be elected, Dr. Joyner moved to reconsider. Seconded and carried.

Dr. M. K. Wylder moved to amend by striking out the word "five" in the proposed amendment and substituting the word "three." Seconded and carried.

The President declared a recess until 9:00 a. m. October 12th.

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**Third Meeting—Thursday Afternoon, Oct. 12.
Commercial Club.**

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Called to order at 1:30 p. m. by 2nd Vice President J. W. Kinsinger, of Roswell.

On roll call, a quorum was found to be present.

The next order of business was the consideration of the following proposed amendment to Section 2, Chapter 5 of the By-Laws:

To substitute for the word "last" in the fifth line, the word "second."

On motion of Dr. M. K. Wylder, seconded by Dr. H. V. Fall, the amendment was adopted.

Dr. W. T. Joyner moved that the House of Delegates proceed to the election of officers. Seconded and carried.

Dr. Joyner placed in nomination for President the name of Dr. C. S. Losey, of East Las Vegas. Dr. G. S. McLandress moved the nominations cease and Dr. Losey be elected by acclamation. Seconded and carried.

As President-Elect, Dr. Joyner nominated Dr. J. W. Kinsinger, of Roswell. Dr. H. A. Miller moved that nominations close and Dr. Kin-

singer be elected by acclamation. Seconded. Carried.

—

Minutes of the House of Delegates

Dr. Wylder nominated for 1st Vice-President Dr. C. A. Frank, of Albuquerque. Moved by Dr. Fall that the nominations close and Dr. Frank be elected by acclamation. Seconded and carried.

As 2nd Vice-President Dr. Miller nominated Dr. F. H. Crail, of East Las Vegas. Dr. Wylder moved the nominations be closed and Dr. Crail elected by acclamation. Seconded and carried.

President E. F. Frisbie took the chair.

Dr. Lukens nominated for 3rd Vice-President Dr. H. V. Fall, of Roswell. Dr. Miller moved the nominations cease and Dr. Fall be elected by acclamation. Seconded. Carried.

Dr. F. H. Crail placed in nomination for Secretary the name of Dr. R. E. McBride, of Las Cruces.

Dr. McBride spoke as follows:

"Gentlemen, I think the time has come to make a change. I have served to the best of my ability and I have been glad to be of service to the Society. I feel that I have not only been privileged but honored, and I ask now to be relieved. I believe the Society will do better by electing some one else. I do not feel that I can carry the work successfully any further as your Secretary, and I should very much prefer that you name some one else. I am not unminful of the honor which you increases in honor as the years roll by and reelection after reelection

follows, but I would rather that you would elect some one else.”

Drs. Wylder and Joyner urged that no change be made at this time in the office of Secretary.

Dr. F. E. Tull moved that nominations close and Dr. McBride be elected by acclamation.

Dr. McBride then said:

“Gentlemen, for five years I have been begging the Secretaries of the County Societies for reports, for five years I have been begging the Councilors for reports, and how many reports have been submitted? I cannot carry this Society longer unless I have the support of the Secretaries of the County Societies and of the Councilors. It is too much to ask one man to do. I do not say that I will not do it, but I cannot do it. It is not that I am not willing to work, but the fact is that during the last year over 2,500 letters went out from my office on Society and Journal business and when I say to you that only ten per cent. or barely ten per cent. have had a reply I am telling you the actual truth. Now I cannot carry the Society, I simply cannot do it. I have my private practice and from my private practice I must make my living, and there is many a night that I have to work till twelve, and one or two in the morning with this work. If it were productive of results, I would not complain. It is not a question of salary. I am willing to serve, perfectly willing to serve, but I have felt at times that I did not have the moral support and the backing of a single man in the Society, not even in my own County

Society, and I tell you that is not a pleasant feeling. That is the situation. I am not unmindful of the honor and I would like to stay Secretary of the Society as long as I am able to carry on the work, but I want to feel that the spirit back of me is one that makes for progress and the betterment of the Society.”

Dr. Miller urged that each Delegate endeavor to create a spirit of interest among the County Societies in support of the work of the State Society.

Dr. Joyner seconded the motion of Dr. Tull. Motion prevailed.

Dr. G. S. McLandress nominated for Treasurer Dr. F. E. Tull, of Albuquerque. Dr. Miller moved that the nominations close and Dr. Tull be elected by acclamation. Seconded and carried.

As Councilor (three-year term) Dr. Joyner nominated Dr. G. S. McLandress, of Albuquerque. Dr. Wylder moved the nominations closed and Dr. McLandress declared elected by acclamation. Seconded. Carried.

On the Scientific Committee, Drs. J. R. Van Atta, of Albuquerque, and F. W. Noble, of Tucumcari, were nominated. Dr. Wylder moved the nominations closed and Drs. Van Atta and Noble elected by acclamation. Seconded and carried.

Dr. Joyner moved that the Thirty-Sixth Annual Meeting be held in Las Cruces, in order that the southern part of the state should again be visited by the Society. Seconded and carried.

Secretary McBride assured the members of a cordial welcome at

Las Cruces.

Dr. Joyner offered the following amendment to the Constitution:

Article 9, Section 1. Officers of this Society shall be a President, a President-Elect, Three Vice-Presidents, a Secretary, a Treasurer, and six Councilors.

Article 9, Section 2. Amend by substituting the words "two Councilors" for the words "one councilor" in the seventh line.

Dr. Wylder moved that the amendment be received and take the usual order. Seconded and carried.

Dr. W. E. Kaser read a draft of a proposition proposing a combination of the New Mexico Medical Journal, the Arizona Medical Journal, and the El Paso County Medical Society, and spoke in explanation of the proposition.

The following discussion took place.

DR. H. A. MILLER: Madam President, Members of the House of Delegates. As junior member of the Council, I wish to protest against this combination. The idea is this: New Mexico is a pioneer state, our Journal possibly is in a pioneer condition; but New Mexico has a future before it and we are going to develop. We have as much brains in New Mexico as they have in other states. Dr. McBride has said that he is trying to stimulate the members of the State Society to furnish articles for the Journal. Why cannot we use the idea of this being a state journal to stimulate the pride and the interests of the members? If we enter into a com-

bination, it is only a question of time when the publication of this Journal will be taken to El Paso. For my part, I am sincerely in favor of maintaining the New Mexico State Journal for the Society and by the Society. However, I am willing to abide by whatever the majority rules."

Discussion followed in regard to details of the proposed combination.

DR. CRAIL: Madam President, last evening and for some time it has seemed to me that it would be a desirable thing to have this combination journal, but the more I have thought it over the less I think of the plan. Dr. Miller says we are in a pioneer state, but is there a reason why New Mexico should not be as populous and have as many physicians in the course of a few years as Colorado has and Arizona? When that time comes these two states will far outrank the El Paso County Medical and an equal representation upon a board controlling the journal would be hardly fair. If we enter into an agreement now it will be very hard to change it in the future; it would be just as hard to get away, when, in the future, an individual state journal seemed desirable, as it would be now in all probability to enter into it. Again, at this time the Arizona Medical Journal is defunct. They have no journal, and the only reason that New Mexico has a journal is because we have an editor that makes us one. We are not insolvent, we have a little money, and it seems to me that if at the present time and

as things have been in New Mexico for the last four or five years we can support a journal and be sixty dollars ahead of the game now there is no reason why in the next five years we should not have a much better journal than we have now. For that reason it seems to me it would be very wise to at least hold off on this.

DR. KASER: I want to make clear the position of the members of the Council. Dr. Miller was not here yesterday afternoon. I do not wish you to feel that I am fathering this particular arrangement. You remember that yesterday none of you made any objection and when we drew up this agreement we considered that we were carrying out the wishes of the House of Delegates, but there was no formal action taken. Now regarding the Journal I wonder if you have read the last number. It is getting harder instead of easier to get out a journal and I think Dr. McBride can make that point clear.

SECRETARY MCBRIDE: Yes, it is getting harder. The last number carried only the program and a few little things; in the first place, we had no other material to put into it, and in the second place we did not have any money to pay for it, actual money in hand; but by the publication of that Journal we increased our resources about seventy dollars. It practically paid for itself and left something over, as the last issue cost about half what it usually costs. I also believe that some of the things which have held us back in the past will not do so in the fu-

ture and that we shall begin to receive more support from the national organization a little later on. My firm belief all along has been that a combination properly worked out would be for the best interests of everybody, but I am free to confess to you gentlemen now, as I have said along, that I am not satisfied the present combination is *the* combination. Without going into into details I may say that while the men from Arizona have come up here and asked us to go into it I do not believe, if we went to El Paso with the proposition, that it would be accepted. I do not believe, however, that the proposition would meet with the opposition it would have encountered six months or a year ago.

The whole question now is whether we want to give up the ten years' work that the Journal has cost for the potential value that is between the lines of this contract. I do not like to take a definite stand one way or the other, because I have already been accused of being the stumbling block in the way of this proposition and I do not want my Society to feel that I am holding it back from the combination, a combination which if worked out would broaden the scope and the influence of southwest medicine, I feel sure, but whether it will work to equal advantage in New Mexico, Arizona and El Paso I do not know.

DR. JOYNER: When this was first mentioned I thought rather favorably of it. The more I think of it, the more doubtful I am becoming as to whether it is best for us to

enter into it at this time. I have had something to do with the Journal as Councilor at a critical time in its life, when it was practically defunct. We now have a better journal and are in better financial condition. The proposition is that after putting in all of this effort to build up a state journal, we should have representation with a defunct journal and the bulletin of a county medical society, and we would eventually be submerged I am afraid. So I think I will vote against any proposition to make a change this year.

Dr. Joyner then moved a recess until 9:00 o'clock the following morning. Seconded and carried.

**Fourth Meeting—Friday Morning, Oct. 13.
Commercial Club.**

Called to order at 9:30 a. m., 1st Vice-President C. S. Losey in the chair.

On roll call a quorum was found to be present.

Secretary McBride read a telegram received from Dr. Carpenter, of El Paso, stating that he did so in order that the delegates might have all the facts bearing on the proposition of combination of journals.

(Here insert telegram.)

Dr. Fall moved that the proposition for combination be referred to the Council with the recommendation that it be not accepted at this time. Seconded and carried.

The Chairman appointed Drs. McLandress, Fall and Miller as a committee to draw up suitable memorials on the deaths of Doctors

Blair, Osuna, Sands and Connett.

Dr. Joyner, as Chairman Committee on Social Insurance, submitted the following report:

To the President and House of Delegates of the New Mexico Medical Society:

We, your Committee appointed to look into the matter of social insurance, beg leave to report as follows:

We recommend that the President be authorized to appoint a state committee of three members on social insurance.

(Signed) W. T. Joyner,
G. S. McLandress,
M. K. Wylder.

On motion of Dr. Kaser, duly seconded, the report was adopted.

Dr. Kaser, as Chairman of the Committee on Indian Service Resolution, read the following report:

To the President and House of Delegates of the New Mexico Medical Society:

Your committee appointed to report on the Indian Service Resolution beg leave to recommend the endorsement of the request of the Secretary of the Indian Medical Service Association and the passage of the following resolution:

Whereas it has been brought to our attention that the organization, pay, perquisites, and opportunities of the employes of the Indian Medical Service are deplorable and much below those of the other governmental medical services, and

Whereas this condition of affairs is necessarily reflected in the work of the organization;

Be it Resolved that it is the sentiment of this Association that the

Indian Medical Service should be reorganized and improved, possibly by being merged with the United States Public Health Service.

On motion of Dr. Joyner, duly seconded, the report was adopted.

The Chairman appointed the Secretary a committee of one to prepare suitable resolutions of thanks to the local medical society and other local bodies for courtesies shown.

Dr. Kaser reported for the Committee on Public Health and Education as follows:

There were five on this committee. We have never had an opportunity of meeting. This has been the only opportunity in the past year to get together at all, and at this meeting there are only two of us present. So we can make no report that is binding. Any report made now expresses only our individual opinions, not those of the committee.

This is a committee on public health and instruction, as we understand it, and not a legislative committee, though at the time of our appointment the understanding was that to some extent we took over the duties of the old Public Legislation Committee, so naturally public legislation has come up in our discussion.

It has seemed to us that at the coming Legislature a law relating to public health might opportunely be presented. We have at present, as you all know, a State Board of Public Health and Medical Examiners, the duties of which are expressed in vague terms. The coun-

ties are authorized to appoint county health officers to act under the direction of the county commissioners and to carry out the directions of the State Board of Health. That is as close as our relations are. What we would like to get more particularly, it seems to me, is a closer relation between the state officers and the county health officer. Our public health activities altogether devolve upon the county health officers.

Our Board is a mixed board, and there has been a question as to whether it would be better in case such public health legislation passed to have a separate board of public health or to continue the old Board of Public Health and Medical Examiners. The argument, to my mind, in favor of continuing the old Board is that by appointing a new Board the number of appointive offices is increased and our state list is already rather large. Of course, if you have a single Board you separate altogether the activities of the Board of Medical Examiners and to that extent, perhaps, we escape a certain opposition that we might otherwise encounter from those forces that have been working against the medical profession in this state for some years.

No public health law can be administered without an appropriation—that follows as a natural course—and we suggest that in the coming law an appropriation be provided for and the employment of a full-time state health officer. With some such officer, the activi-

ties of the county health officers can be correlated and you can get some teamwork, which you cannot do now; your state health officer can see that the county health officers are appointed, as in some counties no health officer is appointed at this time.

I do not wish to go further into detail, as it seems to me that the law to be made should be a broad law, giving power to the state board to make any detailed regulations.

Two other fundamental laws are those of vital statistics and morbidity reports. No real work can be done by a health office unless those laws are enforced. We would suggest, therefore, the adoption in a modified form of the model vital statistics law and the model morbidity law of the Public Health Service.

We suggest, too, the appointment by the President of a Legislative Committee as a sub-committee, as we do not feel that we are the Legislative Committee, this committee to concentrate their efforts on the passage of a public health law; and that no action be taken by this Society or its committees for the passage of any Medical Practice Act at this time.

Adoption of report moved by Dr. Miller. Seconded and carried.

Dr. Steed moved as follows: That the Committee on Public Health and Instruction be and is hereby instructed to prepare a suitable board of health bill embodying the ideas as expressed in the discussions, particularly the necessity for a full-time state health officer and

sufficient appropriation to cover the necessary expenses of the office of the state health officer; and that an appropriation of fifty dollars (\$50.00), or so much thereof as may be necessary be and is hereby made out of the funds in the treasury of this Society to cover the expenses of the preparation of this bill. Seconded and carried.

On motion of Dr. McLandress, duly seconded and approved, the Secretary was instructed to pay all legitimate bills for expenses in connection with the annual meeting.

Dr. Kaser moved that the Society should out of its funds turn over to the Journal of the Society one dollar and fifty cents per capita, instead of the one dollar per capita heretofore transferred to the Journal by the Society; this not to increase the dues. Seconded and carried.

Secretary McBride reported that the Treasurer's report was not at hand, but that there was in the treasury the sum of \$417.00.

On motion, the House adjourned sine die.

Minutes of the Council.

Friday Morning, October 13th.

The Council met with all members present, and was called to order by President Losey.

On motion of Dr. Miller, seconded by Dr. McLandress, Dr. Kaser, senior member, was made Chairman of the Council.

The Chairman called for nominations for managing editor during the ensuing year.

On motion of Dr. McLandress,

seconded by Dr. Losey, the name of Dr. R. E. McBride, of Las Cruces, was placed in nomination.

Dr. Miller moved the nominations cease and Dr. McBride be declared elected by acclamation. Seconded and carried.

Moved by Dr. Miller that the managing editor be authorized to take such steps as he might see fit in an effort to obtain appointment of the New Mexico Medical Journal as official organ of the El Paso County Medical Society and of the Arizona Medical Society under the conditions as outlined by him to the Council. Seconded and carried.

On motion the Council adjourned *sine die*.

Original Articles

A FEW SUGGESTIONS TO LIFE INSURANCE EXAMINERS.

C. A. FRANK, M. D.,
Albuquerque, N. M.

(Read before the Thirty-Fifth Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 11-13, 1916.)

A physician who is appointed a medical examiner for an insurance company should feel highly honored and a deep sense of responsibility to the company should be uppermost in his mind.

The success of an insurance company depends to a large extent on its medical examiners.

Realizing thus the dignity and importance of their position and

the confidence reposed in them, they should be alert to the situation and assume the trust bestowed on them in the same spirit that the medical department exhibits in its bestowal.

The qualifications necessary for an examiner are many. He must be a man of culture and refinement, possess an irreproachable character, and be a skillful tactician.

His knowledge of diagnosis and prognosis should be of a character required to detect the smallest deviation from the normal.

The selection of insurance risks depends chiefly on the efficiency of the medical examiner, hence he should be careful and conscientious, remembering always that his work will have a far reaching effect both on the company and on the policyholder. The examination should be conducted in private, and the place where the examination is made should be free from noise.

The age of the applicant is very important; if he appears older than the age stated it may indicate some serious condition, it may be due to overwork or strain, dissipation, business worry, or some deep seated disease.

The immunity of certain races from, or their susceptibility to particular diseases is well known, and inquiry as to nativity is very important. The fact that a man is an American does not always signify that he belongs to the Caucasian race, as he may be an Indian or a Negro, but many examiners answer this question as to the race of the applicant by "American." The

general appearance of the applicant will give a comprehensive conception of the man from the facial expression, physique, manner, gait, and external appearance. A person with a tall thin body is more likely to be a victim of tubercular disease. A person with a short thick body is prone to apoplexy and obesity.

The elucidation of the family history is one of the difficult problems for the examiner. In many cases this is caused by a want of definite knowledge on the part of the applicant; again a desire to conceal that which he regards as dangerous to his best interests is an obstacle met by those of large experience. A knowledge of the family history enables us to arrive at an approximate estimate of duration of life in the family. We learn also of any previous predisposition to particular diseases and degenerations and the time of life when they have occurred. The medical history of the applicant is of great importance and is probably the chief foundation-stone upon which the medical director bases his decision.

Specific answers to direct questions must be insisted upon and evasive answers cannot be accepted. The points to be determined are whether the disease has appeared more than once; for some are notably recurrent or prone to chronicity. In this class may be included asthma, gout, gall-stones, pneumonia, malaria, and rheumatism.

In other diseases such as syphilis, gonorrhoea, articular rheumatism, and scarlatina, sequellae have an unfavorable influence on life, be-

cause these secondary changes cause degenerations and disturbances of nutrition which may destroy life prematurely. In reference to the lungs the disease most often followed by serious results is pleurisy; this is not only on account of sequellae, but because the cause leading to the development of the pleurisy makes the prognosis grave.

When there is a history of acute articular rheumatism, the heart must be carefully examined, for endocarditis occurs in about one-fourth of all cases.

The great mortality resulting from diseases of the lungs and heart is well known to those interested in life insurance, and in view of this fact great care must be exercised in the examination of these organs, in order to detect these diseases in their incipency. The value of an examination of the chest depends on the accuracy of the examiner's knowledge of the topographical anatomy of the parts, with a knowledge of the normal sounds and the precise interpretation of the adventitious and abnormal sounds. It is presumed that all medical examiners are fully competent to detect any abnormalities of the chest, and I will not attempt to elaborate on the subject further.

A careful examination of the urine is of the utmost importance in life insurance examinations, as this secretion is an index of the metabolic changes occurring in the body. A persistent increase or decrease from the normal amount is to be considered pathological. A persistent increase with low specific

gravity is present in chronic interstitial nephritis and diabetes insipidus, and with high specific gravity in diabetes mellitus. A decreased amount of urine is found in acute Bright's disease, chronic parenchymatous nephritis, cirrhosis of the liver, and valvular lesions of the heart. The importance of the detection of albumen, particularly in small quantities, or when only a trace is present, is apparent to all examiners.

The urine should always be filtered before applying any of the tests for albumen. The tests usually employed for the detection of albumen in the urine are Heller's nitric acid test, and heat, ferro cyanide test, and the Roberts test.

As some examiners may not have access to these formulas I will give them here.

The Roberts or salt and acetic acid test is used by adding one sixth of the volume of urine to a saturated solution of chemically pure sodium chloride; after thoroughly mixing the solutions, add from three to six drops of acetic acid, then boil. This is considered the most reliable test, as any cloudiness or precipitate is serum albumen, and this test should be used in all doubtful cases.

The ferro cyanide test will also show traces of albumen, and is used by adding to a test tube one third full of urine, a like amount of a five per cent solution of ferro cyanide of potassium; mix the solutions and add a few drops of acetic acid; if albumen is present a milky turbidity appears.

While there is so-called function-

al albuminuria, it must be remembered that at or beyond middle age minute quantities of albumen may mean serious kidney disease, and furnish the unprofitable side of life insurance, and that these cases are generally robust and apparently in good health.

This subject is of such vital importance that all insurance examiners should equip themselves with these reagents, namely, the ferro cyanide, and the Roberts tests, as by the older methods the examiner could not be absolutely sure of his findings as they precipitate other substances besides albumen, and cannot be relied upon to show minute traces. For the detection of glycosuria, we have two reliable tests, Fehling's and Haines's. With freshly made solutions, Fehling's test is reliable, provided about the same amount of urine is gradually added, as the quantity of the reagent used. Haines's solution is preferred by most examiners as it is much handier, being only one solution that will keep for a long time. An important point in using Haines's solution is that only about five or six drops of urine should be added, as a larger quantity of urine, even if normal may give a positive reaction; this point is often overlooked by medical examiners.

For the past few years a great many insurance companies have required blood pressure readings as a part of the examinations, and recently the requirements include also the diastolic reading as well as the systolic.

It is, therefore, necessary that all

examiners supply themselves with a reliable sphygmomanometer and acquire the necessary skill in the use of this instrument. The systolic pressure can be taken by palpation and the diastolic read from the instrument by the oscillation of the indicator. The more accurate way of taking blood pressure, however, is by auscultation with the aid of the stethoscope. The method is fully explained in the text books, and also in the booklets which are sent out with the instruments.

I wish here to say a word about the responsibility of the examiner. He is the representative of the medical department of the company employing him, and is expected to guard the interests of the policyholders, and should never lose sight of this fact. He is not the representative of the agent nor of the applicant, but stands first and last for the safety of the company.

The primary presumption of good health of the applicant does not release the examiner in the slightest degree of the necessity of making a thorough and careful examination; the company does not demand physical perfection, but it does demand average good health.

There are many apparently trivial matters that if improperly handled may cause necessary delay in issuing the policy, and in this way may be the means of doing great harm to the applicant and to the company.

It should be remembered that all applications should be written in ink, all questions are to be fully answered, no blank spaces left un-

filled, and no ditto marks used. If a correction be necessary the examiner's signature or initials must be attached as evidence that the correction is in his own hand, and not the result of some improper or dishonest effort to change the answers or figures. The examiner must under no circumstances examine relatives or a person in whose acceptance for insurance he has a pecuniary interest. Examinations should be made in private; no third person should be present or within hearing during the examination, except the mother in the case of unmarried women, or an interpreter should he be needed; and the presence of either of these should be noted in the space for that purpose. The application of one who is suffering from any indisposition should not be sent forward. In such a case it is best to complete the examination as far as possible, and after securing the applicant's signature, hold the papers until he entirely recovers, notifying the company that the application is held, and for what reason.

If the examiner has any delicate or confidential matter to report in connection with an examination, he should mail it to the medical department of the company under separate cover; such correspondence is always solicited and the obligation of secrecy is in every instance observed.

A medical examiner for a life insurance company occupies an important and responsible position in the medical field today. This branch of medical science has developed into a specialty, and in order that

the demands made on the examiner may be fulfilled it is essential that he should possess special knowledge and have qualifications rendering him capable of meeting these requirements.

The writer has prepared this paper with the purpose of placing before the examiner some of his particular duties and difficulties, and to impress on his mind the necessity of perfecting himself in his work so that he may adequately protect the insurer and do justice to the insured.

Discussion.

DR. G. K. ANGLE, Albuquerque: I would like to ask the Doctor one question, and would like to add one suggestion. The question is, how does he proceed to get a specimen of urine in the case of a woman and have it so identified. I have not been instructed how to proceed in that regard.

Then I would like to make the suggestion that if an insurance examiner's time is worth anything it is worth a five-dollar bill and that fee ought to be charged.

DR. F. W. NOBLE, Tucumcari: In regard to the identification of specimens, it is easy to identify a specimen, in the case of a female, if you happen to have a nurse present during the passing of the urine.

I have been using a different solution than that Roberts' solution. The one that I use is a saturated solution of magnesium sulphate, to which ten per cent nitric acid is added. There is some discrepancy between my Roberts' solution and the Roberts' solution of the speaker.

DR. J. F. PATCHIN, Albuquerque: I was very much pleased with the paper. In making these examinations, I find a good deal of trouble from people coming in soon after a hearty meal, also from patients who have been smoking, since both these conditions, of course, make a great deal of difference in the pulse.

In regard to the urine, it is rather a hard

proposition, if the question is asked definitely, "Do you know that the patient passed the urine?" Well, you either have to shut them up in a room, give them a bottle and funnel, and if no one else is there it must be that person's, or take their word for it. I have been deceived in a few cases. I had one patient who presented a specimen in a very nice way. I said, "If you cannot give me a specimen now, send it up." Well, she got hold of a nice perfume bottle, and I don't know whether there was any urine in it. So I told her that I could not examine that for urine and I guess the hint was taken that I was not fooled that time.

It is important to remember in examination that after full meals, it makes little difference what the patient has been eating or drinking, there is an effect on the pulse, and you have to look for that. All these things come up in examination for life insurance, and I think so far as bad risks are concerned the habits of a man are sometimes of a great deal more hazard than some chronic disease might be. A man with a chronic disease might perhaps live a long time. In regard to the class I have mentioned I think that if you take the history of thirty years or more you will find that they are not very good risks for insurance and you will lose as much on that class as on those who have some little physical trouble.

In regard to the urinary business, when the question is put up to the examiner I think that as a rule the man who will not make sure should not be allowed to examine for life insurance at all.

DR. J. W. KINSINGER, Roswell: I think the insurance companies have been to blame upon one subject in the examination for life insurance. I think we will all agree that the technique and the requirements and all have been adequate in every respect in most of the companies except in this respect: They have never required anything except an answer to the question, "Have you had syphilis?" I think there should be a requirement that a Wasserman should be made before the person is passed for insurance because I know that in my experience apparently healthy men have secured large policies of

insurance who have had syphilis and denied it. While they were apparently in good health at the time of examination they have died in perhaps two or three years, a few years at any rate, with hemiplegia, syphilitic hemiplegia, or apoplexy, or some syphilitic condition.

DR. F. J. PATCHIN, Albuquerque: I might answer that question by saying that if a man has had syphilis he ought never to pass any examination or have any insurance, and the same is true of a good many, also, who have had gonorrhoea.

DR. S. L. BURTON, Albuquerque: I think that the physician who examines for any insurance company should not return or send in an application until he has gone over it the second time to see that every question has been answered. It will ensure quick action from the company and may mean the acceptance of a policy it is passed on and returned to the party who takes the insurance. Very few persons can fill out their applications completely without going over them the second time.

Another important factor that a great many of our physicians overlook is the family history. They fail to secure the family history as it should be secured.

DR. FRANK, closing: I am glad there was such a lively discussion of my paper. I did not think it would be of much interest.

In regard to Dr. Angle's remarks about the examination of the urine of women, my habit has been to insist upon the applicant passing the urine in the office and have had a place for that purpose. You cannot take their word for it. In a case where the urine is sent in for a test, it is rather a delicate question, but I believe the only way to do is to know that the urine was passed by the applicant.

In regard to the fee: All large life insurance companies now charge a fee of \$5.00 except, I think, the New York Life, and perhaps some of the western companies.

Dr. Noble refers to the Roberts' test. I am not familiar with the test that he speaks of, which is made with magnesium sulphate. The solution that I use is a saturated solution of chemically pure chloride of sodium. I think it is the latest form of Roberts' test. That is what we use and generally insist on.

It is a saturated solution, as I say, of chemically pure chloride of sodium, one-third of the volume of urine used of this solution is added, shaken, and then from three to six drops of 50 per cent acetic acid added. The solution is then boiled and any precipitate is serum albumin. It is the most delicate test, I think, that can be made, especially where you want to detect minute quantities of albumin. It does not precipitate anything else, and for that reason it is more reliable, I think, than the ferrocyanid. The trouble with examiners I find is that they depend too much on the heat and nitric acid tests. They think that those settle the question, and in fact they are both thoroughly unreliable.

In regard to Dr. Patchin's suggestion about the pulse, the acceleration of pulse caused by smoking, eating and drinking, that is very well taken, and the thing to do is to have the man come in again the next day or evening, when his pulse is normal. Of course, the drinking man has no place at all in life insurance; the drinking man who is known to be a drinker, either periodic or constant, should not have insurance and cannot get it if he is known.

In regard to Dr. Kinsinger's suggestions about syphilis, I think that point too is very well taken, but it seems to be impossible to follow it. In the first place, making a Wasserman costs at least \$5.00, and that added to the \$5.00 examiner fee would be almost prohibitive. The companies rely a good deal upon other information besides what the medical examiner gives. There are other sources of information, three or four in fact, and in most cases where there is a history of syphilis some one in the town where the man lives knows it and the fact is likely to be found out. If the company gets a history of syphilis, of course the applicant is rejected.

Dr. Burton makes a very good point. I think it is one of the principal difficulties that an examiner for life insurance companies has to contend with. They waste lots of postage every year from the simple fact that a number of questions are left unanswered. Instead of the papers being looked over at once, they are at once sent in, much delay

is caused, and sometimes the applicant loses the policy.

In regard to family history it seems that, especially in the southwest, most applicants know little about the family history. They either do not know or do not care. Of course, we do not expect much from the Mexicans, but it seems to be the case also among the Americans that they do not know of what their parents died. Of course, we have to educate the public as much as possible, and time will work some improvement.

DR. R. E. McBRIDE, Las Cruces: I do not want to interrupt any discussion, but there is just one thing that I think a company owes to the examining physician that they do not seem to appreciate. You take a busy physician in his office hours and rush a man up there—I am speaking of the agent—and say, "If this man is not examined right away we lose him." "All right." Well, there are many questions to be answered, the agent is waiting and he grasps the paper and is off before you know it. I meet that sort of thing. The agent is anxious to get the paper and to get it in; the moment it is signed, off with it.

Another thing. I believe all examinations made by a physician should be sent directly to the company and that the agent should never see them.

DR. FRANK: That is a point well taken, but it is almost impossible to prevent it. An agent, and especially a state agent, who represents the company, claims that he has as much right to the paper, to see the examination, as the man in the general office, and it is almost impossible to convince them otherwise. It is the custom also in most of the companies, and that is why I say if there are any delicate questions they should be sent to the office under separate cover and they will be treated as confidential.

Also in regard to hurrying up the examination, if the medical examiner will only understand that he is not working for the agent, (Dr. McBride: That's the point), that he is working for the company and that no matter what the agent wants it is his right to safeguard the interest of the company, then he will be able to get out of that trouble.

SOCIAL RESPONSIBILITY ARISING FROM MEDICAL PROGRESS

W. G. HOPE, M. D.,
Albuquerque, N. M.

(Read before the Thirty-Fifth Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 11-13, 1916.)

All reading and observing laymen have noted the advance in medical and surgical science in the last few decades. And although marvelous progress has been made in all lines of endeavor, we believe that in none has the race benefitted more than in the advance made in the healing art. During all historic time epidemics of disease have been a curse of armies, of nations, of civilizations. Relatively small bodies of men occupying salubrious regions developed the elements of science and for a few centuries flourished. Their superior knowledge gave them dominion over their less fortunate neighbors, who were converted into slaves. Conquest brought disease and the local civilizations were obliterated by contagion. History is replete with instances in which victorious armies have brought to their victorious countries with their prisoners of war, invisible and intangible agents of death which have ultimately vanquished the victors.

The Egyptians of the Pharaohs drained the land, built aqueducts, disposed of their dead hygienically, reared temples and cities, maintained law and order, developed the elements of literature and science,

devised and employed simple machinery. Of them Diodorus says: "The whole manner of life was so evenly ordered that it would appear as though it had been ordered by a learned physician rather than by a lawgiver."

Herodotus declared ancient Egypt the healthiest of countries, but filled with physicians of whom one treats only the diseases of the eye, another those of the head, the teeth, the abdomen or the internal organs."

Gibbon said: "Ethiopia and Egypt have been stigmatized in all ages as the original source and seminary of the plague."

It is evident that in its greatest civilization Egypt was salubrious; coincident with the decline in the learning and wisdom of its people, it was visited and desolated by pestilence.

That Egypt had lost its salubrity as early as the period of the exodus of the Israelites is shown by many passages in the Bible in which the Chosen People are threatened by the diseases of Egypt if they neglect or violate the laws.

Moses, "learned in all the wisdom of the Egyptians," codified the sanitary rules in the form of religious rites and ceremonies and thus secured their observance among the faithful even to the present time.

The Greek developed the greatest civilization of antiquity because he was the most devoted to science; but he was unable to cope with the bubonic plague, and his descendents have been in bondage to malaria for nearly twenty-four centuries. The

medicine of Hypocrates, the wisdom of Socrates, the philosophy of Plato, the science of Aristotle could not save the Greek from the degrading effects of disease, and under its withering influence the civilization of this people slowly but surely decayed.

Of the epidemic of A. D. 69, Tacitus says: "Houses were filled with dead bodies (Rome) and the streets with funerals; neither age nor sex were exempt; slaves and plebians were suddenly taken off, amid the lamentations of their wives and children, who while they assisted the sick or mourned the dead were seized with the disease, perishing and were burned on the same funeral pyre. To the knights and senators the disease was less mortal though these also suffered in the common calamity."

In the year 80 the deaths from the plague in Rome numbered ten thousand a day.

I quote from Bocaccio relative to the plague in Florence in the fourteenth century: "Such was the cruelty of Heaven and perhaps of men that between March and July following, it is supposed, and made pretty certain, that upwards of one hundred thousand souls perished in the city only, whereas before the calamity it was not supposed to have contained so many inhabitants. What magnificent dwellings, what noble palaces were thus depopulated to the last person, what families extinct, what riches and vast possessions left, and no known heir to inherit, what numbers of both sexes in the prime and vigor

of youth—whom in the morning neither Galen nor Esculapius himself, but would have declared in perfect health—after dining heartily with their friends here, have supped with their departed friends in the other world.”

In every century, almost every decade of the Christian Era until the last twenty-five years, similar plagues have ravished the whole civilized and uncivilized world.

We are sorry for the Greek whose bodily health, mental strength, and moral strength were depressed by the invisible and insidious organisms of malaria. He had no microscope and how could he detect or even suspect that the mosquitoes which had annoyed his ancestors for generations were the cause of his plague. The Greek had never heard of quinine or the other cinchona preparations. Centuries later Von Behring and Roux gave us antitoxin which reduced the mortality of diphtheria from sixty to eight per cent. The experiments of Villeman demonstrated the contagious nature of tuberculosis, long suspected, and frequently denied. The research of Koch resulted in the recognition and isolation of the causative agent, and since this discovery the mortality of the great white plague in Europe and the United States has been diminished more than one half, and it is within the range of reason to look forward to the time when tuberculosis shall be known only by the fearful records it once made in the history of man's struggle to be relieved from the heavy tribute paid to infection.

We boast of our civilization, but this is justified only within limits. Science more nearly dominates the world than at any time in the past. Education permeates the masses more deeply, but credulity and ignorance is widely prevalent. We have our schools, colleges and universities, while our almshouses, insane asylums and penal institutions are full. In our cities we see the fine homes of the rich, the splendid temples of trade and commerce, the slums of want and poverty, and the homes, both rich and squalid, of vice and crime. No nation in this condition can be given a clean bill of health. We have not emerged from the dark ages. The historian of the future will have no difficulty in convincing his readers that those who lived at the beginning of the twentieth century were but slightly removed from barbarism, as he will tell that the school, saloon and house of prostitution flourished in close proximity; that the labor union man dynamited buildings; that while we sent the missionary to convert the Moslem and the Buddhist, ten thousand murders were committed annually in our midst, and that a large percentage of our mortality was due to preventable disease.

In the great work for the betterment of the race, all men must cooperate. There is much to be done before we pass from the shadows of ignorance into the full light of knowledge.

The uplift of mankind must not depend upon the physician and the clergy. The burdens are too many and too diversified. Moreover other

callings have no right and should have no desire to shirk the moral responsibilities which should rest alike on all. In so great a work as the eradication of preventable disease all intelligent people must cooperate. The law must support by proper enactments, and these must be enforced with justice and intelligence; it must be recognized that the right to enjoy health is just as sacred as that to possess property; that to poison men in factories and mines, to pollute drinking water supplies, to adulterate foods, and to drug with nostrums is manslaughter.

Religion must teach the sanctity of the body as well as that of the soul, that ignorance is sin and knowledge is virtue; that parenthood is the holiest function performed by man, and that to transmit disease is an unpardonable sin. The teacher must realize that improvement in health and intelligence increase the efficiency of labor.

The pulpits of our land are open for the most part to the sanitarian. The respectable newspapers are most effective in the crusade against quackery and disease. The philanthropist has learned that the advancement of science confers the greatest and most lasting benefit on man.

It is a moral obligation to be intelligent. Ignorance is a vice, and when it results in injury to any one it becomes a crime, a moral, if not a statutory one.

To infect another with disease, either directly or indirectly, as a

result of ignorance is an immoral act.

The purpose of government is to protect its citizens, and a government which fails to protect its citizens against contagion and infection is neither intelligent nor moral.

To transmit disease of body or mind to offspring is worse than murder because it projects suffering into the future indefinitely.

Preventive medicine is yet in its infancy, but has accomplished great things. Within the past thirty years, the mortality from tuberculosis has decreased one half, and with scarlet fever and diphtheria the results have been more striking. In the past ten years the average life has been increased four years. Great epidemics which devastate continents are no longer known in the more intelligent parts of the world. In fact, it may be said that the death rate is now an excellent measure of intelligence. In 1911 the death rate in London was fifteen per one thousand, while that of Moscow was twenty-seven.

Preventive medicine is the keystone of the triumphal arch of our civilization, and its displacement would precipitate mankind into relative barbarism. Should the health administration of any great commercial center fail, for even a few months to exercise the function of restricting disease, the history of the epidemics of the middle ages might be repeated. Great things have been done, but greater tasks lie before us, and their accomplishment depends upon the scientific industry of the medical profession,

and the intelligence and assistance of the people. Without the co-operation of these forces the greatest efficiency cannot be secured.

While the mortality from tuberculosis has been reduced half in the past thirty years, we must not assume that the total eradication of the disease will be accomplished in the same number of years. Only the more progressive members of the medical profession have taken the initiative, and only the more intelligent and conscientious members of the community have responded. A sense of moral responsibility must grow as the work proceeds. It remains for all who have the welfare of the race at heart to plan wisely and carry forward courageously the campaign against ignorance and disease.

DR. R. E. McBRIDE, Las Cruces: If there is one thing above all other things that makes me loyal to the American Medical Association, despite the periodic rows which we have in the ranks, it is the fact that they stand for the education of the public along the lines laid down in this paper. If there is one thing that comes closer to me than all other things in the medical profession, closer even than the handling of diseased cases day after day, it is this question of public health, particularly public health as related to the medical profession.

New Mexico is a border state, and the counties adjacent to the Mexican border have constantly thrown up against them a heterogeneous mass of filth and dirt and disease, and it is a wonder to me that any of us in New Mexico, or, at least, in southern New Mexico ever have a well day.

For the past five years it has been my privilege to be a health officer of Doña Ana County. Doña Ana County has had to fight two main channels of approach—that is, of the enemy's approach—one directly out of

Old Mexico, and the other through the smelter district in El Paso. Smallpox, diphtheria, scarlet fever, measles, typhus and probably typhoid have been traced directly to Mexico, either through El Paso or directly across the border. We have had quite a few cases of typhus fever, and it has only been by constant and repeated and continuous preachings and work that we have managed to arouse sufficient public sentiment to permit us to do something like efficient work, and the work we do is not nearly as efficient as it should be.

Speaking for New Mexico, I believe that the greatest need of this state today is an absolutely competent board of health law. I have not a word to say against the present membership of the Board of Health. They are as competent physicians as can be found, they are as conscientious and they stand in their profession as high as any in the southwest; but they are handicapped absolutely by a law which gives them full authority and makes not the slightest provision for carrying out that authority. And I believe that we as physicians, as the New Mexico State Medical Society, can well afford to bury, for the present at least, our demand for a medical practice act and concentrate all of our efforts entirely upon a demand, and see that the request is granted, for an absolutely modern board of health law. (Applause.)

I have always maintained, and I still maintain, that the differences which arise from different schools of practice can be settled and held in abeyance provided we have a competent board of health act and an intelligent board of health who will see that its provisions are carried out. I have no fear of the Christian Scientist making inroads upon my practice just so long as the Christian Scientist is required to follow the regulations of a modern board of health law. I have no fear of the osteopath making inroads upon my work if he is made to conform to those regulations. But I do fear the Christian Scientist, and I do fear the osteopath, and I fear all the other cults and sects when they are permitted to hide their diseased cases and their contagious cases away in some unsanitary corner and not allow the health authorities to know anything about them.

I believe that the greatest trouble we in New Mexico have today is not the lack of a medical practice act, but it is the lack of funds to carry out the rules and regulations of the Board of Health; and I am firmly of the opinion that in this coming Legislature, whatever our demands may be, we should concentrate at first, at once and thoroughly, upon this demand for an absolutely competent board of health.

Do you know that of all the states in the Union, this is the lowest in that respect? Dr. Chapin, I believe of Rhode Island, at the request of the American Medical Association made an inspection of the various boards of health of the Union, their methods, their rules and regulations and means for carrying them out. They were graded from a percentage of 1,000 down. New Mexico is at the bottom of the list, the absolute bottom, with a zero. That is food for thought, and I am glad Dr. Hope's paper has been brought up at this particular time. I would like to say more, but I won't.

DR. F. H. CRAIL, East Las Vegas: I enjoyed Dr. Hope's paper very much, and I felicitate him upon his departure from the conventional state society paper. Wherever we go, wherever I have been all the papers I have heard have always to deal with pathology and pathogenesis and histology, the Eustachian tubes and Fallopian tubes, phagocytosis and things like that; and the fact that a paper once in a while like that Dr. Hope has read is brought before a state medical society is a mighty good thing. It is usually like sitting down to a meal that is all meat and vegetables without any desert. I especially enjoyed this paper.

Dr. Gilbert Adamson, of New York, once said that the doctor must not look at these things in the cold-blooded fashion that doctors are wont to do, especially in stated meetings. I believe that the doctor's function in life, while he ought to make a true diagnosis and he ought to use every test necessary for making a true diagnosis, is above all to remember that his duty is primarily to the individual. As Dr. Adamson said, and it is in his work, medicine is not given so much to cure things as it is to alleviate sickness; and I think that a paper like Dr. Hope's,

while it does not apply directly to disease, creates a moral atmosphere that is invaluable.

Whatever legislation should be done in New Mexico, public sentiment must be stimulated, and if papers like this paper are brought before the public, public sentiment will be stimulated, and without that we can get no legislation. I believe that we can get our sanitary law, the sanitary law that is needed, when we get our case before the people, and that we can also get our medical practice act. This paper should be printed and should be printed where the public may see that we sometimes deal with matters besides gastric ulcer, prostates, the verumontanum, primary foci, etc., and they will then take more interest in what we so earnestly wish.

DR. W. E. KASER, East Las Vegas: I am very glad that Dr. Hope has given us such an expression. There is no one of us in the northern part that has seen the conditions this past year that Dr. McBride and the other men in the southern tier of counties have. Here we have not seen those conditions and have not appreciated them.

In regard to the report made by Dr. Chapin, it is fair to state that his estimate does not mean that nothing has been done, because county men, like Dr. McBride, have done work and ought to be given credit for it. If you take that report at its face value, these men miss credit that is due them.

We cannot have a thing that we are not willing to pay for. I believe that Dr. Chapin's scale is measured by appropriations, and means only those activities that require money to carry them out. If we get zero, it is because we have zero to spend. I want to heartily endorse the last suggestion made by Dr. McBride, and that is that we do not push the medical practice act, and that we do push a public health law. What we need most is the appropriation; it is a question of "how much." That is first. But after we get it, it will be a matter of making use of it; and it seems to me that then we shall need a full-time health officer, who must be given needed time to study conditions and then make suggestions which there will be the machinery to carry out.

DR. S. F. BURTON, Albuquerque: There

is a health officer from a neighboring state present, and I would like to hear him speak on this subject.

DR. W. B. COLLINS, Austin, Texas: I have been enjoying this discussion of the paper very much and I shook the Doctor's hand. We have never called each other's name, have never met before, but he has struck the keynote of the public health situation and we ought to awake and become responsible, not only the physicians but the educators of your state. This is a matter of education, I find. The whole populace ought to be interested and to build sentiment. The politicians who make these appropriations always yield to their clientele or those who elect them. If you can succeed in shaping public sentiment to where it will demand a certain thing, you will get that certain thing. I think the Doctor's paper ought to be published, not only in your official organ, which I believe is a state journal as we have in Texas, but it ought to go to every school journal and every newspaper in your state and to every superintendent.

I do not know your educational system. Possibly I am reasoning by analogy. We have county superintendents in Texas, and also a state superintendent; a state organization, and a county organization for educational purposes—that is, to overlook educational activities. If you have such an organization in your state, it would be wise indeed to put this into the hand of every county superintendent with comments thereon.

I speak in regard now to getting actual results. You want, if I understand you, to get your Legislature to do certain things. I have had some experience in that line, and legislatures are pretty hard to convince with the plea of a party whom they think, or seem to think, has a mercenary interest in the appeal. For instance, we sought in my state last year to have an appropriation given the Board of Health to use for the prevention of bubonic plague in our state. We did not know whether we had it or not, but we feared it, and by the examination of figures we find that prevention from an economic standpoint is ten dollars to ten cents. It is a hundred times cheaper to prevent it than

to cure it, from a dollars and cents' standpoint. I got up the statistics as best I could and made an appeal to a committee in the State Legislature. You know and we all know that the rodent family is what we all dread in the matter of plague, that the human element is the least to be considered with reference to the extermination of the disease. I went to the Legislature with this appeal for \$25,000, a small sum in comparison with the value of the end, and they laughed me out of the room, they called me "the rat doctor."

But I would not be "downed." For the moment I was, of course. I then got up statistics, and showed them what the disease was costing other states and other cities, and how our railroads would be paralyzed and our seaports on the gulf would be destroyed for a time until we ratproofed our walls and our wharves and our buildings and destroyed the rodents which carried the fleas. I proved to them that on the cotton crop alone, by having to change it from the port of Galveston from which we usually send it to New York, our loss would be about \$12,000,000. We raise about 4,000,000 bales and the difference in freight rates would be \$3.00 a bale, and that would make \$12,000,000. We raise about 4,000,000 bales and the difference in freight rates would be \$3.00 a bale, and that would make \$12,000,000.

The majority of those in the Legislature were farmers and as soon as I got that before them and when they began to think of the cotton patch and what they would lose if we got plague—and the probability was very strong, as it was then at New Orleans, the next port to us—there were only four dissenting votes. They had voted it down, you understand, in the beginning and laughed me out of school. I had felt very much chagrined over it, but when I came back at them with those figures and educated them in the subject as well as I could, their action was almost unanimous. There were only 4 votes out of 143 representatives in our state—I believe it was 143, at any rate the Legislature, whatever the number may be—only 4 votes against the proposition.

Now I could not add to this paper. It is one of the best that I have ever listened to along the public health line in its emphasis

of the importance of the work and its history of the diseases we have combatted in the past. As the Doctor suggests, a great many of us are apt to forget what has been done and we are likely to believe that we have discovered many things that were discovered a long time ago, as you find if you go back through medical history. We name them differently, we deal with them differently, we have better methods, but the origin of our methods was often laid far back in the past.

The question of preventive medicine is the great question that we ought to have under discussion today. The time will come, and it is not very far distant in my judgment, when the man who pretends to cure things will be a very rare man. The surgeon, of course, the gynecologist, of course, will relieve conditions by dealing with them in a radical way, but there will be something we will consider more than specific medication. I do think that the more scientific we become and the more we know about how diseases are carried, who the carriers are, and how diseases are propagated from one to another, and by what agencies they are carried, that we as intelligent men, as teachers and as humanitarians ought to take and will take that side to heart. We have only to go down to the Panama Canal Zone to see what preventive medicine can do. That is a concrete case.

But when we talk about it to the people you have to "show" them, i. e., the ordinary people, the Legislatures, as you say you are going to appeal to that body. You have got to "show" them, you have got to make them understand that they will get economic results. They are all good people, as a rule, they are not wilfully disposed to do evil or to refuse to accept things that are for our good, and as soon as you convince them, as soon as they become morally certain that you are right in your conclusions and that your requests are moderate and not calculated to overtax them they certainly will respond. That has been my experience.

You all know that Dr. Gorgas went down to Panama and reduced the death rate there to less than it is in the United States, with the sunshine, the rainfall, in fact every condition the same as it had been since the Crea-

tion, and with the terrible failure of the French people staring them in the face. But with everything that preventive medicine can do carefully installed and enforced, he made it what you might style a health resort, taking the death rate for a criterion.

I do not wish to take all your time. It is a pleasure indeed to me to hear your talk on this subject, and in my judgment the Board of Health is the most important factor you can take up. I do not know your law.

DR. McBRIDE: We have a law, Doctor, which gives the Board of Health every power, but absolutely no appropriation with which to carry it out.

DR. COLLINS: No machinery, then, to work with. A law like that, gentlemen, is a dead letter. "Faith without works is dead," I think the Book says. Though I cannot give chapter and verse, I am sure that I have heard my mother quote it. It takes money. You cannot run a Sunday school without money, one that was worth anything. In law we cannot accomplish anything without machinery, sufficient machinery. I certainly wish you well in whatever you undertake.

I realize that this tuberculosis problem is one of the greatest problems in the Southwest. It is really a menace to us as a race, almost, and from an economic standpoint as well. Our climate is advertised and those who are infected seek it from all quarters of the earth. They come among you and among us too, and we must arrange in some way to prevent their becoming a danger to us if they continue to come. We have also to deal with it in a humanitarian and economic way. As a business proposition and as a humanitarian proposition it confronts us all. We none of us like to refuse to invite our friends and relatives to come to us; but when we bring them among us in great numbers and introduce them to our families and our neighbors' families, we are opening a very serious question. A great many of these people are indigent, not able to care for themselves, and somebody tells them of the promised land, so that our country becomes a Mecca for such people and has been for many years. We are beginning to feel ourselves seriously embarrassed by this condition. Now your public health board, if

you organize it financially as it should be, should have authority in these respects, and it will certainly yield you economic results that will be surprising. I wish you well indeed.

DR. J. S. CIPES, Albuquerque: As I listened to these papers I thought to myself that if I did not know the men who had written them I would feel much inclined to believe that both had been written by one and the same man, at least by two men who had been closely associated. Fortunately, I can say that I know both of these men, and I am mighty proud of it that I do know them.

The subject of preventive medicine is today, I believe, more important than any other subject in medicine. I believe that prevention can be more easily carried out than the method of curing diseases; and while I do believe that it is necessary to have laws and enforce them in order to prevent disease, I also believe that the most efficient way of preventing disease can only be by educating the public. In other words, if you want to put into effect something that is good for the public, teach it to them, tell them what it will bring them, and they will be the ones to get whatever is necessary for enforcing that law. Not only do we have to have laws in order to prevent disease, but we have to proceed along the lines of education in order that there may be a sentiment for those laws; and I believe that we can prevent as well in that way as by passing laws and enforcing them.

Albuquerque itself is a good example. I remember that a number of years ago, when I came to Albuquerque, we had tuberculous people about the streets, spitting at every corner, and, I believe, in this way infecting a good many people here who had not had the disease. But in the past seven or eight years the public began to be educated and became interested in the problems of infection, particularly along the line of tuberculosis, and I believe I can say that the city of Albuquerque today is just as free from infection as any other city of the United States. It is not, of course, because we have laws that we enforce, but because the people are educated and are trying as much as any

of us to prevent disease, and I believe that a paper of this kind ought to be read not to physicians only but to the laity as showing them the importance of public health measures. The important thing is to get the people educated, and that will be the only way by which we will be able to get the Legislature to appropriate funds.

DR. M. G. CARTWRIGHT, Albuquerque: I am very glad that this question has come up. I have just returned from the State Federation of Women's Clubs, at Las Vegas, and on the floor, in our business session, I was accused of trying to make the Federation a part of the State Medical Society.

I thoroughly agree with this idea that it is an educational matter and we as physicians must move along those lines. In speaking on the paper that preceded this, our representative from El Paso said in regard to the use of the high-frequency that it simply had a psychological effect. I agree with him that it may be psychological, but we as physicians have a good many psychological subjects to meet in dealing with the public. They must be educated to make efficient laws, laws by which they may be efficiently governed. The law that was passed in our last session was vetoed by our Governor because of the influence that was brought to bear upon him by the Christian Scientists—or psychological effect! We must meet these oppositions that come, and I do hope that this public health question may be put into our public schools throughout the state and become a part of our educational methods. (Applause.)

DR. F. H. CRAWL, Las Vegas: Since coming to New Mexico, the first signs I have seen, I think, of a real interest in public health have developed during the last year. I come from a county where the majority of people are Mexicans and where the public health problem is almost as bad as Dr. McBride has described it in Doña Ana county. Last spring, Dr. Roberts, of New Mexico Normal University, called a conference of the county superintendents of New Mexico, to be held at the opening of the summer school along about the first of June, and they asked Dr. McBride to come and address that conference of New Mexico educators.

I happened to attend that meeting, and Dr. McBride told those teachers practically what he has told this medical society this afternoon, and I was very much surprised and gratified at the interest they took in his discussion and the discussion following the presentation of his talk. After it was over, Dr. White, the state superintendent I think, said that he had a bulletin that was issued once a month and went to every teacher in the State of New Mexico and that extracts from Dr. McBride's talk or any other matters pertaining to the public health would be printed in that bulletin at any time that they were furnished to him. So the suggestion that was made by Dr. Collins could be very easily carried out if we had some arrangement by which these matters could be conveyed to the bulletin of the State Board of Education, a publication which is a very important branch of state and county work and reaches all of the teachers—and that is where the public education starts.

There have been held in Las Vegas during the past year, also, wonderful reunions of the welfare department of the Women's Club, and some physicians of the Las Vegas Medical Society have been asked at each meeting to address the Society on matters relating to public health. As Dr. Cartwright says, just a week or so ago the Federation of Women's Clubs met at Las Vegas and a public health meeting was called at that time and it was agreed by that Federation that they would do everything in their power to help in the passage of a law that would provide for a public health officer. As the delegates to that convention came from every part of New Mexico, there will be carried back to every one of our towns and probably to the smaller places as well the message of that meeting; and so it seems to me that there is at least a spirit of endeavor in New Mexico that has not been here before during my residence in the state. I believe that if this Medical Society will push the matter at the present time, we shall in all probability be able to get the health law for which we are asking.

DR. W. B. COLLINS, Austin, Texas: Madam President, with your permission, I will make one little point in regard to education.

Our state superintendent of education has

made it a prerequisite to getting any part of an additional appropriation which our Legislature made last year for education—they made what we call a "million-dollar appropriation" down there supplementing the public school fund of our state, to be devoted to the improvement of rural schools out through the country—that a school desirous of benefiting by this appropriation must first adopt a system of public health charts which the State Board of Health got out, with a manual accompanying it so that the teachers might be informed. I will not go into it in detail, but it was a system of charts very well gotten up with a manual which the teacher might use at night and prepare himself or herself, if he did not understand the chart. The superintendent made it imperative that they must use those charts before they could partake of that million-dollar appropriation.

He has gone farther this year in the work, and we have organized an affiliation with the extension board of our State University and they, together with the educational department of the state and the State Board of Health, are carrying on a campaign of education in our state. We have gone farther and have compiled figures to show just what tax is required to get up a fund that will do the work we need and it amounted to only six mills on a hundred dollars in our state. That will give us a sum four times larger than we have ever had before for public health work. We expect to present that proposition to the Legislature.

We have done another thing in regard to education in the last year or two. We have organized a county health school, as we call it, a two-weeks' course for county and state health officers. It is under the State University and we have the best lecturers from over the United States to teach the county health officers, in the first place, the laws—that is done by lawyers—and then the medical branches, which are taught by doctors and specialists. Then we have organized a county health officers' association, which is one of the liveliest little associations that we have in our state. The chief aim, of course, is to enable them to do their duty intelligently and

effectually and to push forward the campaign of education.

Now I insist—we do not have it in our state except in isolated cases—that each county employ a whole-time health officer; all the time, because one runs up against the hardest situations in the world in public health work, and the doctors are not always as loyal to the health officer as they ought to be and he meets all sorts of oppositions. So there is no doubt but that he should be employed as a whole-time officer.

However, what I rose to speak of was that the State Superintendent of Education in our state was co-operating along this line of education in many ways. In each school the children are brought together for twenty minutes each morning in the assembly room and they are given instruction in public health matters. We agree with the old saying that it is hard to teach an old dog new tricks, so we begin with the child by a long campaign so that we may reach ideal results in time. Our success has been remarkable, and we feel that we shall succeed still farther, though it is a long-drawn out fight. But the money will come if you put the idea into the minds of the people, for the politicians act in response to the demands of the people.

DR. S. L. BURTON, Albuquerque: I would like to move that this Society appoint a committee to go before the Legislature to secure an appropriation for the employment of a health officer for the State of New Mexico.

SECRETARY McBRIDE: That matter is now before the House of Delegates. They have not reported upon it as yet.

THE NEGLECTED PROSTATE.

E. L. WARD, M. D.,
Santa Fe, N. M.

(Read before the Thirty-fifth Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., Oct. 11-13, 1916.)

It has been said that it is the duty of the consultant to examine the rectum and for most purposes this could be still further limited to the

examination of the prostate. The average practitioner has learned that the passing of blood, an obstruction of the bowels or the metastasis of a tumor call for an examination of the rectum, but he has not learned that many cases of neurasthenia, rheumatism, backache, etc., may come from a diseased prostate. We have learned to examine the tonsils, thyroid and other glands in cases of metastatic infections and diseases of metabolism, but seldom think of the prostate. A gland which by its peculiar relation to the rectum and urinary system is doubly exposed to congestions, We have looked at the prostate as in unimportant gland which occasionally became enlarged, obstructing the urinary stream, thus necessitating removal or as the source of an occasional acute abscess which must be evacuated. However, prostates which became enlarged have for years been giving warning symptoms which will be diagnosed in the future and the proper treatment instituted. Diseased prostates begin as a rule as a congestion or an infection.

Congestions of the prostate are caused by masturbation, sexual excitement without gratification, excessive intercourse and chronic infections.

The confirmed masturbator can be classified in two types, the one who is mentally unbalanced and masturbates because of his mental deficiency. The mental deficiency is not the result of masturbation as formerly thought, but the mental deficiency is the cause of the mas-

turbation. The other type began to masturbate as a boy and was unaware that he was acquiring a bad habit. In time his prostate became chronically congested so that when he became aware of his danger the chronic congestion constantly turned his thoughts to his sexual organs so that he was unable to stop the practice. Such a man is certainly to be pitied. A drunkard may move to a dry state where he can not get his drink but the sexual temptation is always with him day or night. He is ashamed to go to the doctor with a complete confession and comes with a tale of various neuresthenic and reflex symptoms. Or if he tells the truth the most we have been able to give him in the past is sane advice and bromides.

The female sex is not necessary to cause a congested prostate through sexual excitement without gratification. A man may build sexual pipe dreams which are equally as pernicious as those caused by the dim parlor lamp. Excessive intercourse produces a congested prostate not only on account of the organ being overworked but also because his mind is continually turning to sexual matters constituting, it would seem with some people, the sole ambition in life.

We are all familiar with the infected prostates which go on to abscess formation but in this paper I wish to discuss only the more obscure cases which are often overlooked. The infection may come by way of the blood, the rectum, the kidney or bladder or from the ure-

thra and in about 80 per cent of cases is due to the gonococcus. It is often complicated by a posterior urethritis, a stricture or both. But a urethritis is very often kept up by an infected prostate. The infection begins in the gland about the urethra and spreads to the deeper portions so that we find the treatment of the infected prostate inseparately linked with the treatment of the posterior urethra.

A discussion of the prostate would not be complete without a consideration of the veru montanum. Disease of the veru montanum and prostate often go hand in hand so that the treatment of one often demands treatment of the other. It is often difficult to say which is the primary cause but where one alone is treated later symptoms will often demand the treatment of the other.

The treatment of the above conditions is not so difficult as the diagnoses. It is much better to examine ten normal prostates than to overlook one which is diseased. The following case histories will illustrate some of the symptoms and the treatment which I have found of value in these conditions.

Case 1. A carpenter age 33, came to office complaining of weak kidneys. The past history was negative. The patient felt perfectly well as long as he did light work but as soon as he did any heavy lifting he had a dull aching pain in his lower back which he ascribed to his kidneys. Bending over had no effect on the pain and it was worse at night than in the morning. For

the past four months there has been a diminished sexual desire but the sexual power was normal. He denied venereal disease. Examination of the back showed normal motion and there was no tenderness of the lumbar muscles. The sacro-iliac joints were normal. Examination showed a slightly enlarged prostate with fairly marked tenderness on the left side. The patient was given prostatic massage every three days with marked improvement.

Case 2. Patient, a life insurance agent, came to the office because of extreme nervousness and weakness. The patient's wife had tuberculosis but otherwise the family history was negative. He denied venereal infection but has indulged in occasional sexual excesses. For the past three years he had noticed that he was becoming more nervous and exhausted so that now he feels unable to walk little more than a block. He had no aches or pains and ate well. His weight was normal. He had no difficulty in starting or in passing his urine and the stream was of good size. Physical examination showed a well preserved man for his age but with an anxious, exhausted expression. His hands were unsteady but there was no distinct tremor. The reflexes were normal. The sexual organs were somewhat atrophic. The prostate was enlarged and somewhat indurated, the enlargement being most marked in the lateral lobes. It was not tender and the enlargement was uniform. He was given prostatic massage every four days which was preceded by injections

of silver nitrate into the prostatic urethra. He made a prompt improvement and is now able to drive a car without difficulty on his trips through the state. His face was a perfect index of the condition of his prostate and when he came into the office with a drawn anxious expression, I knew his prostate needed attention. After he had been under treatment four months he came to the office saying that while he was lying in bed that morning thinking of sexual matters he suddenly had an emission. I examined his prostatic urethra by means of a Swinebourne urethroscope and found the veru montanum so congested that it bled to the touch. This was treated with silver nitrate 12 per cent and subsequent treatments advised each week. The case is too recent to draw definite conclusions from this part of the treatment but marked sexual passion in a man of his age should call attention to the veru montanum and prostate.

Case 3. Patient came to office complaining of a chronic diarrhea, weakness and various neuresthenic symptoms. The patient had one brother who died of tuberculosis twenty years ago. Soon after the patient came West because of general weakness. Each year after coming here he had an attack of diarrhea but during the entire year suffered from various reflex symptoms and a lessened resistance. This lessened resistance was manifested by frequent colds and furunculosis. The diarrhea proved to be a mucous colitis which quickly reacted to colonic irrigations. However, he con-

tinued run down, had a continual pain over his pubis and a frequent desire to sleep irrespective of his surroundings. He had frequent emissions, even the act of urinating often being sufficient to cause an emission. The patient was unaware of these until live spermatozoa were found in his urine. The patient's sexual organs were so sensitive that even the presence of a woman would cause an erection. He confessed that he had masturbated since boyhood and had been unable to break himself of the habit until a year ago when he threw off the habit with the aid of bromides. Since then he thinks he has not been as well.

General examination showed a small man of middle age with an anxious expression. His skin was dry and under the arms showed a tendency to eczema. The genitals were negative except for the signs of a previous circumcision. The urinary meatus was very small. The prostate was normal. A meatotomy was done and the veru montanum examined. This was intensely congested so that the slightest touch caused bleeding. It was cauterized with silver nitrate 12 per cent and the treatment repeated at weekly intervals. The pain over the pubis disappeared after the first treatment and the emissions decreased until they were about three weeks apart. The patient still complains of various neurotic pains but they are decreasing in frequency. The patient has learned that feelings of lassitude and erratic thoughts call for a cauterization of the veru mon-

tanum and returns for treatment about once a month.

Case 4. Patient, a contractor age 29, came to office complaining of loss of sexual power. From the age of puberty he has had excessive sexual intercourse but denies venereal infection. He has been married three years. For the past six months he has lost the power of erection but has a normal desire. He has no trouble in starting or stopping the flow of urine and there is no increased frequency of urination. At times he has had a pain along the terminal portion of his urethra. On examination the external genitals were normal and rectal examination showed a normal prostate. Urethroscopic examination showed a normal urethra but the veru montanum was intensely congested. This was cauterized with silver nitrate 12 per cent and repeated at weekly intervals. After three weeks treatment he reported that his erections were normal.

Case 5. Patient, a ranchman, came to office for treatment of internal piles. He complained of pain when his bowels move and slight tenderness in the perineum. The piles have never come down and have never bled. The bowels were slightly constipated. Examination of the rectum showed entire absence of piles or fissure but a large symmetrical indurated prostate which was slightly tender. Further questioning showed there was increased frequency of urination and that the stream was not as large as formerly. At times there was difficulty in starting the stream. Examination

of the urine was negative but there was slight retention. Removal of the prostate was advised but declined.

Case 6. Patient, a negro, age 27, came to office complaining of pain in the back and left side. Patient had gonorrhoea seven years ago from which he thought he recovered but upon close questioning admitted that he occasionally had a morning drop. The present trouble began seven months ago with pain in left back running to inguinal region. Exertion always made the pain worse and caused him to lean over and to the left. He complained of tenderness in lower left back and kidney region. Examination showed a slender negro who favored the left leg much as an appendix case favors the right. The lungs, back and hip joints were normal. He could not throw the left foot backward without marked pain. There was deep tenderness in the left inguinal region and the inguinal glands were enlarged. The urine was normal. The spasm pain and tenderness seemed to be a myositis of the psoas muscle with the chances of its being gonorrhoeal in origin. In looking for a focus I examined the prostate and found it markedly tender. He also had a stricture of large calibre of the membranous urethra. The patient was advised to take vaccines, have prostatic massage with deep injections into the prostatic urethra but as the patient was only here for a court case he was lost sight of.

Case 7. Patient, a painter, came to office complaining of physical

exhaustion. Patient's wife died of tuberculosis of the lungs six years ago. Four years ago he contracted gonorrhoea which became posterior. Two years ago he began to have pain on defecation, a constant ache in his perineum and to pass shreds in his urine. He consulted a physician who advised irrigation of the posterior urethra by means of a rubber catheter which the patient used himself. This caused an improvement in the symptoms but of late he has had difficulty in inserting the catheter, pain on movement of the bowels, a constant ache in perineum and the passage of shreds. He has no trouble in starting or stopping the flow and it is of fair size.

On general examination the lungs were negative except for a chronic bronchitis. The prostate was enlarged and very tender especially the median lobe. Examination of the urine showed shreds in both glasses. There was no urinary discharge. A bulbous bougie showed a stricture of large calibre. He was given irrigations of Diday which he was to use himself and told to come back later to have his prostate massaged, and the stricture dilated. He made so much improvement that he did not think farther treatment necessary.

Case 8. Patient, a druggist, has had a chronic urethritis for the past three months and has used all of the usual remedies but still has a thin discharge throughout the day. One month ago he had an epididymitis which has undergone resolution. Examination showed the signs of a

recent epidymitis on the right side. The lips of the meatus were glued together by a thin discharge, smears from which showed gonococci. The penile urethra was enlarged and indurated. The entire urethra was irrigated with silver nitrate $\frac{1}{4}$ per cent and the prostate massaged. A semi-purulent discharge was obtained which contained many pus cells and gonococci. He was given prostatic massage every other day and irrigations of silver nitrate $\frac{1}{4}$ per cent daily. The discharge cleared up in three days but the massage and irrigations were continued for one week to avoid recurrences.

Conclusions. Sexual abnormalities in the young should immediately draw attention to the veru montanum and prostate as should unnatural sexual desire in older men. Neurasthenia in older men is apt to be prostatic or artrial in origin. After all neurasthenia is only the name of a disease which we have not diagnosed and will soon become as obsolete as the term rheumatism. Weak kidneys as related by the patient frequently mean a weak prostate.

The prostate is a frequent organ for gonococcus to lie dormant in and from which it causes an infection of the blood or urethra. A metastatic infection is as apt to be prostatic in origin as the teeth or tonsils, although differing in type. The infected prostate is the common cause of a recurring gonorrhoea or one which fails to clear up and in all cases a persistent urethral dis-

charge should call attention to the prostate.

Discussion.

DR. K. D. LYNCH, El Paso, Texas: I was glad to hear the Doctor make reference to the so-called cases of "neurasthenia and backache" which are due to chronic prostatic disease. We have come across a good many of those and, just as he said, persistent prostatic massage with also the irrigations of nitrate of silver in the posterior urethra usually clears them up. A little better method for these irrigations of nitrate of silver is to use Bang's syringe sound, which gives not only the dilating effect, but also you get the silver nitrate to just exactly the spot where you want it.

I think the essayist might have made mention, in regard to obscure prostatic cases, of certain cases of rheumatism. I was talking with my friend, Dr. Butler, at luncheon today, and find that he has had about the same experience that I have had—that is, of a number of cases in young men in whom we have had to remove the prostate on account of the prostate being the seat of an infection which produced a rheumatism of a chronic type. I do not know how many prostates Dr. Butler has removed for this reason. I have done two in the last two years. This is borne out also by the experience of such men as Leslie and Tyffel in their anatomical studies of the gland, which show that a certain number of cases—in fact, quite a percentage of cases—of enlargement come within the third decade of life. We know now that not all the cases of enlargement or hypertrophy of the prostate occur in the so-called "old men," and I think there are going to be more of these cases in the future on which we will have to operate at an earlier period, when the patient will be in a far better physical shape to withstand an operation with such a mortality to it as the prostate operation has had in the past.

DR. J. I. BUTLER, Tucson, Arizona: I think, as Dr. Lynch has said, the prostate is more neglected even when a diagnosis is made than it is without a diagnosis; that is, we permit a chronically infected prostate to remain just because the man has not arrived

at the "prostatic age." The diagnosis is artificially blocked by the fact that the person has not attained a certain antiquity, and many prostates should be removed which do not respond promptly and permanently to massage and the various other prostatic therapeutics. Such prostates ought to be removed, regardless of whether the man is having the metastatic toxic symptoms, as a prophylactic when the infection remains and pus can be found in the prostatic secretion.

DR. J. S. CIPES, Albuquerque: I would like to ask Dr. Ward if he has tried the violet ray as an application for hypertrophy of the prostate, and if so with what results.

DR. J. W. KINSINGER, Roswell: I was going to get up and speak about high-frequency electricity in massage of the prostatic gland, but I have been so "wooled" from the Atlantic to the Pacific about high-frequency treatment in different diseases that I hesitate to bring the subject up. However, in the last fifteen years I have used the rectal electrode in the treatment and massage of the prostate gland for suppurative diseases of the prostate with the most gratifying and satisfactory results; and I would advocate to those who have not resorted to the high-frequency treatment, the massage of the gland with the high-frequency rectal tube or electrode. You will find that an enlargement of the prostate will recede much more rapidly, much more satisfactorily, and I believe that the treatment has a good influence over the infective condition; I believe that it has a great influence in ameliorating, at least, the virulence of the infection. I would like more clinicians to try it. It is very easily done, it is more cleanly than to use the finger, it is easier on the patient, and you can reach higher with the tube. You can massage also at the same time the upper glands which, in addition to the prostate, frequently are infected. I think you will find the procedure most satisfactory.

DR. K. D. LYNCH, El Paso, Texas: I was glad to hear Dr. Kinsinger bring up that question of high-frequency treatment of the prostate. I have one of the most powerful high-frequency machines made, but I do not think I have used it for massage of the prostate in the last four years. Of course, there

is a certain type of prostate on which massage with the electrode used with the machine gives better results than when you massage with the finger. Swinburne brought that out some years ago, when he said his finger was not long enough to massage some prostates, and I suppose that is what Dr. Kinsinger has found. I do not think that we ought to fool ourselves very much as to just what the high-frequency current does. I think it is as much the actual destructive effect of this work, the cauterant effect, as any result on the infection. In fact, Bauduy and myself, working in New York, tried it on a great many cases and we gave it up entirely and just used the electrode that we had in a little box that came with the cabinet. We just went ahead and used that.

In my opinion the Doctor gets results also because he massages the seminal vesicles, and those are frequently the seat of infection. I think that point applies also in regard to Dr. Ward's paper and that some of the cases which he had may have been seminal vesicle infections—that is, infections of the deep urethra or, at least, secretions coming through the seminal vesicles. I think Dr. Kinsinger has gotten results because he has gotten massage higher up and has reached the seminal vesicles. However, I know that Dr. Kinsinger is a man of experience and judgment, and he may have got results from selecting the right type of prostate for such massage.

But I do think that in the future Dr. Butler's experience and my own will be brought out more fully by the profession to be the actual state of the case; that is, that we have to operate on a number of these prostates in young men before they come to the age where the operation becomes an exceedingly dangerous one, before the kidneys have been affected or, at least before they have been blocked up and cannot be relied on for elimination and are, indeed, sources of danger in themselves.

DR. L. A. PULLEY, Albuquerque: There is one point which I do not think was brought out, though we could not hear all of the paper in this part of the room. Dr. William Robbins, of New York, is doing a great deal of work along that line. Most of the cases of prostatic gland trouble we know are due to

an infection, either gonorrheal or some infection after continued masturbation, and there has been invented an instrument whereby the verumontanum is removed altogether. In that way it is possible to get down to the bottom of the crypts of the prostate gland and remove the source of infection, whereby the prostate gland is enabled to more readily overcome the inflammation that has been set up by the infection. I do not know whether Dr. Ward brought out that point about removal of the verumontanum.

DR. J. W. KINSINGER, Roswell: Dr. Lynch tells me that he uses the coil in high-frequency work. He gets a very low voltage and a high amperage. The static machine, I believe, is the only proper one to use for high-frequency work; that has been my experience. With the static machine, you can use a voltage of 222,000 and you get a low amperage. I do not know just what voltage you get in the coil, but you will get a high amperage. Now the high voltage and the low amperage will give you a stimulative effect instead of a cauterative effect. That has been my experience and for fifteen years I have done this work. I can say positively that with this high voltage, 222,000, which I believe my machine gives, there will be no cauterative effect at all in addition to the stimulative one. In any kind of work that you do it is the high amperage and the low voltage that gives you cautery effects and does not give you the stimulating effect which you desire.

DR. K. D. LYNCH, El Paso, Texas: I think Dr. Kinsinger has misunderstood me with regard to the type of machine for using the high-frequency current. As I understand it, the high-frequency current is one which has been evolved from the Morton induced current. That is, they found an oscillatory discharge if they ran this through a coil which is known as the D'Arsonval coil and they got a current of very high voltage. My machine, I believe, gives a voltage much higher than Dr. Kinsinger has mentioned, one somewhere between 800,000 and 1,000,000. They also found that if they brought it out by one part of the Wappler coil—that is one of the coils I have been using—by a single wire they got a monopolar discharge or

the Oudin current. They also make use of the vacuum tube. Hayden used this in the urethra and he said that he got results, but most of the men in New York could not get the results that he did. I am not saying that machines of the type that Dr. Kinsinger is using are any different from my own, but what I mean is that the only use we have nowadays for the actual high-frequency current is for electro-cauterization, and I think the other currents produced in the vacuum tube, such as we have been using, have no effect whatever other than a psychological one.

In regard to the work the Doctor has mentioned, that is, the removal of the verumontanum, I think that we have practically quit doing that. We men who do some quantity of special work along this line have all found that those cases who have had the verumontanum scraped off by the Rehffuss tube have had a pretty bad scar formed in the deep urethra and they are very much worse off afterwards. They do improve for a certain length of time. No matter what operation you do on some of these patients they think for a certain time that they improve; then they come back and the specialist has to work against that scar in the posterior urethra. Besides, that taking off of the verumontanum does not do anything to the prostatic ducts except occlude some of them and possibly give the patient cysts in the prostate later on.

DR. WARD, closing: In regard to the removal of the prostate, I think the point brought out, that it should be removed earlier, that we should not wait until a man gets systemic poisoning from the reaction in the kidneys, if carried out would give us a smaller mortality than we have had.

With reference to the use of the violet ray, I have not taken that up because in the few cases that I tried it on I did not get good results. So I have given that up, but I think that in many of these patients where the prostate and seminal vesicles are hard to reach it would be very good. In the ordinary patient, where we rely so much on the fingertip, the results are better without it.

In regard to the removal of the verumontanum, I have not done it simply because the

operation does not look good to me. The ducts all open at the side and by cauterizing with silver nitrate the inflammation is reached. You also get some effect of the silver nitrate on the mouths of the ducts and you can avoid infection in that way. I believe better results are obtained in that way than by removing the verumontanum, which does not remove the cause.

New and Nonofficial Remedies.

Barium Sulphate for Roentgen Ray Work.—Barium sulphate freed from soluble barium salts. This salt passes through the system unchanged and, because of this, is used in taking Roentgen Ray pictures of the stomach and the intestines.

Barium Sulphate-Squibb for Roentgen Ray work.—A brand complying with the standards for barium sulphate for Roentgen Ray work, N. N. R. E. R. Squibb and Sons, New York (Jour. A. M. A., Oct. 7, 1916, p. 1091).

Chlorazene Tablets, 4.6 Gr.—Each tablet contains 4.6 grains chlorazene (sodium paratoluenesulphochloramine). The Abbott Laboratories, Chicago (Jour. A. M. A., Oct. 21, 1916, p. 1229).

Propaganda for Reform.

Hydras.—The Council on Pharmacy and Chemistry reports that Hydras, sold by John Wyeth and Bro. is one of the so-called "uterine tonics," said to contain "cramp bark, helonias root, hydrastis, scutellaria, dogwood and aromatics" in unspecified amounts. While the name, taken in connection with the composition, suggests that hydrastis is an important constituent, the A. M. A. Chemical Laboratory found this drug to be present in unimportant amounts. The Council finds Hydras inadmissible to New and Nonofficial Remedies because its composition is semi-secret; because the recommendations on the label for its use in specified diseases, and the advertising accompanying the bottle are sure to lead to its ill-advised use by the public; because the claims made for its curative properties are exaggerated and unwarranted; because the name is misleading and because the combination of these five drugs, even if individually they were of therapeutic value,

is irrational (Jour. A. M. A., Oct. 7, 1916, p. 1107).

Nuxated Iron.—Nuxated Iron is advertised in newspapers with the claim that it is not a patent medicine or secret remedy. In the popular meaning of the words, "Nuxated Iron" is just much a "patent medicine" as is "Peruna," "Lydia Pinkham's" or "Pierce's Favorite Prescription." Also, "Nuxated Iron" is essentially secret in composition. While the public is led to believe that the preparation consists chiefly of nux vomica and iron, analyses made in the A. M. A. Chemical Laboratory and elsewhere indicate that it contains much less than an ordinary dose of iron and practically no nux vomica. It is sold under claims that are both directly and inferentially false and misleading not only as regards its composition but also as regards its alleged therapeutic effects. Nuxated Iron is also advertised in the Medical Brief, a publication which has for its editor the "medical expert" for the Wine of Cardui concern in the recent case against the American Medical Association and as its publisher one who, through the "National Druggist," has long been the mouthpiece of the "patent medicine" interests (Jour. A. M. A., Oct. 21, 1916, p. 1244).

Patent Medicines Prosecuted under the Food and Drugs Act.—The following information was brought out in connection with prosecutions by the federal authorities under that portion of the Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims: Rayway's Ready Relief was claimed to relieve rheumatism, sore throat, pleurisy, pneumonia and other conditions. The government chemists found the preparation to be a hydro-alcoholic solution of oleoresin of capsicum, camphor and ammonia. Ingham's Vegetable Expectorant Nervine Pain Extractor was found to contain alcohol 86 per cent., opium alkaloids, camphor, capsicum and vegetable extractive matter. It was claimed that this morphine mixture was not only safe and harmless, but positively beneficial when given to teething children. Tetterine was said to be a marvelous remedy for tetter, eczema, etc. Maignen Antiseptic Powder according to the government chemists is com-

posed essentially of calcium carbonate, borax, aluminum sulphate and sodium carbonate. Among other things the exploiters of this powder, which at one time was advertised to the medical profession, tried to persuade the public that the preparation would "sterilize" the stomach, throat, nose, lungs, etc. Green Mountain Oil or Magis Pain Destroyer was found to consist essentially of 95 per cent. linseed oil, with oil of sassafras, oil of thuja, and oil of turpentine, with possibly small amounts of camphor. According to the claims made on the trade package, this stuff was said to be "A Remedy for Diphtheria, Croup, Deafness and Sore Eyes, Rreu-

matic Pains, Stiff Joints, Pains in the Back," and many other ailments. Mrs. Joe Person's Remedy was found to be a slightly sweetened water-alcohol solution of vegetable drugs with a minute trace of alkaloids and the presence of podophyllin and sarsaparilla indicated. The preparation was claimed to cure such things as "blood poison," eezema, malaria and pellagra. Tutt's Pills were found to consist mainly of sugar, aloes, starch and calomel. The nostrum was sold under claims to the effect that it was "a remedy for intermittent and remittent fevers, dropsy, dysentery, diseases of the kidneys and bladder," and a number of other conditions (Jour. A. M. A., Oct. 28, 1916, p. 1316-1317).

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E. D. I. T. O. R. I. A. L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

You want a larger and better Journal

YOU CAN HAVE IT BY WRITING OUR ADVERTISERS: "I SAW YOUR AD IN OUR STATE JOURNAL."

FAVOR THOSE WHO FAVOR US.

The New Mexico Medical Journal wishes all of its readers a MERRY CHRISTMAS AND A HAPPY NEW YEAR. May 1917 have in store a generous share of blessings for you all.

SOUTHWESTERN MEDICINE.

The New Mexico Medical Journal, the Arizona Medical Journal, and the Bulletin of the El Paso County (Texas) Medical Society have at last formed a combine by which the above named journals are to be merged, the new journal to be known as *Southwestern Medicine*. The wisdom of this move is apparent, for the new journal will have stronger backing and a wider field and will therefore be more representative of the very best there is in the medicine of the Southwest than was any one of the journals separately.

A Board of Managers has been appointed, Doctors James Vance

and F. P. Miller representing the El Paso County (Texas) Medical Society, Doctors Roy Thomas and E. T. Harbridge representing the Arizona Medical Society and Doctors G. S. McLandress and T. C. Sexton representing the New Mexico Medical Society. This board met in executive session and organized by electing Doctor James Vance as Chairman and Doctor T. C. Sexton as Secretary. Doctor R. E. McBride, Managing Editor of the New Mexico Medical Journal has been named as Editor-in-Chief of the new Journal. A Business Manager is yet to be appointed.

It is planned to issue the first number of *Southwestern Medicine* in January, 1917.

The new Journal deserves and should have the united support of the profession in the Southwest. This section of the country has too long been neglected in the matter of medical recognition and the chief function of *Southwestern Medicine* will be to gain this recognition. To do this will require the support of the entire profession and the active co-operation of all to that end. There are many little points connected with the effort to effect the merger that must be forgotten,

there has had to be some "give and take" all along the line, but as finally worked out the combination should be satisfactory to all and *Southwestern Medicine* should be a success.

The New Mexico Medical Journal is grateful for the measure of support it has received through the years of its existence from the members of the profession, not only in New Mexico but throughout the Southwest generally, as well as appreciative of the support given its advertising pages. It goes into the combination firmly convinced that it is for the best interests of ethical medicine in this part of the world and bespeaks for *Southwestern Medicine* the same consideration that has been given it.

COMBATING INSECTS AFFECTING THE HEALTH OF MAN

Continued advances in the work of combating the activities of insects affecting the health of man are reported by the Chief of the Bureau of Entomology of the U. S. Department of Agriculture in his annual report recently issued. In mosquito investigations in Louisiana a species of mosquito hitherto considered a noncarrier of malarial infection was proved to be a carrier. Studies have been made of malaria and measures are being evolved to meet plantation conditions.

The "starvation" plan, aimed to exterminate the spotted fever tick of the Bitter Root Valley, Montana, was followed during the year with encouraging success. The plan consists of the removal of the domestic

hosts of the adult tick from the infested areas. The Bureau also conducted a campaign of extermination against ground squirrels and other rodent hosts of the immature ticks. Examination of the rodents killed showed 40 per cent. lower infestation by the tick than during the preceding year.

The report directs attention to the demonstrations of the Bureau specialists that the breeding of flies in manure can be prevented by treating the substance with calcium cyanamid and acid phosphate, which at the same time increase the fertilizing value of the manure.

The Bureau also conducted investigations into methods of lessening fly infestation in packing establishments operated under the Meat Inspection Service of the Department.

Dog fanciers have long noted that when a house-dog begins to get fat and wheezy it is pretty apt to be attacked by a stubborn skin disease. In such a case they cut down the diet and increase the open air exercise, thus relieving the over-burdened body of poisonous substances.

The sin of gluttony is common and therefore much condoned, but like every other violation of Nature's laws has a penalty. Fat inefficiency, sluggish mentality, the reddened nose, the pimpled face, certain of the chronic skin eruptions, and much fatigue and nervousness are due to the abuse of the digestive apparatus. Rich, indigestible foods in large quantities, highly seasoned to stimulate the jaded palate, are forced into a body al-

ready rebellious from repletion. Exercise is largely limited to walking to and from the table and bodily deterioration proceeds rapidly. Many an overfed dyspeptic, suddenly dragged by the stern hand of circumstances from a life of physical ease and plenty and forced to work out of doors suddenly discovers that his semi-invalidism has gone, that a chronic skin derangement of many years standing has disappeared and that a new vigor and zest of life has been given him.

Not everyone can spend his whole time in the open air but a certain amount of exercise and plain wholesome food in an amount not exceeding the body's needs can be had by almost everyone. Simple moderate diet and exercise make for health. These are not faddish food theories; they are just plain common sense.

DENTAL PREPAREDNESS

What is the most important attribute of a soldier?

Good feet?

No.

Good eyesight?

No.

Good brains?

No.

What then?

Good teeth.

A soldier may have good feet, good eyesight, and good brains but if he has bad teeth, he can't eat. If he can't eat he can't march near enough to the enemy to see him and use his brains to fight him.

How does a soldier get good teeth?

By having good teeth in childhood.

How do children keep good teeth?

Through being taught by their mother how to keep their teeth clean and having their teeth looked after while they are growing. This makes good teeth for future soldiers.

It would seem then as though the first patriotic duty of a mother was to keep her children's teeth in good condition.

It is.

Notice.

Beginning with the January, 1917, issue, the Louisville Monthly Journal of Medicine and Surgery will become the official organ of the Mississippi Valley Medical Association, appearing with that issue in new dress and under the name of the Mississippi Valley Medical Journal. The proceedings of this Association have been for years of the highest scientific nature, and the appearance in full of papers and discussions in convenient form for binding will enable members and subscribers to preserve these valuable proceedings.

Dr. Henry Enos Tuley, Secretary of the Association, will continue as Editor; Dr. H. H. Grant as Business Editor, and a special Editorial Committee, composed of the following, will assist in the editorial policy of the Journal: Drs. William N. Wishard, Indianapolis; Arthur R. Elliott, Chicago; Willard J. Stone, Toledo, Ohio, and Louis Frank, Louisville.

It is announced that a special epitome department will be established, giving each month a review of some special borderline topic which is of interest to surgeon and internist.

Original Articles

EARLY SYMPTOMS OF UPPER ABDOMINAL DISEASE

H. A. BLACK, M. D.,
Pueblo, Colorado.

(Fraternal Delegate from the Colorado Medical Society.)

(Read before the 35th Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 11th, 12th and 13th, 1916.)

Members of the New Mexico State Medical Society: I am deeply appreciative of the honor of appearing before you as a Delegate, and I wish to take this occasion to extend to you all, collectively and individually, an invitation to meet with us next September at Colorado Springs. We will show you good weather, a good town, and a good time.

It is impossible to condense within the confines of a twenty minute paper the entire subject of diagnosis of disease of the upper abdomen. I shall therefore limit myself to certain salient features in connection with some of the more frequent disorders arising from the structures in this section of the body.

While three decades have passed since Forster uttered that metaphorical simile, "The Abdomen is the Temple of Surprise," and the fruitage of these years has been rich in surgical achievements, yet today we must bow in deference and

admit in humility that such is still all too true. The brilliancy of an operation depends largely upon the accuracy of the clinical diagnosis and it is not unfair to say that great diagnosticians are few in comparison to the number of those whom we may justly class as eminent surgeons. It is appalling to contemplate the volume of mistakes made by the general average when we consider that in one of the great clinics there are approximately ten per cent. of gross errors in the primary diagnosis of the clinicians and when also it is considered that the majority of these inaccuracies occur in diseases of the upper abdomen, then indeed should we as surgeons seek with care for means to reduce and eventually eliminate those errors which the profession has been content to believe were unavoidable mistakes in clinical diagnosis.

In upper abdominal diseases it has been all too common to find an accurate diagnosis made only after some complication had drawn aside the screen and revealed the true character of the complaint and unfortunately the occurrence of this additional and oftentimes unnecessary factor signifies that an opportunity has passed when proper treatment could promise the most for the patient. For this condition there are causes: anatomic, physiologic, and clinical. Not elsewhere in the trunk cavities is there such an interlocking and overlapping of essential structure as found in the upper abdomen, especially in the right quadrant. Many of the physiological functions of these organs have been

clarified only in recent years and we have reasons to believe that the physiologist will in the future contribute further knowledge that will be of no small aid in solving the clinical problems encountered in diseases of these viscera. The close anatomic association and the coordinating physiologic processes of the upper abdominal organs explain why some of these diseases present such interlocking and confusing symptomology, and it is only through careful interpretation of an accurately taken case history and to no less a degree the consideration of the individuality of the patient, that we may reach a clinically reasonable and logically sound diagnosis which will be post-operatively correct.

The one great warning signal on the highway of health is that of pain, for this more than any other one thing will cause the individual to pause and turn from his daily routine of life long enough to consult the physician or surgeon, and in abdominal disease the distribution, character and the time of onset of pain are of great value in diagnosis. Primarily we encounter two varieties of pain, the one manifested by the patient and the other brought on by the diagnostician in the course of physical examination. Unfortunately the latter does not always confirm the former and still more regrettable is the fact that the former is not uniformly confirmed by the latter. That clinical entity, pyloric spasm when occasioned by acute inflammation of the appendix will give rise to severe epigastric pain,

while deep pressure over that region will not elicit the tenderness which is the usual accompaniment of inflammatory pain and only when the examiner's finger palpates the southwest quadrant of the abdomen will the patient be cognizant of the actual source of his distress.

In the distribution of pain it should be remembered that referred pain while usually traceable from the point of lesion to some other abdominal structure, as we would expect from the nerve supply of these organs, yet not infrequently is the pain located at some point without the abdomen and more rarely, though of the utmost importance to bear in mind when working out a diagnosis, do extra-abdominal lesions cause most severe pain in locations within the abdomen. A Wasserman test of the blood and spinal fluid of a sufferer from the gastric crisis of tabes will not infrequently save the patient from an unfruitful laparotomy and, as has been the case with more than one, a careful auscultation of the chest of a patient suffering from an acute pneumonic process with referred severe abdominal pain, would have spared him the dangers of an obviously regrettable operation. No less important than the distribution is the character of abdominal pain. Obstruction of a hollow viscus occasions always severe and sometimes rhythmic pains which arise from the violent contraction of its muscular coat in an effort to overcome the offending condition; particularly true is this in acute renal

and gall bladder colic and in obstructive appendicular disease, while inflammatory conditions of the serous membrane are more generally characterized by a less severe but more steady pain, although perforation of the serous covering of an abdominal organ, which may occasionally occur early though usually is a late complication of a lesion, is heralded by pain, sudden, lancinating and overwhelming and which is at first local but soon becomes general in extent and attended with marked collapse. Beckman calls attention to the fact that since the stomach and duodenum do not often become obstructed, severe pain is rarely met with in lesions of these organs unless perforation has taken place; therefore severe colicky pain should, in the absence of the other symptoms of perforation, direct attention to structures other than the stomach and duodenum, and here may be mentioned that as a rule in inflammatory lesions the more acute the ailment the more severe the pain, as if it was the S. O. S. call from the tissues in danger.

The time of the onset of pain in relation to taking of food is of striking clinical significance. The distress arising from two to four hours after the taking of food indicates, but is by no means pathognomonic, of duodenal ulcer; while the pain developing immediately upon or soon after the taking of food is likely to be more severe than from ulcer, also perhaps it may be accompanied by gas and vomiting and is indicative of a lesion outside the

stomach, more likely in the bile tract or appendix and reflexly causing pylorospasm and reverse peristaltic waves of the muscular coat of that viscus.

With or without vomiting and oftentimes not directly associated with pain, nausea is probably the second most common symptom of disease of the organs of the upper abdomen. The more closely this factor is connected with pain the more probable is it the product of an acute disturbance. A persistent nausea may be the sole symptom of a low grade appendicular disease and until thoroughly examined be treated for an indefinite period for nervous dyspepsia. Nausea and vomiting due directly to a stomach lesion is not usually protracted but is generally relieved as soon as the stomach has unburdened itself, while the prolonged persistent type suggests gall bladder disease, tubercular lesion of the iliocecal region, tabes, pernicious anaemia or pregnancy. In these cases there may not be as large a volume of vomited matter, neither will there be afforded the same degree of relief as results in cases of peptic ulcer. Haematemesis usually signifies ulcer, carcinoma, cirrhosis of liver or trauma arising from a severe spasm of the pylorus.

Peptic ulcer, which includes both the low gastric and the duodenal types, presents certain distinctive symptoms which if searched for through the medium of a carefully taken history, a thorough physical examination, laboratory analysis and a competently interpreted roentgen examination, may be diag-

nosed with much certainty. Rigidity and tenderness are early symptoms and the pain is rarely referred. Occult blood may be found in the stools in the early stages and also in acute exacerbations. The presence of blood in the stools or in the vomit means an abrasion or a break of small capillaries or some of the larger vessels and in duodenal ulcer when the haemorrhage is extensive it is probable that the lesion is located on the posterior surface. In a large percentage of peptic ulcers the periodicity is a most prominent and striking symptom. Pain comes on usually from two to four hours after the taking of food. Its onset is generally earlier after a liquid meal than following a more solid one. Also according to Graham the longer the period between the taking of food and the onset of pain the lower will be found the ulcer. The daily recurrence of discomfort is noticeable at almost an exact time after the taking of food, often the distress awakening the patient in the early morning hours. The tendency for the complaint to follow the same routine of symptoms day after day and then, without change in mode of living or manner of treatment, to disappear and the patient feel and believe himself well only to be, after a few weeks or months, rudely aroused from his fondly fancied security. Many writers mention the tendency for these periods of renewed activity termed attacks, to occur in the spring and autumn and I have not seen a single case of long standing in which careful questioning did not

bring out the history of this peculiarity, although there may be an interval of several seasons between the attacks. Vomiting as well as pain in these cases is more noticeable during acute exacerbations and both symptoms are generally occasioned by severe pylorospasm. Gastric analysis usually shows a so-called hyperacid condition but too much confidence must not be placed on this factor as any irritation of the midgut may produce a spasm of the pylorus which results in a prolonged retention of the gastric secretions, giving rise to conditions often erroneously termed hypersecretion and hyperacidity. In the hands of an experienced operator the roentgen ray findings when correctly interpreted will in ninety per cent. of the cases make a positive diagnosis and is, next to a carefully taken history, the most valuable single diagnostic agency we possess at the present time. Any surgeon operating for suspected upper abdominal disease except in cases of emergency without a previous roentgen examination is not giving his patient the full measure of care and protection.

In gastric cancer it is impossible to make an early diagnosis from the symptomology. When the patient presents himself to the surgeon with cachexia plus anaemia, loss of weight, impaired appetite and a readily palpable tumor there is little to be done except make comfortable his few remaining months. While had the case received the early attention it deserved, a roentgen examination would probably

have discovered while there was still opportunity for beneficial surgical interference, an irregularity in the stomach or an absence of peristaltic waves at the site of the lesion. It is in such cases that the general practitioner may, by early referring them to the roentgenologist and the surgeon, rob that insatiable monster of many whom it had marked for its own.

Gall bladder disease, as does chronic appendicular involvement, presents in some cases a train of symptoms which may very perfectly imitate disorders of almost any structure within the limitation of the upper abdomen. From my experience we have thus far in this class of cases comparatively little aid except in a negative way from the X-ray, while perhaps more than in any other disease of the abdominal viscera, the case history will be found the great factor in correct diagnosis. The light attacks of gas noticeable soon after taking food, with sudden onset and short duration, eased by belching and food regurgitation, point almost unmistakably to commencing gall bladder disease but at this period of its development the symptoms may be so slight that the patient does not consult the physician and the history is only obtained when more severe symptoms have caused the sufferer to seek aid. The periods of discomfort are usually described as "slight attacks of indigestion," but come on at more and more frequent intervals and develop in intensity until the feeling of tightness early experienced becomes an actual pain which

may, when it subsides, leave a soreness of which the patient will be cognizant. Pain in these cases is often mentioned as being referred to the right scapular region but careful questioning will elicit the fact, almost without exception, that the pain was first noticed in the right hypochondrium. Frequently there is associated with the pain of gall bladder disease a distinct sense of chilliness. At this stage of development there is apt to occur pylorospasm with the resulting condition which we may term mechanical hyperchlorhydria and the other symptoms of chronic gastric disturbance. In fact so closely may the symptomology resemble that of a chronic peptic ulcer that a differential diagnosis is impossible except by a careful consideration of the early history and development of the case; and in this connection it should be kept in mind that actual ulcer of the stomach or duodenum may be directly caused by conditions arising from gall bladder and chronic appendicular diseases as well as from the primary foci whence, as Rose now in his work on the elective action of the streptococci so conclusively demonstrated, these lesions at times originate.

Every case calls for its own particular consideration, for gastric, duodenal, gall bladder, and appendicular disease may each in turn present a syndrome typical to any one of the others at some period of their development. So, finally, since in every disease of the upper abdomen an early diagnosis offers the best promise of successfully dealing

with the disorder, we should by every means available endeavor to arrive at a diagnosis and apply promptly the proper treatment. We should no more wait upon a peptic ulcer to perforate than we would upon an inflamed appendix or infected tube to rupture. Every symptom of distress in the upper abdomen should receive most painstaking attention, supplementing the carefully taken history with a complete physical, laboratory and at least in every questionable case, a roentgen examination.

Discussion.

DR. F. W. NOBLE, Tucumcari: It is an excellent paper that Dr. Black has given us, but it is impossible to get in all the little things of diagnosis in one paper. I do not think that I noticed his making mention of the value of determining the rigidity of the rectus muscle by very, very light percussion, light palpation. Then, in the history of these ulcers we very, very often find that the patients are sick for three months, four months, six months, and then after they are medically treated they are well for about the same length of time, no longer, and then they have a recurrence. A history of that kind looks very much like ulcer, nearly always is ulcer. And I do not believe that I noticed in his paper mention of the work that Rehffuss has been doing on fractional examination of the stomach contents in cancer. I think that that is a very valuable work, which is now being done by means of the Rehffuss tube; it furnishes a very valuable measure in the diagnosis of cancer of the stomach.

DR. E. C. PRENTISS, El Paso: I was very much pleased with the Doctor's paper, particularly in regard to his dealing with the very careful taking of the history. That is not done nearly as often as it ought to be. A history taken carefully, taken with precision, will very often in itself clear up a diagnosis fairly accurately, even without physical examination; I mean that you can in that

way get a very good idea of a case. But, on the other hand, I have had a number of cases in which I have not only examined them thoroughly but have had opportunity of following them for periods of from several months to two years, yet, in one case in particular, operative findings proved me to be wrong. In this one case in particular, I diagnosed duodenal ulcer—it was absolutely typical of duodenal ulcer—and he had his recurrences of attacks for several years. Finally operation was performed and disclosed the fact that there was no ulcer of the duodenum at all and the gall bladder was very much inflamed and distended.

There is one method of diagnosis, which to my mind is very valuable, that the essayist did not mention with regard to the diagnosis of gastric and duodenal ulcer. That is the string test. In this test you put a little BB shot on the end of a string, have the patient swallow it at night, measuring the string so that it will come about two or three inches below the common duct, and in case of an ulcer that is oozing you will almost always get a red stain on the string at the point where it lies over the ulcer, except, of course, when the ulcer is in the greater curvature. I recently saw that test fail, in a case where we should have gotten the evidence in that way, but the lady was nauseated and could not retain the string so it had to be given up.

There is one thing that makes these upper abdominal lesions interesting in a way, and that is that frequently they will produce the symptoms of the patient and the real, underlying cause of the whole thing will be overlooked. For instance, a marked stasis of the colon can diminish the motility of the small intestines and stomach both and can lead to chronic appendicitis and gastric ulcer and gall bladder inflammation with adhesions, yet sometimes the symptoms are limited practically to the stomach and upper abdominal region and after operation the stasis does not receive attention, so that the patient gets after all an unsatisfactory result. I have seen that happen in a number of cases.

Another instance: I have seen a case recently, in which I felt that the tenderness of the celiac plexus and the adhesions in the neighborhood of the appendix and the gall-

bladder were secondary to obscure colonic infection with ameba, which colonic infection gave practically no symptoms itself, and the patient did not have quite a satisfactory result, but after breaking up the adhesions and removing the gall-bladder she responded very favorably to the emetin treatment. Of course, that did not prove that there were ameba, but it was very suggestive, and I think that these obscure amebic infections are very much more common than is ordinarily supposed. Some of them undoubtedly will clear up on the emetin treatment. I believe that many of these lesions are secondary to such infections.

DR. J. W. KINSINGER, Roswell: In these cases of upper abdominal lesions, we must not forget that there are certain strains of the streptococcus which entering at the tonsil may later lead to infection of the gall-bladder and secondarily travel to the appendix, etc., and we will then have appendicitis following a tonsillitis. This fact has been proven by some of our laboratory men. They state that there are certain strains of streptococci that do, not apparently, but positively, originate in the tonsillar region and extend in the course of time, apparently infecting only those organs; while other strains would perhaps enter through the blood stream or glandular chains other organs, infecting them and giving rise to different diseases, different inflammations, suppurative or nonsuppurative. That is, certain strains will reach and infect only certain organs.

That an early diagnosis is absolutely necessary for the relief of the patient is well brought out in this paper, and I think it is a point we should all take to heart. We should give more attention to the early diagnosis of those diseases where surgical interference frequently, at an early period, will save the life of the patient and avoid very great suffering to him.

DR. K. D. LYNCH, El Paso: I think we can all heartily endorse the paper which Dr. Black has read to us, and I imagine that he did not mention some of the more refined tests to be made for upper abdominal lesions simply on account of the limitation of time.

I was glad to hear him refer to the cases of thoracic disease which cause abdominal

symptoms. I think, however, they are more frequent in connection with lower abdominal conditions, such as appendicitis, than with those in the upper abdomen. Of course, we all know that we have cases of diaphragmatic pleurisy, etc., that simulate various conditions about the liver, such as cyst or abscess or even in some cases gall-bladder or duct disease. In regard to the point the essayist made in reference to gall bladder conditions, I think that usually occurs with a lesion in the common duct and not in the gall-bladder or cystic duct itself.

I was sorry the Doctor did not mention some of the other conditions in the upper abdomen, especially acute lesions of the pancreas. I think that point could have been brought out a little more fully in the paper.

DR. J. I. BUTLER, Tucson, Arizona: In regard to this subject of early symptoms of upper abdominal disease, I may say that an experience for which I had to assume at least part of the responsibility has saved me from making the same mistake several times since. That is, in obscure abdominal pain with atypical symptoms, to turn the patient over and examine his vertebral trough. I have on several occasions recognized early Potts disease, giving nothing but abdominal symptoms, by means of this procedure.

DR. K. D. LYNCH, El Paso, Texas: I would like to make another point, if I may, in reference to something that Dr. Black brought up, and that was in regard to a low-grade appendicular disease causing nausea. I think that it has been well recognized by many of the profession that symptoms of nausea occur reflexly from a distention of any abdominal organ. This, too, may be an explanation of some of the cases which Dr. Prentiss mentioned in regard to stasis in the ileum and in the colon. They are already full of material and when they get a little more down there they become distended, and nausea is caused which is referred to the upper abdomen.

DR. BLACK, closing: I thank you very much for the discussion. We all like to have our papers discussed, and I laid myself open at one or two points at which I hoped I would be attacked, but have not been honored by it. It was impossible to cover all of the organs

of the upper abdomen, or even all of the symptoms of any one organ, in reference to all the verifications in the confines of a twenty-minute paper. You may take one subject even, say the hematemesis of ulcer, and you can write a twenty-minute paper and still have something left to be said on the subject afterwards.

The periodicity of attacks, especially in ulcer, is a point for which there is no good explanation that will cover every condition, so far as I know. The best explanation is one which has very recently been advocated by Rosenow, speaking of the tendency of ulcers to spring into activity during the fall and spring months. He goes on the same theory that he does in his selective action of streptococci, that it is in the fall and spring that the patient is most subject to streptococci infection, more subject to tonsil trouble, more subject to some primary foci elsewhere, and that the renewed activity of these chronic ulcers is secondary to this tonsil infection; which is at least logical, based upon his theory.

The string test has its limitations, because there are ulcers so situated that the string will not touch the ulcer, as the Doctor mentioned, on the anterior surface. Again, in the case of ulcers that are not healed but still in a quiescent state, they have not re-invested themselves with epithelium and yet there is an insensitive granulating surface which does not readily bleed. Those ulcers will carry string over their surface and will not show evidence by a stain.

The question of stasis is covered by the point which I endeavored to make in regard to the X-ray: That we should in all our doubtful cases use the X-ray, and have it interpreted by a man competent to interpret. I am not an X-ray man, do not operate a machine, so I am not saying anything for myself when I say that. But I do not operate my doubtful cases until I have sent them to a roentgenologist in whom I have confidence and have obtained his findings.

I am very glad the Doctor brought out the question of caries of the spine, because that, like acute pneumonic processes and the crisis of tabes, does produce pain apparently rising from abdominal lesions; and these

cases, if not found before operation, will be very mortifying to the surgeon and very difficult to explain to the family.

PAROTITIS SECONDARY TO SUPPURATIVE APPENDICITIS

(With Case Reports.)

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(Read before the 35th Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 11th, 12th, and 13th, 1916.)

My paper today is upon the inflammation of the parotid gland, which appears after perforated appendicitis, and in looking over the literature on such cases, it is surprising to find how little has been written upon it, and what little has found its way into medical literature shows little conclusive evidence as to its cause or successful treatment.

Among those who have spent considerable time, in research on the subject, Brennan Dyball gives a list of 101 cases of secondary parotitis, and of these, ten cases occurred after disease or injury of the urinary tract. Eighteen cases followed injury to the alimentary tract. Twenty-three cases occurred in the course of disease of the peritoneum and abdominal wall or pelvic cellular tissue. Fifty cases occurred after disease or temporary derangements of the genital organs. Of this list, one-half the cases arose after disease of the generative organs and twenty per cent. after removal of cystic ovaries. Dyball re-

ports a death from gangrenous parotitis four days after an appendectomy in which the abdominal conditions were perfectly satisfactory.

The next greatest number of cases of secondary parotitis followed perforative gastric ulcer, and other cases have arisen after most of the non-operated diseases of the abdominal viscera, less commonly after appendicitis, puerperal fever, intestinal obstruction, removal of the tubes, gastric ulcer without perforation and acute gastritis. A few cases followed catheterization, the placing of a pessary, a blow on the testicles, menstrual disturbance and the menopause. One case occurred after ovariectomy. The gland suppurated and a diffuse cellulitis of the neck resulted, which certainly must have weighed greatly against the chances of the patient. Especially remarkable was it that after this ovariectomy the patient had no temperature and was apparently doing well, when the parotitis occurred.

Rolleston called attention to the frequency with which secondary parotitis occurred during the starvation treatment of such affections, as gastric ulcer and duodenal ulcer. Tebbs had fifteen cases, during the starvation treatment of gastric ulcer. Hone reported a fatal case of suppurative parotitis, during the starvation treatment of gastric ulcer, and collected eight such cases on record. Howard, in fifteen years at John Hopkins, with seventy-six cases of gastric ulcer had one fatal case of suppurative parotitis.

In one thousand cases of gastric ulcer, five hundred and fifty received food and water by mouth, from the start of the treatment, and four hundred and seventy cases were allowed nothing by mouth for some days. There occurred twenty-three cases of secondary parotitis among these thousand cases. Of these twenty-three cases there were twenty-one in which complete oral starvation had been employed and the other two cases had had rectal feedings, but had been permitted to suck ice to relieve their thirst. The percentage out of the five hundred and thirty cases who had been permitted food and drink by mouth was 0.4%, while the percentage in those treated by oral starvation was 4.5%, or more than nine times as many as in the five hundred and thirty cases.

The variety of bacteria present will differ according to the primary infection.

The complication of secondary parotitis has varied in its onset from the day following the operation to as many as fifty-four days after an operation for hydatid cyst of the liver. One case occurred twenty-three days after washing the bladder for cystitis. In fact, there seems to be no settled time when this complication may appear; but in most cases, after operation upon the pelvic or abdominal viscera, it has appeared during the first week, and those which appeared after delivery or abortion, did so usually during the second week.

In thirty-three per cent. of sec-

ondary parotitis both parotids were infected, the opposite gland becoming inflamed twenty-four to forty-eight hours after the first gland; and both glands were invaded, after ovariectomy, more frequently than after other conditions. When on one side only, the right side was involved more frequently than the left side; but there seemed to be no relation between the side operated upon and the side of the face involved. In one of my cases the first symptoms of parotitis occurred on October 22nd, just twenty days after her operation for perforative appendicitis, and eight days after she was re-operated for intestinal obstruction caused by a loop of intestine slipping through a space made by an adhesion band between the omentum and small intestine. In another case it appeared on October 25th, in a patient operated upon October 23rd, so that was the second. In still another case, it came on the eleventh day after operation. Another occurred toward the end of the second week and this suppurated. Both glands were affected and I incised the glands and drained them freely by means of three rubber tubes in each gland.

There are four theories as to the cause of secondary parotitis after abdominal disease or operation.

First, the pyaemic theory.

Second, the oral sepsis theory.

Third, the reflex theory.

Fourth, the toxin theory.

The first theory attributes the parotitis to a metastasis; but Paget points out that in true pyaemia, an abscess of the parotid is exception-

al, and it would seem that if parotitis was always metastatic, why were there no other metastatic foci present. And, if metastatic in origin, why should it not follow occasionally after operations in other parts of the body. Lastly, we learn, that although supposedly metastatic, only fifty per cent. suppurate.

The second theory is, that this particular parotitis is caused by infection with micro organisms by way of the duct of Stenson. Of course, the average mouth is quite frequently full of microbes from decayed teeth, Rigg's disease, diseased tonsils, etc. If this theory were true, parotitis should be a much more common complication than it is, in all the acute infections. In all my cases the mouths had previously been rinsed very frequently with alkaline antiseptic solution. The third theory says that it is due to reflex nervous action. This theory is based on the supposed sympathy between the parotid and the testis or ovary, because in epidemic parotitis these other organs so often become inflamed; but where is the nervous sympathy of the parotid with the appendix or duodenal ulcer? In support of the toxin theory Dyball calls attention to the secondary parotitis from lead, mercury, copper and iodine, and thinks that these poisons are paralleled by the toxins of such diseases as enteric fever, cholera, typhus fever, variola, pneumonia, cerebro-spinal meningitis and scarlet fever. In fact he believes that it is the toxins in these latter diseases that cause the complicating parotitis. He be-

lieves that it is the toxins of the peritonitis that cause it in abdominal conditions having peritonitis present. He explains the parotitis after gastric ulcer, intestinal obstruction, or malignant growth of the bowel as due to increased absorption of the intestinal contents and recalls Bouchard's work on auto-intoxication. In support of this, he recalls a case of ptomaine poisoning from tainted meat, in which the local effects of the poisoning were trivial but the constitutional effects marked.

If we credit the toxin theory we must admit that certain glands react to certain toxins, while the cells of other organs are not affected, for instance, scarlet fever attacks the kidneys. Dyball thinks the reason suppuration occurs is that after the gland is inflamed by the toxin, it forms a point of less resistance to pyogenic organisms which reach the gland either by the blood stream or by Stenson's duct. And it is contended that suppuration is not present unless the already inflamed gland becomes infected by secondary germs, say by haematogenous infection or by ascending infection from Stenson's duct, but Bucknall brought forth histriological evidence to show that parotitis is always an ascending infection from the mouth by Stenson's duct and urged prophylaxis by oral antiseptic cleansing; while Tebbs contended that the majority of cases were haematogenous infections. Now Ralston calls attention to the frequency with which secondary parotitis occurs during the starvation

treatment of such affections as gastric and duodenal ulcer, and he had nine cases of secondary parotitis during such treatment of gastric ulcer, and that in all these cases special attention to cleansing the mouth had been given. Tebbs had fifteen cases during the starvation treatment of gastric ulcer. Hone reported a fatal case of suppurative parotitis after the starvation treatment of gastric ulcer and had collected eight such cases, and I am persuaded that Ochsner's starvation treatment which I use after operations in many of these cases of perforative appendicitis was an important factor in the production of the four cases of secondary parotitis. In all my cases my patients used the alkaline antiseptic solution to rinse the mouth frequently, previous to the appearance of the parotitis.

About the first symptom manifested is a complaint by the patient, about twenty-four hours before the appearance of any swelling, of a soreness in the ear, or in front of the ear, or in the jaw and the parotid region on the side attacked, and it is tender on pressure. If the temperature and pulse have been low there will be a distinct rise in both. In about twenty-four hours swelling can be detected, and the patient complains of pain in moving the jaws.

The disease may end by resolution in just a few days, but about half the cases suppurate. Paget said that the latter ending was always true of patients who were in a septic state; however, parotitis

may result when the seat of the primary operation shows no apparent sepsis. It has been contended that suppuration will not occur unless the already inflamed gland be infected by secondary germs by haematogenous infection or by ascending infection through Stenson's duct. One of Paget's cases occurred after ovariectomy in a patient who had no temperature and was apparently doing well until the parotitis occurred. The gland suppurated and a diffuse cellulitis of the neck resulted, which certainly must have weighed greatly against the chances of his patient. He reported thirty-seven deaths in his series of cases; but he attributed the mortality in each of them to the primary disease. Brennan Dyball reports a death from gangrenous parotitis which occurred four days after an appendectomy. It seems to me that this complication occurring as it does just as the patient is being dragged away from death after a suppurative appendicitis or other grave abdominal condition that at this time it might well turn the scale against the patient; indeed, suppurative parotitis is a grave complication, since out of eight cases of secondary suppurative parotitis three proved fatal.

In treating secondary parotitis general supportive measures are used, the gland has been painted with iodine and the mouth cleansed with antiseptic solution. When suppuration is detected free incision is demanded and some form of adequate drainage. In my first patient I used a mouth wash of the alkaline

antiseptic solution, a ten per cent. ichthyol ointment and heat. In my second case I used Van Cott's bacterin and repeated it each three days, in addition to external heat, an antiseptic mouth wash and the use of chewing gum. This same treatment was used in two other cases, the last of which suppurated.

CASE 1.—Mrs. C. F., housewife, age 26, referred to me by Doctor C. H. Hale, entered hospital October 22nd, 1912, with a general peritonitis complicating appendicitis. On October 25th, she complained of pain in the right side of the neck and on examination, a swelling of the parotid was noticed and a diagnosis of secondary parotitis made. An alkaline antiseptic mouth wash was used. An ichthyol ointment was applied externally and dry heat. Van Cott's bacterin was given in appropriate dosage and repeated at four day intervals and the patient made a good recovery by November 15th, without suppuration in the glands.

CASE 2.—E. M., a schoolgirl, age 10, referred to me by Doctor W. M. Lancaster, complaining of pain in the right lower quadrant since Tuesday morning (Sept. 22nd, 1914) and that she had a chill Wednesday. She says she vomited Tuesday after the pain commenced. Her temperature at this time was 102.6 and pulse 120, costal breathing and the abdomen was held rigidly. There was great tenderness at McBurney's point and pain which was referred to the region of the gall bladder and kidney region. Howay's sign was present. A diag-

nosis of suppurative appendicitis was made and she was operated on at once. The appendix was removed and abscess drained and a large rubber drainage tube led out from the abscess cavity. She complained on October 22nd that an insect had bitten her near the ear and on inquiry and examination, this complaint proved to be due to a secondary parotitis. She was given one-half cc. of streptococcic vaccine and this was repeated at four day intervals. The girl recovered without suppuration occurring in the parotid.

CASE 3.—Miss K. S., a spinster aged 40, entered the hospital March 9th, 1915, complaining of severe cramping pain in the abdomen. Her rectal temperature at eleven a. m. was 99.6 and her pulse 108 and at four p. m. her temperature was 103.2 and a diagnosis of perforative appendicitis was made. She was taken to the operating room, so soon as her consent could be gained, and an appendectomy performed. A large rubber drain was left in the lower abdomen. She complained of pain in the face and ear on March 21st and we diagnosed a probable parotitis and gave an injection of Van Cott's bacterin. Next morning the parotid was some swollen, confirming the diagnosis of the night before. This patient rapidly got well of the parotitis and there was no suppuration of the gland.

CASE 4.—Mr. E. B., a rancher aged 20 years, referred to me by Dr. W. M. Lancaster, entered the hospital complaining of aching pain

in the right lumbar region for the last two weeks. He has been unable to leave his bed for that period. His mother died of yellow jaundice, otherwise his family history is negative. He has had measles and mumps from which the recovery was perfect. Two weeks ago a pain came in the lower abdomen which was like stomach ache. This was not severe. At first the soreness was farther back in the lumbar region than it is now. He had no chill. Two weeks ago Sunday he vomited green bile after the pain had begun. He says he had no fever two weeks ago, but he has now a temperature of 101 with a pulse of 92 which is dirotic. There was tenderness and resistance in the right lumbar region also just above McBurney's point and it extended backward to the region of the right kidney. He had no pain in his testicle or knee joint but complained of pain over the right kidney on Murphy's fist percussion. The urinalysis showed no albumen, no pus, but many cellular and hyaline casts. A diagnosis of appendicitis with retrocaecal abscess was made and the abscess drained but the appendix was not removed. On the eleventh day he complained of pain in the jaw and ear and a tentative diagnosis of secondary parotitis was made and confirmed next morning by the swollen parotid. I did not treat this case early with the bacterin and suppuration occurred in both parotid glands requiring extensive incisions and drainage. The case recovered after a stormy convalescence.

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Parotitis Following Injury or Disease of the Abdominal and Pelvic Viscera.—Brennan Dyball (Annals of Surgery Volume 40).

Discussion.

DR. J. W. KINSINGER, Roswell: I have, unfortunately, not heard all of the Doctor's paper. It is a subject that I have never looked up as thoroughly as the Doctor has, and we find so little about it in recent literature that it is evident the Doctor has given the matter very extended thought. So far as agreeing or disagreeing with the paper, I would not be able to take a stand. I would say this, that it is worth a good deal to me personally to have brought to my attention these cases that occur in our surgery and also cases that are not operative and where the operation is perhaps neglected. It is well worth our efforts to observe those cases more closely and to collect more reports on suppurative and nonsuppurative parotitis and infectious and noninfectious diseases; as he has stated today these cases are not always proven to be all infectious or septic or pyemic cases. Therefore, I promise the Society that at another meeting I shall endeavor to be better posted on the subject.

DR. E. C. PRENTISS, El Paso: I enjoyed the paper very much indeed. There is one factor, which I believe the Doctor did not mention, that might have something to do with the occurrence of inflammation, of abscess, in those cases. Of course, we know that these acute conditions in the abdomen are very frequent—acute appendicitis, gastric ulcer, and those other conditions; and we know, at the same time, that the parotitis is very rare. Now we must also remember that stones in the parotid gland, though they occur rarely too, and in the ducts, will frequently

exist there for years and either with no symptoms or symptoms will not be noticed until such time as a good-sized stone is discharged from the duct after pain lasting, it may be, for from six to twenty-four or thirty-six hours. Now it is just possible that in these cases the Doctor has had there might have been a latent stone, or at least in one of these cases, that would have given no trouble had it not been for the inflammatory condition with the getting into the blood of the germs. It would be interesting to know whether, in the case of pus, if he opened the abscess, there was a stone present. I do not know whether those stones are of such a nature as to give a shadow to the X-ray or not. It would be an interesting point if this question could be cleared up by means of the X-ray.

DR. J. I. BUTLER, Tucson, Arizona: Not directly bearing on this subject, but of considerable interest, is a reversal of the order of affection of these glands—in other words, an affection of the parotid preceding abdominal symptoms. There have been a number of cases reported, in fact, quite a series, in which the pancreas was secondarily affected in parotitis, inflammatory parotitis—in fact, catarrhal jaundice has appeared in one series of cases in an epidemic form. What the explanation is, I do not know, nor what would be the association that would bring about such a secondary involvement.

DR. K. D. LYNCH, El Paso, Texas: I wish Dr. Noble would tell us just exactly what was the type of bacterin used. Of course, there are various bacterins and that information might give us some clue as to the type of infection in these cases. I do not recall having seen more than one case of parotitis following an abdominal operation. That case went to suppuration, incision, and perfect healing thereafter.

As regards the ascending type of infection, I think that we have pretty well ruled it out in practically all parts of the body. I believe the theory that infection up a channel or duct against the direction of secretion takes place has been quite generally given up—it has in regard to the ureter and several other tubes, and I do not think it has a place either in the parotid.

DR. NOBLE, closing: I did not search for any stones in any of my cases. I did not get any stones when I opened up the gland. I made incisions on either side, but did not get any stone and no stones appeared in the dressings. If the condition was caused by a stone, then the stone is still there. I think it would be well, if I were so fortunate or unfortunate as to have any more, to search for a stone; it would be interesting, at least.

There have been cases—I noted one case—of reversal of the inflammation. This case had a parotitis following orchitis several days after the orchitis appeared.

The bacterin used was the stock bacterin of Parke, Davis & Company. It is composed of colon bacillus, staphylococcus and streptococcus, and is called by them Van Cott's compound.

THE COUNTRY SURGEON

J. H. WROTH, M. D.,
Albuquerque, N. M.

(Read before the 35th Annual Meeting of the New Mexico Medical Society, Albuquerque, N. M., October 11th, 12th and 13th, 1916.)

Some of you may remember the interview between Mark Twain and President Grant. Grant was, of course, a sphinx, and when Mark Twain was introduced to him, he shook hands and said: "I'm glad to see you." The conversation languished, until finally, Mark said: "Say, Mr. President, I feel embarrassed, don't you?" I likewise feel embarrassed before the learned and sedate aggregation which I have before me, but I intend to break loose and give you just what I think on certain propositions and then you can tear me all to pieces with the assurance that I shall come back at you.

There are many before me who

have been in the profession for years who have started from small places and have reached the goal of their ambition, that of being a leader in the profession. I ask those of you whose hair is now going below the timber line, while listening to this paper, to go back to your early days when you were a struggling doctor, full of ambition and had a strong desire to reach the upper rung of the ladder and think over these facts as ancient history. Most of you have achieved your end, but there are others beginning where you began, working for an end and are chasing the ignis fatuus, but with a definite and decided end in view which they will attain according to their ability and perseverance. How many of us in the early days have started, handicapped by lack of material advantages, conscious that we had what our teachers had told us and yet little, very little, as compared with what we know now.

How many of you, and I use the pronoun "you" in a general sense, in starting out in life have been called upon some evening to travel anywhere from 20 to 100 miles to a case of which you knew nothing, no information had been given you as to the real necessity. I can see, by personal recollection, the doctor crowding into a satchel everything that he possibly possessed and some other things that he probably borrowed of somebody else. I can see him in my mind, crossing the distance and arriving at a shack which might contain two rooms; in that he would find his patient; it might

be anything from a complicated confinement to an abdominal disease. In those early days we had not recognized appendicitis, but called it inflammation of the bowels, or peritythlitis. This was not our fault. We had not got far enough along in our knowledge to distinguish between two or three diseases and in those days of which I speak gall bladder trouble was absolutely unknown; in fact, I doubt that in '76 the average physician would have recognized a gall bladder disease if he met it in the middle of the road. This man, on horseback, with saddle bags, did the best he could; camped with his patient, stayed with him, studied him, and in the majority of cases succeeded under adverse conditions in spite of his limited knowledge, unable, from environment, to keep up with the current medical advancement, and yet, gentlemen, I will say to you, that in proportion to the number of cases, the country surgeon did succeed in a far greater ratio than those who were favored by surroundings and by association.

I herewith present a plea for the country surgeon, the man who in an obscure hamlet with no help within reaching distance, able only to rely upon himself, uses his gray matter, and at the same time becomes gray-headed over the worry. There are men in my hearing who have gone through this experience and who have been forced to operate or prescribe under the most adverse conditions and to their credit be it said, without professional help and with ignorant assistance in the line of nursing, have succeeded in attain-

ing results far ahead of their more favored "compadres."

I see before me several members of the medical profession who have given me their experiences as a country surgeon and who have since risen to a higher rank, and in this connection I want to tell a story about one of them. The facts are these:

A man with a crushed leg and possible internal injuries; a shack about 12 feet square; wife and two children occupying the same; dirt omnipresent; man almost in a state of collapse, and, as I intend to make this personal to myself, I, in my checkiness, offered some objection and suggested that we probably had better remove him, examine his secretions, etc., but my old friend, a stern and rigid old Baptist, said: "Hell; we ain't got time; save his life." Those were the old days of country doctors.

Gentlemen, I am not going into any discussion as to what remedies to use or how I wish to do things, but I desire you to consider how some of you started out in life, the advantages that you now have and the methods that you are now able to use. Compare the country surgeon, "40 miles," as Sidney Smith says, "from a lemon," with a serious case, and put him alongside of your city physician; one man is alone; no matter what the accident or form of disease is, you can imagine yourself what the conditions are. He stays with that patient, works over him, and succeeding or not, forgetting in his desire to save life that he himself is a poor man,

crowded, probably with debt, but his humane impulse and his duty to his profession keep him there irrespective of what might be occurring at his home town.

Let us look at the other side: The telephone rings; "Is this the doctor? Man down here with bad case of something"—it may be anything. "All right, call the ambulance and take him to the hospital and I'll be up there in ten or fifteen minutes and look him over." The case is looked over, turned over to the nurse, directions given, and the doctor goes back, I cannot say to a deserved sleep, but to a rest. Which, gentlemen, of the two men should command the respect, if you are looking upon your patients as human beings? The one gives his own life, his own care; the other practically does the same, but unloads on the assistants or subordinates the observation powers.

It was my pleasure once to visit a very prominent surgeon of this country, carrying letters of introduction, and he said: "I am going to operate this morning, and I would like to have you present."

Said I, "What is the case?"

"Well," said he, "I haven't decided yet; the papers are not before me."

I said, "What do you mean?" Of course, I had then arrived at the age when I could make remarks of that kind.

"Well, Dr. Smith has not given me the examination of the urine and Dr. Brown hasn't given me the history of the case, and I'll examine those before I operate."

I didn't say anything, but it struck me very forcibly and very decidedly, and not very favorably. There is one man present (who will appreciate what I am going to say), who (I know) went twenty miles on a bicycle to take care of a man with a serious accident, watched him, himself, stayed with him a certain length of time and cured him. Compare the two men; who has done the noblest work? Who got results? Which one of these two men is entitled to the greater credit not on account of physical suffering on his part, but on a deliberate, persistent conscientious knowledge of the condition of affairs; and here is where this paper begins properly.

Not having been a country practitioner in the strict sense, my life having been spent in cities and small towns, I feel that I can to a certain extent express a very decided and impartial opinion on the standing of the people doing the foundation work. To those of you who care to study medical history, you will find that most of the pioneers have been in villages, country towns of small size, and have labored under disadvantages which you and I can never appreciate. Recall the instance of Ephraim McDowell performing an ovariectomy, with a mob ready to avenge should he fail. He blazed the way and while his methods might have been crude and undoubtedly were, he started the line for operations in abdominal surgery. More instances of this kind can be given, such as the treatment of fractures or practically any disease in the

human body, and if you will take the time to look this matter over, it has been the man in the "back woods," the man who acted by himself who has opened the way for others to follow; in fact, he made a trail, narrow at first, but which others taking advantage of conditions and encouraged by his experience, have converted into a broad automobile highway.

While not apropos, I would like to insert a little personal story:

I was a member of the class of '78 the first class that ever took a five-year course, and after our graduation, five of us who had been private students of a prominent surgeon, went to a dinner, during which the old man said: "Boys, I'm satisfied with you; you've got along all right; you've done your duty, but there's one thing you've got to learn which nobody can give you, and that is, common sense."

Now, I claim that the country surgeon, by his hard work, by his inability to depend on others, has reached and obtained the knowledge of common sense. The leaders of the profession are worthy of their name, but the country doctor has brought to them new knowledge; he has brought to them facts which they didn't formerly appreciate. It is a very easy matter for a man to go around the corner and call on Dr. Robinson for help or ideas, but I am willing to say that the man who has brought the most ideas, the most intricate knowledge despite his lack of possible scientific education, is the country doctor. He may be, according to social distinctions, un-

couth in appearance, traveling around with a buggy that hasn't been painted for a year and a half, and yet in the course of my travels I have found that very same man better posted in the knowledge of human beings than I was and I am very forcibly reminded of a statement made by a prominent professor of anatomy in Harvard College in a novel, speaking of a country doctor, in a New England village, he says:

"I know the families that have a way of living through everything and I know the other kind that have a trick of dying without any reason—I know the folks that think they're dying as soon as they're sick—and the folks that never find out they're sick until they're dead. I do not undervalue your science, but I know these people 'round here—fathers and mothers—children and grandchildren so that all the science in the world can't know them—without it takes time about it. * * * * You can't tell a horse by driving him once—nor a patient by talking a few minutes with him."

Can Science beat it?

I have been called erratic. I admit I have peculiar ideas, but at the same time, while we are still looking forward to future advancement, we must not minimize the achievements of actual workers. We must not get swelled up with pride because we happen to have an automobile or a position in a hospital, but we must recall how we got them and especially as there are men in villages today just as good, working just as hard, and getting just as good results as

those who stand on the pinnacle of science to whom we should give due credit. They know their patients; they know their peculiarities; it is not a case of coming in or asking questions and saying, "Yes," we'll do this, or we'll do that. The consultant or specialist has no more idea of the idiosyncrasies of their patients than I have of the her-after. Patients have to be studied; they are not "cases" in that sense. While it may be that the day of the old family physician has passed away, yet it behooves us not to give a snap-shot judgment, but to stop and study the individuals. I have been so often misled because I thought I knew everything at that time, that possibly I am learning some common sense as I grow older. However, my feeling is this: That a greater study of the individual person himself is more necessary than an opinion. We are too prone in our present life to rush things and here is where the country surgeon and doctor really has the best of us.

Now, gentleman, this is probably a peculiar paper; at all events, I can call it an honest paper. I believe everything I have said and, just as we build a house, as long as the foundation is laid properly, strongly and permanently, it stands; it may contain rough stones that will not compare with the finished building above it, but the finished building would be of no account were it not for the foundation laid, and that foundation in medical matters is the country doctor and surgeon. To him be the credit.

Abstracts

Scientific Researches into the Causes of Alcoholism and Inebriety.

By T. D. Crothers, M. D., Hartford, Conn.

One great fact has been established by accurate laboratory and clinical research, viz., that the physiological action of alcohol on the cell and tissue is that of an anaesthetic and depressant, and not a tonic or stimulant. This has been accepted by the profession generally, and while it revolutionizes the previous theories, explains in some degree why alcohol is so fascinating.

Beyond this, there is a vast range of causes producing alcoholism and inebriety that are practically unknown. All remedial and restorative efforts are based on the theory that alcohol is the special and particular cause of all the degenerations which follow from its use.

Careful studies of individual cases show this to be untrue; also that in many instances alcohol is only a symptom. It may be a complicating drug intensifying unknown conditions that were latent before. It may be a specific poison localizing in certain organs. It is also cumulative, and associated with the most complex neuroses.

The causes that impel men to drink have never been studied scientifically. The literature up to the present is a confusing mass of theories and opinions unverified.

In this unknown region there are innumerable questions like the following: Why are certain periods of life more favorable for the outbreak of the craze for alcohol than others? Why does the desire to drink break out suddenly in diverse conditions, and then subside from causes inadequate to explain the change? What is the explanation of the exact periodicity of these drink excesses that

are as certain as the rise and fall of the tide? What are the causes in surroundings and conditions of living that provoke these paroxysms? Why do men drink after injuries, diseases, shocks, losses, disappointments, business reverses and great successes in life? What degenerations are transmitted from the parents to the children that create susceptibility to drink in so-called moderation for years, and why do others become diseased and die? Why do some men drink in early life, then abstain, and in middle or later life turn to alcohol again and drink until death? Why are some persons susceptible to the contagion of surroundings and companions, while others are immune? What physical and psychical causes produce the drink craze?

These are some of the unknown causes and conditions which have never been studied with scientific exactness. One of the most prominent and widely accepted explanations is the so-called moral cause. Physical conditions are considered results and not causes.

A Research Foundation has recently been organized at Hartford, Conn., for the purpose of making an exact scientific study of these questions. It will be endowed and become a permanent work. Preliminary studies have already begun, and practicing physicians from all parts of the country are appealed to for the records and histories of cases which will be compiled and tabulated for the purpose of determining the laws which control and govern them.

This is the first scientific effort to take up the subjects of alcoholism and inebriety and determine the causes which produce them outside of alcohol. Science has shown that these conditions are governed by exact physical and psychical laws, which if known and understood would indicate the most practical means and measures of relief.

The Foundation will be practically a laboratory or clearing house, where persons can come for examination, counsel and advice. To a large class of persons who want something more than pledges, appeals or sanatorium treatment, this will open a new field of means and measures for relief that will be most welcome.

Correspondence is earnestly solicited from the profession.

Book Review

Painless Childbirth

By Dr. Carl Henry Davis. Forbes & Co., Chicago, Price \$1.00.

A book of unusual importance has just appeared, written by Dr. Carl Henry Davis of Rush Medical College and The Presbyterian Hospital of Chicago, entitled "Painless Childbirth, Eutocia and Nitrous Oxid-Oxygen Analgesia," (Forbes & Co., Chicago). This book is important for two reasons: it is the first book by an obstetrician to thoroughly discuss the various methods employed in the attempt to secure painless childbirth; and, secondly, it is the first report of the results of varied experience with the nitrous oxid-oxygen analgesia, which will undoubtedly become the analgesic of choice in obstetrics.

The first part of the book traces the development of the attempts to relieve the suffering of labor. The chemistry, pharmacology and toxicology of the various analgesics are compared and their advantages and disadvantages considered with unbiased fairness.

In the second part of this volume eutocia is given as the goal for which the physician is striving. The author believes that in the cry for painless childbirth that the desire of mothers is for eutocia,—not amnesia. Granting that painless obstetrics is desirable the author pleads for safer and better obstetrics. He claims that with all the modern progress in preventive medicine that there has not been a corresponding increase in the safety of maternity. By quoting liberally from various obstetrical authorities and the mortality records of several countries, Dr. Davis shows that maternity is more dangerous today than before the discovery of anaesthetics and antiseptics. Doctor, do you know that in the United States there is twice as much danger of the mother dying from puerpal sepsis as there is of the average woman dying from tuberculosis?

Recognizing the need for relieving pain in many cases of childbirth, Dr. Davis offers in the highly important third section of his book a method which should receive the con-

sideration of every physician whether he practices obstetrics or not. This is the nitrous oxid-oxygen analgesia. This method has passed the experimental stage; for it was used successfully in Europe in the early 80's and the results there have more recently been duplicated in the Presbyterian and other American hospitals. The statistics recorded are extremely interesting. The author gives in detail the technic for administering nitrous oxid oxygen analgesia in operative as well as in normal labor.

While the advocates of "Twilight Sleep" agree that it should be used only in an especially equipped hospital and by a specialist, Dr. Davis believes that the nitrous oxid-oxygen analgesia may be used safely and efficiently by every physician who is trained in the science of obstetrics. He believes that nitrous oxid-oxygen analgesia is a logical method of relieving the suffering during childbirth and a great aid in securing eutocia.

We have recently received Volume III of the Medical and Surgical Reports of the Episcopal Hospital of Philadelphia, containing a number of excellent papers based on the work done in the Episcopal Hospital in 1914-1915.

Constipation, Obstipation and Intestinal Stasis.

Constipation, Obstipation and Intestinal Stasis, by Samuel Goodwin Gant, M. D., LL. D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Second edition enlarged. Octavo of 584 pages, with 258 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$6.00 net; Half Morocco \$7.50 net.

This is the second edition of doctor Gant's excellent book, the first edition having been reviewed in these columns some time since.

Many new chapters have been added to meet the demands made by a better knowledge of the subjects treated. New illustrations are also found adding value to an already valuable work. The new material added gives the book a wider range of usefulness than had the first edition.

Blood-Pressure.

Blood-Pressure, From the Clinical Standpoint, by Francis Ashley Faught, M. D., Formerly Director of the Laboratory of Clinical Medicine at the Medico-Chirurgical College, Philadelphia. Second edition, thoroughly revised. Octavo of 478 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Price \$3.25 net.

Doctor Faught has made a careful review of his work on Blood-Pressure and in this second edition we find a number of corrections in the text as well as an addition of much clinical material including new charts illustrative of various types of blood pressure changes.

The study of Blood-Pressure is still in its infancy and there is much yet to be learned. Doctor Faught's book is a splendid manual for the general practitioner to use as the basis of his studies.

New and Nonofficial Remedies

During November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

H. K. Mulford Company: Mercurialized Serum—Mulford, No. 5-A and 5-B; Mercurialized Serum—Mulford, No. 6-A and 6-B.

Swan-Myers Company: Swan's Bacillus Bulgaricus.

Swan's Bacillus Bulgaricus.—A pure culture in tubes of the Bacillus bulgaricus. It is designed for internal administration and for direct application to body cavities, abscesses and wounds. The culture is supplied in boxes of twelve tubes. The tubes must be kept in a cool place and must not be used after the date stamped on the package. Swan-Myers Company, Indianapolis, Ind. (Jour. A. M. A., Nov. 25, 1916, p. 1601.)

Propaganda for Reform.

Patent Medicine Prosecutions under the Food and Drugs Act.—The following information was brought out in connection with prosecutions by the federal authorities chiefly under that portion of the Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims. Dr. Porter's Antiseptic Healing Oil

was found to be essentially a solution of camphor and carbolic acid in cottonseed oil. It was claimed to be an excellent remedy for cuts, sores, old chronic ulcers, corns, bunions and a preventive of whooping cough, diphtheria and tuberculosis. Ballard's Horehound Syrup Compound was sold "For Consumption, Coughs and Colds" and other diseases. Dr. Shoop's Night Cure, was claimed promptly to cure ulceration, inflammation or congestion of the womb, leucorrhoea, painful ovaries and other female diseases. It was found to be a suppository containing zinc carbonate, zinc sulphate and boric acid in a cacao butter. Dr. Shoop's Cough Remedy was found to be a syrup containing ammonium benzoate and probably white pine tar and gum. Dr. Shoop's Restorative was sold for the cure of all diseases of the stomach, liver and blood and still other diseases. Father John's Medicine was advertised as a consumption "cure." Dr. Shoop's Twenty Minute Croup Remedy was found to be a syrup containing glycerine and a small amount of salicylic acid. Bad-Em Salz was found to consist of sodium chloride, sodium sulphate, sodium bicarbonate, and a small amount of tartaric acid. It was sold with claims suggesting that it was derived from European springs and that it dissolved gallstones and gravel in the kidneys or bladder. Kennedy's CalCura Solvent was a water-alcohol liquid containing 2.44 per cent. potassium acetate, 16.75 per cent alcohol, 52.46 per cent. cane sugar and vegetable matter resembling mint, cardamon and boneset. From the claims which were made one would get the impression that there could be few ills that it would not cure. (Jour. A. M. A., Nov. 4, 1916, p. 1335-6.)

Intravenous Therapy.—The technic, although not difficult, must be thoroughly mastered, or undue pain, infection, air embolism, or even death may result. Often a drug has an action different from that obtained by the usual method of administration. Deaths have resulted not only from a lack of proper technic, but also from a lack of knowledge of drugs so administered. Thus death has followed the injection of an iron preparation containing peptone, and also following intravenous injection of ether. Intravenous injections, while sometimes superior to the slower

methods, are distinctly inferior when a continuous rather than a sudden action is desired as with iodids, nitrites, iron or salicylates. Intravenous injections should not be resorted to unless distinct advantages are to be secured, as when immediate action is necessary in emergencies, where the drug is not otherwise absorbed or is destroyed in the stomach. In the light of our insufficient knowledge of the action of simple drugs when administered intravenously, the injection of complex mixtures of drugs is particularly reprehensible. (Jour. A. M. A., Nov. 11, 1916, p. 1450.)

Sleepy Water.—Chicago physicians are told by the Sleepy Water Corporation that Sleepy Water is a "cure" for diabetes, Bright's disease and many other ills. The claim is also made that for six years not a single case of nephritis or diabetes treated with this water has failed to be cured. Sleepy Water sells for a dollar a gallon, but you cannot buy less than fifty gallons. At least a gallon a day must be taken and even five gallons a day may be taken "without any detrimental effect upon the heart action, no matter how bad the heart action seems to be." If we are to take the corporation's word for it, "Sleepy Water" has performed many miracles, although details of its modus operandi are not forthcoming, "as no autopsy has been performed on a person cured by Sleepy Water." (Jour. A. M. A., Nov. 18, 1916, P. 1530.)

Human Ease.—The federal authorities have issued a fraud order, denying the use of the mails to the Human Ease Medicine Co., of Atlanta, Ga. Human Ease was guaranteed "to cure all diseases both in and on man and beast." Analysis showed it to be an ointment composed of lard with a little sodium bicarbonate, sodium sulphate and potassium nitrate, flavored with oil of sassafras. (Jour. A. M. A., Nov. 18, 1916, p. 1540.)

Some Misbranded Nostrums.—The following "patent medicines" were found misbranded by the federal authorities: A. D. S. Cod Liver Oil Comp., claimed by the American Druggists' Syndicate to be a sovereign remedy in pulmonary tuberculosis, was not possessed of the virtues claimed, nor a preparation of the active principles of pure Norwegian cod liver oil. Johnson's Chill and Fever Tonic,

claimed to be a "guaranteed remedy" for dengue fever, typhoid fever, measles and la grippe, was a watery solution of Epsom salts and cinchonin hydrochlorid. A. D. S. Peroxide Talcum Antiseptic and Deodorant, sold by the American Druggists' Syndicate with the claim that it contained a peroxide and to be a wonderful antiseptic and germicide, was found to have no antiseptic properties and no detectable peroxide. Dr. King's Royal Germeteur, claimed to be a "germ destroyer," was found to consist essentially of 98 per cent. water and 2 per cent. sulphuric acid, saturated with hydrogen sulphid. (Jour. A. M. A., Nov. 18, 1916, p. 1541.)

What Ailed Him?—A druggist wants to know what ailed the patient for whom the following was prescribed: calomel 1 grain, potassium iodide 4 drachms, potassium bromide 3 drachms, potassium citrate 5 drachms, tincture of aconite 2 fluidrachms, wine of ipecac 1 fluidounce, chloroform water to make 3 fluidounces. Without venturing a guess regarding the patient's illness, it is suggested that if anything new was wrong with the patient after he took the medicine, the case may be diagnosed as one of misplaced confidence, either the physician's misplaced confidence in drugs or the patient's misplaced confidence in the physician. (Jour. A. M. A., Nov. 18, 1916, p. 1541.)

Tartrates in Nephritis.—While the vegetable acids, such as citrates, burn to alkali in the body, the tartrates are not so converted, and leave the body nearly in their original form. Underhill and others have shown that tartrates in large doses can cause tubular nephritis in animals. While human beings tolerate without apparent kidney disturbance small doses of tartrates, either given medicinally or as they occur in baking powders and in certain foods, and while it would probably require very large doses to cause kidney inflammation, it would seem inadvisable to give food rich in tartrates or to give medicinally large doses of tartrates in nephritis. (Jour. A. M. A., Nov. 25, 1916, p. 1601.)

More Misbranded Nostrums.—The following "patent medicines" have been found misbranded under the U. S. Food and Drugs Act, chiefly because of unwarranted and false therapeutic claims: Dr. Jones' Liniment was

recommended for corns, toothache, backache, "rheumatism," and various other conditions. Analysis showed it to be "essentially a gasoline solution of oleoresin of capsicum, oil of sassafras, methyl salicylate, and evidently, volatile oil of mustard." Graham's Dyspepsia and Heartburn Remedy was found to contain, among other things, sodium bromide, sodium bicarbonate, magnesium carbonate, sugar, chloroform, alcohol and small quantities of morphine. It was asserted to be a remedy for gastritis, ulceration or threatened cancer of the stomach, and all disorders arising from an impaired digestive system. Mother Hart's Baby Syrup admittedly contained opium and alcohol. It was asserted to be "A Safe Remedy For The Home." Dr. Hale's Household Ointment was sold as "A Positive Specific for the Speedy and Permanent Cure of Rheumatism, Lamé Back, Neuralgia" and many other conditions. Analysis showed the ointment to be composed of "vaseline and camphor with a small amount of aromatics resembling oil of thyme." Dr. Greene's Nervura was sold for nervousness, nervous debility, weakness, poor blood, etc. It was found to contain 18 per cent of alcohol, and celery, ginger and other unidentified vegetable material were indicated. Hill's Freckle Lotion was claimed to be absolutely harmless when used externally according to directions. Yet it was found to contain corrosive sublimate. Dr. Hiatt's Germicide was sold as a specific for croup and for diphtheria, quinsy, sore throat, etc. It was a syrup containing sodium benzoate, phenol, alcohol, a small amount of glycerine, probably balsam of tolu and flavored with oil of wintergreen. (Jour. A. M. A., Nov. 25, 1916, p. 1615 to 1616.)

Unna's Paste for Varicose Veins.—In the treatment of varicose ulcers of a mild form Dr. Oschner prepared a boot composed of several layers of a bandage, each treated with Unna's paste applied hot. The paste consists of gelatine 4 parts dissolved in 10 parts hot water to which 10 parts glycerin and 4 parts zinc oxide are added. (Jour. A. M. A., Nov. 25, 1916, p. 1617.)

Toilet Lotion.—Nothing is better to soften and whiten the skin than the official cold cream. For oily skins a tragacanth lotion is suitable. (Jour. A. M. A., Nov. 25, 1916, p. 1618.)

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All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussion

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Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A.

Address communications to

New Mexico Medical Journal, P. O. Drawer 23, Las Cruces, N. M.

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Intestinal Stasis, Ptosis and Constipation

have assumed today an importance which the medical profession never before imagined. This is because the toxemia which may accompany these conditions, with its train of detrimental results, has been demonstrated, while the fact that cases may be treated successfully by the physician, is recognized.

It has been shown that Ptosis, Intestinal Stasis and Constipation do not necessarily occur together. Each may exist by itself, or any degree of combination of two or all may obtain. The essential matter is to prevent the toxemia by preventing an abnormal delay in the passage of material along the gastro-intestinal tract and by hindering development of bacteria.

The medicinal remedy, *par excellence*, is, by common consent, LIQUID PETROLATUM, *Heavy*, administered early in the case and persisted in until a cure is had, or until it is demonstrated that surgical conditions prevent results.

We therefore wish to call the attention of the medical profession to

Liquid Petrolatum, Squibb (Heavy, Californian)

as especially suited to relieve constipation and to prevent alimentary toxemia. It is colorless, tasteless, neutral and non-irritating. It exceeds the quality requirements of the United States Pharmacopœia, and the British Pharmacopœia, and is the purest and best mineral oil to be had. It is superior in essential respects to similar products, whether of Russian or American origin.

E. R. SQUIBB & SONS, New York

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Soap

(Formula of Dr. Chas. T. McClintock)

**Powerful antiseptic,
disinfectant, detergent
and deodorant.**

Prepared from pure vegetable oils combined with mercuric iodide, the most powerful germicide known.

Does not attack nicked or steel instruments; does not coagulate albumin.

GERMICIDAL SOAP, 2%:

Contains 2% of mercuric iodide: large cakes, one in a carton.

GERMICIDAL SOAP, MILD, 1%:

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For other forms see our catalogue.

SUGGESTIONS FOR USE

To prepare antiseptic solutions.

To sterilize hands, instruments and sites of operation.

To cleanse wounds (bruises, cuts, abrasions), ulcers, etc.

To lubricate sounds and specula.

To destroy infecting organisms in skin diseases (ringworm, acne, barber's itch, etc.).

To disinfect surface lesions associated with fetid discharge.

To control the itching of skin infections.

To disinfect the hands after attendance upon cases of communicable disease.

To make solutions for the vaginal douche.

To destroy the odors of offensive hyperidrosis.

To cleanse the hair and scalp.

To remove and prevent dandruff.

To disinfect vessels, utensils, etc.

To wash and sterilize bed-linen, handkerchiefs, etc., used in the sick-room.

◆ ◆ ◆

Germicidal Soap, in short, is useful whenever and wherever a powerful antiseptic, disinfectant, detergent or deodorant is required.

SPECIFY "P. D. & CO." WHEN ORDERING FROM YOUR DRUGGIST.

Home Offices and Laboratories,
Detroit, Michigan.

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Indexed

New Mexico Medical Journal

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May 1916
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VOLUME XVI

NUMBER 2

In Many Clinical Conditions

where the alimentary processes are at a standstill, how worse than futile is food as ordinarily prepared. Such food is but a menace to the organism that is unable to transform it, subdue it, to the state in which it normally contributes to nutrition and repair.

In **PANOPEPTON** we have a food in which the essential requirement of preliminary digestion has already been accomplished. Its substance, the entire food substance of beef and wheat, has undergone those profound changes which render it available for nutrition.

In **PANOPEPTON**, in its acceptability and success, is realised the clinical possibilities of peptonised food as suggested so many years ago by the brilliant English physician, Sir William Roberts.

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0.881 to 0.888 at 25° C.

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It is sold only in one-pint bottles under the Squibb label and guarantee.

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"The Soap of a Hundred Uses."

A FEW SUGGESTIONS.

- To prepare antiseptic solutions.
- To sterilize hands, instruments and site of operation.
- To cleanse wounds (bruises, incisions, abrasions), ulcers, etc.
- To lubricate sounds and specula.
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New Mexico Medical Journal

June 1916

VOLUME XVI

NUMBER 3

PANOPEPTON

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The purpose of Panopepton is best realized when the patient is made to understand that it is not to be taken as a medicine, not diluted with water, perhaps impure water sometimes; not kept in a warm place, but taken cold, straight from the refrigerator, or after an instant's contact with clean cracked ice; or with very hot water like a consomme.

We lay stress on this because occasionally Panopepton is so administered that the patient does not get the full benefit of the skill and experience which have gone to make possible the specification of a food containing 24% solids, containing all the constituents of beef and wheat, so blended (without artificial flavoring or condiments or cane sugar) as to be agreeable in the sense that a fine cordial or champagns is agreeable.

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Wassermann reaction	\$5.00
Complement fixation test for gonorrhoea.....	5.00
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Cell count, globulin, and copper reduction of spinal fluid	5.00
Tissue examination	5.00
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Blood counts, red, white, or differential, each.....	2.50
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Other prices on request.	

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Effective June 1, 1916

Which Mineral Oil is Best for Medical and Surgical Use ?

1. That oil which is free from paraffin and all toxic, irritating or otherwise undesirable elements, such as anthracene, phenanthrene, chrysene, phenols, oxidized acid and basic bodies, organic sulphur compounds and foreign inorganic matter; because an oil of such purity will pass through the gastro-intestinal tract without causing irritation or other untoward effects.

2. That oil which possesses the highest natural viscosity, with the highest specific gravity, because such an oil will pass through the intestine more slowly than a lighter and thinner oil and lubricate the walls of the gut more completely, and soften faeces more effectually, and is not likely to produce dribbling.

3. That oil which is really colorless, odorless and tasteless, because palatability favors persistence in treatment.

The oil which meets all these requirements is

Liquid Petrolatum, Squibb Heavy (Californian)

It is a pure, colorless, odorless and tasteless *Mineral Oil*, specially refined under our control only by the *Standard Oil Company of California* which has no connection with any other Standard Oil Company. This oil has the very high specific gravity of 0.886 to 0.892 at 15°C. (or 0.881 to 0.887 at 25°C.) and has also an exceptionally high natural viscosity. It is sold solely under the Squibb label and guaranty and may be had at all leading drug stores.

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(FOR HYPODERMATIC USE)

SOLUTIONS IN AMPOULES have received the approval of the foremost physicians and surgeons of America and Europe. They have many advantages over solutions prepared in the ordinary manner.

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New Mexico Medical Journal

July 1916

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Dilute with three to four times its volume of olive oil and spray into the nares and pharynx.

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Detroit, Michigan.

Parke, Davis & Co.

ANNUAL MEETING, OCTOBER 11, 12 AND 13

New Mexico Medical Journal

August 1916

VOLUME XVI

NUMBER 5

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It is a pure, colorless, odorless and tasteless *Mineral Oil*, specially refined under our control only by the *Standard Oil Company of California* which has no connection with any other Standard Oil Company. This oil has the very high specific gravity of 0.886 to 0.892 at 15°C. (or 0.881 to 0.887 at 25°C.) and has also an exceptionally high natural viscosity. It is sold solely under the Squibb label and guaranty and may be had at all leading drug stores.

E. R. SQUIBB & SONS, NEW YORK

Hay Fever: Adrenalin

The suprarenal substance, in the form of its isolated active principle, Adrenalin, is the chief reliance of a host of physicians.

And well it justifies their confidence.

Adrenalin effectually controls the nasal discharge. It cuts short the violent sneezing paroxysms. It aborts the annoying lacrimation. Nasal obstruction disappears under its use. Natural breathing is resumed. Distress gives way to comfort.

Adrenalin Chloride Solution

Adrenalin Chloride, 1 part; physiologic salt solution (with 0.5% Chloretone), 1000 parts.

Dilute with four to five times its volume of physiologic salt solution and spray into the nares and pharynx.

Once glass-stoppered bottles.

Adrenalin Inhalant

Adrenalin Chloride, 1 part; an aromatized neutral oil base (with 3% Chloretone), 1000 parts.

Administer full strength or dilute with three to four times its volume of olive oil, spraying into the nares and pharynx.

Once glass-stoppered bottles.

THE GLASEPTIC NEBULIZER

is an ideal instrument for spraying the solutions above mentioned. It produces a fine spray and is suited to oils of all densities, as well as aqueous, spirituous and ethereal liquids. *Price, complete (with throat-piece), \$1.25.*

Home Offices and Laboratories,
Detroit, Michigan.

Parke, Davis & Co.

ANNUAL MEETING, ALBUQUERQUE, OCTOBER 11, 12 AND 13

New Mexico Medical Journal

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SEP 15 1916
September 1916

VOLUME XVI

NUMBER 6

PANOPEPTON

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There are constantly multiplying records of cases in which Panopepton is practically the only nourishment that can be tolerated and in which it proves adequate for the present requirements; and by its energising and sustaining effects, it, little by little, prepares the patient for taking other foods.

Have Panopepton kept in a cold place.

FAIRCHILD BROS. & FOSTER,
New York

Crouse Laboratories

Box 63

EL PASO, TEXAS

Office 522 Roberts-Banner Building

WILLIS M. WAITE, M. D. DIRECTOR

PRICE LIST

Wassermann reaction	\$5.00
Complement fixation test for gonorrhoea.....	5.00
Colloidal gold test	5.00
Cell count, globulin, and copper reduction of spinal fluid	5.00
Tissue examination	5.00
Urine examination, ordinary	1.00
Autogenous vaccine	10.00
Blood counts, red, white, or differential, each.....	2.50
Widal test	3.00
Other prices on request.	

CONTAINERS AND MAILING CASES FREE

Effective June 1, 1916

Which Mineral Oil is Best for Medical and Surgical Use ?

1. That oil which is free from paraffin and all toxic, irritating or otherwise undesirable elements, such as anthracene, phenanthrene, chrysene, phenols, oxidized acid and basic bodies, organic sulphur compounds and foreign inorganic matter; because an oil of such purity will pass through the gastro-intestinal tract without causing irritation or other untoward effects.

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Effective June 1, 1916

1866
1916

A Word of Appreciation

OUR house will celebrate its fiftieth birthday on the Twenty-sixth of October. This is therefore the year of our Golden Jubilee.

At such a time it is fitting that we should recognize in a public manner one of the fundamental causes of our success. This is found in the confidence bestowed upon us for fifty years by those whom we have sought to serve. Without their support we could have done nothing. Lacking their co-operation we should long since have ceased to exist.

Our appreciation of this truth is profound and heartfelt. We acknowledge indebtedness with gratitude, and during the second half century of our existence we shall strive in every way to be worthy of the trust reposed in us by the medical and pharmaceutical professions of the world.

PARKE, DAVIS & CO.

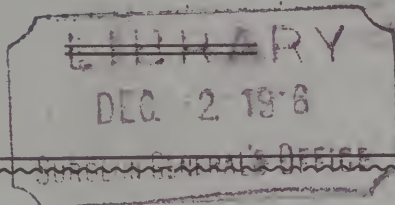
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New Mexico Medical Journal

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E. R. SQUIBB & SONS, NEW YORK

The specification "Parke, Davis & Co." on your orders for diphtheria antitoxin will insure a pure and potent product.

In the manufacture of our diphtheria antitoxin scientific methods mark every step of the process.

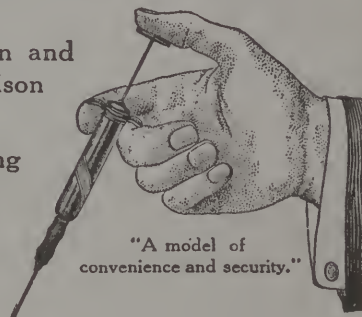
1. We conduct a biologic farm of more than six hundred acres—a home of natural environment for the animals used in the production of our antitoxin.

2. Our biologic stables are modern and sanitary. They are under the supervision of skilled veterinary surgeons.

3. The health of our serum-producing horses is most carefully maintained. No animal is eligible for service that has not been pronounced sound and healthy by expert veterinarians.

4. Immunization and bleeding of horses are conducted in accordance with modern surgical methods.

5. The antitoxin is developed with scrupulous care, every method and appliance being in strict conformity with scientific procedure.



CONCENTRATED Antidiphtheric Serum (GLOBULIN)

is tested and retested, bacteriologically and physiologically. It goes to the physician with a positive guaranty of purity and activity.

Bio. 16—1000 antitoxic units.

Bio. 20— 5000 antitoxic units.

Bio. 18—3000 antitoxic units.

Bio. 22—10,000 antitoxic units.

Bio. 23—20,000 antitoxic units—supplied on special order.

SEE THAT YOUR DRUGGIST IS ABLE TO SUPPLY YOU.

Home Offices and Laboratories,
Detroit, Michigan.

Parke, Davis & Co.

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New Mexico Medical Journal

December 1916
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SURGEON GENERAL'S OFFICE

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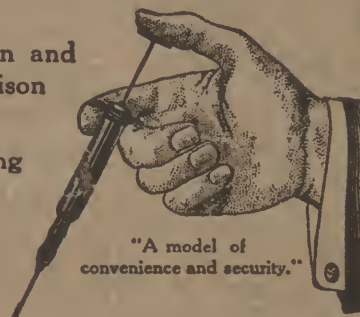
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