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DIARRHEA

(SUMMER COMPLAINT)

IS CARRIED BY

DIRTY HANDS
DIRTY FOOD

DIRTY BOTTLES
DIRTY NIPPLES

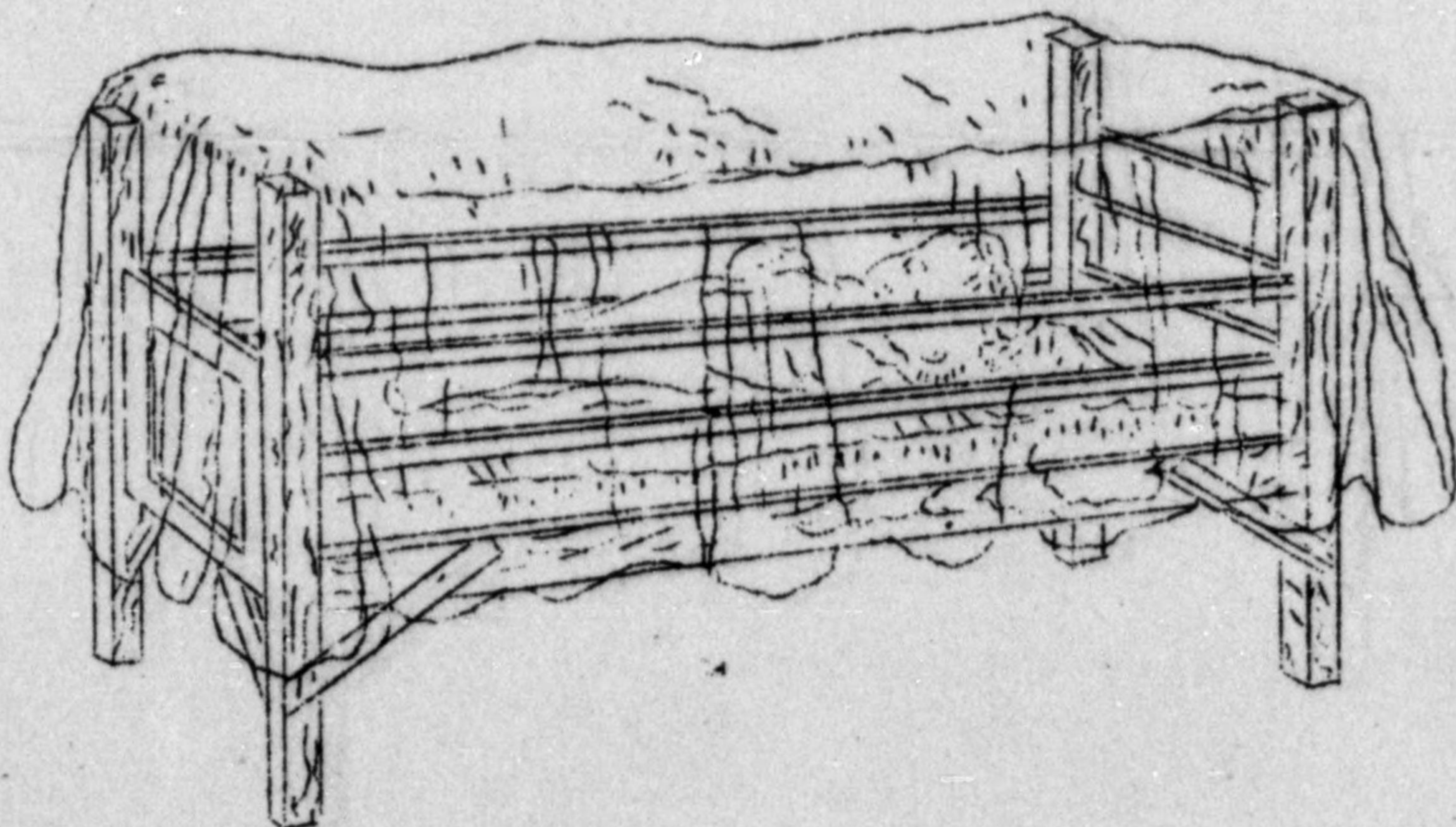
AND

FLIES



KEEP YOUR BABY
FROM HAVING

DIARRHEA



MEMPHIS HEALTH DEPARTMENT
RECOMMENDS
DOCTOR OR HEALTH OFFICER HEALTH DEPARTMENT
IF YOUR BABY DOES GET DIARRHEA TAKE HIM TO DOCTOR
AND BE TREATED BEFORE CHILDREN TO BE
MADE SURE THAT SUCH AS WATER OR MILK

D2

Toxoid PREVENTS DIPHTHERIA

It is better to prevent serious illness than to cure it.

One of the most serious diseases of infancy and childhood is diphtheria.

Fortunately toxoid injected under the skin protects most children against the disease.

Schick Tests later prove that protection has developed.

Immediately after birth most children are immune to diphtheria but at the age of nine months they need the protection given by toxoid.

The use of toxoid has caused a great reduction in the number of cases and deaths from diphtheria. Physicians now give toxoid as part of the routine care during the first year of life.

Ask your doctor to be certain.

Your child deserves this protection. Consult your family doctor. If you cannot pay a doctor take the child to one of the Public Child Health Clinics.

CINCINNATI BOARD OF HEALTH

D.V.

Banish DIPHTHERIA



HAVE YOUR CHILD *Immunized*

DIPHTHERIA COULD BE WIPED OUT IF EVERY CHILD WERE IMMUNIZED BEFORE ENTERING SCHOOL !

DIPHTHERIA IS DANGEROUS !

During the past five years, twenty-one persons died of diphtheria in Cleveland. Fourteen of these deaths occurred in children under nine years of age.

Diphtheria is a dangerous, contagious disease caused by the growth of diphtheria bacilli or germs in the nose and throat. These bacilli produce a powerful toxin (poison). It is this toxin which causes illness and sometimes death.

Diphtheria usually starts with a sore throat, fever, chills, and aching pains. If symptoms such as these occur, a physician should be called at once.

DIPHTHERIA IS SPREAD !

Diphtheria is spread directly by those who have the disease and by persons who carry the germs in the nose and throat (carriers) to susceptible persons. It is also

spread through the use of recently contaminated common materials such as toys and dishes.

DIPHTHERIA IS PREVENTABLE !

Diphtheria can be prevented. No child need have diphtheria. He can be protected by an easily applied and safe measure, diphtheria immunization. Two or three injections of diphtheria toxoid are given several weeks apart by a physician. The injection is practically painless and causes very little reaction.

The diphtheria toxoid stimulates the body to produce a substance which makes the diphtheria toxin harmless. A child who has been given toxoid builds up his own protection against diphtheria.

DON'T LET YOUR CHILD GET DIPHTHERIA !

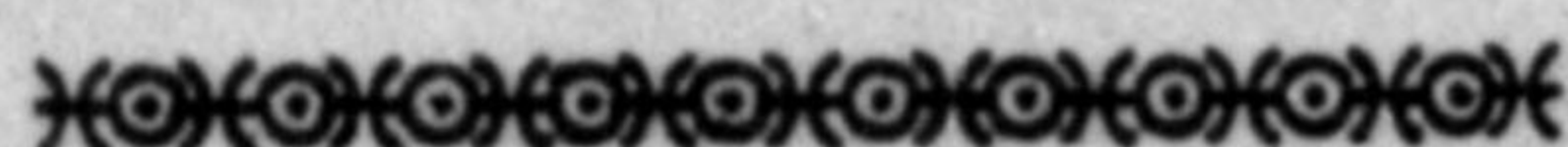
Every child should be given this protection at about nine months of age. When the child enters school, he should be given a "booster" injection to reinforce his protection.

Children up to the age of eight years, who have not been immunized in infancy or during the preschool period, should be given these treatments at the time they enter school.

PARENTS, THIS IS YOUR RESPONSIBILITY !

Take your child to your physician to be immunized or to receive a "booster" injection against diphtheria.

If you cannot arrange for your family physician to give your child this protection, then request the School Physician to do so. Infants or preschool children may be taken to the Division of Health Child Welfare Station nearest your home.



BUREAU OF HEALTH EDUCATION
DIVISION OF HEALTH
HAROLD J. KNAPP, M.D. COMMISSIONER

CLEVELAND, OHIO
1946

Dv

DIPHTHERIA

A DANGEROUS DISEASE
EASILY PREVENTED



GEORGIA DEPARTMENT OF PUBLIC HEALTH
Atlanta, Georgia

T. F. Abercrombie, M. D., *Director*

AP 10,023

DIPHTHERIA IS DANGEROUS!

What is Diphtheria?

Diphtheria is a dangerous, catching disease particularly deadly to children. It is caused by a tiny, rod-shaped bacillus that finds the lining of the nose and throat the best place for its development. Once established in these membranes, it produces a powerful poison, or toxin, which the blood absorbs and carries all over the body. This toxin acts on the heart and nerves and may cause serious illness or death.

How is Diphtheria Spread?

Diphtheria germs are spread directly from one person to another, usually from a sick to a well individual, through personal contact, coughing, secretions from nose and throat, etc. Some people, however, are immune to the toxin of diphtheria themselves and yet carry the live bacteria in their throats and noses. Such persons are known as "carriers" and, if undiscovered in a community, are a constant danger to those unprotected from the disease.

Symptoms of Diphtheria

The symptoms of diphtheria may be slight, such as sore throat, chilliness, a little fever, or aching pains, and may be mistaken for simple croup, tonsillitis, laryngitis or some other less serious illness.

Why Children Are in Greatest Danger

Children are most defenseless against this disease. During pre-school years, their resistance is low and it is not much higher when they begin school and are exposed to many avenues of contagion. The very young child is not only more apt to take diphtheria but is also more likely to die of it than older children.

A Deadly Weapon Against Diphtheria

For over a quarter of a century scores of laboratories and hundreds of scientists have been studying the problem of diphtheria. They first developed a curative serum or antitoxin which is used in the *treatment* of diphtheria.

Later they succeeded in developing substances which can be used in the *prevention* of diphtheria. Of these the most effective, safest and most convenient is diphtheria toxoid.

Every child can be protected and given immunity by the use of diphtheria toxoid. No child need have this disease. The toxoid is non-poisonous and yet has the power to arouse the defensive powers of the human body and cause immunity.

The toxoid is treated and tested in laboratories to make sure it is harmless, sterile and safe and yet has the power to give protection against diphtheria. It is administered by injection with a hypodermic syringe. In young children there is, as a rule, no disagreeable reaction of any kind.

Is Your Child in Danger?

He is, if he has not been immunized against diphtheria. Do not wait until the child reaches school age. When he is six months old take him to your doctor or to a clinic for this safe, simple means of protection. Physicians and health officers urge that you *act now* to provide for the future health and welfare of your child.

D₂

DIPHTHERIA



DIVISION OF HEALTH
CLEVELAND



"Gosh, I wish that we could go back to the good old days".

Did you ever hear anyone say that?

Well, that person can have his "good old days" if he wants them but, for the sake of his children and my children, I'm giving thanks for the good "new" days and I'm hoping that we never go back,—not even one year,—to the old days.

Let's turn the pages back and have a look at what happened in the past so that we can compare it with the present:—

During the thirty years from 1912 to 1941, inclusive, 36,403 cases of diphtheria were reported in Cleveland. Of these, 2,861 died. The vast majority of these sufferers were children.

Think of it,—2,861 tombstones!

20,465 of these cases and 1,715 deaths occurred during the first ten of those thirty years; 14,561 cases and 1,035 deaths during the second ten years; 1,377 cases and 111 deaths during the last ten years.

The improvement is most striking in 1939 when there were only 50 cases and 1 death; in 1940, with 13 cases and 1 death; 1941, with 23 cases and 2 deaths and 1942 with 34 cases and 2 deaths. This is a grand record of accomplishment but it shows a slight trend upward and gives us parents a definite obligation to our children.

It might be quite natural for a person to study these records and to think, "Why, diphtheria is a disease of the past—only a few cases occur now—why should I have those injections given my baby?—Guess I'll take a chance and let the matter ride for a while".

That would be a most dangerous attitude. It is true that there has not been an outbreak in Cleveland recently, for the reason that *many parents have protected their babies and children*. But if all babies are not immunized as they reach nine months of age, the first thing we know we might have an outbreak of diphtheria and lose all of the ground that we have gained.

You see, diphtheria is one of the most treacherous diseases known to humanity. Previous to about 1894 there was no known treatment of any value. The death rate was very high and physicians were almost powerless to prevent that horrible, choking death. But when antitoxin became available, it gave the doctors a powerful, life-saving weapon—IF the disease were recognized in its early stages and—IF antitoxin were used promptly. It was simply **MAGIC!** Antitoxin is still the only reliable treatment but it *must be given as soon as possible*.

But an
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But antitoxin was not the only answer or solution to the diphtheria problem. It did not **PREVENT** the disease for any length of time. What was needed was some method of long-time prevention.

And so, this became a problem for research workers and, about 1920, "toxin-antitoxin" was developed and accepted by the medical profession and by public health agencies. Great campaigns of immunization were organized and hundreds of thousands of babies and children were given the benefit of this marvelous protection.

Since then, the material used for the injections has been improved and refined so that now we have what is called "toxoid". It is used all over the world. Two or three injections of a small amount of this toxoid are given, several weeks apart. Sometimes the physician recommends a third dose and, if he does, it should be allowed. The injection is practically painless and causes very little reaction.

EVERY CHILD, EVERYWHERE should be given this protection at about nine months of age. Older children who have not received it yet should also be safeguarded. It is not safe (indeed, it is an enormous risk) to wait until the child is of school age because the most dangerous period of life, as regards the possibility of having diphtheria is from 1 to 6 years. That is also when the highest death rate is observed.

(over)

The Cleveland Division of Health urges that EVERY baby be taken to the family physician for this wonderful health service. NOT tomorrow; NOT next week; NOT next month, but TODAY. If you cannot afford the small fee, you are privileged to take your baby to the Child Welfare Station in your neighborhood where it will be done for you at no cost.

Parents, this is YOUR responsibility. YOUR baby has the right to escape preventable disease and it looks to YOU to protect it in every way. Won't YOU meet this most important obligation of parenthood?

“ “ “



FORM 63-148 20M 10 43

CHILD WELFARE STATIONS
OF THE
CLEVELAND DIVISION OF HEALTH

- Child Welf. Sta. No. 1 — 6250 St. Clair Ave.
Municipal Bath House
- Child Welf. Sta. No. 1A — 1420 E. 31 St.
Goodrich House
- Child Welf. Sta. No. 2 — 2500 E. 35 St.
- Child Welf. Sta. No. 3 — 3395 Scranton Rd.
City Hospital
- Child Welf. Sta. No. 3A — 2337 W. 14 St.
- Child Welf. Sta. No. 3B — 4200 Pearl Rd.
M. E. Church
- Child Welf. Sta. No. 4 — 5845 Broadway Ave.
- Child Welf. Sta. No. 4A — 3830 E. 131 St.
Public Library
- Child Welf. Sta. No. 5 — 9206 Woodland Ave.
Municipal Bath House
- Child Welf. Sta. No. 5A — 2060 Abington Rd.
University Hospitals
- Child Welf. Sta. No. 6 — 12512 Shaw Ave.
- Child Welf. Sta. No. 6A — 856 E. 152 St.
Public Library
- Child Welf. Sta. No. 7 — 9939 Lorain Ave.
- Child Welf. Sta. No. 7A — 3000 Bridge Ave.
West Side Com. House



98 D₂

DIPHTHERIA

City Health Department
Houston, Texas



PROTECT YOUR CHILD

**from the tragedy of
Death or injury to health
that diphtheria can bring**



STATE DEPARTMENT OF HEALTH
TEXAS

PARENTS OF TEXAS

Your children can be protected from diphtheria,
safely and simply.

Medical science has given your physician a
method of safeguarding your children from
diphtheria -- one of the most fatal and
dangerous diseases to which they can be exposed.

Ask your physician to protect your children
from diphtheria this safe and simple way --
before it might be too late.

TEXAS STATE DEPARTMENT OF HEALTH

DIPHTHERIA

WHAT IT IS----

Diphtheria is a disease caused by a germ which is passed from one person to another by kissing, coughing, sneezing, or by handling the same articles. Sometimes the germs may get into milk and be carried to a person whom it can infect, but usually the disease is "caught" from a person ill with diphtheria, or a person who is carrying germs without signs of the disease.

Diphtheria is usually a disease of the nose, throat, or windpipe. The infection may be mistaken for a simple sore throat and only a doctor can be sure it is diphtheria. In many cases he may have to grow the germs over night (by a way called "culturing") in order to identify them. It is always wise to have a doctor see any sore throat at the very beginning of symptoms.

WHAT IT DOES-----

Diphtheria is a killing disease. It kills infants and small children. It can kill these children in two ways: either by choking a child to death--for the membrane of diphtheria in the throat is as deadly as a strangling hand--or, the poisons it produces can attack the heart, so that a child, who is to all appearances well and ready to get about, may collapse when he begins to run and play. Diphtheria can also produce paralysis of the muscles of swallowing, which may also lead to death.

These are the effects of diphtheria that are spectacular; the other detrimental effects of the disease upon the future health and welfare of the child are difficult to determine and predict.

HOW IT CAN BE PREVENTED-----

It is unnecessary for any child to suffer from diphtheria. Protection against this disease is possible by the early use of such preparations as toxoid. Toxoid is a preparation that the doctor may give at one or two injections. If this is given between the age of six months and one year, the child is protected in the most dangerous age and there is usually no reaction noticed by the child.

IS PREVENTION SUCCESSFUL-----

Toxoid will make 90-95% of children immune or safe from the disease. A simple test, the Schick test, which consists of injecting a single drop of harmless fluid in the outer layer of the skin, will relieve any doubt.

Parents, doctors, and public health workers have combined in the attack on the disease with the result that six hundred and seventy lives were saved in Texas in 1938 by the use of toxoid. If the 1932 death rate were still the same, almost nine hundred children would have died in 1938; instead, as a result of preventive work, only slightly over two hundred died of diphtheria.

WHEN SHOULD PREVENTION START-----

About 90% of all deaths from this disease occur before the age of five years. It may be too late to protect the child adequately if the parent waits until time to go to school. Every infant should be protected against diphtheria during the first year of life. This practice will wipe out this disease.

WHEN DIPHTHERIA COMES TO YOUR COMMUNITY-----

1. See your doctor--if your child is unprotected, he will give toxoid; if previously protected, he will test to be sure the child's protection is still sufficient.

2. Keep your child at home with any sore throat until a physician has determined what kind of sore throat the child has.

3. Do not take your child into homes where there are sick children.

4. If diphtheria occurs in your home be sure it is reported to your city health officer. Accept quarantine as prescribed--- to break it may bring death to another child. Your City and County Health Officer are charged by law with maintaining quarantine; do not embarrass your physician by asking him to shorten it.

5. Play safe---if in doubt let the physician judge. Remember---diphtheria kills---toxoid protects.

PLANNING COMMUNITY PROTECTION-----

Your civic organization may be willing to join this battle. Certain steps will assist in making your fight successful.

1. Select a committee to consult your physicians. Let your physicians plan the method of administration.
2. Your health officer can obtain toxoid free from the State Health Department for those who cannot pay.
3. Plan your campaign so that the parents of every preschool child and infant know the details.
4. Provide transportation to the physician's office.

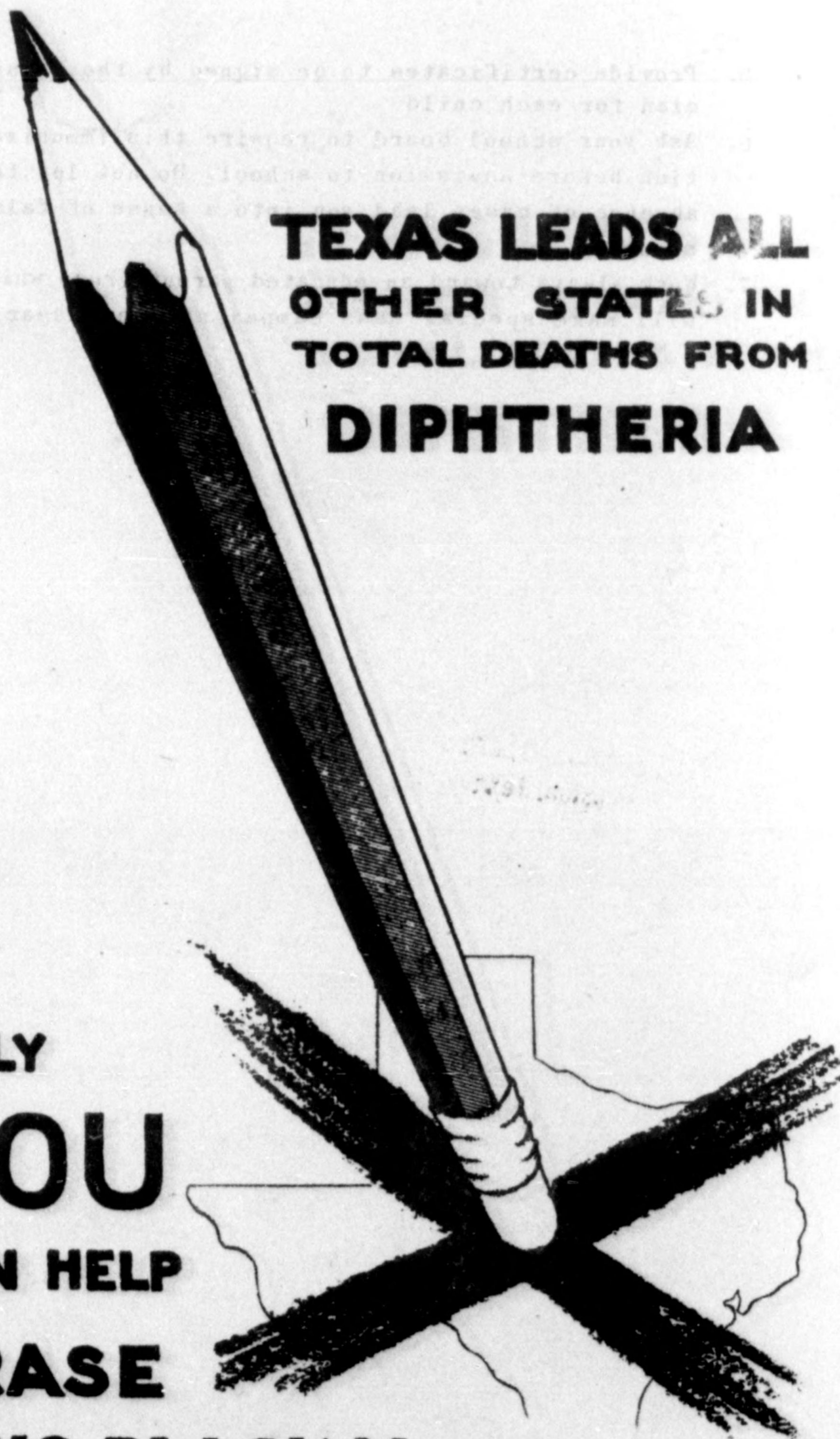
5. Provide certificates to be signed by the physician for each child.
6. Ask your school board to require this immunization before admission to school. Do not let the absence of cases lead you into a sense of false security.
7. Work always toward an educated parent group which will make special mass campaigns unnecessary.

TO ALL STATES FROM
DIPHTHERIA

ONLY
YOU
CAN HELP
ERASE
THIS BLACK MARK

**TEXAS LEADS ALL
OTHER STATES IN
TOTAL DEATHS FROM
DIPHTHERIA**

**ONLY
YOU
CAN HELP
ERASE
THIS BLACK MARK**



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DIPHTHERIA

The Facts For You

A Communicable Disease
Most Prevalent in the Colder Seasons
Young Children Most Susceptible
May Resemble Cold at First
Often Fatal

CAN BE PREVENTED



BUREAU OF COMMUNICABLE DISEASES
STATE BOARD OF HEALTH
MADISON, WISCONSIN
1943

DIPHTHERIA

Diphtheria is a communicable disease which occurs at any age but has its greatest prevalence in childhood. It is caused by a germ known as the diphtheria bacillus. It may occur in any month of the year but its highest incidence is from late fall to mid spring.

Its chief characteristic is a sore throat with a white membrane on it, or a progressive croup especially in small children. Despite the marked decline in frequency during recent years, diphtheria still exists in the population and it must still be reckoned with as a treacherous and deadly infliction.

HISTORY

The popular fear of diphtheria is well founded for past generations have suffered heavily from it. In 1881 there were 2,202 deaths from it recorded in Wisconsin with less than half the present population. The death rate from diphtheria continued to be heavy in subsequent years. In 1895 an antitoxin for treatment was discovered and following this the death rate began to decline. In the decade, 1916 to 1925, there was in Wisconsin an average of about 3,000 cases and 300 deaths annually. Immunization to protect against the disease came into general use about 1923 and since then has been increasingly applied. The annual number of cases and deaths from diphtheria of late years has been as follows:

STATISTICS

Year	Cases	Deaths	Year	Cases	Deaths
1926	2,054	157	1935	158	11
1927	1,862	134	1936	168	16
1928	1,155	100	1937	189	25
1929	1,025	80	1938	134	17
1930	799	72	1939	44	4
1931	795	54	1940	69	7
1932	604	57	1941	47	1
1933	299	18	1942	59	5
1934	286	26			

AGE

Young children are highly susceptible to diphtheria and as age advances they become more nearly immune to it. There is a greater proportion of deaths among small children in large cities than in rural areas probably because of the opportunities for exposure to diphtheria at earlier ages. In New York City more than 80% of the deaths have been stated to be in pre-school children, while in Wisconsin at large with its rural areas, the statistics from 1933 to 1942 show 3.8% of the fatalities to be under one year of age, 27.7% to be under five years of age and 55.4% to be under ten years of age. Some deaths occur even in advanced years. At the present time about 8% of all cases reported are fatal, due largely to neglect of sore throat and croup. In the days before antitoxin was available the mortality was often as high as 30% in reported groups of cases.

SYMPTOMS

Mild Cases. The first symptom may be that of an ordinary attack of fever, sometimes accompanied by chilliness and aching. This may be so trifling as to pass without a complaint. A sore and inflamed throat soon manifests itself and a white spot appears in the back of the throat, generally on the tonsils. It may be difficult or impossible to distinguish it from tonsillitis in the beginning as the latter disease sometimes has fever and little white spots on the tonsils. The tendency of these spots in diphtheria is to coalesce into a patchy membrane of varying size, and when this occurs, diphtheria should always be considered probable. Cases which were apparently mild in the beginning may sometimes progress into pronounced forms. Some very mild cases show no white spots whatever or they may be of so temporary a nature as to escape observation and the patient passes on to convalescence after a brief period of sore throat and fever. Their true nature may be determined by laboratory tests of swabbings from the nose and throat. Undiagnosed cases frequently lead to exposure of others.

Pronounced Forms. The fever rises to varying heights, generally 102 to 103 degrees; the membrane gradually extends and usually about the third day it may wholly or partially cover one or both tonsils and encroach on the adjacent parts. It may exist as a considerable patch on the back wall of the throat. The pulse is likely to be very rapid and the glands in the neck may be swollen and tender. When no antitoxin is given these membranes commonly remain seven to ten days. Great depression, weakness, and usually an extensive membrane filling the back of the throat accompany a severe case.

Nasal Diphtheria. This may be mild in character and often overlooked or may have pronounced symptoms. Due to its situation the membrane is not likely to be seen. The symptoms of depression, watery or fetid discharge from the nose and enlarged glands in the neck should lead to examination for this form of diphtheria.

Laryngeal Diphtheria. In young children there is a tendency for the membrane to form in the windpipe. This is ordinarily called membranous croup. The membrane is out of view and the diagnosis, therefore, difficult. A continuous croup, which does not let up, should be a signal for prompt medical attention. The windpipe becomes narrowed, difficult or noisy breathing results and unless proper treatment is given strangulation may be the outcome. The depression and other symptoms of diphtheria are present. The youth of the victim and the frequent delay in diagnosis cause this form of diphtheria to be an unusually fatal one.

WHY DIPHTHERIA IS SO OFTEN FATAL

Not only is there the possibility of a strangulating membrane, but the diphtheria germ manufactures a powerful poison known as a toxin. This toxin circulating in the system works great damage to the nerves, heart and other organs. It also causes the paralysis that sometimes occurs two or more weeks after the beginning of an attack of diphtheria and which generally manifests itself by involvement of the pharynx (which shows by food regurgitating through the nose), by loss of the voice, or by partial or com-

plete heart failure. Other parts of the body such as a limb may be involved. These paralyses often occur after sudden movement or exertion and that is the reason why watchful care should be given the diphtheria patient until long after recovery.

CARRIERS

A diphtheria carrier is a person who carries diphtheria germs in his throat without coming down with the symptoms of the disease. Somewhere he has been in contact with a case of diphtheria or other carrier. Usually carriers are persons who are immune. One of the reasons why diphtheria continues to exist is the casual presence of these carriers in the population. Carriers are only discoverable by tests. The rules of the State Board of Health require quarantine of carriers when found.

TESTS

The ordinary test for diphtheria consists in gathering secretions from the tonsils and nose, by means of a probe with sterile cotton on the end. These are examined for diphtheria germs in the laboratory. Mild and doubtful cases of diphtheria and carriers are identified by this test. Cases are released from quarantine by means of this test.

ANTITOXIN FOR TREATMENT

The only drug to be relied upon for treatment is antitoxin. Antitoxin is injected into the body. Its function is to neutralize the toxin produced by the diphtheria germ. In neutralizing this poison the further growth of the membrane is also inhibited. Antitoxin used on the first day of the disease will cure 99% of cases; with each day of progress of the disease it is less successful. The physician should use large doses to be effective. Gargles and stimulants are to be administered at the direction of a physician and rest in bed for a long time is essential. The disease is so serious that the physician is justified in using antitoxin in all reasonably suspected cases of diphtheria in

order that its life-saving effect be obtained without delay. The action of antitoxin is temporary and it does not confer permanent immunity.

PREVENTION

Prevention has been attained by general measures, such as individual cups and towels which limit the transfer of the secretions; by the rigid exclusion of all children with sore throat from school and the isolation of them at home; by the testing of all suspicious sore throats and the throats of all persons in contact with diphtheria by a doctor or nurse; by the use of small doses of antitoxin through which persons known to be exposed can be protected for a period of ten days to three weeks, and by the use of toxoid as a vaccine to prevent diphtheria at some future date.

IMMUNIZATION BY TOXOID

Toxoid is a substance administered to make a person immune for a long time against diphtheria. Formerly toxin antitoxin, a variety of toxoid, was much used and some physicians still prefer it. About 80% of persons immunized remain protected against diphtheria for many years and mostly for life. As has been stated, the mortality from diphtheria is great in small children. Therefore the best time to immunize a child is early in life, preferably around nine months of age. When we consider that unrecognized carriers exist, that the diagnosis of diphtheria, especially in nasal and laryngeal forms, is often made late, and that in the confusion with sore throats some cases escape detection, we can readily understand why the diphtheria menace continually hangs over our heads and how necessary it is for all children to be immunized. In rural Wisconsin where the distance to doctors is long, calls are expensive, and there is a tendency to delay calling a physician until the child is seriously ill, immunization is of special value. It is to be remembered that toxoid is not a substance to be used for the child already ill with diphtheria, but only for the well child. Immunity is not achieved for a month or more after its ad-

ministration. The great decline in the diphtheria death rate in recent years has been in keeping with the progressive use of immunization.

SCHICK TEST

The Schick test is used to determine whether or not an individual is susceptible to diphtheria. It must be clearly interpreted to be of value. The State Board of Health advises the routine giving of toxoid to all children between nine months and twelve years of age without attempts to determine their immunity by the Schick test. In older children the test may be used. The Schick test can be given six months or a year after the child is immunized to determine whether immunity has been established and if not, more toxoid can be given.

THE CARE OF THE SICK ROOM

A well lighted and ventilated room should be selected for the patient. No one in the home but the nurse or attendant should come in contact with the patient. Even though such person has been immunized, this does not prevent her from being a carrier. It is wise, therefore, that the attendant should not come in contact with the other members of the household. A gown should be worn by the attendant in the sick room and removed when leaving the room. A solution of liquor cresolis compound, two ounces to a gallon of water, or other antiseptic should be readily accessible and the attendant's hands should be washed frequently in this solution. Secretions from the nose and throat of the patient should be collected on cloths or paper and burned. All dishes should be sterilized by boiling after use. No member of the household should be released from quarantine until the nose and throat are negative to laboratory tests. The nurse on the case should not attend other patients until tests from her are negative.

RELEASE FROM QUARANTINE

At the time quarantine is removed, thorough disinfection should be accomplished by boiling all articles exposed that can be boiled without injury or by placing them in carbolic

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The Schick test is used to determine whether or not an individual is susceptible to diphtheria. It must be clearly interpreted to be of value. The State Board of Health advises the routine giving of toxoid to all children between nine months and twelve years of age without attempts to determine their immunity by the Schick test. In older children the test may be used. The Schick test can be given six months or a year after the child is immunized to determine whether immunity has been established and if not, more toxoid can be given.

THE CARE OF THE SICK ROOM

A well lighted and ventilated room should be selected for the patient. No one in the home but the nurse or attendant should come in contact with the patient. Even though such person has been immunized, this does not prevent her from being a carrier. It is wise, therefore, that the attendant should not come in contact with the other members of the household. A gown should be worn by the attendant in the sick room and removed when leaving the room. A solution of liquor cresolis compound, two ounces to a gallon of water, or other antiseptic should be readily accessible and the attendant's hands should be washed frequently in this solution. Secretions from the nose and throat of the patient should be collected on cloths or paper and burned. All dishes should be sterilized by boiling after use. No member of the household should be released from quarantine until the nose and throat are negative to laboratory tests. The nurse on the case should not attend other patients until tests from her are negative.

RELEASE FROM QUARANTINE

At the time quarantine is removed, thorough disinfection should be accomplished by boiling all articles exposed that can be boiled without injury or by placing them in carbolic

acid solution, two ounces to a gallon of water, or some other antiseptic. The woodwork should be washed with an antiseptic, and rugs, curtains, outer clothing, etc., placed in the sunlight and outdoor air for at least three days. Fumigation by a gaseous disinfectant is not required. The dishes of the patient should continue to be sterilized by boiling after use for a number of weeks and an individual drinking cup and towel should be used by the released patient. Since diphtheria often leaves a weak heart, any active or vigorous exercise should not be indulged in for several weeks after apparent recovery.

ESSENTIALS OF QUARANTINE REGULATIONS

The patient must be quarantined for at least ten days from the time the case is reported to the health officer and thereafter until tests of the nose and throat are negative.

Members of the family and persons in the home with the patient who desire to leave the home must be quarantined until tests are negative.

Persons who remain in the home, while it is under quarantine, must have negative tests at the time the household is released.

Children in the family with the patient may return to school after taking up their residence elsewhere for five days and obtaining negative tests. The first test should be taken at the time of removal from the quarantined home, and the second not earlier than the fourth day after removal.

Exposed persons not in the home with the patient must be tested for diphtheria bacilli.

Carriers may be released in five days if they have negative cultures taken in the manner specified in the regulations of the State Board of Health.

The complete rule upon diphtheria may be found in the pamphlet entitled, "The Prevention and Control of Communicable Diseases."

Diphtheria Is Dangerous

BUT

Toxoid Prevents It

D2

DIPHTHERIA

*Can Be
Prevented*

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

Do we still need to worry about diphtheria?

Only continual vigilance can keep the disease at its present low level. In spite of all modern knowledge, usually one child out of ten who catches the disease dies of it. Diphtheria toxoid inoculations build a wall of immunity which keeps the disease out of the community as long as we have the wall. Only those who have been protected need not fear diphtheria.

Who may catch diphtheria?

Any unprotected child may catch it. A newborn baby has a natural resistance to diphtheria which is lost by the time it is six months old. Some older children and many adults have gradually developed a resistance to the disease over the years.

When is diphtheria most dangerous?

The most dangerous years are from six months to school age, when about three out of every four children are susceptible unless they have been protected. More than half of the diphtheria deaths occur in pre-school children. Cases are more numerous in the winter than in the summer.

From whom can it be caught?

The germs of diphtheria are found in the nose and throat. Some people who are perfectly healthy may have the germs in their throats. Such persons are called carriers of diphtheria. The germs are spread by the breath and especially through coughing and sneezing, and by nasal discharges.

How may a child be protected against diphtheria?

The only effective protection against diphtheria is through immunization. Three injections of diphtheria toxoid are usually given three or four weeks apart.

What is the effect of the injections?

The injections are safe and harmless. For a few days there is usually a red spot on the skin where the injection was made. Occasionally a child has a headache and a little fever for a day.

How soon is immunity produced?

Several months may be required for full protection to develop. For this reason it is important to have children protected before they are exposed to diphtheria.

What does it take to get community protection?

Most children who receive the three immunizing doses of toxoid are protected. A few need more than three doses. When a large proportion of the children in a community have received these doses, the community is safe from an epidemic of diphtheria.

What does it take to get individual protection?

If you want to be sure that your particular child is not among the small number requiring more than three doses to get immunized, you should have your doctor give him a Schick test three to six months after the injections. If this test shows that the child is still not protected, more injections of toxoid are indicated.

What is the Schick test?

This is merely a test to see whether or not a child can catch diphtheria. The Schick test itself does not protect; only injections of toxoid will protect.

When should your child be immunized?

The best time to begin immunization is in infancy after the first six months. Another single dose should be given when the child enters school.

Can children over twelve be immunized?

Yes, but the Schick test should be done first to see if the child really needs immunization.

Is there any proof that immunization controls diphtheria?

Yes. In 1923 when the work was begun, there were over 9000 cases of diphtheria in Massachusetts. In 1944, there were less than 250. Several large cities in which most of the children have been immunized have had no cases of diphtheria at all for a number of years.

Where can a child be immunized against diphtheria?

Your family physician can give the injections. Ask him about them today. If you cannot go to your doctor, see your board of health.

Is combined immunization recommended?

The combination of diphtheria toxoid and whooping cough vaccine gives good immunity to both diseases and reduces the number of inoculations. Diphtheria toxoid and tetanus toxoid can also be used together. The Department does not yet have these combinations available.

**DIPHTHERIA CASES
in
MASSACHUSETTS**

In 1923	9018
(at beginning of immunization)	
In 1944	229


IMMUNIZATION DID IT!

PUBLICATION OF THIS DOCUMENT APPROVED BY THE COMMISSION ON
ADMINISTRATION AND FINANCE

20m-2-46-17816

Dv

Diphtheria


Minnesota Department of Health
A. J. Chesley, M. D., Secretary and Executive Officer
State Office Building St. Paul, Minnesota

7272 8-17-46 3M

WHAT IS DIPHTHERIA?

Diphtheria is a dangerous, catching disease caused by the growth of diphtheria germs in the nose and throat. Diphtheria starts with a sore throat, chilliness, a little fever and aching pains 2 to 5 days after catching the germs. It may be mild enough to be mistaken for tonsillitis or some other less serious illness. Mild diphtheria may be followed by paralysis. Unrecognized diphtheria is dangerous because it allows other people to be needlessly exposed and delays giving the patient the diphtheria antitoxin which may mean the difference between life and death.

**HOW DANGEROUS IS D
WHAT AGES ARE MOST**

Children under 5 are almost
unless they have been immunized

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REMEMBER—
All children should be immunized before they are one year old and again on entering school.
Cultures of all sore throats should be taken early to insure prompt diagnosis.
Call your physician early, for the earlier diphtheria antitoxin is given the more effective it is.

**HOW WOULD MY CHILD
CATCH DIPHTHERIA?**

Diphtheria is spread from persons infected with diphtheria germs by any means which will carry the germs in their nose and throat discharges to the nose and throat of an unprotected person. Infected persons may be sick with diphtheria or may be well persons who carry diphtheria germs and can spread them to other people. About 10% to 15% of those recovering from diphtheria remain carriers of diphtheria bacilli longer than 40 days, and 2% to 4% remain carriers longer than 90 days.

**HOW CAN I PROTECT
FROM DIPHTHERIA?**

No child need have diphtheria
harmless treatment. Take you
cian and ask to have them im
diphtheria toxoid. *Every chi
he is a year old.* He will then
tection the most. Whether pr
theria toxoid should be given
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**WHAT SHOULD I DO IF I SUSPECT THAT
MY CHILD HAS DIPHTHERIA?**

Put your child to bed in a room by himself and keep everybody away from him. Call your family physician and follow his directions carefully. If he suspects diphtheria he will take cultures from the patient's nose and throat. He will probably give diphtheria antitoxin before he receives a report of the culture because early treatment helps save lives.

**HOW CAN I HELP MY
CONTROL DIPHTHERIA**

Cooperate with immunization
the school and preschool child
your own children from diph
theria in your family, or if on
a diphtheria carrier, carefully
by your health officer. The pr
your responsibility.

**DEATH FROM DIPHTHERIA IS THE RESULT OF NEGLIGENCE
ASK YOUR PHYSICIAN TO PROTECT YOUR CHILDREN NOW**

HOW DANGEROUS IS DIPHTHERIA AND WHAT AGES ARE MOST AFFECTED?

Children under 5 are almost defenseless against diphtheria unless they have been immunized.

Young children are more apt to take diphtheria and die from it than are older children, but one may have diphtheria at any age. Early treatment with antitoxin has decreased the deaths from diphtheria, but diphtheria is still very dangerous when not controlled. Diphtheria may be complicated by pneumonia, heart damage, and various forms of paralysis. Mild diphtheria may give rise to fatal diphtheria in someone else.

REMEMBER—

All children should be immunized before they are one year old and again on entering school.

Cultures of all sore throats should be taken early to insure prompt diagnosis.

Call your physician early, for the earlier diphtheria antitoxin is given the more effective it is.

HOW CAN I PROTECT MY CHILDREN FROM DIPHTHERIA?

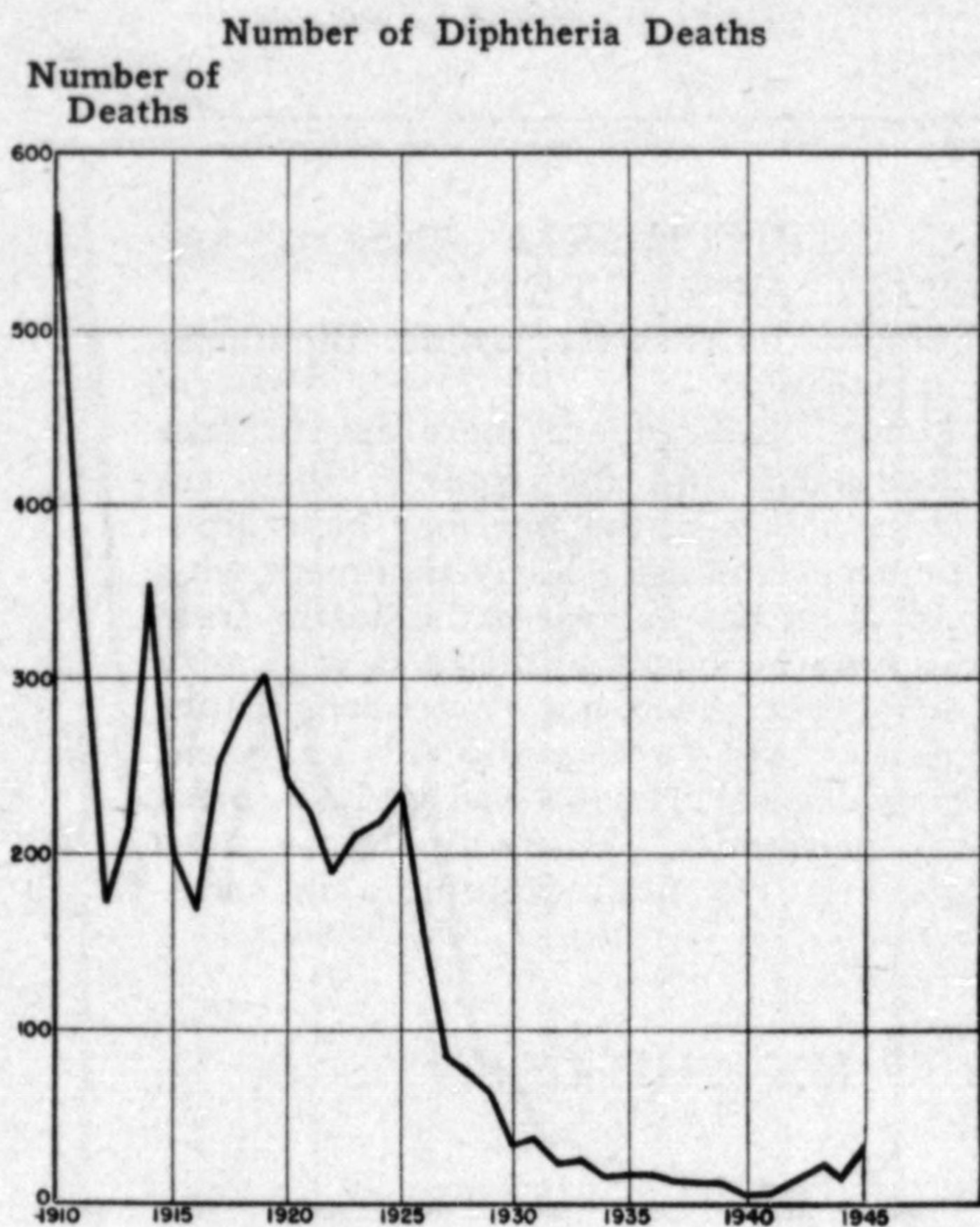
No child need have diphtheria. It can be prevented by a simple harmless treatment. Take your children to your family physician and ask to have them immunized against diphtheria with diphtheria toxoid. *Every child should be given toxoid before he is a year old.* He will then be protected when he needs protection the most. Whether previously immunized or not, diphtheria toxoid should be given to children when they first enter school. Diphtheria will be controlled only when all children have been protected by diphtheria toxoid.

HOW CAN I HELP MY HEALTH OFFICER CONTROL DIPHTHERIA?

Cooperate with immunization programs which aim to protect the school and preschool children of your community. Protect your own children from diphtheria. If there should be diphtheria in your family, or if one of your family should become a diphtheria carrier, carefully observe the restrictions imposed by your health officer. The prevention of diphtheria is largely your responsibility.

WHY FROM DIPHTHERIA IS THE RESULT OF NEGLIGENCE
 YOUR PHYSICIAN TO PROTECT YOUR CHILDREN NOW

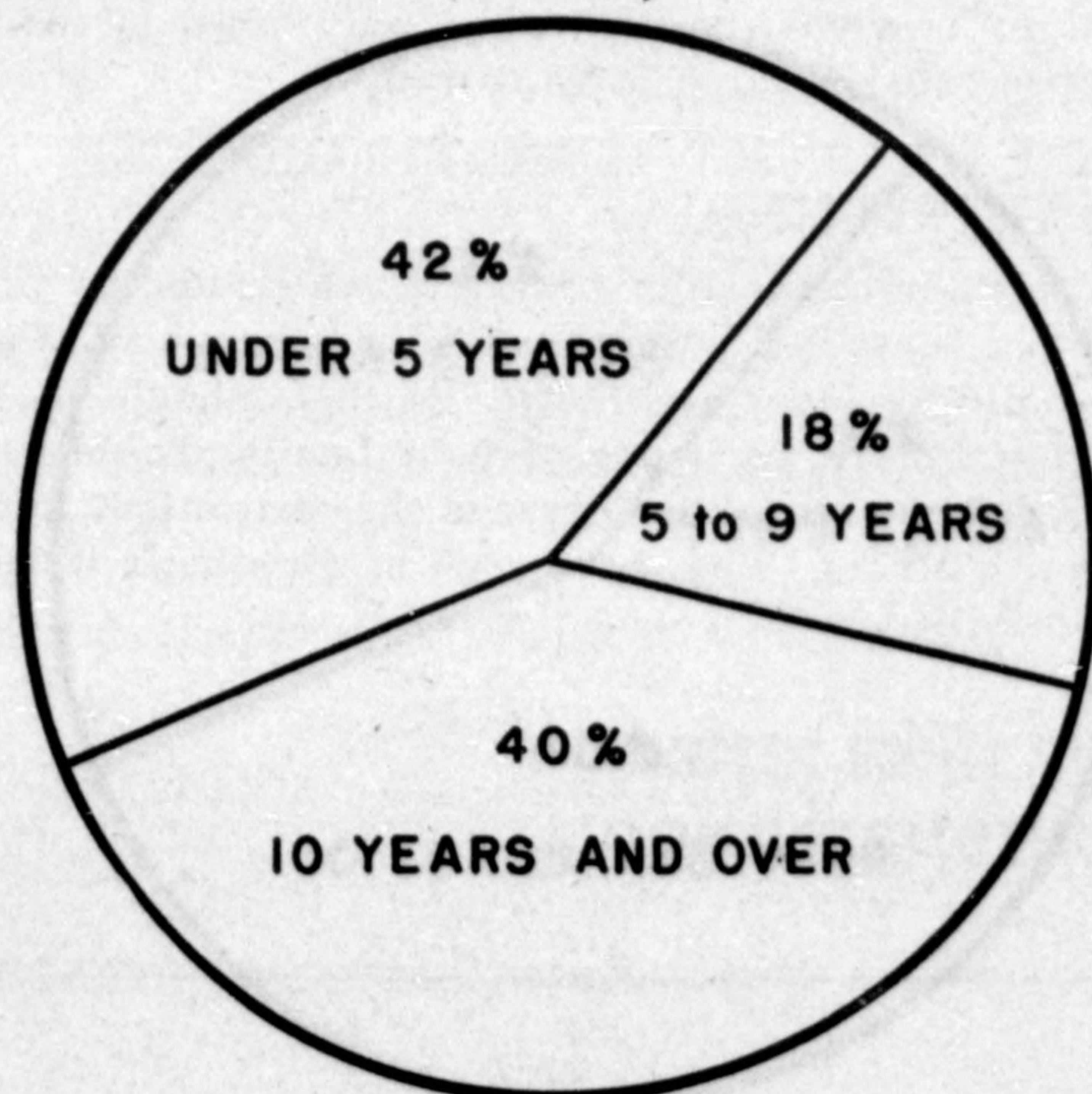
DIPHTHERIA IN MINNESOTA



Number of Reported Cases and Deaths

Year	Cases	Deaths
1910	5,012	566
1911	3,309	335
1912	1,877	173
1913	3,189	215
1914	4,683	354
1915	2,587	200
1916	2,502	170
1917	3,910	254
1918	3,674	285
1919	4,541	302
1920	3,616	243
1921	4,385	222
1922	4,269	191
1923	4,431	211
1924	3,941	218
1925	3,779	232
1926	2,957	156
1927	1,935	82
1928	1,363	73
1929	1,124	65
1930	768	32
1931	859	38
1932	649	24
1933	552	25
1934	624	16
1935	500	17
1936	427	17
1937	364	13
1938	286	12
1939	188	11
1940	122	6
1941	129	7
1942	139	12
1943	376	20
1944	508	16
1945	476	22

AGE DISTRIBUTION OF DIPHTHERIA DEATHS
(1935-1944)



Dv

"Learn to Do Your Part in the Prevention of Disease"
 PHILADELPHIA DEPARTMENT OF PUBLIC HEALTH



DIPHTHERIA PREVENTION

MOTHERS OF PHILADELPHIA!

Diphtheria can and should be wiped out. Every child who develops diphtheria in Philadelphia is a neglected child. He has not received the simple protective toxoid injections. Each year a few children die in this city from diphtheria. These deaths are unnecessary and could be prevented through protective inoculations.

HOW TO PREVENT DIPHTHERIA.

ALL CHILDREN SHOULD BE IMMUNIZED. As soon as a baby reaches 9 months of age, he should be given two doses of alum precipitated toxoid a month apart. If immunization has been neglected during infancy this same procedure should be carried out for children at or below 6 years of age. This treatment should always be followed in 3 or 4 months by a Shick test to prove its success. Parents should take their children to their family physician for immunization or to a diphtheria prevention clinic in one of the Health Centers of the Department of Public Health.

HOW DIPHTHERIA SPREADS

Diphtheria is a dangerous, infectious disease affecting chiefly children. It is caused by a germ called the diphtheria bacillus. These germs are present in the sputum and secretions of the nose and throat of the child sick with the disease. They are spread directly from one child to another through coughing or sneezing or indirectly through articles freshly soiled with discharges from the sick child.

Diphtheria may also be spread by a carrier. A carrier is a healthy person who has the germs of the disease in his nose or throat but shows no signs of illness. These persons are a danger to others, while in no danger themselves. Convalescents may be carriers as well as may people who have not had the disease but who have been in close, household contact recently with someone sick with diphtheria. It is very important for the Health Department to know about these carriers so that they may be kept from spreading diphtheria to others.

Occasionally diphtheria is spread through infected milk or milk products. This occurs only if an unrecognized case or a carrier has been employed in the preparation of milk. This is one reason why only pasteurized milk should be used.

WHO GETS DIPHTHERIA

Anyone exposed to diphtheria is likely to contract the disease but infants and young children are most susceptible. Infants under 9 months of age have a certain amount of temporary immunity or protection transmitted from the mother's blood. Therefore, injections are seldom necessary before this time. Persons who have had one attack of diphtheria are not necessarily immune to a second attack of the disease.

HOW DIPHTHERIA AFFECTS ITS VICTIMS

If a child develops diphtheria it will usually be from two to five days after exposure before he becomes sick. He will not be very ill at first, but he will have a sore throat. The diphtheria germs give off a powerful poison which quickly spreads through the body. If the victim is not given antitoxin promptly this poison may attack and paralyze some of the nerves and muscles of his body. It may act on his heart and cause sudden death. In the laryngeal type, diphtheria resembles catarrhal croup and unless antitoxin is given early in the disease a membrane forms in the upper part of the windpipe and the child dies of suffocation.

Parents should be on the look-out for sore throat, tonsillitis, or croup, and should call a physician promptly. The treatment of diphtheria is a matter for the doctor. Home remedies do no good and waste valuable time. Parents should remember that children with beginning diphtheria are not very sick as a rule.

WHAT TO DO IF DIPHTHERIA DEVELOPS

If the patient is sent to the hospital: The sick room should be thoroughly cleaned or renovated and aired and sunned. All children who have been in intimate contact with the child sick with diphtheria should be immunized with diphtheria antitoxin and quarantined until their nose and throat cultures are negative. This same quarantine is placed on adult contacts who are food handlers or who are associated in any way with the care of children.

If the patient remains at home ant rules to be followed.

1. Keep the patient in bed until discharged by your physician.
2. Keep all other persons, except physician, out of the sick room.
3. Be sure the attendant does not go for other members of the family.
4. Have the attendant wash and immerse them in a disinfecting solution in the sick room or handles the patient.
5. Keep the patient's dishes clean and change each meal.
6. Disinfect all articles that the patient and all articles soiled by discharge.
7. Protect all household contacts with antitoxin. Such protection, however, lasts 10 days to 2 weeks.
8. When the patient recovers, release the household from quarantine by cleaning the sick room and contents by cleaning.

This includes boiling all articles that have been in contact with him, such as dishes, Mattresses, pillows and other articles that should be aired to air and sunlight for a full day. The bed room should be scrubbed with soap and water and the room should not be used for 24 hours, during which it should be aired and sunned.

HEALTH DEPARTMENT

The child with diphtheria who remains in the sick room to which none but the physician and nurse shall remain in isolation for at least 10 days. If the physician finds that there are no diphtheria germs in the nose and throat of any other persons in the house who have been in contact with the patient.

All persons in contact with a case of diphtheria should be immunized unless they receive an immunizing dose of antitoxin. Such persons may be released from quarantine by the Health Department authorities provided their nose and throat cultures are negative.

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DIPHTHERIA DEVELOPS

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If the patient remains at home: There are several very important rules to be followed.

1. Keep the patient in bed until completely recovered and until discharged by your physician.

2. Keep all other persons, except the nurse or attendant and physician, out of the sick room.

3. Be sure the attendant does not handle nor prepare food for other members of the family.

4. Have the attendant wash her hands with soap and water and immerse them in a disinfecting solution each time she leaves the sick room or handles the patient.

5. Keep the patient's dishes separate and boil them after each meal.

6. Disinfect all articles that have been in contact with the patient and all articles soiled by discharges from the patient.

7. Protect all household contacts by giving them diphtheria antitoxin. Such protection, however, is only temporary and may last 10 days to 2 weeks.

8. When the patient recovers and the Health Department releases the household from quarantine, carry out the disinfection of the sick room and contents by cleaning, airing, and sunning.

This includes boiling all articles that have been used by the patient or have been in contact with him, such as dishes, bed linen, towels and so forth. Mattresses, pillows and other articles that cannot be boiled should be exposed to air and sunlight for a full day. The bed, woodwork and other objects in the room should be scrubbed with soap and water. Following this cleaning, the room should not be used for 24 hours, during which time it should be thoroughly aired and sunned.

HEALTH DEPARTMENT REGULATIONS

The child with diphtheria who remains at home must be isolated in a room to which none but the physician and the attendant may be admitted. The child shall remain in isolation for at least 14 days and until the health officer finds that there are no diphtheria germs in his nose and throat nor in those of any other persons in the house who have been in contact with him.

All persons in contact with a case of diphtheria shall be quarantined unless they receive an immunizing dose of diphtheria antitoxin or unless they are known to be immune to diphtheria by reason of a negative Schick test. Such persons may be released from quarantine by consent of the health authorities provided their nose and throat cultures are negative. They may then

move to other premises where there are no children or school attendants and be released from further observation.

While there is a case of diphtheria in the house other children in the household must remain at home and be excluded from school until the quarantine is lifted. Adults in the household who are food handlers or who are associated with children, such as teachers and janitors, are also quarantined when the patient stays at home unless they take advantage of the procedures offered in the foregoing paragraph and are excluded from work for the incubation period of five days.

All individuals living in a house quarantined for diphtheria must remain there unless passed upon by the Health Department for residence elsewhere. The permit issued to a wage earner does not include permission to attend public gatherings or meetings and may be withdrawn if its terms are not met.

DIPHTHERIA CAN BE PREVENTED

Parents owe it to their children to protect them from diphtheria by toxoid injections. These should be given at 9 months of age, and should be followed in 3 or 4 months by a Schick test. A negative test proves that the child has been protected.

Don't neglect your child! Take him to your family physician or to one of the Health Centers for protective treatment.

DIVISION OF CHILD HYGIENE
1942

PHILADELPHIA DEPARTMENT OF PUBLIC HEALTH
FOR FURTHER INFORMATION PHONE LOCUST 0290

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DIPHTHERIA

A NEEDLESS DISEASE OF CHILDREN



VIRGINIA STATE DEPARTMENT OF HEALTH

Richmond, Virginia

1943

DIPHTHERIA

In all past ages diphtheria has been a great killer of children. Even today it attacks those who have not been protected with toxoid, and kills those not treated promptly with antitoxin. Yet it is the easiest of all serious diseases to prevent, and no child need die of it unless someone fails to protect him from it. Among the greatest benefactors of mankind are those able and devoted men who discovered the cause of diphtheria and learned to protect children from its ravages.

The Disease

Diphtheria is an infectious and contagious disease caused by diphtheria germs which usually lodge in the throat or nose and multiply rapidly on their membranes and in their secretions. This disease is highly contagious because the germs in the throat may be transmitted to other children very readily either by direct contact or by contaminated articles. Anything which the patient uses or touches can become contaminated, and even the air about him contains droplets of infectious secretions expelled from his throat by coughing, sneezing, or even by loud talking. Diphtheria germs multiply readily in milk or other foods, and epidemics may be caused by foods contaminated by persons affected by diphtheria.

The diphtheria bacilli in the patient's body give off a powerful toxin or poison which produces in the throat a tough grayish membrane. This membrane may stop up the windpipe and cause suffocation. The toxin also permeates the blood and injures nerve cells, heart fibres, and other vital organs. If antitoxin is given early in the attack, it prevents these poisonous effects, but if it is delayed, it cannot undo the harm that already has been done.

Symptoms

After a child catches diphtheria, the first symptoms develop in two to seven days, and usually in two or three days. The early symptoms are those of an ordinary sore throat or cold, and often are too mild at first to cause alarm. There may be a feeling of chilliness and perhaps aching pains in the back and legs. Fever rises in the first twenty-four hours and may be high in severe cases. In mild cases the early symptoms may not seem to be of sufficient severity for the child to go to bed. However, in young children there may be convulsions from the onset. As the hours pass, more and more poison is produced by the germs and the symptoms become severer in proportion to the increasing damage to vital organs. Even in mild untreated cases, paralysis and heart failure may occur with startling suddenness.

The local symptoms vary according to the parts most affected. The three most common forms of the disease—pharyngeal, laryngeal and nasal diphtheria—are distinguished by the local effects of the germ and its toxin on the throat, the windpipe and the nose respectively.

Pharyngeal Diphtheria

In pharyngeal diphtheria, the child usually complains of a sore throat, loss of appetite, and difficulty in swallowing. At first the throat appears red, but soon becomes coated with a dirty gray membrane. This membrane is attached firmly and when removed mechanically, it leaves a bleeding surface. There is usually some swelling and tenderness of the neck. If a proper dose of antitoxin is given *early*, the membrane disappears and the patient's condition improves rapidly. In untreated cases, however, the symptoms increase and the child becomes weaker, and paralysis or death may follow.

Laryngeal Diphtheria

In this especially dangerous form of diphtheria, the lining of the upper part of the windpipe is inflamed and swollen, and the growth of diphtheritic membrane in the air tube narrows its opening and makes breathing difficult or even impossible. If sufficient antitoxin is given *early enough*, it will reduce the inflammation, remove the membrane and save the patient's life without other treatment. In severe or untreated cases, it is necessary for the doctor to insert in the larynx a small silver tube through which the patient can breathe until he is well enough to have it removed. In all such cases the doctor should be called as early as possible.

Laryngeal diphtheria or membranous croup, as it also is called, begins with a hoarseness of the voice and a croupy cough. Unlike ordinary croup which usually occurs only during the night, its symptoms continue in daytime. In a few hours or within a day or two, the child grows worse, and his breathing becomes increasingly more difficult until he struggles desperately for every breath. *The doctor should be called long before this stage is reached.*

Nasal Diphtheria

This type of infection usually is of a milder character. Its symptoms are those of a head cold with a tendency to persist longer than common colds. The discharge from the nose is irritating and causes sores on the upper lip and the edges of the nostrils. It may spread to the throat or larynx and have other serious effects. Persons with this comparatively mild form of diphtheria are dangerous to their relatives and friends who often contract more serious forms of the disease from them.

Other Forms of Diphtheria

Diphtheria may cause sores on the skin of any part of the body, and their nature may not be suspected until some member of the family contracts a more typical form of the disease. Expectant mothers are subject to a serious form of diphtheria.

Treatment

Diphtheria can be cured readily if it is recognized early. There are practically no deaths of patients who are given sufficient antitoxin on the first day of the illness, but the mortality increases with each day's delay in starting proper treatment. The early administration of antitoxin prevents the toxin from doing bodily harm. As already stated, it cannot undo harm already done. These effects only can be removed gradually by treatment and nursing, which aid the child's natural vitality to strengthen weakened organs. Fortunately, nature tends to restore the partially paralyzed nerves and weakened hearts of severe cases.

Insertion in the larynx of a small silver tube is of the greatest possible value in severe laryngeal cases if adequate doses of antitoxin are used also. Hospitals and throat specialists have facilities for intubation; therefore, it is much better for laryngeal diphtheria especially to be treated in hospitals rather than at home.

Prevention

Fortunately, diphtheria can be prevented easily. Any parent can have his own children immunized against diphtheria so effectively that they are not likely to have even a mild attack. Parents who fail to protect their children in this way have many heartaches when diphtheria attacks their offspring as it often does. Large cities which formerly suffered severely from diphtheria now go year after year without a single diphtheria death because practically all of the young children are immunized against diphtheria. Any city or county with much diphtheria is paying the penalty for its failure to protect its children against a serious preventable disease.

Diphtheria is more dangerous to young children than to older ones and adults. For this reason, babies should be immunized when they are six months old, and certainly before the end of their first year. They need not have the treatment earlier, because newborn babies receive from their mothers enough immunity to protect them about six months. When this protection is lost, it should be renewed by toxoid injections which will protect almost completely for several years. Because the protection from toxoid also diminishes somewhat with passing years, another dose should be given after three or four years. This usually is all the preventive treatment needed. This service can be obtained from the local health department or a health clinic if it is not practicable for the family physician to administer the protective treatment.

Throat Cultures

Much useful information is secured by laboratory examination of specimens from the throats of diphtheria patients. If the throat is rubbed gently with a swab of sterile cotton, it is easy to examine the germs absorbed by the cotton. By examination with the microscope and in other ways, diphtheria germs can be recognized in specimens

taken very early in the course of the illness, even before the characteristic symptoms appear. In this manner the physician can tell quickly a case of diphtheria from less serious kinds of sore throat.

A patient is likely to spread diphtheria to other persons as long as virulent germs remain in his throat. We, therefore, need to know when all germs have disappeared. The patient should be isolated from other persons until negative throat specimens show that the virulent organisms no longer exist. Some diphtheria germs are more virulent or dangerous than others, and by careful examination of throat cultures, it is possible to tell whether the bacilli from a particular patient are of the very dangerous kind or of types that give but little trouble.

Diphtheria Bacillus Carriers

Every case of diphtheria is caught directly or indirectly from another actual case of diphtheria or from an apparently healthy diphtheria carrier. Most carriers are persons who have had diphtheria recently and who still have the germs in their throats. Cases of diphtheria usually become free of infection in about three weeks from the beginning of the attack though it sometimes lingers longer. Some carriers are persons whose attacks of diphtheria were too mild to be recognized; many of them seem to have only a mild cold or a sore nose. Such persons often continue to work or attend school where they transmit severe attacks of diphtheria to their associates. Many cases of diphtheria, moreover, infect members of their families who become temporary carriers without symptoms.

Unrecognized diphtheria carriers are important, not only because of the cases they cause during the fall and winter outbreaks, but also because they keep the germs alive and virulent through the summer months and furnish the seed for a new crop of cases each autumn.

Indirect Infection

The easiest way for diphtheria to spread is by direct association with a case or a carrier, but it may be caught also indirectly from toys, towels, handkerchiefs, clothing, eating utensils and other objects which have been used and infected by a patient or carrier. The most dangerous of all infected objects, however, are milk and other foods in which the germs multiply rapidly. For this reason, those who attend the patient should never prepare, or handle or serve food or eating utensils for anyone but the patient. It is especially dangerous to the entire community for anyone associated with a case of diphtheria to work in dairies, restaurants, boarding houses, or stores selling or serving foods to the public. Epidemics with hundreds of cases have been caused by infected milk supplies. To prevent epidemics of milk-borne diphtheria and other diseases, all milk should be pasteurized, and the health of dairy workers should be guarded carefully.

D✓

Protect All Children Against Diphtheria

* The Iowa State Medical Society, the *
* local county medical societies and *
* other organizations through the state *
* are working together with the State *
* Department of Health to prevent need- *
* less illness and deaths from diphtheria. *
* The information printed in this *
* pamphlet has been approved by the *
* Committee on Child Health and Pro- *
* tection of the Iowa State Medical *
* Society. *
* As soon as you have had all of your *
* children protected against diphtheria *
* please give this pamphlet to a friend. *

Published by the
STATE DEPARTMENT OF HEALTH
DES MOINES, IOWA

Diphtheria Is Preventable!

**No Child Need Have Diphtheria
Are All of Your Children Protected?
If Not, Act Today! Do Not Delay!**

Many years ago doctors found out definitely how to prevent diphtheria. At that time they discovered a material which when placed just under the skin, stimulates the child's body to produce nature's protective substance against that disease. Because of the constantly improved methods of disease prevention, it isn't remarkable that a number of diphtheria preventive agents may now be used with almost equal success. Today, it is even possible to tell whether or not a child will contract the disease when exposed. This can be done by means of a simple test, called the Schick test. This test, if negative, proves that the child is protected against diphtheria. Once the protection is complete, it lasts many years. Even today, diphtheria is one of the serious communicable diseases of childhood.

WHY HAVE DIPHTHERIA

In 1923 a state-wide anti-diphtheria program was inaugurated in Iowa which has been continued to date. Progress, as in all health campaigns, was slow in the beginning. The public had to be taught the need for and value of diphtheria preventive treatments. Although much has been accomplished in Iowa as evidenced by the reduction in the number of cases and deaths from this cause since 1923, even now too many children die from this disease.

NUMBER OF DEATHS FROM DIPHTHERIA STATE OF IOWA 1923-1940

Year	Number of Deaths	Rates per 100,000 Population
1923	239	9.7
1924	151	6.2
1925	117	4.8
1926	111	4.6
1927	121	5.0
1928	67	2.8
1929	47	1.9
1930	44	1.8
1931	50	2.0
1932	62	2.5
1933	55	2.2
1934	38	1.6
1935	56	2.2
1936	26	1.0
1937	11	.4
1938	24	.9
1939	15	.6
1940	15	.6

THE AGE THAT MO

Diphtheria always endangers the less of age. However, the greatest occur among the children at the For that reason the parent should to protect every child as soon as children of all ages should be imm

DIPHTHERIA PREVENTI AND ALM PREVENTIVE TREATME

Quarant
Curing d
Funeral

PREVENTIVE TREAT DIP

Preventive treatments stimu protective substance (antitoxi velops slowly, requiring a perio becomes complete. Once the pr

THE

A negative Schick test indic tection against diphtheria. No child will not take diphtheria from 3 to 6 months after the is negative.

WHO CAN GIVE P

Your own family physician parents fail to have their child school age. Since almost on cur among children under six obvious. County-wide preven cooperation with your county children to acquire protectio

COUNTY-WIDE

Detailed information conc county-wide diphtheria prev officers of your county medi partment of Health, Des Mo Bankers Trust Building, Des

Diph
No Child
Are All of

If Not, Act

THE AGE THAT MOST NEEDS PROTECTION

Diphtheria always endangers the health and life of the patient regardless of age. However, the greatest number of deaths from this cause occur among the children at the age group from 9 months to 6 years. For that reason the parent should give the family doctor the opportunity to protect every child as soon as it reaches 9 months of age. However, children of all ages should be immunized.

DIPHTHERIA PREVENTIVE TREATMENTS ARE SAFE AND ALMOST PAINLESS

PREVENTIVE TREATMENTS ARE LESS EXPENSIVE THAN:

- Quarantine for diphtheria;
- Curing diphtheria; and
- Funeral expenses.

PREVENTIVE TREATMENTS PROTECT AGAINST DIPHTHERIA

Preventive treatments stimulate the child's body to produce nature's protective substance (antitoxin) against diphtheria. Protection develops slowly, requiring a period of from 6 weeks to 6 months before it becomes complete. Once the protection is complete, it lasts many years.

THE SCHICK TEST

A negative Schick test indicates complete and probably lasting protection against diphtheria. No parent can be absolutely certain that his child will not take diphtheria if exposed, unless the Schick test, made from 3 to 6 months after the last preventive treatment has been given, is negative.

WHO CAN GIVE PREVENTIVE TREATMENTS?

Your own family physician is prepared to care for your children. Some parents fail to have their children protected until they have reached the school age. Since almost one-half of the deaths from diphtheria occur among children under six years of age, the danger of this neglect is obvious. County-wide preventive programs organized and conducted in cooperation with your county medical society offer an opportunity for all children to acquire protection against diphtheria.

COUNTY-WIDE PREVENTIVE PROGRAMS

Detailed information concerning the organization and conduct of a county-wide diphtheria preventive program may be secured from the officers of your county medical society or by writing to the State Department of Health, Des Moines, or the Iowa State Medical Society, 505 Bankers Trust Building, Des Moines.

**Diphtheria Is Preventable
No Child Need Have Diphtheria
Are All of Your Children Protected?**

If Not, Act Today! DO NOT DELAY!

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Rates per 10,000 Population
9.7
6.2
4.8
4.6
5.0
2.8
1.9
1.8
2.0
2.5
2.2
1.6
2.2
1.0
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.9
.6
.6

D~
Be on the SAFE SIDE

of



A CHILD can be completely protected from diphtheria by immunization. Two or more injections of diphtheria toxoid are necessary in order to immunize a child. The first series of injections should be followed up from time to time—for example, when starting school—with reinforcing doses in order to keep up the immunity. A combined diphtheria and tetanus toxoid is now used by many physicians; or sometimes a triple combination, which includes diphtheria toxoid, tetanus toxoid, and whooping cough vaccine, is used.

The Schick test is helpful in finding out whether or not a child is safe from diphtheria.

The Danger of Neglect

Diphtheria has become so rare that some parents may think their child is in no danger of catching it. That is a mistaken idea. No child is safe from diphtheria until he has been successfully immunized.

Recently there has been an increase in diphtheria in some parts of the country. It may be due, in part, to the wide prevalence of diphtheria in foreign lands. Unimmunized children are in danger from any known or unrecognized source of infection.

Do not take chances with diphtheria when you can easily protect your child by a simple treatment. Have the child immunized according to the following schedule.

A TIMETABLE OF DIPHTHERIA PROTECTION

From 6 to 9 months of age—Two or three injections of toxoid at intervals recommended by the physician.

From 18 to 24 months—Another injection of toxoid or the Schick test. If the Schick test is positive, further injections of toxoid should be given.

At 6 years of age and again at 12 years of age—Reinforcing doses of toxoid.
In diphtheria epidemics—Booster doses of toxoid, if not more than six
months have passed since the last dose.

Adapted from recommendations of the American Academy of Pediatrics

Temporary Protection

If a child is exposed to diphtheria before he has been immunized, anti-toxin may be given to produce an immediate, temporary protection. Let the physician know at once if a child has been thus exposed, so that antitoxin can be given if the doctor considers it necessary. This is a short-term protection which wears off in a few weeks.

What Diphtheria Is

Diphtheria is caused by the diphtheria bacillus which grows mainly in the nose and throat. It produces a powerful toxin or poison which is spread by the blood stream. This poison may attack the heart muscle and damage it severely.

Children less than 5 to 7 years of age are more likely to catch diphtheria and are also more likely to die of it than are older children.

Diphtheria usually starts with a sore throat, chilliness, slight fever, aching, loss of appetite, and sometimes vomiting and headache. The signs and symptoms may be so mild that the disease will go unrecognized, or it may be mistaken for tonsillitis or laryngitis. Yet, even when the symptoms are mild, the child may be in great danger.

Antitoxin must be given to a child who has diphtheria and, if it is given early enough, usually will prevent death from the disease. The earlier antitoxin is given the better the outcome. Antitoxin which is given after the third day is much less effective.

Follow the rules or recommendations of your public health officials for preventing the spread of diphtheria.

METROPOLITAN LIFE INSURANCE COMPANY

HOME OFFICE: NEW YORK

Pacific Coast Head Office: San Francisco

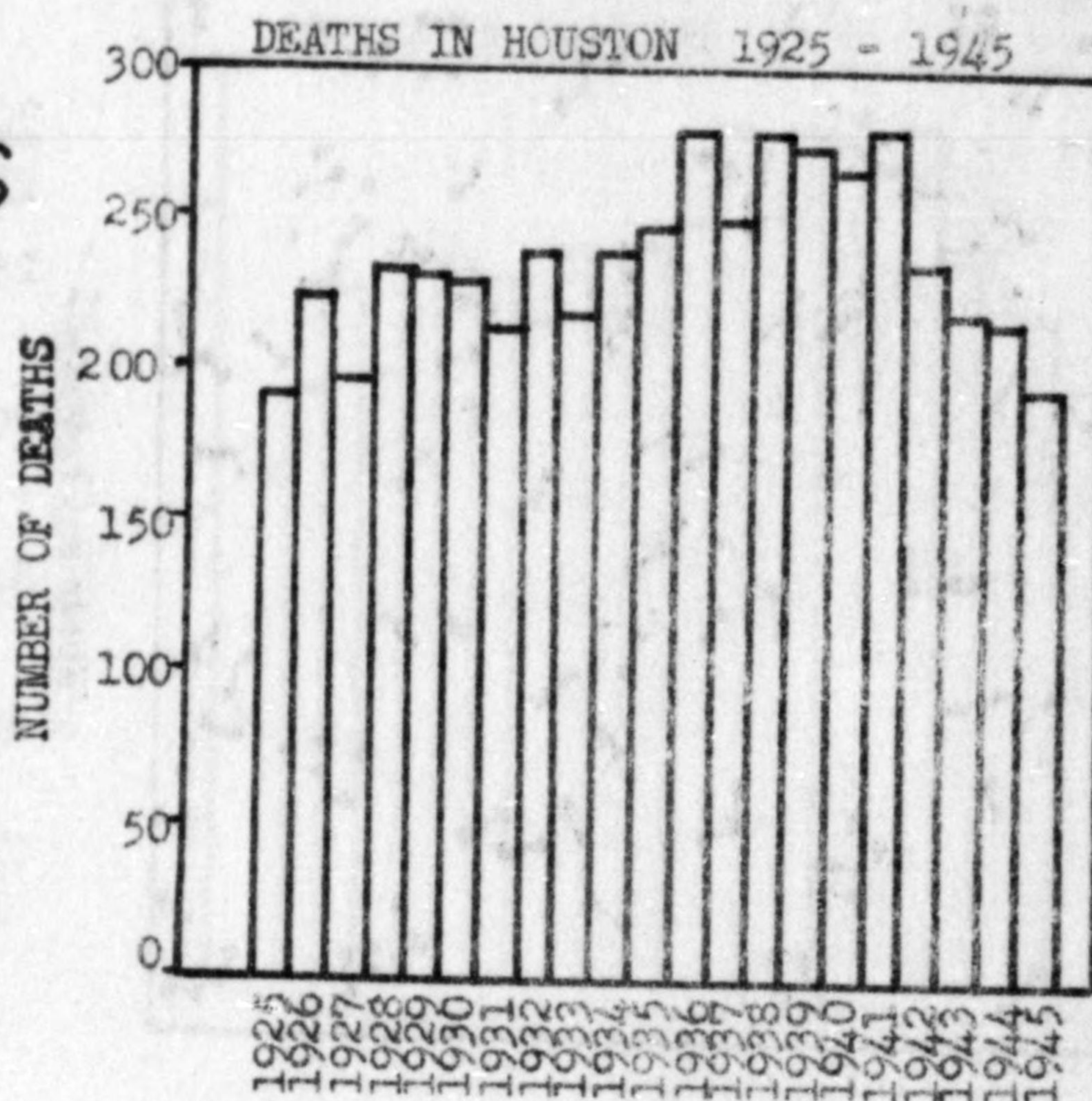
Canadian Head Office: Ottawa

Handwritten: D9

City Health Department
Houston, Texas

TUBERCULOSIS IN HOUSTON
BY RACES
1925 - 1945

TUBERCULOSIS



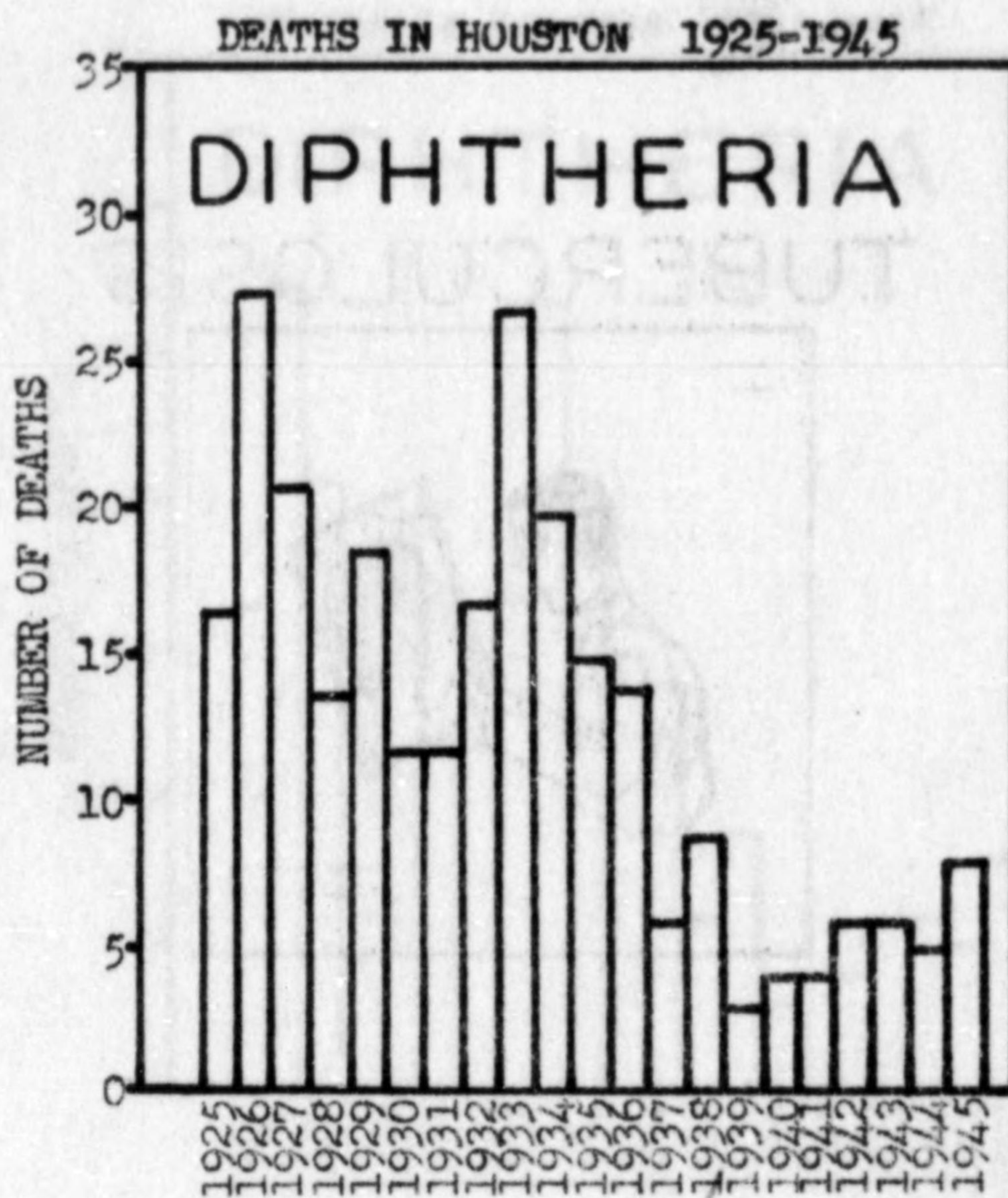
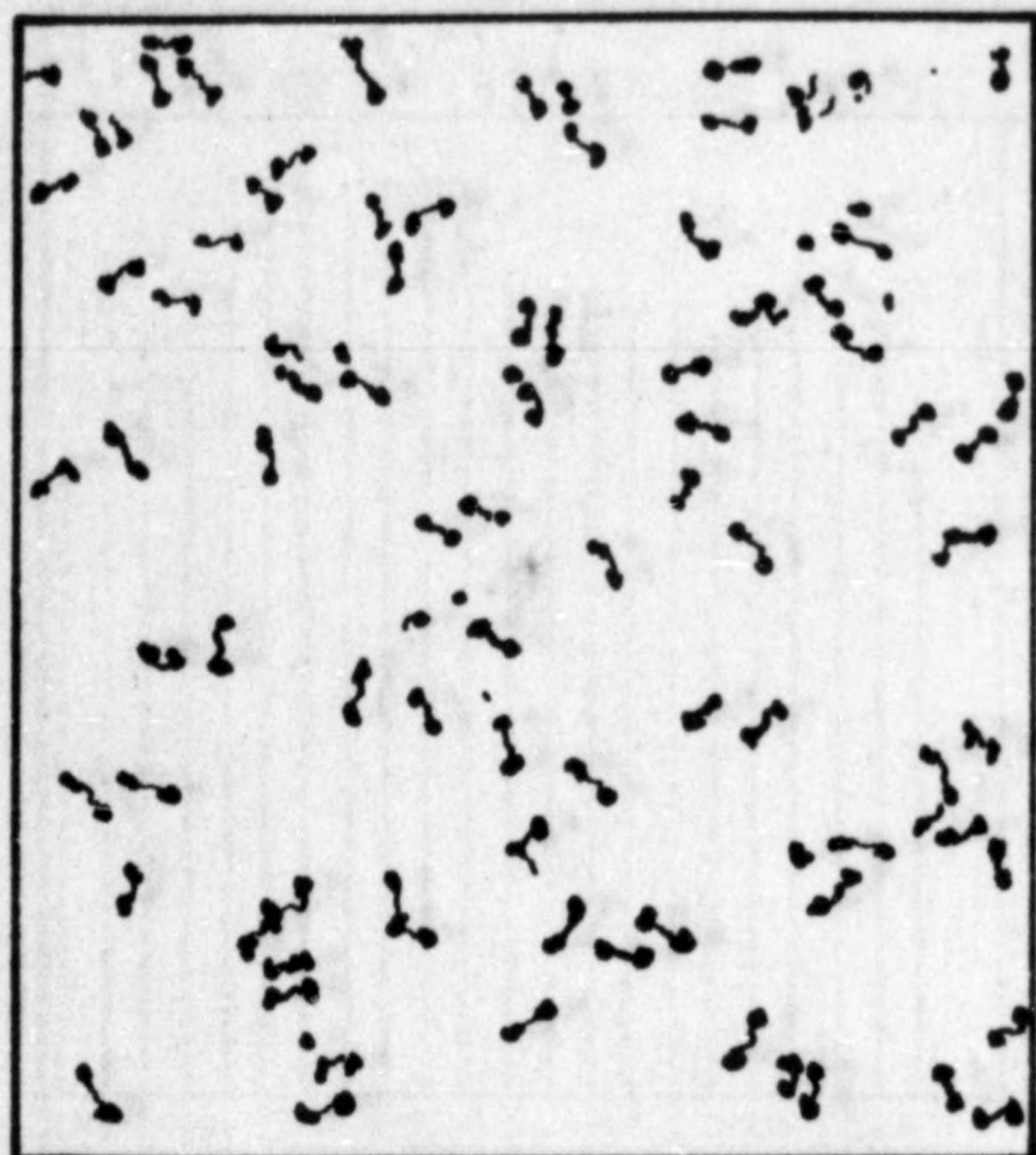
*Rate Per 100,000 Population

YEAR	CASES REPORTED		TOTAL DEATHS		WHITE DEATHS		COLORED DEATHS	
	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
1925	484	224.79	190	88.24	128	75.89	62	132.94
1926	420	182.04	226	97.95	134	74.14	92	184.10
1927	500	203.15	197	80.04	122	63.27	75	140.68
1928	527	201.50	236	90.24	136	66.38	100	176.53
1929	656	236.88	234	84.50	145	66.84	89	148.37
1930	709	242.51	230	78.67	142	62.00	88	138.94
1931	933	295.32	215	68.05	123	52.06	92	140.84
1932	812	247.15	241	73.35	135	55.45	106	157.47
1933	902	270.38	217	65.05	129	51.46	88	126.96
1934	950	279.29	241	70.85	141	54.67	100	140.24
1935	783	225.47	248	71.41	148	55.82	100	136.42
1936	788	225.40	283	80.95	163	59.85	120	159.36
1937	916	256.60	250	70.03	150	53.65	100	129.37
1938	938	257.16	281	77.04	160	55.80	121	152.63
1939	893	235.24	275	72.44	163	55.37	112	137.78
1940	631	164.10	267	69.44	163	54.66	104	120.51
1941	478	120.95	280	70.85	175	57.12	105	118.46
1942	485	114.98	237	56.19	148	44.90	89	93.32
1943	425	95.01	221	49.45	130	37.25	91	90.12
1944	387	84.13	217	47.17	149	41.76	68	65.88
1945	321	68.13	194	41.17	126	34.48	68	64.31

775013

DIPHTHERIA IN HOUSTON, TEXAS BY RACES

1925 - 1945



*Rate Per 100,000 Population

YEAR	CASES REPORTED		TOTAL DEATHS		WHITE DEATHS		COLORED DEATHS	
	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
1925	290	134.69	17	7.89	14	8.30	3	6.43
1926	263	113.99	28	12.14	20	11.06	8	16.01
1927	344	139.77	21	8.53	18	9.33	3	5.63
1928	388	148.36	14	5.35	14	6.83	0	.00
1929	473	170.80	19	6.86	17	7.84	2	3.33
1930	347	118.69	12	4.10	12	5.24	0	.00
1931	311	103.13	12	3.98	10	4.23	2	3.06
1932	379	121.95	17	5.47	13	5.34	4	5.94
1933	382	119.37	27	8.44	18	7.18	9	12.98
1934	328	99.63	20	6.07	16	6.20	4	5.61
1935	384	113.46	15	4.43	12	4.53	3	4.09
1936	300	86.29	14	4.03	12	4.41	2	2.66
1937	153	42.87	6	1.68	5	1.79	1	1.29
1938	163	44.53	9	2.46	8	2.79	1	1.26
1939	114	30.38	3	.80	3	1.02	0	.00
1940	72	18.72	4	1.04	4	1.34	0	.00
1941	85	21.52	4	1.01	3	.98	1	1.13
1942	118	27.76	6	1.41	5	1.52	1	1.05
1943	86	19.11	6	1.33	4	1.15	2	1.98
1944	101	18.04	5	1.09	4	1.12	1	.97
1945	118	25.04	8	1.70	7	1.91	1	.95

D-2



CITY OF CLEVELAND DIVISION OF HEALTH

NEWS RELEASE

SEPTEMBER 28, 1946

KEEP DIPHTHERIA OUT OF CLEVELAND

Fourteen persons this year, in the Cleveland community, have had diphtheria--seven were over nine years of age. Throughout many sections of the country there has been an upward trend in the number of cases of diphtheria, and as in Cleveland, more and more of the victims were in the higher age groups. However, Cleveland has been more fortunate than some of these communities, for the record shows no unusual increase over previous years. Now it is up to Clevelanders to banish this disease entirely from the community.

HOW DIPHTHERIA CAN BE KEPT OUT:

No one need have diphtheria. *Immunization protects against diphtheria.* This procedure consists of three diphtheria toxoid injections. Two of these injections are given by the physician four to six weeks apart in early infancy. The third injection is a "booster" dose given several years later before entrance to school. The injections are easily administered, safe, and cause very little reaction.

Every infant between the ages of six months and one year should have this protection. It is not safe to wait until the child is of school age. Then, before the child enters school, he should be given the "booster" or stimulating dose to further insure his protection.

If a child, up to eight years of age, has not been immunized during infancy or during the preschool years, he should receive complete protection before he enters school.

WHAT PARENTS CAN DO:

Protection of the child against diphtheria is the responsibility of every parent. Parents should arrange with their family physician to have their child immunized or to receive a "booster" injection against diphtheria. Those who cannot arrange for the service of the family physician should request the School Physician to protect their child.

The first week of October, the School Health Services of the Board of Education and the Cleveland Division of Health will initiate their annual drive for total immunization of public and parochial school children against diphtheria. As part of this program, copies of the enclosed pamphlet "*Banish Diphtheria*" will be distributed to parents of kindergarten and first grade children.

In taking care of the school child, the infant and younger child should not be neglected. The family physician should be consulted, or the child may be taken to the nearest Division of Health Child Welfare Station.

Bureau of Health Education

Vol. 3 No. 29

CURRENT DISEASE STATISTICS REPORTED

	WEEK END. SEPT. 21	WEEK END. SEPT. 14	ONE YEAR AGO		WEEK END. SEPT. 21	WEEK END. SEPT. 14	ONE YEAR AGO
Pneumonia	10	16	5	Gonorrhea	35	72	56
Scarlet Fever	10	4	13	Syphilis	59	108	70
Meningitis	0	0	2	Whooping Cough	11	20	29
Poliomyelitis	23	24	5	Tuberculosis	25	117	24
Diphtheria	0	0	0	Measles	3	21	1

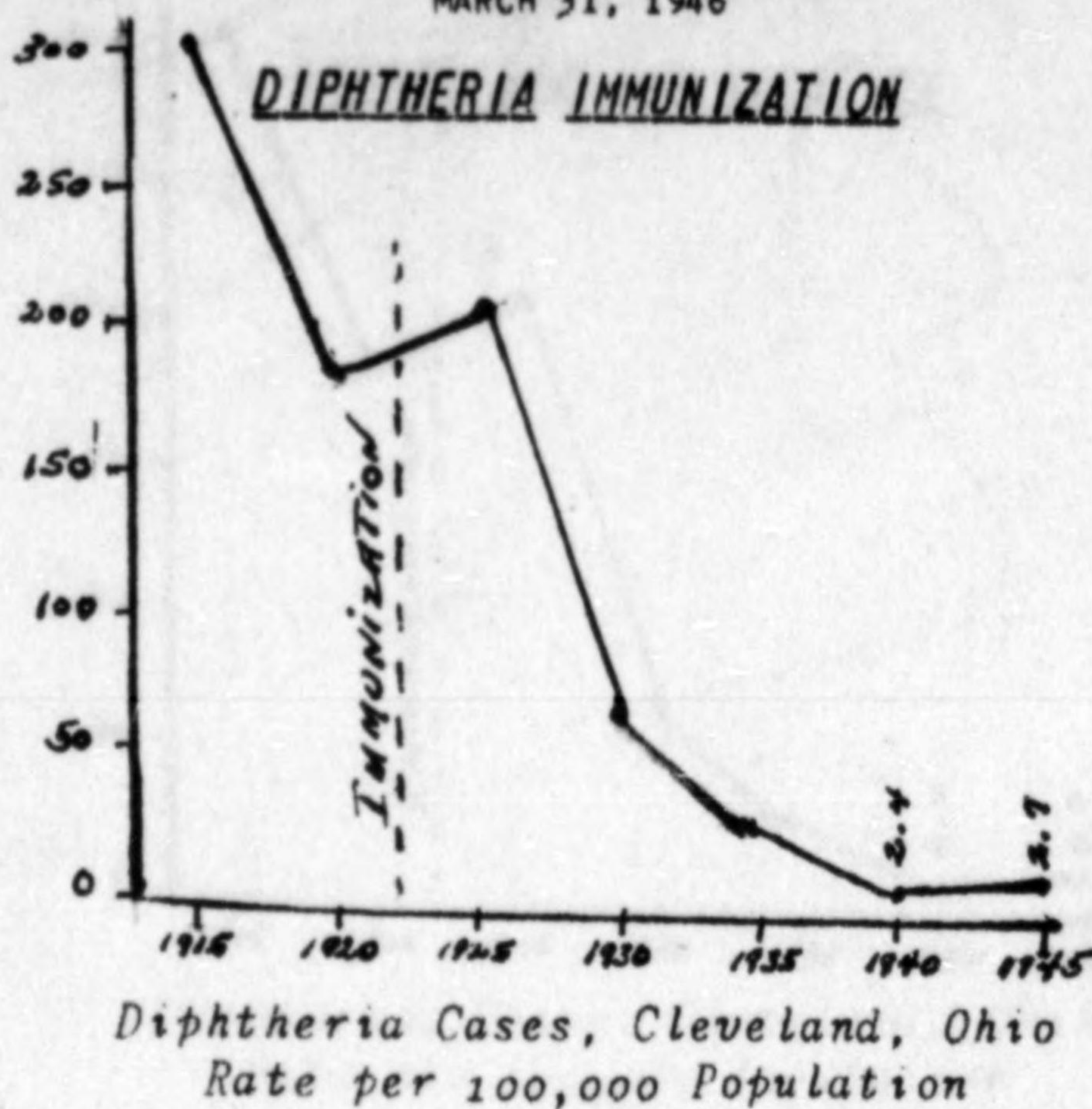
TOTAL Communicable disease cases reported 224
 TOTAL Deaths from all causes (except stillborn) . . . 183

(Please Post on Bulletin Board)

CITY OF CLEVELAND

NEWS RELEASE
MARCH 31, 1946

DIVISION OF HEALTH



Over 30 per cent of the ten thousand children entering the public schools last fall were susceptible to diphtheria, as revealed by the Schick test. Nearly 50 per cent of these had no history of immunization before entering school. These figures were disclosed by Dr. Charles F. Good, Directing Supervisor of the Health Service of the Cleveland Public Schools. Children under twelve years of age, particularly those of preschool years, are most susceptible to diphtheria--if they have not been immunized--because they have not yet acquired natural immunity. The highest death rate from diphtheria occurs in the pre-school age group.

During the last two years of the war, diphtheria was one of the leading epidemic diseases in Europe, and one of the leading causes of death. Although only a few cases of diphtheria have been reported in the Cleveland area during the last decade, there has been a disturbing rise in the number of cases throughout the country this past year. The number of cases in Ohio have also increased considerably.

DIPHTHERIA IS PREVENTABLE!

Most infants have a temporary, natural immunity against diphtheria during the first several months of life, *BUT* this immunity usually disappears after the age of six months. Between the ages of six to nine months immunization protection consisting of two toxoid inoculations, three to six weeks apart, should be given to every child. Then, when the child enters school, a third or "booster" dose of toxoid should be given to reinforce his protection.

If the services of a private physician cannot be obtained, infants may be immunized against diphtheria--and vaccinated against smallpox--at the District Health Centers of the Division of Health.

Bureau of Health Education

Vol. 3 No. 12

CURRENT DISEASE STATISTICS REPORTED

	WEEK END. MAR. 23	WEEK END. MAR. 16	ONE YEAR AGO		WEEK END. MAR. 23	WEEK END. MAR. 16	ONE YEAR AGO
Pneumonia	11	20	23	Gonorrhea	85	62	33
Scarlet Fever	41	31	65	Syphilis	78	108	74
Diphtheria	0	2	0	Whooping Cough	17	6	36
Meningitis	1	2	5	Tuberculosis	33	43	48
Tinea	19	13	14	Measles	22	29	7

TOTAL Communicable disease cases reported 471
TOTAL Deaths from all causes (except stillborn) . . 191

(PLEASE POST ON BULLETIN BOARD)

D2



FUTURE HEALTH FOR



*Your
Child*

SAFEGUARD YOUR CHILD AGAINST...

SAFEGUARD YOU

diphtheria



What Is the Nature of Immunization Against Diphtheria?

There have just been made available by *Lederle* new toxoids which are vastly superior to anything previously produced. These purogenated toxoids appear essentially not to cause reactions in children and adults. In the alum-precipitated forms, the alum content has been reduced by 75%, thus reducing to a minimum any local reaction caused by that substance. In these toxoids, the nitrogen-containing impurities have been reduced to approximately 0.15%.

This is a simple, rapid, effective method of preventing diphtheria by conferring upon the child a durable active immunity. By active immunity is meant a long-term resistance which the child builds up gradually over a period of weeks, while the injections are taking effect. This is the opposite of "passive" immunity, which is produced in non-immune children, for temporary protection, by means of an anti-serum.

When Should This Immunization Be Practiced?

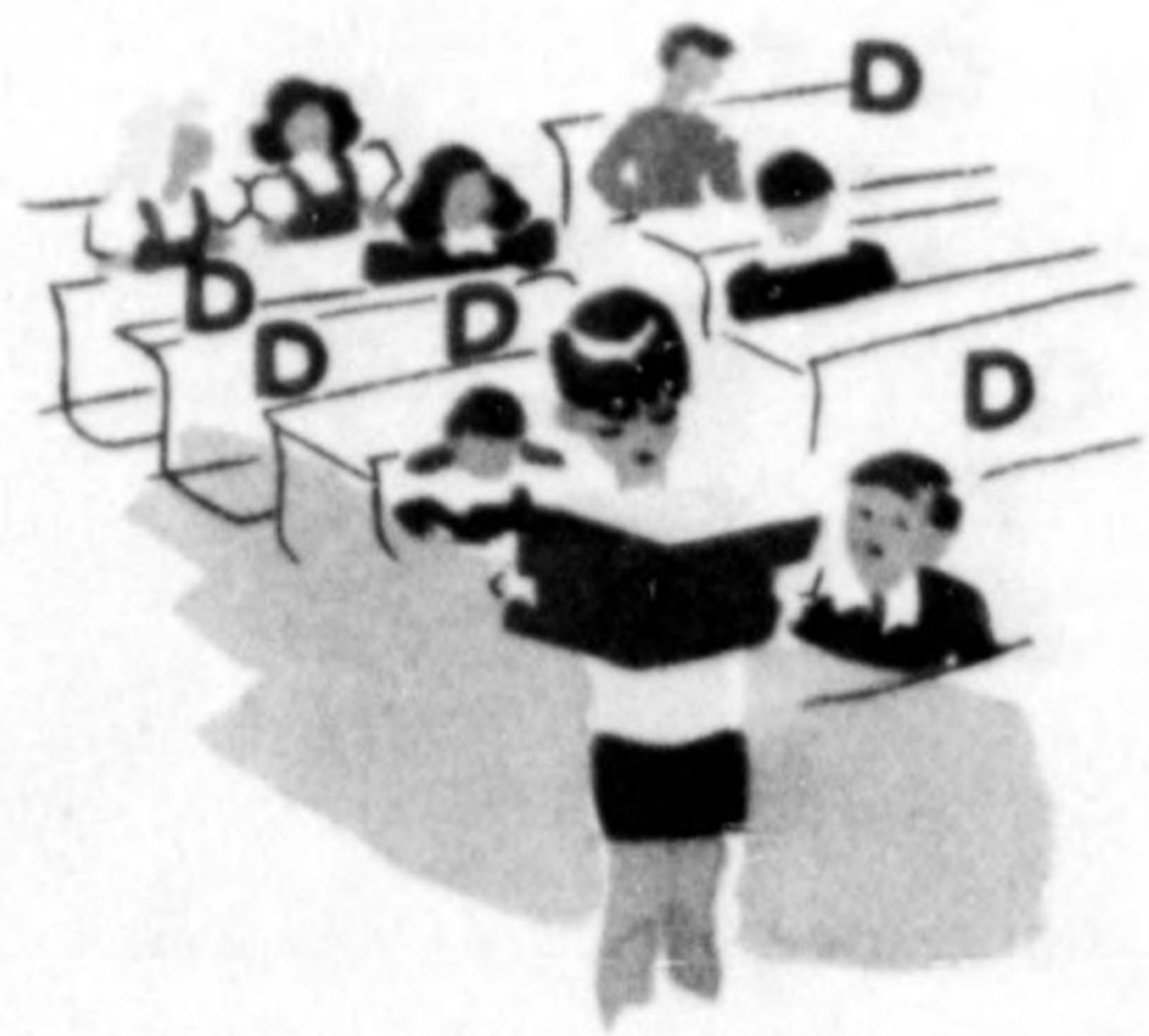
Ordinarily, the best time to immunize against diphtheria is between the sixth and ninth month of life. Every child should be immunized against diphtheria in infancy, and such children as show they are still sensitive (by means of a special test called the Schick test) should be immunized just prior to entrance into school.

What Results Are Accomplished By This Immunization?

A lasting immunity to diphtheria is secured, which can be increased at any time by means of a booster dose of toxoid.

Who Should Apply This Immunization?

Your physician, or a trained nurse under his supervision, in his office, at your home, or in a clinic.



What Is the Nature of Immunization Against Tetanus?

There have just been made available by *Lederle* new toxoids which are vastly superior to anything previously produced. These purogenated toxoids appear essentially not to cause reactions in children and adults. In the alum-precipitated forms, the alum content has been reduced by 75%, thus reducing to a minimum any local reaction caused by that substance. In these toxoids, the nitrogen-containing impurities have been reduced to approximately 0.15%. Protection against tetanus is secured by means of "toxoids." In fact, a tetanus toxoid is coming into use, providing durable immunity to tetanus.

Who Should Receive Tetanus Immunization?

While previously anyone engaged in military services, domestic or farming, highway accidents, or other activities considered a suitable subject for tetanus immunization is increasing that ever against tetanus.



ONLY YOUR PHYSICIAN CAN PROTECT YOU

SAFEGUARD YOUR CHILD AGAINST...

SAFEGUARD YOU

*tetanus!***What Is the Nature of Immunization Against Tetanus?**

There have just been made available by *Lederle* new toxoids which are vastly superior to anything previously produced. These purogenated toxoids appear not to cause reactions in children and adults. In the aluminum-precipitated forms, the alum content has been reduced by 75%, thus reducing to a minimum any local reaction caused by that substance. In these toxoids, the nitrogen-containing impurities have been reduced to approximately 0.15%. Protection against tetanus is very similar to protection against diphtheria, both being achieved by means of "toxoids." In fact a combined diphtheria-tetanus toxoid is coming into increasing use for providing durable immunity to both these diseases.

Who Should Receive This Immunization?

While previously anyone engaged in a hazardous occupation (military services, dangerous sports, gardening or farming, highway accident risks, etc.) was considered a suitable subject for this immunization, the feeling is increasing that everyone should be immunized against tetanus.

**When Should This Immunization Be Given?**

It is preferably given between the sixth and ninth month of life.

What Results Are Accomplished By This Immunization?

A durable immunity to tetanus is achieved, and the patient's immune defenses are placed in a state of readiness so that upon the receipt of a severe injury that is contaminated with dirt, or otherwise may be suspected of harboring tetanus organisms, the individual's immunity may be greatly stimulated immediately by a "booster" dose of tetanus toxoid. This is preferable to administering antitetanus serum.

Who Should Apply This Immunization?

Your physician, or a trained nurse acting under his supervision, in his office, at your home, or in a clinic.

What Are the Advantages of Simultaneous Immunization Against Both Diphtheria and Tetanus?

The production of active immunity is a simple, rapid, and highly efficient method of acquiring immunity by the use of toxoids. These can be used to stimulate immunity against tetanus.

The outstanding achievement in immunology has been the production of toxoids by the alcohol-precipitation process. These **PUROGENATED** toxoids represent the greatest advance in immunology since the discovery of toxoids. They have been found to be far more effective than the old toxoids. (For other advantages, see literature on Diphtheria and Tetanus.)

When Should This Immunization Be Given?

Every child should be immunized against tetanus simultaneously in the same dose as the diphtheria (determined by the Schick test) and a booster dose just prior to the next diphtheria booster.

The best time to immunize a child is when this has not been done, or when the child is immunizing them at any age.

What Results Are Accomplished By This Immunization?

The child secures within a few days a durable immunity to both diphtheria and tetanus. This immunity is increased at any time the child is exposed by a so-called booster dose of diphtheria or tetanus toxoid.

Who Should Apply This Immunization?

Your physician, or a trained nurse acting under his supervision, in his office, at your home, or in a clinic.

*Trade Mark

PROTECT YOUR CHILD AGAINST THE COMMON CHILD

SAFEGUARD YOUR CHILD AGAINST...

Tetanus!

both *diphtheria*
and *tetanus!*

What Are the Advantages of Simultaneous Immunization Against Both Diphtheria and Tetanus?

The production of active immunity by means of toxoids is a simple, rapid, and highly effective method of preventing both diphtheria and tetanus. At any time after acquiring immunity by this means, a "booster" dose may be used to stimulate immunity to either diphtheria or tetanus.

The outstanding achievement of the year in preventive immunology has been the purification and crystallization of toxoids by the alcohol-fractionation method of Pillemer. These PUROGENATED* TOXOIDS *Lederle* constitute the greatest advance in active immunization technique since the discovery of toxoids. The resulting toxoids have been found to be far more pure than the parent toxoids. (For other advantages, see preceding sections on Diphtheria and Tetanus.)

When Should This Immunization Be Practiced?

Every child should be immunized against diphtheria and tetanus simultaneously in infancy. Later, such children as are still sensitive (determined by means of a special test called the Schick test) to diphtheria, should receive a booster dose just prior to entrance into school.

The best time to immunize children is in infancy, but if this has not been done, there should be no hesitation in immunizing them at any time during the preschool years.

What Results Are Accomplished By This Immunization?

The child secures within a month or two an active lasting immunity to both diphtheria and tetanus, which can be increased at any time that there is an epidemic or undue exposure by a so-called "booster" dose of either diphtheria or tetanus toxoid, or both toxoids.

Who Should Apply This Immunization?

Your physician, or a trained nurse under his supervision, in his office, at your home, or in a clinic.

*Trade Mark



Immunization Be Given?
between the sixth and ninth

Accomplished By This

to tetanus is achieved, and the
wounds are placed in a state of
sterility. In the event of the receipt of a severe injury
with dirt, or otherwise may be
exposed to tetanus organisms, the indi-
vidual should be greatly stimulated immedi-
ately with a dose of tetanus toxoid. This is
accomplished by the use of tetanus
antitoxin serum.

This Immunization?

by a trained nurse acting under his
supervision, at your home, or in a clinic.

AGAINST THE COMMON CHILDHOOD INFECTIONS!

SAFEGUARD YOUR CHILD AGAINST...

smallpox



What is the Nature of Smallpox Vaccination?

This is a simple, rapid, painless vaccination, which leaves the skin almost intact. Ordinarily, no dressing is necessary and the effectiveness of the vaccine is promptly shown by a "reaction" of redness, or small blisters.

Who Should Receive This Vaccination?

Every child should be vaccinated in infancy, revaccinated on entering school, and revaccinated whenever an epidemic appears.

When Should This Vaccination Be Practiced?

One of the most authoritative groups of children's specialists in the world states as follows—"Vaccinate as early in life as possible . . .". No child should be permitted to go beyond three years of age without such vaccination.

What Results Are Accomplished By This Vaccination?

The child, or adult, is protected for a considerable period of time against one of the most serious epidemic diseases known to man.

Who Should Apply This Vaccination?

Your physician, or a trained nurse acting under his supervision, either at his office, in your home, or at a clinic.



SAFEGUARD YOUR CHILD AGAINST...
FOLLOWING UPPER RESPIRATORY TRACT INFECTIONS



Who Should Receive This Vaccination?

Many individuals react very favorably to these vaccines during times of epidemic, while others do not. Your physician should determine the group in which your child belongs.

When Should This Vaccination Be Practiced?

It may be given at any time, except during an epidemic, which is probably unnecessary. There are certain cases in which vaccine should not be used. Your physician should be acquainted with these contraindications.

What Results Are Accomplished By This Vaccination?

The results that are likely to be obtained are indicated in advance. Physicians should be advised with such vaccines to determine the benefit in that individual case. It may be repeated year after year. In those cases where they are not effective, your physician will, of course, discontinue the vaccination.

Who Should Apply This Vaccination?

Your physician, or a trained nurse acting under his supervision, in his office, at your home, or at a clinic.

**SAFEGUARD YOUR CHILD AGAINST SECONDARY INVADERS
FOLLOWING UPPER RESPIRATORY INFECTIONS, PARTICULARLY...**

“colds”!



***What is the Nature of Immunization
Against Secondary Invaders?***

Upper respiratory infections, including the “common cold”, are frequently caused by invaders that either are not fully identified, or are of such a nature that there is no known protection against them. All that can be done for such infections is to provide good nursing care, rest, fluids, and palliatives for relief of symptoms. Following these infections, however, well recognized bacterial invaders enter the respiratory tract and may cause a good deal of disability from prolonged bronchitis, tracheitis, or laryngitis. It is against these secondary invaders that mixed or “combined” vaccines are employed.

Who Should Receive This Vaccine?

Many individuals react very favorably to repeated injections of these vaccines during the winter season, whereas others do not. Your physician is the best judge of the group in which your child belongs.

When Should This Vaccine Be Given?

It may be given at any time, except that its use in infants is probably unnecessary. There are certain conditions in which vaccine should not be used, and your physician is acquainted with these contra-indications.

***What Results Are Accomplished By This
Vaccination?***

The results that are likely to be achieved cannot be predicted in advance. Physicians frequently test a patient with such vaccines to determine whether they are of benefit in that individual case. If they are of benefit, they may be repeated year after year for their protective value. In those cases where they are not of use the physician will, of course, discontinue their use.

Who Should Apply This Vaccine?

Your physician, or a trained nurse acting under his supervision, in his office, at your home, or in a clinic.



SAFEGUARD Y

***What is the Nature
Against Virus***

Virus influenza, or “S” in 1918 and has been immunization is derived a strong and lengthy disease. It is ordinarily skin.

Who Should Receive

Children and adults (the virus type) should

***When Should This
Given?***

It may be given at any of epidemics—which years—vaccine should reaches your area. An epidemic is delayed or may be given for

***What Results Are
Immunization***

An immunity of unknown

***Who Should Administer
Immunization***

Your physician, or a nurse, in his office,

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NS, PARTICULARLY...

olds"!

**Nature of Immunization
Secondary Invaders?**

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ed" vaccines are employed.



SAFEGUARD YOUR CHILD AGAINST...

virus influenza

**What is the Nature of Immunization
Against Virus Influenza?**

Virus influenza, or "Spanish influenza", swept the world in 1918 and has been greatly dreaded since that time. This immunization is derived from chick embryos and provides a strong and lengthy immunity to the virus form of the disease. It is ordinarily given in a single dose beneath the skin.



Who Should Receive This Immunization?

Children and adults endangered by epidemic influenza (of the virus type) should receive this immunization.

When Should This Immunization Be Given?

It may be given at any age over two years. In the presence of epidemics—which occur in this country every few years—vaccine should be given before the epidemic reaches your area. A "booster" dose may be given if the epidemic is delayed several months in reaching your area, or may be given for any future epidemic.



What Results Are Accomplished By This Immunization?

An immunity of unknown duration results.

Who Should Administer This Immunization?

Your physician, or a trained nurse acting under his supervision, in his office, at your home, or in a clinic.

SAFEGUARD YOUR CHILD AGAINST...

SAFEGUARD YOU

measles

What Is the Nature of Immunization Against Measles?

There is no known means of protecting in all instances against measles. However, an efficient means has been formulated for modifying measles to such an extent that it need no longer be feared, and then permitting the child to have a "light case" of the disease which in itself confers a very long, if not permanent, immunity. This protection is conferred by certain constituents of the blood known as immune serum globulins.

Lederle research now makes available a refined measles antibody solution that is superior in the following respects: (1) The solution contains all the immune components of whole blood; (2) It contains four times the total antibodies per dose, compared with products previously available; and (3) It has had reaction-producing materials removed to such an extent that unpleasant after-effects are likely to prove exceptionally rare or nonexistent.

Who Should Receive This Protection?

All children exposed to the disease should receive this immune serum globulin.

When Should This Protection Be Given?

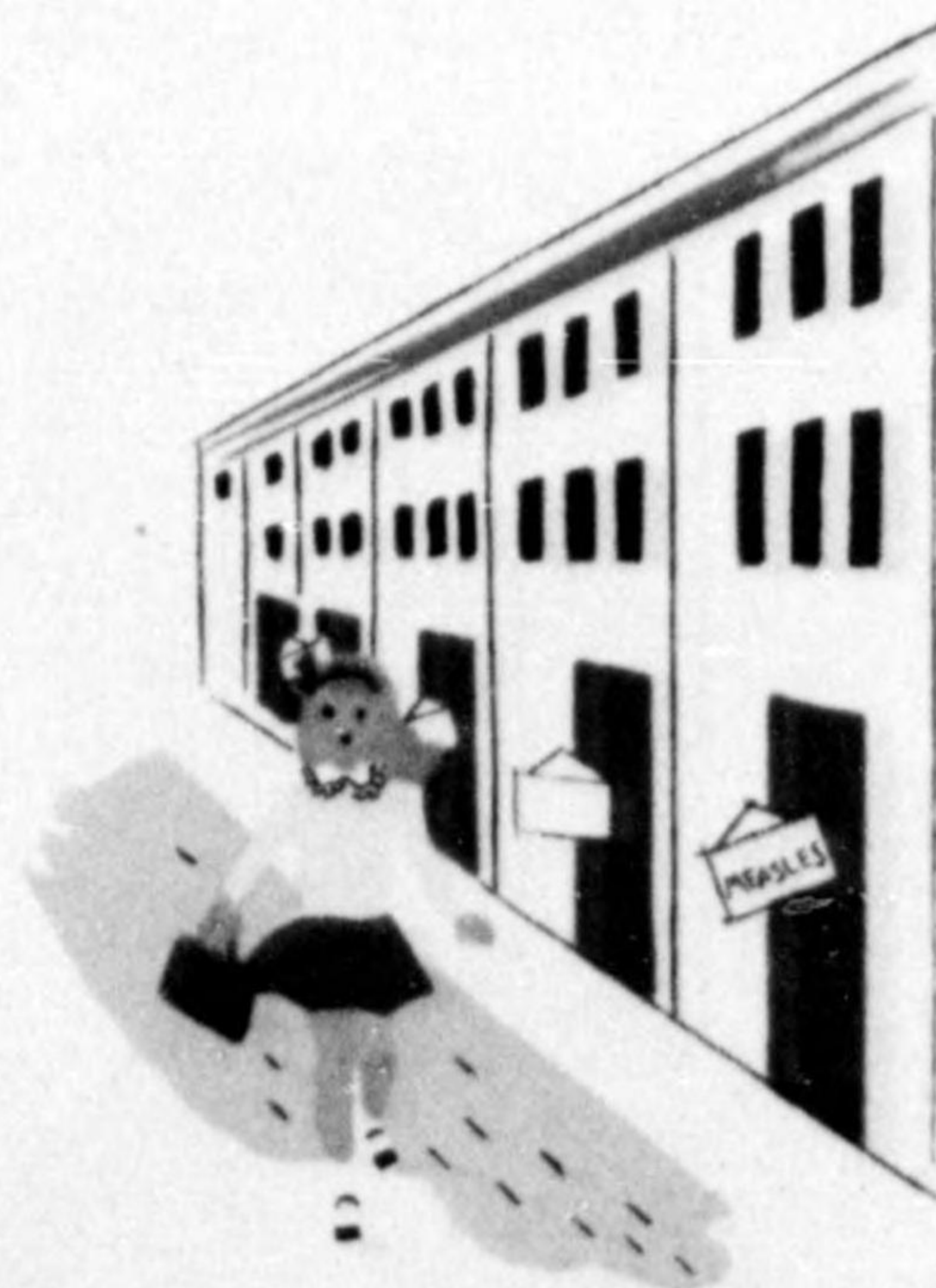
It may be given at any age, within 6 days after exposure to the disease.

What Results Are Accomplished By This Protection?

If the immune serum globulin is given within 6 days after exposure, the disease usually will be modified, if a moderate dose of globulin is given, so that the child will have a "mild attack." It is much wiser for the child to have a mild attack, acquiring lasting immunity, than to give complete protection for only a few weeks through passive immunity. If a larger dose of globulin is given, it is quite usual for the disease not to develop. In that event, the same procedure should be gone through the next time there is exposure. Your physician will, of course, determine appropriate dosage.

Who Should Apply This Immunization?

Your physician, or a trained nurse acting under his supervision, in his office, at your home, or in a clinic.



What Is the Nature of Immunization Against Whooping Cough?

The best method for preventing this disease is by means of the CINE PHASE I Lederle vaccine. Ample time to immunize should be given. Where it is desired to give protection to children directly in cases, PERTUSSIS AND

Who Should Receive This Protection?

Since the consensus is that immunization against whooping cough is a wise protection.

ONLY YOUR PHYSICIAN CAN PROTECT YOU

SAFEGUARD YOUR CHILD AGAINST...

whooping cough

What Is the Nature of Immunization Against Whooping Cough?

The best method for providing protection against this disease is by means of a vaccine. PERTUSSIS VACCINE PHASE I *Lederle* is most useful where there is ample time to immunize a child who has not recently been in contact with whooping-cough cases. Where it is desired to give partial or complete protection to children directly in contact with whooping-cough cases, PERTUSSIS ANTIGEN *Lederle* may be used.

Who Should Receive This Immunization?

Since the consensus is that there is no natural immunity against whooping cough, all children should receive this protection.



When Should This Immunization Be Practiced?

All children should be immunized between the ages of 6 months and 6 years of age. Whenever after the original immunization they are in close contact with whooping-cough cases, they should receive additional protection by means of a booster dose of vaccine. The duration of protection from whooping-cough vaccines is not fully known, but a single dose is not a permanent, and occasionally not a complete, protection.

What Results Are Accomplished By This Immunization?

The child has a considerable degree of protection for many months or years following the administration of the Phase I Vaccine. The child is able by means of a booster dose at any time to step up his immunity if exposed to whooping-cough cases, or if in the midst of an epidemic. While whooping cough itself is not ordinarily very serious in its immediate effects, the complications which follow it—bronchitis, bronchopneumonia, middle ear disease, kidney disease, heart disease—may prove a serious menace to future health.

Who Should Apply This Immunization?

Your physician, or a trained nurse under his supervision, in his office, at your home, or in a clinic.



PROTECT YOUR CHILD AGAINST THE COMMON CHIL

SAFEGUARD YOUR CHILD AGAINST...

cough

typhoid fever



What is the Nature of Immunization Against Typhoid Fever?

This is a simple, rapid, efficient method of immunization by means of a vaccine, which has been proven in both World War I and World War II.

Who Should Receive This Immunization?

All children and adults should receive this immunization who are likely to be exposed to typhoid fever organisms, either through the handling of patients, through consuming contaminated water, milk, or other liquids, or foods. Those who are likely to live in the tropics particularly need this protection.

When Should This Immunization Be Practiced?

Vaccination may be given at any time, in infancy, childhood, youth, or adult life.

What Results Are Accomplished By This Immunization?

Vaccination provides a complete immunity in almost all cases. In populations such as Army personnel, who were vaccinated en masse with the combined vaccine, both typhoid and paratyphoid fevers were essentially eradicated.

Who Should Apply This Immunization?

Your physician, or a trained nurse under his supervision, in his office, at your home, or in a clinic.



Immunization Be

immunized between the ages of 1 and 2. Whenever after the original exposure contact with whooping-cough receive additional protection of vaccine. The duration of protection of cough vaccines is not fully known, but is not permanent, and occasional re-vaccination is necessary.

Accomplished By This

The degree of protection for a child is able by means of a booster step up his immunity if exposed, or if in the midst of an outbreak of whooping-cough itself is not ordinarily sufficient. In severe cases, the complications of bronchopneumonia, middle ear infection, and heart disease—may prove a serious health hazard.

Who Should Apply This Immunization?

Your physician, or a trained nurse under his supervision, in his office, at your home, or in a clinic.

ST THE COMMON CHILDHOOD INFECTIONS!

SAFEGUARD YOUR CHILD AGAINST...

*tuberculosis****What is the Nature of This Test Against Tuberculosis?***

This is not an immunization, since there is no known method of immunizing against tuberculosis. However, this test is of great benefit in "screening" campaigns to ascertain persons who are "susceptible" to tuberculosis. It is the first step in locating possible cases of tuberculosis for further study. This test does not hurt and is as simple and easy as wearing a small strip of adhesive tape for two days. If all students were patch-tested once a year, infections and early cases would be brought to light for further study and care at the stage when there is the best opportunity for cure and the prevention of spreading the infection.

Who Should Receive This Test?

Every student in school should have the benefit of an annual test by means of TUBERCULIN PATCH TEST (VOLLMER) *Lederle*. Adults should be tested where there is suspicion of late tuberculosis.

When Should This Test Be Given?

The test should be applied preferably at the beginning of the school year, so that further testing may proceed at once and students or others who actually have tuberculosis may be spared the effect of

intense school activity upon a disease which usually can be promptly arrested if treated by proper means.

What Results Are Accomplished By This Test?

The majority of students show no reaction at all. Even if two red spots like those in the picture appear after the tape is removed, it does not mean that active tuberculosis is present. It simply indicates that a further examination should be made of the case by means of X-rays and physical examinations, since the person either has had, or has, tuberculosis. Unsuspected cases can thus be detected. The earlier the disease is treated, the more promptly it will be halted.

Method of Using This Test

One of the simplest, easiest, and most efficient ways to track down unsuspected tuberculosis is by means of the Tuberculin Patch Test. TUBERCULIN PATCH TEST (VOLLMER) *Lederle* is a strip of adhesive tape on which are three little squares of paper. Two of the squares contain the testing material, and the third square checks the accuracy of the test. The adhesive tape is left on the skin for two days, then removed, and two days later the result can be interpreted by the physician making the test.

Do not let the test strip get wet! Do not take the test strip off to look under it!

SAFEGUARD YO



LEDERLE LABORATO

SAFEGUARD YOUR CHILD AGAINST TUBERCULOSIS...



**Put it on —
MONDAY**



**Take it off —
WEDNESDAY**



**Positive reaction —
(if any) FRIDAY**

LEDERLE LABORATORIES, INC. A Unit of American Cyanamid Company
30 ROCKEFELLER PLAZA, NEW YORK 20, N.Y.

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activity upon a disease
can be promptly arrested
by other means.

**Are Accomplished
Test?**

Students show no reac-
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may have tuberculosis. Un-
less it is thus detected. The
disease is treated, the more
it is halted.

Using This Test

The simplest, easiest, and most
reliable means of tracking down unsuspected
tuberculosis is by means of the Tuber-
culin Patch (R) Lederle. It is a strip of
material which are three little
squares. Two of the squares
contain the testing material, and the
third checks the accuracy of the
test. The tape is left on the skin
for 72 hours removed, and two days
later the reaction can be interpreted by the
appearance of the test.

**Do not let the test strip get wet! Do
not rub the strip off to look under it!**