The Conquest of Typhoid Fever

What Is Typhoid Fever?

Typhoid fever is a preventable disease that can and should be stamped out. Each year about 44,000 persons in the United States and Canada have typhoid fever, and about 4,400 die of it. The average duration of sickness from it is eight weeks.

To Prevent Typhoid

First—Be sure that you use pure water, pasteurized milk or milk from hygienic dairies, and clean food that is protected from flies.

Second—Be vaccinated against typhoid fever and have all members of your family vaccinated, especially if you are living in or expecting to visit a community where the disease still persists.

Third—All persons having the disease or suspected of having it should be reported at once to the local Health Board.

Fourth—Waste matter from persons having typhoid fever should be mixed immediately with chlorinated lime or carbolic acid to kill the typhoid germs.

Typhoid Fever Vaccination

Typhoid vaccine is made with dead typhoid fever germs. This vaccine is injected under the skin in the upper part of the arm, in three doses, usually at weekly intervals. A slight redness soon appears at the point of injection, but disappears in a few days. In some cases a slight headache and a tired feeling follows, lasting about a day. In very rare cases,
these signs may extend over several days, but the vaccination has been proven to be harmless. It ordinarily protects against the disease from two to three years or longer, although those definitely exposed to typhoid infection should be revaccinated more frequently.

Typhoid fever is now rarer in the United States Army than in the most healthful cities and towns. This is because all soldiers in the Army are vaccinated against typhoid fever. After the war, the death rate from typhoid fever dropped most among men at ages 21 to 35—the very group that was vaccinated by the million in the Army before going to France.

**Typhoid Germs in Water**

If the contents of poorly constructed privy vaults and sewers, and human discharges left on the ground drain into water systems, they may infect the latter with typhoid fever germs. These germs may be taken into the body with drinking water or with water used in preparing uncooked foods. Many typhoid epidemics are caused in this way. Where there is an efficient system of water purification, typhoid fever has greatly decreased.

A sanitary toilet, for the safe disposal of human waste matter, should be provided for every unsewered rural or urban house. It should be constructed according to the specifications of the Board of Health.

**Typhoid Germs in Milk**

Typhoid fever germs often get into milk through carelessness or lack of cleanliness upon the part of those who handle it. Flies sometimes infect it when it is left uncovered.
When milk is pasteurized—heated to 145 degrees for 30 minutes—typhoid fever germs are killed. Use pasteurized milk, and keep it covered in a cool place.

Other Sources of Typhoid Fever

Typhoid fever germs often enter the intestines with food, especially raw foods. Outbreaks have been traced to clams, and to oysters fattened in polluted streams or from sewage-contaminated beds.

Human Carriers

Certain people, apparently healthy, carry typhoid germs in their intestines or urinary tract and cause many cases of typhoid fever each year through handling foods with unwashed hands. They are called typhoid carriers. Many cases result from personal contact with these carriers or with patients suffering from typhoid fever.

Sketch Showing Sources of Pollution on a Farm

PREPARED BY THE DEPARTMENT OF HEALTH BUREAU FOR ENGINEERING OF THE STATE OF NEW JERSEY

This sketch shows how a well may be polluted by privies and barn-yards which seem to be a safe distance away. Instructions for building a privy which prevents seepage and protects from flies are found in Public Health Bulletin 89. Write U. S. Public Health Service, Washington, D. C., for this free bulletin if you live in an unsewered community; also see Metropolitan pamphlet, "Hookworm Disease."
How to Care for a Patient

The Nurse, or whoever takes care of the patient, should never come in contact with the food for other members of the family and should always wash her hands in a disinfectant after attending the patient. All table utensils, bed clothing, remnants of food and other things that have come into contact with a typhoid patient must be thoroughly disinfected by boiling or by other means suggested by the physician. All discharge from the patient must be disinfected and protected from flies. The typhoid patient should have his own table utensils, and they should be boiled after using.

Things to Bear in Mind

Remember—Typhoid fever can be controlled by the use of pure water, pasteurized milk and clean foods; by the proper disposal of sewage; by screening privies and food against flies; by destruction of the fly and its breeding places; by search for and care of carriers and by anti-typhoid vaccination.

Disinfectants

Chlorinated lime—Mix one-fourth pound "chloride of lime" with one gallon of water and keep in an earthenware jug. Pour plenty of this on all discharges from the patient and mix thoroughly with these discharges. Chlorinated lime is very cheap. It should be made fresh each day, for it deteriorates.

Carbolized water—Mix five ounces of carbolic acid with one gallon of water. Keep in bottle away from children. Mark it POISON.
Vacation Typhoid

People who live in cities where the Board of Health sees to it that their water and milk supplies are pure do not realize how vital these are to their health. Often in the country no such safeguards exist, and city people succumb to typhoid infections. So often does this happen that these cases have come to be known as Vacation Typhoid.

A Safe Vacation

In arranging for a vacation, even for a day, select a place where the drinking water and milk supply are pure. You should be sure that the water is protected against contamination from faulty drainage, and that the milk comes from clean barns and is carefully handled. Be sure that the kitchen and dining-room are properly screened to protect the food from flies.

When camping, it is always best to boil or purify water used for drinking, unless you know that it is pure. Clear, sparkling spring water may be polluted by drainage. Water may be made safe for drinking by the use of tablets which can be bought for chlorinating water, or by adding three drops of tincture of iodine to each quart of water, or six drops to each quart if water is cloudy or contains sediment.