

# TYPHOID FEVER

## What is typhoid fever?

Typhoid fever is an illness caused by infection with a strain of *Salmonella* bacteria known as Typhi. This illness can be potentially life threatening if not treated promptly with antibiotic medication. Some people who get typhoid fever can carry the bacteria for years. About 400 cases occur each year in the United States, and 70% of those cases are contracted in another country. Traveling internationally is the most important risk factor for contracting typhoid fever, especially in parts of the world that do not have well-developed sanitation and prevention measures.



Before traveling outside of the United States, travelers must educate themselves about typhoid fever and other travel-associated diseases. For more information about health risks in the area you are traveling to, see the Centers for Disease Control and Prevention (CDC) website on Traveler's Health ([wwwnc.cdc.gov/travel/](http://wwwnc.cdc.gov/travel/)), ask your health care provider, or make an appointment with the Orange County Health Care Agency's Travel Immunization Clinic (call 800-914-4887).



## How do people get typhoid fever?

The bacteria causing typhoid fever live only in humans. They live in the digestive system and blood and are passed through the feces. Some people who have these bacteria will only carry it and not become ill but they can still pass it on to others. The bacteria spread through contaminated food or water. If an infected person fails to wash their hands properly and handles your food, you can get the infection. In some areas of the world, human waste may be used to fertilize crops and the water may be contaminated with sewage. You may become sick if you eat this food or drink the water.

## What are the symptoms?

- High fever
- Weakness
- Stomach pain
- Headache
- Loss of appetite
- Flat, rose-colored spotted rash

The only way to know for sure if an illness is typhoid fever is to have samples of stool, blood or both tested for the presence of *Salmonella* Typhi. However, sometimes people with negative tests can still have typhoid fever.

## How do you prevent it?

There are several ways to prevent getting typhoid fever. Talk to your doctor or travel clinic to discuss getting vaccinated at least one week before traveling (see below). Try to avoid food or drinks that may be contaminated. For example, only drink water that is bottled or boiled for at least one minute to kill the germs. Choose carbonated drinks over regular drinks. Avoid ice or ice cream since they may contain contaminated water. Make sure your food is hot and thoroughly cooked prior to eating. Try not to eat uncooked fruits or vegetables, but if you must, only eat fruit with a peel that you peel yourself and always wash your fruits or vegetables with clean (bottled or previously boiled) water prior to eating. Do not purchase food from street vendors.

## More about typhoid vaccine

There are 2 types of typhoid vaccine. Both are about 50-80% effective in protecting against typhoid, so travelers should still take the precautions listed above to prevent illness.

- One vaccine is a shot (ViCPS) which is given as one dose and should be given at least one week before the protection is needed. You must be at least 2 years old to get this vaccine. A booster shot will be needed every 2 years to continue protection.
- The other form of vaccine (Ty21a) is given as capsules by mouth. There are 4 doses necessary, one taken every other day. You must start these capsules 2 weeks before you leave for your trip so that the last dose is finished at least one day before your trip. You must be at least 6 years old to get this vaccine and cannot have immune problems. A repeat dose is needed every 5 years if you wish to maintain protection.



## What is the treatment for typhoid fever?

If you suspect you have typhoid fever, see a doctor immediately. Treatment of typhoid fever is with antibiotics which shorten how long you are sick. Persons given antibiotics usually begin to feel better within 2 to 3 days, and deaths rarely occur. Keep taking the prescribed antibiotics for as long as the doctor asks you to take them. Wash your hands carefully with soap and water after using the bathroom, and do not prepare or serve food for other people. This will lower the chance that you will pass the infection onto someone else. Because of the dangers from the typhoid bacteria, by law your doctor must notify Public Health about the infection. Public Health will test a series of stool and urine specimens until you clear the infection.

## Special note of caution:

Even if symptoms go away after a period of time, you may still carry the infection. If you are a carrier you can spread the infection to others. People who handle food pose a great risk of passing the infection to others in the food they touch. For this reason, a person whose occupation includes handling food or caring for children can be restricted from working until the person is cleared for work by Public Health.

