

January 2008

Typhoid Fever

What is typhoid fever?

Typhoid fever is a bacterial infection caused by *Salmonella typhi* (*S. typhi*). It is also called enteric fever.

How is typhoid fever spread?

The bacteria is found in human feces and urine. It is spread from eating contaminated food or water especially in areas with poor sanitation. It can also spread from person to person by putting anything in the mouth that has been contaminated with the stool of a person who has *Salmonella typhi* infection. This is also known as the “fecal-oral” route.

Who is at risk of getting typhoid fever?

Typhoid fever is not common in Canada because of good living conditions including clean drinking water and sewage treatment. The greatest risk of typhoid infection for Canadians occurs while they are traveling to areas with poor sanitation. Drinking water that is contaminated with sewage or contaminated food such as raw fruits, vegetables or shellfish can spread the bacteria.

What are the symptoms of typhoid fever?

Typhoid fever usually causes someone to be quite ill, especially in those with weakened immune systems. Symptoms include a high or persistent fever, stomach pains, headache, loss of appetite, a rash or generally feeling unwell. Some who are infected may not show any symptoms at all but can still pass the bacteria to other people.

What are the complications associated with typhoid fever?

Complications can arise if typhoid fever is not properly treated. They usually occur in the 3rd or 4th week of infection. Complications include a severe infection in the heart or lungs, severe abdominal pain and abnormalities in the blood.

How soon do symptoms appear?

The symptoms usually appear within 7 to 14 days after a person becomes infected but can range from 3 to 60 days. However, not everyone infected with *S. typhi* will have symptoms.

When and for how long is a person able to spread typhoid fever?

Most infected people are contagious from their stool for two weeks. However some can be contagious for 3 months to 1 year.

How can the spread of typhoid fever be prevented?

- *Keep your hands clean.* Wash your hands with soap and warm water after using the toilet, changing a diaper, helping someone who has diarrhea, helping children use the toilet, and before eating or preparing food. If soap and water are not available and hands are not visibly soiled, use an alcohol-based hand sanitizer.

Be travel smart. When traveling to an area where *S. typhi* is endemic:

- o Wash and cook all foods thoroughly.
 - o Do not eat raw fruits and vegetables that cannot be peeled.
 - o Ensure the water supply is safe before drinking it and use caution when consuming ice.
 - o Do not swim in water that may be contaminated with human sewage.
- *Protect yourself.* Avoid unprotected sexual practices that may permit fecal-oral transmission.
 - *Get vaccinated.* There are vaccines available. Vaccination is recommended for travelers to typhoid endemic regions who will be staying for four weeks or more, household contacts of chronic carriers and laboratory workers who handle *S. typhi* specimens. It is not 100% effective therefore it is important to always follow the guidelines about safe handling of food and drinks and safer sex practices.

How is typhoid fever diagnosed?

Typhoid fever is diagnosed through a blood, urine and/or stool sample. *S. typhi* is not always detected in every stool sample so it may be necessary to submit more than one stool sample from different days to ensure the infection has completely resolved.

How is typhoid treated?

Antibiotics are usually used to treat typhoid fever infection.

Can you get typhoid fever more than once?

Yes, if it is not properly treated, even if symptoms disappear, you may still be carrying *S. typhi* and can pass the disease to others. You can also become reinfected with the same or a different strain of *S. typhi* meaning that you are not immune once infected.

What should I do if I think I have typhoid?

- See a healthcare provider.
- Keep your hands clean. Wash hands with soap and warm water after using the toilet, diapering, and before handling or eating food. If soap and water are not available, use an alcohol-based hand rub.
- If you are sick with diarrhea avoid preparing food for others.
- Food handlers, childcare workers and attendees under 5 years of age, and healthcare workers should not go to work/childcare/school until they are sure they do not have typhoid fever (determined by their healthcare provider or public health unit).