

TYPHOID AND PARATYPHOID FEVERS

What is typhoid fever?

Typhoid fever is caused by the bacterium *Salmonella typhi* (*S. typhi*) and can range from mild to severe disease. Paratyphoid fever shares similar symptoms as typhoid fever but tends to be milder. Paratyphoid fever is caused by the bacterium *Salomonella paratyphi* (*S. paratyphi*). The disease generally occurs in areas such as the Indian sub-continent, Latin America, the Middle East and Africa.

What are the symptoms of typhoid fever?

Symptoms of typhoid fever include:

- Fever
- Headache
- Weakness / fatigue
- Constipation or diarrhea
- Loss of appetite
- Cough
- Lower heart rate
- Rose-colored spots on the body
- Difficulty hearing
- Swelling of the glands that produce saliva

In more severe cases, symptoms include:

- Enlarged spleen and liver
- Intestinal bleeding

The symptoms for typhoid fever may develop between three and 60 days after exposure to the bacteria, but usually within eight to 14 days. Symptoms for paratyphoid fever develop between one and 10 days after exposure to the bacteria. A person with typhoid fever may develop relapses.

The seriousness of symptoms depends on a few factors: the type of bacteria, the amount of bacteria taken in by an individual, how long someone has been ill before seeking treatment, the person's age, medical conditions, and their previous exposure to the typhoid vaccine.

How does typhoid fever spread?

S. typhi lives only in humans. *S. paratyphi* lives in humans and possibly in domestic animals. Individuals with typhoid fever carry the bacteria in their blood and intestine. A small number of individuals with typhoid fever, called carriers, recover from typhoid fever but continue to carry the bacteria. People ill with typhoid fever and carriers shed the bacteria in their feces (stool) and urine.

PUBLIC HEALTH

1-877-464-9675
TTY 1-866-512-6228
york.ca

Individuals can get typhoid fever by eating or drinking items that have come in contact with the bacteria, such as contaminated water, shellfish, raw fruits and vegetables and contaminated milk/milk products. Poor hand hygiene and sanitation increase the risk of spread to others.

Individuals with *S. typhi* or those who become carriers should be excluded from all work involving food handling, child care or health care until tests show at least three consecutive negative stool samples.

If household members or individuals in close contact with the infected person show symptoms of the illness, they should also be excluded from work involving food handling, child care, or health care until receipt of at least two negative stool samples.

How can typhoid fever be prevented?

Typhoid fever can be prevented through the following measures:

- The most effective way to stop the spread of typhoid fever is to practice good hand hygiene, which involve washing hands frequently for at least 15 seconds, especially:
 - After using the washroom
 - After changing diapers
 - Before preparing or eating food
- Practice food and water precautions while travelling in endemic areas
- Avoid untreated water, unpasteurized (raw) milk and uncooked foods, particularly shellfish
- Prepare and handle food carefully – refrigerate items as appropriate
- Travelers should assess their risk and consider vaccination against typhoid in consultation with their health care provider before travel

How can typhoid fever be treated?

People with typhoid and paratyphoid fevers can be treated with antibiotics. People with severe typhoid can be treated with antibiotics and high dose steroids.