

Typhoid fever

Updated: October 2026

The Disease

Typhoid fever is a serious infection caused by *Salmonella Typhi* bacteria.

Paratyphoid fever is caused by *Salmonella Paratyphi*.

Transmission

Both typhoid fever and paratyphoid fever spread either through intake of contaminated food or water or close contact with an infected person. Foods associated with typhoid transmission include raw fruits and vegetables, leafy salads and shellfish harvested from contaminated waters, and other foods handled in conditions where hygiene standards are poor.

Symptoms

Typhoid fever symptoms usually develop six to 30 days after exposure to the bacteria.

Paratyphoid symptoms usually develop one to 10 days after.

While typhoid fever is often called a diarrhoeal disease, not all patients have diarrhoea. Symptoms include high fever, body aches and pains, weakness, abdominal pain and diarrhoea or constipation. Some people may develop a rash. If left untreated, symptoms can worsen and life-threatening complications may develop.

Some people can carry the bacteria without any symptoms ("carriers") and are a source of infection.

Diagnosis

Lab tests on blood, stool and urine samples help diagnose the illness.

Treatment

Typhoid fever and paratyphoid fever are treated with antibiotics.

However, there is a growing problem of antibiotic resistance. "Extensively drug-resistant" (XDR) typhoid is present in some locations and does not respond to many of the antibiotics usually used against typhoid, making preventive measures even more important.

Prevention

Prevention measures are important as typhoid vaccines do not provide complete protection, measures include:

- Careful selection of safe food and water
- Maintain a high level of personal hygiene
- Wash hands frequently with soap and water.
- Drink only bottled or treated water or hot beverages.
- Select safe food.

- Food should be thoroughly cooked and served hot.
- Avoid under-cooked or raw meat, fish or shellfish.
- Eat only fruit that you peel yourself

Vaccination

Vaccination is recommended for people travelling to locations where typhoid fever is common, particularly those visiting friends and relatives or travelling to locations with limited sanitation.

Typhoid vaccines are available as an injection or oral capsules. Booster doses may be recommended for travellers who remain at risk, with schedules varying by vaccine type.

Primary vaccination

Primary vaccination and booster doses for typhoid are the same.

They can be either:

- A single injection.
- A series of three or four oral capsules taken on alternate days (differs country-to-country).

Booster

A booster is required if at continued risk:

- After injected typhoid vaccination (Vi), a booster may be recommended at 2-3 years.
- After oral typhoid vaccination (three capsules), a booster may be recommended at 3-5 years.
- After oral typhoid vaccination (four capsules), a booster may be recommended at 3-5 years.

Risk to Travellers

Risk is highest in areas with poor sanitation, limited access to safe drinking water, and inadequate food hygiene. Travellers to parts of South Asia, Southeast Asia, Africa, the Caribbean, and Central and South America may be at increased risk, particularly those visiting friends and relatives in endemic areas.

Reference

International SOS - Country Guides

<http://www.internationalsos.com>

The US Centers for Disease Control and Prevention

[Typhoid information](#)

Disclaimer

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