

# Typhoid fever

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## The Disease

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

## Transmission

It spreads either through intake of contaminated food or water or close contact with an infected person. Raw fruit and vegetables, and shellfish are often associated with typhoid.

## Symptoms

The symptoms usually begin seven to 21 days after exposure. The typical feature of the disease is persistent high fevers. While typhoid fever is often called a diarrhoeal disease, not all patients have diarrhoea. Symptoms include high fever, body aches and pains, weakness, stomach ache, loss of appetite, cough and diarrhoea or constipation. Some people may develop a rash. If left untreated, symptoms 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 done on blood, stool and urine samples help diagnose the illness.

## Treatment

Typhoid is 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 which are usually used against typhoid, making preventive measures even more important.

## Prevention

Typhoid is prevented through careful selection of safe food and water and vaccination. Hygiene measures and choosing safe food and water is important as typhoid vaccines do not provide complete protection.

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

Vaccination is recommended for people travelling to locations where the risk of typhoid is consistently present.

## Vaccine

### 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

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

High-risk areas are those with poor hygiene and sanitation and limited access to safe water. The disease is common in destinations such as the Indian subcontinent and other developing countries in Asia, Africa and Central and South America.

## Reference

International SOS - Country Guides

<http://www.internationalsos.com>

The US Centers for Disease Control and Prevention

[Typhoid information](#)

### Disclaimer

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