

Typhoid fever

Typhoid and paratyphoid are bacterial infections acquired by the ingestion of food or water which is contaminated with the bacterium *Salmonella Typhi* or *Salmonella Para typhi*. Whilst they are clinically similar, paratyphoid is usually a less severe illness than typhoid. Collectively these illnesses are referred to as enteric fever.

Risks of disease:

Typhoid and paratyphoid mainly affect low-income countries with poor sanitation and lack of clean water.

Transmission for contracting enteric fever occurs from

- consuming contaminated food and water
- Poor/inadequate sanitation and living conditions
- poor personal hygiene
- close contact with those infected with *Salmonella Typhi* or paratyphoid.

The risk of contracting typhoid fever is highest for travellers to the Indian sub-continent (India, Pakistan and Bangladesh), SE Asia, and parts of Latin America and Africa.

Signs and Symptoms:

The symptoms of typhoid vary, but nearly all patients experience fever and headache. Young children may experience mild illness but may also suffer from severe illness.

The incubation period is usually 1-3 weeks but can be shorter or longer depending upon how many bacteria are ingested. Symptoms can include

- mild to high fever
- headache
- diarrhoea can occur early in illness
- joint or muscle aching
- Loss of appetite and nausea
- Rash can appear. (Pink lesions which fade on pressure under a glass. This rash may be difficult to see on dark skin.)

- There may also be abdominal discomfort and later constipation.

Enlargement of the liver and/or spleen can occur.

Typhoid can be successfully treated with antibiotic therapy. However, in some parts of the world *Salmonella Typhi* has become resistant to the traditional antibiotic treatments and alternative drugs must be used.

If left untreated up to 20% of cases may be fatal. Prompt treatment with antibiotics results in reduction of fatality to less than 1%.

Following recovery 1-3% may become long-term carrier.

Paratyphoid is clinically similar, but the disease is usually milder and of shorter duration.

Prevention of Typhoid and paratyphoid.

All travellers should exercise food and water hygiene precautions to prevent all types of enteric fever.

Typhoid vaccination is recommended for: -

- travellers to typhoid-endemic countries where their planned activities put them at risk.
 - Those Visiting friends or relatives
 - Long stay travellers to countries where sanitation and food hygiene is likely to be poor
- and for laboratory workers who may have contact with the bacterium.

There is currently no vaccine to prevent paratyphoid.

Well Travelled clinics presently only stock inactivated injectable typhoid, but live oral vaccine can be ordered for those whom it is deemed beneficial.

A single dose of vaccine is recommended in adults and children over two years of age. The inactivated injectable vaccine can be considered for those over age 1 year, subject to risk assessment, for travel to high risk destinations. The duration of protection from the vaccine is 3 years.

Cholera

is an acute diarrhoeal disease caused by ingestion of food and water contaminated with bacteria *Vibrio cholerae*.

Cholera occurs in regions of the world where water and sanitation are inadequate.

Risks:

The risk of contracting cholera for most travellers is extremely low. Certain activities may increase the risk and during outbreaks.

Those at most risk include

- Humanitarian aid workers
- Travellers to remote areas where cholera epidemics are occurring and there is limited access to medical care
- Travellers to potential cholera risk areas, for whom vaccination is considered potentially beneficial.
- laboratory workers who may be regularly exposed to cholera in the course of their work

Transmission:

Cholera is transmitted through water-borne ingestion of faecally contaminated water or shellfish and other foods.

It is closely linked to inadequate water and sanitation facilities where basic infrastructure is not available

Person-to-person spread is rare but may occur through the faecal–oral route.

Signs and Symptoms:

Severe illness occurs with sudden onset 6-72 hours after infection.

Infection results in **profuse** watery diarrhoea accompanied by nausea and vomiting. If left untreated this can rapidly lead to dehydration and electrolyte imbalance. It is one of the most rapidly fatal infectious diseases cholera can spread very quickly.

Rapid fluid replacement is required as a matter of urgency, antibiotics may also be used. Patients who are promptly treated should respond rapidly and recover.

Prevention:

Most travellers can reduce their risk of acquiring cholera by following advice on safe food and water.

An oral **Cholera Vaccine (Dukoral®)** is available, adults and children from 2 years of age.

Immunisation is not needed for the majority of travellers. Your travel health advisor **will assess your individual risks** and advise if vaccination is indicated for you during your visit to the clinic.

Food and water precautions

Water

- Boil water or use bottled water (ideally fizzy and check that the seal is intact) and beware of fake bottled water.
- Chemical disinfectants may be used; remember water may need filtering. Filtration bottles can be bought.
- Clean teeth with boiled, bottled or treated water.
- Hot drinks bottled and canned drinks are generally safe but avoid ice in drinks.
- Avoid swallowing shower and swimming pool, lake or sea water.

Food

Eat freshly cooked hot (in temperature), food.

- Peel fruit and vegetables and wash in bottled or treated water.
- Wash hands before eating or handling foods.
- Avoid reheated or food left standing.
- High risk foods include: shellfish, salads, mayonnaise and other dishes containing uncooked egg. Also unpasteurised products such as milk and ice cream.

BOIL IT, COOK IT, PEEL IT OR LEAVE IT

Always seek medical advice if you are unwell and have travelled to a risk country and have fever associated with diarrhoea.

