

# TYPHOID FEVER AND CHOLERA



## Typhoid Fever

Typhoid fever is a debilitating fever caused by infection with the bacterial organism *Salmonella typhi*. Following infection, after an incubation of around 1 to 3 weeks, the patient has a gradual onset of illness, starting with the headache, followed by fever and abdominal pain. Constipation is more common than diarrhoea in the early stages of the illness. Later bronchitis develops. In untreated cases death can occur from intestinal perforation or haemorrhage. In untreated cases, the death rate can be as high as 30%. The infection may last up to 3 weeks or even longer. In some individuals infection may occur with no signs of illness at all. A characteristic rash on the trunk, called “rose spots” only occurs in a few percent of cases but is not seen on a dark skin

### How is Typhoid transmitted?

Typhoid bacilli are excreted in the stools of infected individuals, and continue to be excreted by untreated patients after the recovery of up to 4 months. The faecal-oral route, either via drinking water, or food, transmits the disease. Flies may also play a role as a passive vector leading to food contamination.

In some recovered cases, chronic carrier state develops, which may persist lifelong, and such typhoid carriers should not be allowed to prepare food for others, or work in day care centre, as they present the continual source of the organism in their stools.

### How should the patient be treated for Typhoid?

The use of antibiotics at an early stage of the infection is essential to prevent the appearance of life threatening complications, and bed rest is essential. A loss of appetite and weight loss are characteristics of the disease. The consequences of typhoid can be very severe in the case of HIV positive individuals.

### Transmission routes for Typhoid

Waterborne (primarily) also contaminated food and personal contact (poor hygiene).

### Management option for Typhoid

Hygiene and sanitation/ Clean drinking water.

## Cholera

Cholera is a diarrhoeal disease that is very sudden in onset. It is characterized by a massive loss of body fluids, through diarrhoea and vomiting, leading to severe dehydration, which can be fatal. Stools have the appearance of “rice water”. Infants and small children show the most rapid advance of the illness. Untreated cases of cholera can lead to death within 6 hours, depending on the degree of dehydration.

### How is Cholera transmitted?

Any person can contract the disease by ingesting water or food contaminated with a toxic strain of the bacterium called *Vibrio cholera*. The bacteria are excreted by infected individuals and can live for at least three weeks in saline, warm and alkaline water. The bacteria can also survive in food especially seafood.

### How should the patient be treated for Cholera?

Urgent and immediate replacement of the water and salts that are lost through diarrhoea and vomiting is the only effective treatment.

### Transmission routes for Cholera

Waterborne.

### Management option for Cholera

Hygiene and sanitation /clean drinking water.





### Preventive measures for Typhoid

- Don't drink untreated water.
- Add 1 teaspoon of domestic bleach to 20 litres of water and allow to stand for 1 hour before drinking or, if no bleach is available, the water can be boiled vigorously for at least 3 minutes. If the water is cloudy (turbid) add 2 to 3 extra teaspoon of bleach.
- Proper personal hygiene and sanitation infrastructure should be installed and maintained.
- Wash fruit and vegetables before eating.
- Wash your hands after going to the toilet and before preparing food.

### Interesting facts about Typhoid

- A vaccine against typhoid is available, but it only provides limited protection.
- A common source of infection is contaminated water or food from street vendors.
- Infection can be acquired from ice cubes prepared from contaminated water.

### Preventive measures for Cholera

- Don't drink untreated water.
- Add 1 teaspoon of domestic bleach to 20 litres of water and allow to stand for 1 hour before drinking or, if no bleach is available, the water can be boiled vigorously for at least 3 minutes. If the water is cloudy (turbid) add 2 to 3 extra teaspoon of bleach.
- Proper personal hygiene and sanitation infrastructure should be installed and maintained.
- Clean drinking water containers should always be used. Recontamination of stored clean water should be avoided by not inserting the hands or dirty equipment when removing water from the container.

### Interesting facts about Cholera

- A large number of people (up to 70% or more) who drink contaminated water will show little or no symptoms at all. People who are carriers can continue to excrete the bacteria for a period of up to a few weeks.
- Vaccination of individuals with cholera vaccine can offer slight protection against the disease, but this will only last for six months, and does not prevent infection and therefore transmission of the disease.
- After ingestion of the bacteria it takes 2 to 4 days before cholera symptoms may show.
- Although antibiotics may help by shortening the duration of diarrhoea, the cause of death is severe and rapid dehydration, which can only be treated by dehydration by oral and /or intravenous fluids.
- Not all Vibrio cholera are harmful .Nontoxic strains of bacteria also occur.



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