

Typhoid Fever Symptoms

Symptoms normally begin between 6 and 30 days after exposure to the bacteria. The two major symptoms of typhoid are fever and rash. Typhoid fever is particularly high, gradually increasing over several days up to 104 degrees Fahrenheit, or 39 to 40 degrees Celsius. The rash, which does not affect every patient, consists of rose-colored spots, particularly on the neck and abdomen. Other symptoms can include:

- weakness
- abdominal pain
- constipation
- headaches

Typhoid Fever Treatment

The only effective treatment for typhoid is antibiotics. The most commonly used are ciprofloxacin (for non-pregnant adults) and ceftriaxone. Other than antibiotics, it is important to rehydrate by drinking adequate water. In more severe cases, where the bowel has become perforated, surgery may be required.

Typhoid antibiotic resistance

As with a number of other bacterial diseases, there is currently concern about the growing resistance of antibiotics to *S. typhi*. This is impacting the choice of drugs available to treat typhoid. In recent years, for example, typhoid has become resistant to trimethoprim-sulfamethoxazole and ampicillin. Ciprofloxacin, one of the key medications for typhoid, is also experiencing similar difficulties. Some studies have found *Salmonella typhimurium* resistance rates to be around 35 percent.

Causes

Typhoid is caused by the bacteria *S. typhi* and spread through food, drinks, and drinking water that are contaminated with infected fecal matter. Washing fruit and vegetables can spread it, if contaminated water is used. Some people are asymptomatic carriers of typhoid, meaning that they harbor the bacteria but suffer no ill effects. Others continue to harbor the bacteria after their symptoms have gone. Sometimes, the disease can appear again. People who test positive as carriers may not be allowed to work with children or older people until medical tests show that they are clear.

Prevention

- Countries with less access to clean water and washing facilities typically have a higher number of typhoid cases.

Vaccination



If traveling to an area where typhoid is prevalent, vaccination is recommended. Before traveling to a high-risk area, getting vaccinated against typhoid fever is recommended. This can be achieved by oral medication or a one-off injection:

- Oral: a live, attenuated vaccine. Consists of 4 tablets, one to be taken every second day, the last of which is taken 1 week before travel.
- Shot, an inactivated vaccine, administered 2 weeks before travel. Vaccines are not 100 percent effective and caution should still be exercised when eating and drinking.
- Vaccination should not be started if the individual is currently ill or if they are under 6 years of age. Anyone with HIV should not take the live, oral dose.

- The vaccine may have adverse effects. One in 100 people will experience a fever. After the oral vaccine, there may be gastrointestinal problems, nausea, and headache. However, severe side effects are rare with either vaccine.
- There are two types of typhoid vaccine available, but a more powerful vaccine is still needed. The live, oral version of the vaccine is the stronger of the two. After 3 years, it still protects individuals from infection 73 percent of the time. However, this vaccine has more side effects.

The current vaccines are not always effective, and because typhoid is so prevalent in poorer countries, more research needs to be done to find better ways of preventing its spread.

Eliminating typhoid

Even when the symptoms of typhoid have passed, it is still possible to be carrying the bacteria. This makes it hard to stamp out the disease, because carriers whose symptoms have finished may be less careful when washing food or interacting with others. People traveling in Africa, South America, and Asia, and India in particular, should be vigilant.

Avoiding infection

Typhoid is spread by contact and ingestion of infected human feces. This can happen through an infected water source or when handling food. The following are some general rules to follow when traveling to help minimize the chance of typhoid infection:

- Drink bottled water, preferably carbonated.
- If bottled water cannot be sourced, ensure water is heated on a rolling boil for at least one minute before consuming.
- Be wary of eating anything that has been handled by someone else.
- Avoid eating at street food stands, and only eat food that is still hot.
- Do not have ice in drinks.
- Avoid raw fruit and vegetables, peel fruit yourself, and do not eat the peel.