

Vaccination against Typhoid Fever

Information by the Forum Impfen

The following information about typhoid fever as well as preventive vaccinations against this infectious disease is intended to provide fundamental updated* facts to help you decide whether to participate in these vaccinations.

Typhoid fever and its therapy

Typhoid fever is a bacterial infection, caused by *Salmonella typhi* and paratyphi organisms. Typhoid fever is present worldwide and is transmitted via contaminated food, drinks or, in case of poor hygienic conditions, directly from person to person. The bacteria invade the intestinal tract and, in case a sufficient number of bacteria was transmitted, lead to the outbreak of the disease. The bacteria penetrate the intestinal mucosa where they grow before being spread through the blood into the whole body. After further growth, they invade the feces and urine, are excreted and may thus cause new infections. Hence, typhoid fever is a systemic infection, starting about 1 to 3 weeks after transmission and causing fever, headache, muscle pain, gastrointestinal tract disorders and impaired consciousness. Complications may be myocarditis, pneumonia, intestinal bleeding, encephalitis, peritonitis, severe septicemia with subsequent organ failure and others. Without treatment, up to 20% of patients die. Typhoid fever may be treated with antibiotics. However, as the early symptoms of the disease are rather vague, the disease is often diagnosed very late. Furthermore, antibiotics continue to lose their efficacy throughout the world.

The vaccination

2 vaccines are available for typhoid vaccination. A live vaccine containing attenuated typhoid organisms is administered as a capsule (1 capsule on day 1, 3, 5). A dead vaccine containing inactivated bacteria components is injected only once into the muscles or under the skin. Your physician has more details on the vaccination or reasons which may be considered as contra-indication to vaccination. As a normal reaction of the body to the vaccine local gastrointestinal disorders (vomiting, diarrhea, pain) associated with nausea, vomiting, abdominal pain and diarrhea may develop after oral administration; these symptoms are however uncommon; other uncommon general conditions such as headache, muscle and joint pain, shivering, fatigue as well as a mild to moderate increase of temperature may also develop. Usually, these local and systemic reactions are transient, resolve quickly and without further sequelae. After administration of the dead vaccine, local reactions at the injection site such as redness and swelling are commonly reported (in about 1 to 10% of the vaccinees); these symptoms may develop within 1 to 3 days after vaccination, they however persist only in rare cases for a longer period of time. Individual cases of allergic skin reactions (pruritus, erythema) or allergic bronchial reactions may occur after both vaccines. Individual cases of immediate anaphylactic reactions in close relationship to the administration of the dead vaccine were reported.

Benefit for the individual and the population

Vaccination against typhoid fever is mainly administered as an individual protection against typhoid fever when traveling to areas with an increased risk of infection. Protection after administration of the oral vaccine starts about 10 days after having taken the last capsule and persists for about 1 year. The inactivated vaccine has a protection rate between 85 and 90%, the protection persists for three years.

Who should be vaccinated

The German Expert Commission for Vaccinations (STIKO) recommends typhoid vaccinations for individuals at increased risk of infection when traveling to areas with increased presence of typhoid fever. Usually, the vaccination is recommended for travelers, who stay for a longer period of time in the concerned tropical and subtropical countries or who, during their stay, may not be able or may not be willing to respect individual or food hygiene measures.

* This information is continuously reviewed and updated with the most recent knowledge.

Further information: Your physician