

Typhoid Vaccines

Travel vaccines may be recommended or required for your trip. Vaccines help to prevent illnesses from bacteria and viruses. They reduce disease spread and can prevent complications and deaths from vaccine-preventable diseases.

What is typhoid fever?

Typhoid fever is a serious bacterial gastrointestinal (stomach, bowel, etc.) infection caused by *Salmonella enterica typhi*. Typhoid fever can occasionally be life-threatening. For every 10 people that get sick, up to 2 people may die without prompt antibiotic treatment.

How is typhoid spread? Am I at risk?

S. typhi bacteria is transmitted from person-to-person when an infected person (who may or may not have symptoms) with poor hand or body hygiene (e.g., does not wash hands after using the bathroom) passes the infection to another person when handling food and water.

The bacteria are present in areas where there is poor water and sewage sanitation. Travellers to these areas, in particular Pakistan, India, and Bangladesh, are at increased risk for typhoid fever. Travellers visiting friends and relatives, and travellers going to mass gatherings, are at a greater risk for exposure and infection.

What are the symptoms of typhoid fever and when do they appear?

Symptoms usually appear 1 to 3 weeks after exposure to the bacteria. However, symptoms can occur anytime between 3 to 60 days after getting infected. Typhoid fever illness can be mild with low grade fever or severe (extreme fatigue and a sustained fever that can be as high as 39 to 40°C). Other symptoms include weakness, stomach pain, headache, diarrhea or constipation, cough, and loss of appetite. Some people develop a rash of flat, rose-colored spots. Severe symptoms can include serious bleeding in the intestines.

How can typhoid fever infections be prevented?

Choose food and drinks carefully. Boil it, cook it, peel it, or leave it.

Wash your hands, especially after using the bathroom and before preparing and eating meals. Use hand sanitizer ≥60% alcohol if handwashing not possible.

Get vaccinated. Immunization is only moderately effective, **so safe food and water precautions, and frequent handwashing, are still important to lower your risk of getting typhoid fever.**

Can I get typhoid vaccines for free?

Typhoid vaccines are sometimes recommended for travellers, but they are not available for free in Saskatchewan. Talk to your health care provider about purchasing a typhoid vaccine.

Some private insurance may cover some or all of the cost of typhoid vaccines. **The Saskatchewan Ministry of Health does not reimburse any costs associated with privately purchased vaccines.**

Who should *not* get TYPHIM Vi® (non-live injectable vaccine)?

- People who have had a serious or life-threatening reaction to a previous dose of TYPHIM Vi®, or any ingredient in the vaccine
- Children < 2 years old
- People who are seriously ill, with or without a fever, should postpone immunization.

Who should *not* receive Vivotif® (live oral vaccine)?

- People who are allergic to any component of vaccine or enteric-coated capsule
- People who are immunocompromised
- People who are pregnant and/or breast/chestfeeding
- Children < 5 years old
- People with gastrointestinal illness (symptoms may include nausea, vomiting, diarrhea, abdominal pain, fever) should postpone immunization.
- People who are seriously ill, with or without a fever, should postpone immunization.

What are common reactions to typhoid vaccines?

TYPHIM Vi® (non-live injectable vaccine)

Common side effects include redness, swelling, pain or tenderness at the injection site, fever, headache, general discomfort, and muscle pain. These effects generally subside within 1-3 days.

Vivotif® (live oral vaccine)

Side effects are rare and include abdominal discomfort, fever, headache, nausea, diarrhea, vomiting, and rash.

You can treat a fever (at least 6 to 8 hours after immunization) if you are uncomfortable and not sleeping.



TREATING FEVERS AND PAIN:

All ages: acetaminophen (e.g., Tylenol®, Tempra®)

6 months & older: ibuprofen (e.g., Advil®, Motrin®)

DO NOT give acetylsalicylic acid (ASA) to anyone younger than 18 years due to the risk of Reye's syndrome.

It is recommended to stay on-site for at least 15 minutes after vaccination in case you develop anaphylaxis. Anaphylaxis is a rare, life-threatening allergic reaction that can be treated. Symptoms may include hives, swelling of the tongue, lips, or throat, and difficulty breathing. Call 911 immediately if you develop anaphylaxis after you have left the vaccination appointment.

Who should I report reactions to?

Report any unexpected or adverse reactions to your doctor, nurse practitioner, pharmacist, or call 811 or 911 as soon as possible.

What do the typhoid vaccines contain?

TYPHIM Vi® (non-live injectable vaccine) contains *Salmonella typhi* (TY2 strain) purified Vi capsular polysaccharide, phenol, and isotonic buffer solution.

Vivotif® (live oral vaccine) contains viable *S. typhi* Ty21a, non-viable *S. typhi* Ty21a, sucrose, amino acid mixture, ascorbic acid, lactose, and magnesium stearate.

The capsule itself is composed of: hydroxypropylcellulose-phthalate, diethyl phthalate, ethylene glycol, gelatine type B, titanium dioxide, erythrosine FD+C red 3, yellow iron oxide, and red iron oxide.

Important to Know

TYPHIM Vi® (non-live injectable vaccine)

Storage:

Store in the refrigerator before use. DO NOT FREEZE.

When to take:

Travellers should receive TYPHIM Vi® at least 2 weeks before departure.

How to take:

TYPHIM Vi® is injected into a muscle.

Re-immunization:

Every 3 years if at risk.

Vivotif® (live oral vaccine)

Storage:

Store in the refrigerator before use. DO NOT FREEZE.

When to take:

Travellers should complete Vivotif® regimen at least 1 week before departure.

How to take:

Take orally as a series of doses as instructed (1 capsule taken on alternate days, total of 4 capsules).

Take capsule on an empty stomach with at least 4 oz. of cool or lukewarm water that does not exceed body temperature.

Do not take within 3 days of certain antibiotics, including sulfonamides (e.g., Sulfatrim, Bactrim). Do not miss or skip doses. Ask your pharmacist for details.

Separate from the oral cholera/ETEC vaccine (DUKORAL®) by at least 8 hours.

Re-immunization:

Every 7 years if at risk.

Immunization Records

Immunization records are stored in many different places in Saskatchewan. Your pharmacy vaccination may not appear on [MySaskHealthRecord](#) or other registries. Visit medSask.usask.ca for tips for locating your immunization records.

Keep printed immunization records provided by the pharmacy in a safe place for future reference and bring them to each vaccination visit.

Mature Minor Consent

Minors that are mature and capable of understanding the benefits and risks of vaccination can provide their own consent to receiving a vaccine. Vaccine providers must ensure that vaccine recipients understand the benefits and risks for each vaccine and the risks of not getting vaccinated.

REFERENCES:

Product monograph for [TYPHIM Vi®](#)

Product monograph for [Vivotif®](#)

Canadian Immunization Guide (CIG): [Typhoid vaccines](#)

CDC Yellow Book [Typhoid & Paratyphoid Fever](#)

CDC Travelers' Health: [Typhoid Fever](#)

CDC [Typhoid Fever](#)

IAMAT [How to reduce the risk of illness by washing your hands](#)

TDN [Typhoid Fever](#)

GC [Eat and drink safely abroad](#)

HealthLinkBC [Typhoid vaccine](#)

CIG: [Anaphylaxis and other acute reactions following vaccination](#)

CIG: [Immunization in pregnancy and breastfeeding](#)

SCPP Disclosure of the [Personal Health Information of Minors to Parents/Legal Custodians](#)