PROCEDURE

typhoid Vi polysaccharide vaccine, S typhi Ty2 strain

An injection that helps protect against typhoid fever caused by Salmonella Typhi.

PURPOSE
Reduce the risk of typhoid fever

PROCEDURE TYPE
Therapeutic preventive care; minimally invasive intramuscular injection

WHERE IT IS DONE
Outpatient clinic, travel clinic, or pharmacy

ANAESTHESIA
None

HOW LONG IT TAKES
A few seconds to one minute

PREPARATION
No fasting; review allergies, health conditions, and travel timing

RECOVERY
Same day, usually without driving restrictions

MAIN RISKS
Injection-site pain, fever, fainting, severe allergic reaction

RESULTS
Protection begins about two weeks after vaccination

Overview

The typhoid Vi polysaccharide vaccine is an injection that helps protect against typhoid fever. Typhoid fever is caused by Salmonella enterica serovar Typhi, usually called Salmonella Typhi .

The vaccine contains purified Vi polysaccharide. This is a sugar from the bacterium's outer capsule, produced from the Ty2 strain. It does not contain live typhoid bacteria and cannot cause typhoid fever.

The injection trains your immune system to recognize the Vi capsule. If you later encounter Salmonella Typhi , your immune system may respond more quickly.

Protection is not complete. The vaccine does not protect against every cause of illness from contaminated food or water, including paratyphoid fever. Careful food, water, and hand

hygiene remain important.

Why the procedure is performed

You may be offered this vaccine before travel to a place where typhoid fever occurs, especially if you may have prolonged exposure to unsafe food or water. Risk may be higher when visiting friends or relatives, staying in areas with limited sanitation, or travelling away from usual tourist routes.

Vaccination may also be considered if you:

The vaccine is preventive. It does not treat an active infection or replace medical assessment if you become unwell during or after travel.

- Have close, ongoing contact with a person who carries Salmonella Typhi
- Work in a laboratory where the bacterium may be handled
- Need continued protection because exposure risk remains

Who should and should not have it

The Vi polysaccharide vaccine is generally an option for adults and children aged 2 years or older who have a recognized risk of exposure. It is not routinely recommended for everyone in countries where typhoid is uncommon.

You should not receive it if you have had a severe allergic reaction, such as anaphylaxis, after a previous dose or to one of the vaccine's ingredients.

Vaccination is usually delayed if you have a moderate or severe acute illness, with or without a fever. A mild illness, such as a minor cold, is not always a reason to postpone it.

This vaccine is not generally used in children younger than 2 years because plain polysaccharide vaccines do not produce a reliable immune response in this age group.

Tell the vaccination team if you:

Because this is not a live vaccine, it may be used in some people with weakened immunity. However, their immune response may be lower. During pregnancy, the decision is based on the likely exposure risk and the benefits of protection.

- Are pregnant or breastfeeding
- Have a weakened immune system

- Have a bleeding disorder or take medicine that affects bleeding
- Have fainted during previous injections
- Have allergies, including previous vaccine reactions

How to prepare

Follow the treating facility's own instructions first, because they take priority over general information.

You do not usually need to fast. You can eat, drink, and take your usual medicines unless the facility tells you otherwise.

Bring your vaccination record and travel schedule if available. Tell the vaccination team about allergies, previous vaccine reactions, current illness, pregnancy, immune system conditions, and medicines that affect bleeding.

Timing matters. The injection should generally be given at least two weeks before expected exposure so your immune system has time to respond. If departure is sooner, contact the travel clinic promptly. Vaccination may still be discussed alongside other precautions.

Wear clothing that allows easy access to your upper arm. If needles make you faint or feel light-headed, tell the person giving the vaccine so you can receive it while seated or lying down.

What happens during the procedure

A healthcare professional checks the vaccine, confirms your identity, and reviews whether it is suitable for you. You may be asked which arm you prefer.

The skin may be cleaned. A needle is then used to inject the vaccine into a muscle, usually the deltoid muscle of the upper arm. A suitable thigh muscle may be used for some children.

The injection itself takes only a few seconds. You may feel a sharp scratch, pressure, or brief stinging.

You will usually be asked to remain at the vaccination site for a short observation period. This allows staff to help if you faint or have an immediate allergic reaction.

Recovery and what to expect afterward

Your arm may feel sore, tender, or heavy. Redness, firmness, or mild swelling can occur around the injection site. A cool compress may help. Avoid rubbing the area forcefully.

You can eat and drink normally afterward. Staying hydrated may help if you feel mildly unwell.

Most people can continue ordinary activities. If your arm is sore, you may wish to avoid strenuous upper-body exercise until it feels comfortable.

The vaccine does not routinely affect your ability to drive. Do not drive if you feel faint, dizzy, or otherwise unwell after the injection.

Most people can return to work or school the same day. If you develop a headache, fever, or general tiredness, rest may be more comfortable.

Risks and possible complications

Common reactions are usually mild and short-lived. They can include pain, redness, or swelling at the injection site, as well as headache, fever, or a general unwell feeling.

Some people faint around the time of an injection. Fainting is often related to the injection process rather than the vaccine itself. Sitting or lying down can reduce the risk of injury.

A severe allergic reaction is possible after any vaccine but is uncommon. Vaccination sites keep medicines and equipment available to treat this type of reaction.

The vaccine may not provide full protection. You could still develop typhoid fever after vaccination, particularly if you have heavy or repeated exposure. It also does not protect against Salmonella Paratyphi or most other food- and waterborne infections.

Results and follow up

There is no immediate test result. Your immune system begins building protection after the injection, with protection expected about two weeks later.

Routine blood tests are not needed to confirm that the vaccine worked. Keep a record of the vaccine name and date, as this may help with future travel planning.

Protection decreases over time. In the United States, repeat vaccination is recommended every two years for people who remain at risk. Recommendations and available products may differ by country, so follow the schedule provided by the vaccination service.

Contact the clinic as part of routine follow-up if you are unsure whether you need another dose, lose your vaccine record, or have continuing travel or occupational exposure.

Alternatives

An oral live typhoid vaccine may be available. It avoids an injection but requires several capsules taken on a schedule. Because it contains weakened live bacteria, it is not suitable for some people, including certain people with weakened immunity. Its timing can also be affected by some antibiotics and antimalarial medicines.

Typhoid conjugate vaccines are used in many countries and can provide longer-lasting protection, including for younger children. Availability and licensing differ by country and travel clinic.

You can postpone or change travel to reduce exposure. This may lower risk but may not be practical.

Food and water precautions remain essential whether or not you are vaccinated. Using safe drinking water, avoiding unsafe ice or raw foods, and washing your hands reduce exposure, but these measures alone cannot remove all risk.

Choosing no vaccine avoids injection reactions but leaves you without vaccine-related protection against typhoid.

When to call your healthcare team

Contact the vaccination service during routine hours if redness, swelling, pain, fever, or other symptoms are worsening rather than improving. Also call if a reaction concerns you or interferes with normal activity.

Seek urgent medical advice if you develop persistent fever or significant illness during travel or after returning, even if you were vaccinated. Tell the healthcare professional where and when you travelled.

Call emergency services immediately for signs of a severe allergic reaction, including:

- Trouble breathing or wheezing
- Swelling of the face, lips, tongue, or throat
- Widespread hives with dizziness or weakness
- Collapse or loss of consciousness

Common questions

Will I be asleep for the injection?

No. Anaesthesia and sedation are not needed. The injection takes only a few seconds.

Can I drive home afterward?

Usually, yes. Wait until any light-headedness has passed, and do not drive if you feel faint or unwell.

How painful is it?

Most people feel a brief scratch or sting. Your upper arm may remain sore for a day or two.

When will I be protected?

Your immune system needs time to respond. The vaccine should generally be given at least two weeks before exposure.

Can the vaccine give me typhoid fever?

No. The Vi polysaccharide vaccine does not contain live bacteria and cannot cause typhoid fever.

Do I still need to be careful with food and water?

Yes. The vaccine is not fully protective and does not prevent many other infections spread through contaminated food or water.

Sources

- Centers for Disease Control and Prevention. CDC Yellow Book 2026: Typhoid and Paratyphoid Fever
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