
Travel health - yellow fever immunisation

Summary

- Yellow fever is a viral disease spread by mosquitoes – so travellers should always protect themselves against mosquito bites.
 - Yellow fever can be fatal.
 - Immunisation reduces the risk of infection with yellow fever.
 - Some countries require travellers to have an *International Certificate of Vaccination or Prophylaxis* to prove that they have had the yellow fever vaccine.
 - Yellow fever vaccine is safe and effective for life for most situations.
 - Find out if the countries you intend to visit have requirements for yellow fever vaccination. You must have the vaccine at least 10 days before travelling.
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Yellow fever is a serious viral disease, transmitted by **mosquitoes**, found in parts of Africa and Central and South America. The World Health Organization (WHO) keeps updated lists of countries where yellow fever is widespread. The name of this disease comes from the fact that people with serious infections have yellow skin and eyes (jaundice) caused by infection of the liver.

Vaccination for yellow fever is generally safe and effective, and reduces the risk of yellow fever infection. Some countries require that people travelling through infected areas show proof of vaccination against yellow fever with an *International Certificate of Vaccination or Prophylaxis*. Vaccination and certification is available through travel clinics or health providers authorised by WHO. You should always avoid mosquito bites to reduce the risk of all mosquito-borne diseases.

Fatal cases of yellow fever in unvaccinated travellers to Africa and South America continue to be reported.

Symptoms of yellow fever

The first symptoms of yellow fever appear three to six days after exposure to the virus. These symptoms are known as stage one of the disease and include:

- **fever**
- nausea
- vomiting
- flushed face
- constipation
- stomach ache
- headache
- muscle pain
- restlessness and irritability.

These symptoms last for three to four days and then settle over one to two days. In mild cases, the infection ends after stage one as the virus is cleared. But in severe cases of yellow fever, this remission period is followed by serious symptoms and complications known as stage two.

Complications of yellow fever

In 15 to 25 per cent of cases of yellow fever, severe symptoms develop, even if there has been a remission

period. This is known as stage two and occurs because the yellow fever virus has the ability to infect organs such as the liver, heart and kidneys. This is also known as the 'toxic' stage of the infection and about half of the people who reach this stage will die.

The severe complications include:

- high fever
- pain in the upper part of the abdomen
- vomiting – black, 'coffee-ground' vomit
- bleeding
- jaundice (yellow skin and eyes)
- kidney failure
- liver failure
- death.

Immunisation against yellow fever

If you are travelling or passing through areas infected with yellow fever, some countries require you to be vaccinated. A record of your immunisation must be entered and validated in your ***International Certificate of Vaccination or Prophylaxis*** by a healthcare provider that is authorised by the WHO to vaccinate against yellow fever.

Although some countries have no entry requirements, others may require proof of vaccination for all travellers in order to satisfy entry requirements. You can find out if the countries you intend to visit have requirements for yellow fever vaccination by checking the **Department of Foreign Affairs and Trade's Smartraveller website**, or asking your GP (doctor) when you have your appointment.

It is best to arrange an appointment with your GP or a travel clinic doctor six to eight weeks prior to departure in case a series of vaccines are needed. Yellow fever vaccine should be given at least 10 days before entering a country where immunisation is a legal requirement in order to avoid quarantine procedures.

Immunisation against yellow fever only requires a single dose of vaccine, which usually gives most people lifetime immunity. Also, in most cases, once you have been vaccinated, the certificate is valid for life.

People who should receive yellow fever vaccination

People who should be vaccinated for yellow fever include:

- people over nine months of age travelling to or living in areas with a high risk of yellow fever transmission
- people who work in laboratories and routinely work with yellow fever virus.

People who should not receive yellow fever vaccination

The **vaccine** is not suitable for everyone and should not be given to people who:

- are under nine months of age
- have had a severe allergic reaction (**anaphylaxis**) to an earlier dose of the vaccine
- have had severe allergic reaction (anaphylaxis) to any component of the vaccine
- have **allergies to eggs**
- have a weakened **immune system** due to illness or medical treatment
- have a history of a thymic disorder – including **myasthenia gravis**, thymoma, thymectomy, DiGeorge syndrome, or cases of damage to the thymus from **chemotherapy**, **radiotherapy** or as a result of complications after transplantation.

Pregnancy and yellow fever immunisation

Immunisation against yellow fever is not usually recommended for **women who are pregnant** or **breastfeeding babies** under nine months of age. Speak with your doctor if you are pregnant and unable to avoid travel to an area where yellow fever is widespread.

Pre-immunisation checklist

Before receiving the vaccine, tell your doctor or nurse if you or someone in your care:

- is under nine months of age
- you are pregnant or intend to become pregnant
- is unwell (temperature over 38.5 °C)
- has allergies to any other medications or substances
- has had a serious reaction to any vaccine
- has had a serious reaction to any component of the vaccine
- has had a severe allergy to anything
- has a disease or if you are having treatment that causes low immunity
- is taking any prescription or over-the-counter **medications**
- is pregnant or intend to become pregnant.

Side effects of the vaccine against yellow fever

Immunisations against yellow fever are generally effective and safe, although all medications can have unwanted side effects.

Side effects from the vaccine are uncommon and usually mild, but for up to five to 10 days after vaccination may include:

- low-grade temperature (fever)
- mild headache
- muscle aches.

Many vaccine injections may result in soreness, redness, itching, swelling or a burning sensation at the injection site for one to two days. Paracetamol might be required to ease the discomfort.

There are a number of treatment options that can reduce the side effects of the vaccine, including:

- giving extra fluids to drink and not overdressing if there is a fever
- although routine use of paracetamol after vaccination is not recommended, if fever is present, paracetamol can be given – check the label for the correct dose or speak with your pharmacist, (especially when giving paracetamol to children).

Concerns about side effects

If a reaction following immunisation is unexpected, persistent or severe, or if you are worried, see your GP (doctor) or immunisation provider as soon as possible, or go directly to a hospital.

In Victoria, **immunisation side effects** may be reported to **SAEFVIC – the central reporting service for any significant adverse events following immunisations**.

You can discuss with your immunisation provider how to report adverse events in other states or territories. It is also important to seek medical advice if you (or your child) are unwell, as this may be due to other illness rather than because of the vaccination.

Rare side effects

There is a very small risk of a serious allergic reaction (**anaphylaxis**) to any vaccine. This is why you are advised to stay at the clinic or medical surgery for at least 15 minutes following immunisation, in case further treatment is required.

Two very rare side effects associated with the yellow fever vaccine are inflammation of the brain (meningoencephalitis) and organ failure (viscerotropic disease). People over 60 years of age are at a small risk of these rare side effects, and people with thymus disorders are at increased risk of viscerotropic disease.

Immunisation and HALO

The immunisations you may need are decided by your health, age, lifestyle and occupation. Together, these factors are referred to as HALO.

Talk to your GP (doctor) or **immunisation provider** if you think you or someone in your care has health, age, lifestyle or occupation factors that could mean immunisation is necessary. You can check your immunisation HALO using the **Immunisation for Life infographic (pdf)** downloadable poster.

Avoid mosquito bites

Another way to help reduce the risk of yellow fever and other mosquito-borne diseases is to avoid mosquito bites. Whether or not you need to be vaccinated, it is always a good idea **when travelling to protect yourself and those in your care against mosquito bites.**

There are a few simple things to avoid getting bitten by mosquitoes including:

- Use an effective mosquito repellent on exposed skin that contains at least 30 per cent DEET (N,N-Diethyl-meta-toluamide or diethyltoluamide) or 20 per cent picaridin.
- Wear loose, light coloured clothing that covers your skin, such as socks, long pants and long-sleeved shirts when outdoors.
- Use a bed net.
- Stay in air-conditioned, screened accommodation.
- Clothing, bedding, mosquito nets and tents can be soaked in a safe repellent (such as permethrin) prior to travel.

Where to get help

- Your GP (doctor)
- Your local pharmacist
- In an emergency, always call triple zero (000)
- **NURSE-ON-CALL** Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)
- **Immunisation Program**, Department of Health & Human Services, Victorian Government Tel. 1300 882 008
- **National Immunisation Information** Tel. 1800 671 811
- **Smarttraveller.gov.au**, Australian Government Tel. 1300 555 135 (from within Australia) or +61 2 6261 3305 (from overseas) or +61 421 269 080 (SMS)
- **Victorian Vaccine safety service (SAEFVIC)** Tel. 1300 882 924 – the line is attended between 9 am and 4 pm and you can leave a message at all other times

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