

#### Yellow Fever

### Frequently Asked Questions

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### What is yellow fever?

Yellow fever is a disease caused by a virus that is spread to people by the bite of an infected mosquito.

### Where does yellow fever virus occur?

Yellow fever virus is found in tropical and subtropical areas in South America and Africa. Yellow fever virus is a very rare cause of illness in U.S. travelers to these areas.

### How soon do people get sick after being bitten by an infected mosquito?

The incubation period (time from infection to illness) is usually 3-6 days.

### What are the symptoms of yellow fever?

Initial symptoms of yellow fever include sudden onset of fever, chills, severe headache, back pain, general body aches, nausea and vomiting, fatigue, and weakness. Most people improve after these initial symptoms. However, roughly 15% of people will have a brief period of hours to a day without symptoms and will then develop a more severe form of yellow fever disease. In severe cases, a person may develop high fever, jaundice (a condition that involves yellow discoloration of the skin and the whites of the eyes), bleeding (especially from the gastrointestinal tract), and eventually shock and failure of many organs. Roughly 20-50% of people who develop severe illness may die.

### How is yellow fever diagnosed?

Diagnosis is usually based on blood tests that look for virus or antibodies that a person's immune system makes against the viral infection.

### What is the treatment for yellow fever?

No specific treatments have been found to help patients with yellow fever. If possible, patients with yellow fever should be hospitalized for treatment of their symptoms and closely observed by healthcare workers. Rest, fluids, and use of pain medications and fever-reducing medications may relieve symptoms of fever and aching. Certain medications should be avoided, such as aspirin or other non-steroidal anti-inflammatory drugs (such as ibuprofen and naproxen), because these may increase the risk for bleeding.

## How can people reduce the chance of getting infected with yellow fever virus?

Yellow fever can be prevented by vaccination. The vaccine is a live but attenuated (less potent) strain of the virus. Travelers should also take actions to prevent mosquito bites when in areas of Africa or South America with yellow fever virus transmission.

• **Use insect repellent.** When you go outdoors, use an EPA-registered insect repellent such as those containing DEET, picaridin, IR3535, or oil of lemon eucalyptus on exposed skin. Even a short time outdoors can be long enough to get a mosquito bite. For details on when and how to apply repellent, see Insect Repellent Use and Safety.

- Wear proper clothing to reduce mosquito bites. When weather permits, wear long-sleeves, long pants and socks when outdoors. Mosquitoes may bite through thin clothing, so spraying clothes with repellent containing permethrin or another EPA-registered repellent will give extra protection. Clothing pre-treated with permethrin is commercially available. Mosquito repellents containing permethrin are not approved for application directly to skin.
- Be aware of peak mosquito hours. The peak biting times for many mosquito species is dusk to dawn. However, *Aedes aegypti*, one of the mosquitoes that transmits yellow fever virus, feeds during the daytime. Take extra care to use repellent and protective clothing during daytime as well as during the evening and early morning. Staying in accommodations with screened or air-conditioned rooms, particularly during peak biting times, will also reduce risk of mosquito bites.

### What should I do if I think a family member might have yellow fever?

If you or anyone in your household has symptoms that are causing you concern, consult a healthcare provider promptly for proper diagnosis.

### Frequently Asked Questions About Yellow Fever Vaccine

# I just received the yellow fever vaccine. Do I need to avoid contact with my immunocompromised family member?

No. There is no evidence that people who receive yellow fever vaccine shed the vaccine virus. Therefore, there is no need to avoid people including those whose immune systems do not work well.

### Who should get yellow fever vaccine?

Yellow fever vaccine is recommended for people age 9 months or older who are traveling to or living in areas at risk for yellow fever virus transmission in South America and Africa. Proof of yellow fever vaccine may be required for entry into certain countries. Country-specific yellow fever risk information, along with vaccine recommendations, can be found in the Yellow Fever Vaccine Requirements and Recommendations table. For some countries, there are only certain areas where there is a risk for yellow fever; for those countries, more specific information is given in the chart to guide the recommendation for vaccination.

### Who should not get yellow fever vaccine?

Infants younger than 6 months of age should not get the vaccine. In addition, anyone with a severe allergy to any part of the vaccine, including eggs, chicken proteins, or gelatin should not get the vaccine. Anyone who has had a severe reaction to a previous dose of yellow fever vaccine should not be vaccinated again.

If you have any of the following conditions, your healthcare provider can help you decide whether you can safely receive the vaccine:

- HIV/AIDS or other disease that affects the immune system
- Weakened immune system as a result of cancer or other medical conditions, transplant, or drug treatment (such as steroids, chemotherapy, or others that affect immune function)
- Thymus disorder
- Adults 60 years of age and older
- Infants 6 8 months of age
- Pregnant women and nursing mothers

For additional information on contraindications and precautions, see Yellow fever vaccine.

### How long does yellow fever vaccination last?

For most people, one dose of the vaccine provides long-lasting protection. Certain people may benefit from another dose of the vaccine either because they have problems with their immune system or they are in higher-risk settings. For more information on the yellow fever vaccine, see the Vaccine page.

### Will I have to go to a special clinic to get a yellow fever vaccination?

Yes. Yellow fever vaccine is regulated by International Health Regulations, so only authorized providers can administer the vaccine. Most providers of yellow fever vaccine can also give you other vaccines or medicines for travel. To find an authorized yellow fever vaccination clinic, see our list of providers at Yellow Fever Vaccination Clinics.

## Is yellow fever vaccine recommended for people 60 years and older who will be traveling to areas with risk for yellow fever?

People aged ≥60 years may be at increased risk for serious adverse events (serious disease or, very rarely, death) following vaccination, compared with younger persons. This is particularly true if they are receiving their first yellow fever vaccination. Travelers aged ≥60 years should discuss with their healthcare provider the risks and benefits of the vaccine given their travel plans. In addition to considering the vaccine, travelers to endemic areas should protect themselves from yellow fever and other vector-borne diseases. Preventive measures include wearing clothes with long sleeves and long pants and using an effective insect repellent such as those with DEET, picaridin, IR3535, or oil of lemon eucalyptus.

#### What are the side effects of yellow fever vaccination?

Reactions to yellow fever vaccine are generally mild. They can include mild headaches, muscle aches, and low-grade fevers. There have been reports of extremely rare but serious events following yellow fever vaccination. See Reactions to yellow fever vaccine.

### I think I got sick from the vaccine, what should I do?

Consult with your healthcare provider. Ask your healthcare provider to report your case to the Vaccine Adverse Events Reporting System (VAERS) if he or she thinks the vaccine has made you sick.

### Does the yellow fever vaccine contain thimerosal?

No, the FDA-approved yellow fever vaccine does not contain thimerosal.

## How long should a woman wait to conceive after receiving a yellow fever vaccination?

Yellow fever vaccination has not been known to cause any birth defects when given to pregnant women. Yellow fever vaccine has been given to many pregnant women without any apparent adverse effects on the fetus. However, since yellow fever vaccine is a live virus vaccine, it poses a theoretical risk. While a two week delay between yellow fever vaccination and conception is probably adequate, a one month delay has been advocated as a more conservative approach. If a woman is inadvertently or of necessity vaccinated during pregnancy, she is unlikely to have any problems from the vaccine and her baby is very likely to be born healthy.

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