

Dengue Fever

Dengue fever is an illness spread by the bite of mosquitos infected with one of the dengue viruses. Symptoms are usually flu-like but can worsen to severe dengue (dengue hemorrhagic fever), a life-threatening condition. Getting infected a second time increases your risk of serious symptoms. You can get vaccinated if you've already had dengue once.

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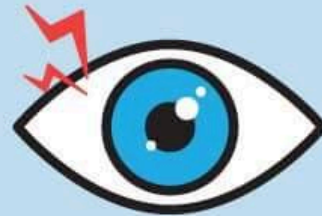
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Overview

Symptoms of Dengue Fever



Rash.



Intense pain behind your eyes.



Nausea or vomiting.



Muscle, bone and joint pain.

Warning Signs of Severe Dengue Fever



Abdominal pain.



Frequent vomiting.



If you live in or are visiting an area where dengue is common, seek medical attention immediately if you have warning signs of severe dengue. This includes abdominal pain, blood in your vomit or poop, bleeding gums or nose, frequent vomiting or extreme tiredness or restlessness.

What is dengue fever?

Dengue fever is an illness you can get from the bite of a mosquito carrying one of four types of dengue virus (DENV). The virus is most commonly found in tropical and subtropical regions, including Central and South America, Africa, parts of Asia and the Pacific Islands.

Dengue isn't contagious from person to person except when passed from a pregnant person to their child. Symptoms are usually mild with your first infection, but if you get another infection with a different version of DENV, your risk of severe complications goes up.

Who does dengue fever affect?

Dengue is most commonly found in Central and South America, Africa, parts of Asia and the Pacific Islands. A few parts of the U.S. also have dengue. Those living in or traveling to these regions — more than half the people in the world — are most at risk. Children and those who are elderly are at higher risk for serious illness.

How common is dengue fever?

Research estimates that nearly 400 million people get infected with dengue each year, but most (about 80%) have no symptoms.

Can you be immune to dengue fever?

Yes, you can get immunity to a version of dengue virus once you've been infected with it. Because there are at least four versions (strains) of the virus (DENV), this is pretty complicated.

Your immune system has tools it can use to recognize infections and get better at fighting them off. As your body fights a virus, it looks through its toolbox to find out which tool (antibody) it has that can destroy that specific threat.

Antibodies are specific to each harmful invader to your body, fitting to them like a key to a lock. Antibodies grab onto their specific target and your immune system destroys it. Once your body knows how to fight that specific virus, you are unlikely to get sick with it again.

After getting one of the four strains of DENV, you shouldn't be able to get that one again. But the antibodies for that strain don't fit other versions quite perfectly. So if

you get infected by a different version of DENV later on, it can actually use this imperfect fit to trick your immune system (antibody-dependent enhancement).

The different strain can get caught by the antibody from the first strain you had and get pulled into your cells, but — for reasons not fully understood — it's not destroyed. It's then inside your cells without your cells knowing it's harmful. This makes it easier for the virus to infect you and cause more serious illness.

Symptoms and Causes

What are the symptoms of dengue fever?

Most dengue infections don't cause symptoms. If you do have symptoms, high fever (104°F/40°C) is typical, along with:

- Rash.
- Intense pain behind your eyes.
- [Nausea or vomiting](#).
- [Muscle, bone](#) and [joint pain](#).

Dengue fever symptoms start to appear four to 10 days after a mosquito bite and can last three to seven days. About 1 in 20 people sick with dengue will develop severe dengue after their initial symptoms begin to fade.

Severe dengue (dengue hemorrhagic fever)

Severe dengue is a life-threatening worsening of dengue symptoms. Warning signs of severe dengue are usually seen 24 to 48 hours after your fever goes away.

Severe dengue is a medical emergency that can be fatal. If you have dengue or live in an area where dengue is common, go to the nearest ER immediately if you experience any of these symptoms:

- [Stomach/abdominal pain](#).
- Frequent vomiting.
- [Throwing up blood](#) or blood in your poop (stool).
- [Nose bleeds](#) or bleeding gums.
- Extreme tiredness, restlessness or irritability.

What causes dengue fever?

Dengue fever is caused by one of four dengue viruses. When a mosquito infected with the dengue virus bites you, the virus can enter your blood and make copies of itself. The virus itself and your immune system's response can make you feel sick.

The virus can destroy parts of your blood that form clots and give structure to your blood vessels. This, along with certain chemicals that your immune system creates, can make your blood leak out of your vessels and cause internal bleeding. This leads to the life-threatening symptoms of severe dengue.

How does dengue fever spread?

Dengue is spread by Aedes mosquitos, which also carry viruses like Zika and chikungunya. The mosquitos bites someone with dengue fever and then bites someone else, causing them to become infected.

Is dengue fever contagious?

Dengue fever isn't contagious directly from one person to another like the flu. The only way to get dengue from another person is if a pregnant person becomes infected. If you're pregnant and get dengue, you can pass it to your baby during pregnancy or childbirth.

Diagnosis and Tests

How is dengue fever diagnosed?

Dengue fever is diagnosed with a blood test. Your healthcare provider will take a sample of blood through a vein and send it to a lab to look for signs of dengue virus. This may also identify which of the four versions you have. Your provider can use a blood test to look for other viruses that cause similar symptoms.

Management and Treatment

How is dengue fever treated?

There's no medicine that treats dengue fever. Your healthcare provider will give you recommendations on how to manage your symptoms and if and when you should go to the ER.

How do I manage the symptoms of dengue fever?

Managing your symptoms is the only way to treat dengue fever. Follow your healthcare provider's recommendations, which may include:

- Keeping yourself hydrated by drinking plenty of water and fluids.
- Getting as much rest as possible.
- Treating pain with [acetaminophen](#) (like Tylenol®) only.

- **Do not** take [ibuprofen](#) (like Advil®) or [aspirin](#). This can increase your risk of life-threatening internal bleeding.

Prevention

How can I reduce my risk of dengue fever?

The two main ways to protect yourself from dengue are through avoiding mosquito bites and vaccination.

Mosquito protection

The best way to reduce your risk of dengue fever is to protect yourself from mosquito bites:

- Use EPA-registered insect repellents that contain 20% to 30% DEET or other ingredients known to help keep Aedes mosquitos away.
- Cover exposed skin outdoors, especially at night when mosquitos are more likely to be around.
- Remove standing water (buckets or barrels, bird baths, old tires that may hold rainwater) and fill low spots where water can pool.
- Keep mosquitos outside of your home by repairing holes in screens and keeping windows and doors closed if possible.
- Use mosquito netting at night in areas where dengue is common.
- If you're pregnant, avoid traveling to areas where dengue is common if possible.
- When traveling, be sure to check with the CDC to understand if there are any outbreaks of illness in your destination before you leave.

Dengue vaccine

The dengue vaccine (Dengvaxia™) is recommended only if you've already had dengue before. It can reduce your risk of severe dengue (dengue hemorrhagic fever) if you get a different version of the dengue virus in the future.

Getting the vaccine isn't recommended if you've never had dengue before. Because getting infected once with dengue makes you more likely to get sicker if you get another version of the virus (antibody-dependent enhancement), getting vaccinated before having dengue for the first time can increase your risk of severe dengue. Your healthcare provider will do a blood test to check for signs of a previous dengue infection to confirm that you've had dengue before getting the vaccine.

Vaccination isn't available to everyone. For instance, travelers from the U.S. aren't yet eligible. Check with your healthcare provider to understand whether you're eligible for dengue vaccination.

