

Dengue Fever

Overview

Dengue fever is a mosquito-borne illness that occurs in tropical and subtropical areas of the world. Mild dengue fever causes a high fever and flu-like symptoms. The severe form of dengue fever, also called dengue hemorrhagic fever, can cause serious bleeding, a sudden drop in blood pressure (shock) and death.

Millions of cases of dengue infection occur worldwide each year. Dengue fever is most common in Southeast Asia, the western Pacific islands, Latin America and Africa. But the disease has been spreading to new areas, including local outbreaks in Europe and southern parts of the United States.

Researchers are working on dengue fever vaccines. For now, in areas where dengue fever is common, the best ways to prevent infection are to avoid being bitten by mosquitoes and to take steps to reduce the mosquito population.

Symptoms

Many people experience no signs or symptoms of a dengue infection. When symptoms do occur, they may be mistaken for other illnesses — such as the flu — and usually begin four to 10 days after you are bitten by an infected mosquito.

Dengue fever causes a high fever — 104 F (40 C) — and any of the following signs and symptoms:

- Headache
- Muscle, bone, or joint pain
- Nausea
- Vomiting
- Pain behind the eyes
- Swollen glands
- Rash

Most people recover within a week or so. In some cases, symptoms worsen and can become life-threatening. This is called severe dengue, dengue hemorrhagic fever, or dengue shock syndrome.

Severe dengue happens when your blood vessels become damaged and leaky. And the number of clot-forming cells (platelets) in your bloodstream drops. This can lead to shock, internal bleeding, organ failure and even death.

Warning signs of severe dengue fever — which is a life-threatening emergency — can develop quickly. The warning signs usually begin the first day or two after your fever goes away, and may include:

- Severe stomach pain
- Persistent vomiting
- Bleeding from your gums or nose
- Blood in your urine, stools, or vomit
- Bleeding under the skin, which might look like bruising
- Difficult or rapid breathing
- Fatigue
- Irritability or restlessness

When to see a doctor

Severe dengue fever is a life-threatening medical emergency. Seek immediate medical attention if you have recently visited an area in which dengue fever is known to occur, you have had a fever and you develop any of the warning signs. Warning signs include severe stomach pain, vomiting, difficulty breathing, or blood in your nose, gums, vomit, or stools.

If you have been traveling recently and develop a fever and mild symptoms of dengue fever, call your doctor.

Causes

Dengue fever is caused by any one of four types of dengue viruses. You can't get dengue fever from being around an infected person. Instead, dengue fever is spread through mosquito bites.

The two types of mosquitoes that most often spread the dengue viruses are common both in and around human lodgings. When a mosquito bites a person infected with a dengue virus, the virus enters the mosquito. Then, when the infected mosquito bites another person, the virus enters that person's bloodstream and causes an infection.

After you have recovered from dengue fever, you have long-term immunity to the type of virus that infected you — but not to the other three dengue fever virus types. This means you can be infected again in the future by one of the other three virus types. Your risk of developing severe dengue fever increases if you get dengue fever a second, third or fourth time.

Risk factors

You have a greater risk of developing dengue fever or a more severe form of the disease if:

- **You live or travel in tropical areas.** Being in tropical and subtropical areas increases your risk of exposure to the virus that causes dengue fever. Especially high-risk areas include Southeast Asia, the western Pacific islands, Latin America and Africa.
- **You have had dengue fever in the past.** Earlier infection with a dengue fever virus increases your risk of severe symptoms if you get dengue fever again.

Complications

Severe dengue fever can cause internal bleeding and organ damage. Blood pressure can drop to dangerous levels, causing shock. In some cases, severe dengue fever can lead to death.

Women who get dengue fever during pregnancy may be able to spread the virus to the baby during childbirth. Additionally, babies of women who get dengue fever during pregnancy have a higher risk of pre-term birth, low birth weight, or fetal distress.

Prevention

Vaccine

Dengue fever vaccines may be available for people ages 6 to 60. Dengue vaccination is a series of two or three doses, depending on the vaccine you get, over the course of months. These vaccines are for use by people who live where the viruses that cause dengue are common, and who have already had dengue fever at least once.

Prevent mosquito bites

The World Health Organisation stresses that the vaccine is not an effective tool on its own to reduce dengue fever in areas where the illness is common. Preventing mosquito bites and controlling the mosquito population are still the main methods for preventing the spread of dengue fever.

If you live in or travel to an area where dengue fever is common, these tips may help reduce your risk of mosquito bites:

- **Stay in air-conditioned or well-screened housing.** The mosquitoes that carry the dengue viruses are most active from dawn to dusk, but they can also bite at night.
- **Wear protective clothing.** When you go into mosquito-infested areas, wear a long-sleeved shirt, long pants, socks, and shoes.

- **Use mosquito repellent.** Permethrin can be applied to your clothing, shoes, camping gear and bed netting. You can also buy clothing made with permethrin already in it. For your skin, use a repellent having at least a 10% concentration of DEET.
- **Reduce mosquito habitat.** The mosquitoes that carry the dengue virus typically live in and around houses, breeding in standing water that can collect in such things as used automobile tires. You can help lower mosquito populations by cutting habitats where they lay their eggs. At least once a week, empty and clean containers that hold standing water, such as planting containers, animal dishes, and flower vases. Keep standing water containers covered between cleanings.

Home Remedies for Dengue

1. **Neem:** Some lab studies have shown that neem leaf extract could stop the growth of the dengue virus in animals. Therefore, neem leaves may be used to help deal with the infection. Boil some fresh neem leaves in water. Drinking this water may help you recover quickly.
2. **Papaya:** Papaya leaves have been used in traditional medicine for the treatment of dengue fever. The role of papaya leaves in managing dengue has been investigated. The results are promising, revealing that papaya leaf could help increase the platelet count, white blood cells, and neutrophils in some individuals. Increased platelet count could help prevent bleeding, thereby preventing the progression of the disease.
3. **Tulsi:** Basil, known as Tulsi in Hindi, is an aromatic herb native to tropical regions of Asia. Tulsi leaves have been used to manage dengue fever traditionally. Tulsi has antimicrobial properties and has protective action against the dengue virus.
4. **Bitter gourd:** Karela extract has shown inhibitory action against the multiplication of dengue virus in lab studies. You can use karela as a vegetable and use it in foods and dishes.

