

Dengue Fever

Also Known As: Breakbone Fever

What is Dengue Fever?



Dengue virus is a leading cause of illness and death in the tropics and subtropics. As many as 400 million people are infected yearly. Dengue is caused by any one of four related viruses transmitted by mosquitoes.

Dengue has emerged as a worldwide problem only since the 1950s. Although dengue rarely occurs in the continental United States, it is endemic in Puerto Rico and in many popular tourist destinations in Latin America, Southeast Asia and the Pacific islands.

Dengue hemorrhagic fever (DHF) is a more severe form of dengue infection. It can be fatal if not recognized and properly treated in a timely manner.

How is it Spread?

Dengue is transmitted to people by the bite of an *Aedes* mosquito that is infected with a dengue virus. The mosquito becomes infected with dengue virus when it bites a person who has dengue virus in their blood. The person can either have symptoms of dengue fever or DHF, or they may have no symptoms. After about one week, the mosquito can then transmit the virus while biting a healthy person.

Dengue cannot be spread from person to person.

Signs and Symptoms

The main symptoms of dengue fever are:

- High fever
- Severe headache
- Severe pain behind the eyes
- Joint pain
- Muscle and bone pain
- Rash
- Mild bleeding (e.g., nose or gums bleed, easy bruising)

Generally, younger children and those with their first dengue infection have a milder illness than older children and adults.

Dengue hemorrhagic fever is characterized by a fever that lasts from 2 to 7 days, with general signs and symptoms consistent with dengue fever. When the fever declines, symptoms including persistent vomiting, severe abdominal pain, and difficulty breathing, may develop; this marks the beginning of a 24- to 48-hour period when the smallest blood vessels (capillaries) become excessively permeable (“leaky”), allowing fluid to escape from the blood vessels into the abdominal area (causing ascites) and lung cavity (leading to pleural effusions). This may lead to failure of the circulatory system and shock, followed by death, if circulatory failure is not corrected. In addition, a person with DHF has a low platelet count and hemorrhagic manifestations, tendency to bruise easily or other types of skin hemorrhages, bleeding nose or gums, and possibly internal bleeding.

Diagnosis

Diagnosing dengue fever can be difficult, because its signs and symptoms can be easily confused with those of other diseases — such as malaria, leptospirosis and typhoid fever.

A doctor will likely ask about your medical and travel history. Be sure to describe international trips in detail, including the countries you visited and the dates, as well as any contact you a person may have had with mosquitoes.

Certain laboratory tests can detect evidence of the dengue viruses, but test results usually come back too late to help direct treatment decisions.

Treatment

There is no specific medication for treatment of a dengue infection. Persons who think they have dengue should use analgesics (pain relievers) with acetaminophen and avoid those containing aspirin. They should also rest, drink plenty of fluids, and consult a physician. If they feel worse (e.g., develop vomiting and severe abdominal pain) in the first 24 hours after the fever declines, they should go immediately to the hospital for evaluation.

Although, There is no specific medication for DHF, it can however be effectively treated by fluid replacement therapy if an early clinical diagnosis is made. DHF management frequently requires hospitalization.

People at Risk

Factors that put people at a greater risk of developing dengue fever or a more severe form of the disease include:

- **Living or traveling in tropical areas.** Being in tropical and subtropical areas increases the risk of exposure to the virus that causes dengue fever. Especially high-risk areas are Southeast Asia, the western Pacific islands, Latin America and the Caribbean.
- **Prior infection with a dengue fever virus.** Previous infection with a dengue fever virus increases risk of having severe symptoms if infected again.

Prevention

There is no vaccine available against dengue, and there are no specific medications to treat a dengue infection. This makes prevention the most important step, and prevention means avoiding mosquito bites if living in or traveling to an endemic area.

The best way to reduce mosquitoes is to eliminate the places where the mosquito lays eggs, like artificial containers that hold water in and around the home. Outdoors, clean water containers like pet and animal watering containers, flower planter dishes or cover water storage barrels. Look for standing water indoors such as in vases with fresh flowers and clean at least once a week.

Adult mosquitoes like to bite inside as well as around homes, during the day and at night when the lights are on. For protection, use repellent on the skin while indoors or out. When possible, wear long sleeves and pants for additional protection. Make sure window and door screens are secure and without holes. If available, use air-conditioning.

If residing with a person who is ill with dengue, take extra precautions to prevent mosquitoes from biting the patient and going on to bite others in the household. Sleep under a mosquito bed net, eliminate mosquitoes found indoors and wear repellent.



For more sources of information on this topic visit:

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES www.michigan.gov/mdhhs

ST. CLAIR COUNTY HEALTH DEPARTMENT www.scchealth.co

CENTERS FOR DISEASE CONTROL AND PREVENTION www.cdc.gov