

Dengue



DCHHS
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Dallas County Health and Human Services

What is dengue? Dengue (pronounced den' gee) is a disease caused by any one of four closely related dengue viruses (DENV 1, DENV 2, DENV 3, or DENV 4). The viruses are transmitted to humans by the bite of an infected mosquito. In the Western Hemisphere, the *Aedes aegypti* mosquito is the most important transmitter or vector of dengue viruses, although a 2001 outbreak in Hawaii was transmitted by *Aedes albopictus*.

What is dengue hemorrhagic fever (DHF)? DHF is a more severe form of dengue infection. It can be fatal if unrecognized and not properly treated in a timely manner. DHF is caused by infection with the same viruses that cause dengue fever. With good medical management, mortality due to DHF can be less than 1%.

How are dengue and DHF 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 directly from person to person.

What are the symptoms of the disease? The principal symptoms of dengue fever are high fever, severe headache, severe pain behind the eyes, joint pain, muscle and bone pain, rash, and 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.

DHF 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 the fluid component to escape from the blood vessels into the peritoneum (causing ascites) and pleural 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, the patient 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.

What is the treatment for dengue? 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. As with dengue fever, 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.

The best way to avoid Dengue is to avoid mosquito bites.

What can I do? Defend by using the 4Ds.

DEET All Day Every Day: Whenever you're outside, use insect repellents that contain DEET or other EPA approved repellents and follow instructions.

Dress: Wear long, loose and light-colored clothing outside.

Drain: Remove all standing water in and around your home.

Dusk & Dawn: Limit outdoor activities during dusk and dawn when mosquitoes are most active.

In addition to the 4Ds, travelers can protect themselves by doing the following:

- Choose a hotel or lodging with air conditioning or screens on windows or doors.
- Sleep under a mosquito bed net if you are outside or in a room that is not well-screened.