



Hawaii State Department of Health

Disease Investigation Branch

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Dengue Fever

(breakbone fever, dengue hemorrhagic fever)

What is dengue fever?

Dengue fever is a viral illness spread by *Aedes* mosquitoes. There are four closely related dengue viruses (DENV 1, DENV 2, DENV3 and DENV 4). The disease occurs mainly in tropical Asia, Africa, The Caribbean and the South Pacific. It is most common during the rainy season in areas infested with infected mosquitoes.

Sometimes, persons arriving from other countries may enter the United States with dengue fever and infect local mosquitoes, which happened in Hawaii in 2001 and in 2015.

How do you get it?

The dengue virus is spread through the bite of infected *Aedes* mosquitoes, which are found throughout Hawaii. A mosquito can become infected if it feeds on someone who is already infected with the virus. This is why it is important to stay away from mosquitoes when you are infected. When an infected mosquito bites a new person, that mosquito can transmit the dengue virus to that new person. Dengue is not spread directly from one person to another.

What are the symptoms of dengue fever?

The symptoms of dengue fever include sudden onset of fever, severe headache, eye, joint, and muscle pain, and rash. The rash typically appears on the hands, arms, legs and feet 3 to 4 days after the fever begins. Minor bleeding problems can also occur. The symptoms usually go away completely within 1 to 2 weeks. Sometimes, people with dengue fever have blood clotting problems. When this happens, the illness is called dengue hemorrhagic fever. Dengue hemorrhagic fever is a very serious illness with abnormal bleeding and very low blood pressure (shock). **All persons with dengue fever symptoms should seek medical care for an evaluation.**

When do symptoms start?

The symptoms usually start 5 to 7 days after being bitten by infected mosquitoes, but the onset can range from 3 to 15 days.

How does your doctor or other healthcare provider determine if you have contracted dengue fever?

Your healthcare provider will consider if your symptoms are what would be expected for dengue fever. If that is likely, then your doctor will contact DOH to request and coordinate testing of your blood for the virus (if within 7 days from the start of your symptoms) or antibodies (if greater than 7 days from the start of your symptoms).

Dengue diagnostic tests are conducted by the DOH State Laboratories on Oahu for free for people meeting the Department of Health's testing criteria (although the clinical laboratory where your blood is drawn may charge a nominal processing fee for the visit, blood draw, etc.).

Is it possible to be infected with dengue virus but have no symptoms?

Yes. As many as 50-75% of all persons infected with a dengue virus have no clinical signs or symptoms of the disease. Some infected people experience fever, but their other symptoms are mild and nonspecific, making their dengue infection difficult to diagnose.

What is the treatment for dengue fever?

There are no specific antiviral treatments for dengue. However, persons ill with dengue can feel more comfortable with supportive care:

- Get plenty of bed rest.
- Drink fluids to prevent dehydration.
- Take medicine such as acetaminophen

(Tylenol®) to reduce fever and pain. **Do NOT** take aspirin, ibuprofen (such as Advil® or Motrin®), or other non-steroidal anti-inflammatory drugs because they can make bleeding problems worse in persons ill with dengue.

- If you are taking medicine for another medical condition, talk to your healthcare provider before taking any other medication.

What else should persons with dengue fever do?

To protect those around you, avoid being bitten by mosquitoes during the first week of illness, to prevent the spread of dengue to mosquitoes which may then infect other people.

Monitor for warning signs of severe dengue illness. These include intense abdominal pain, persistent vomiting, difficulty breathing, increased drowsiness or confusion, and unusual bleeding from the gums, nose, vagina, or in the urine. If any of these occur, immediately seek medical attention.

Is there a dengue vaccine?

In the United States, an FDA-approved dengue vaccine is available for specific individuals. The vaccine is currently only recommended for children aged 9-16 years with laboratory confirmation of a previous dengue infection and who live in a region where dengue is prevalent (currently does not include Hawaii). The vaccine is not authorized for U.S. travelers who are visiting areas with common dengue outbreak but do not reside there.

Do pregnant or breastfeeding persons need to take extra precautions?

It is possible for a pregnant person who is infected with dengue virus to infect the fetus or newborn baby at birth. It is especially important that pregnant persons receive proper medical attention if infected with the dengue virus. Like everyone else, pregnant persons should focus on avoiding mosquito exposure by getting rid of standing water where mosquitoes can breed, covering up exposed areas of the body to avoid being bitten, and using an EPA-registered insect repellent, such as DEET, picaridin, IR3535, or oil of lemon eucalyptus, which are approved for pregnant persons.

The risk of passing dengue virus to the newborn through breastmilk is considered low, and the health

benefits of breastfeeding are much greater than the likelihood of infection. People who are breastfeeding should discuss any concerns or questions with their healthcare provider.

If you get dengue fever once, can you get it again?

Yes. There are four major types of dengue viruses (DENV 1, DENV 2, DENV 3, and DENV 4). Having dengue fever with one type of dengue virus will not protect you from the other three types.

If you want to get tested for dengue fever after more than a week has passed from the time you were ill, an antibody test can determine whether you were previously infected with dengue. However, determining which dengue virus type you had is not possible after the first week of illness.

How do you keep from getting it?

- When traveling to areas that have dengue fever, try to avoid exposure to mosquitoes. *Aedes* mosquitoes are usually most active in the early morning hours after daybreak, in the late afternoon before dark, and any time during the day when indoors or in shady areas.
- Control mosquitos indoors and outdoors by emptying standing water sources weekly and using screen on windows and doorways. Repair holes in screens as needed.
- Use EPA-registered insect repellents.
- Wear loose-fitting, long-sleeved shirts and pants to reduce exposure. Treating clothing with permethrin is an additional way to repel mosquitoes.

For more information:

CDC Dengue <https://www.cdc.gov/dengue/index.html>

Areas with Risk of Dengue
<https://www.cdc.gov/dengue/areas-with-risk/index.html>