

# Dengue Fever and Dengue Hemorrhagic Fever

## What are dengue fever and dengue hemorrhagic fever?

Dengue fever is a viral illness that you can get from a mosquito bite. It is also known as breakbone fever because of the severe joint and muscle aches it causes.

Usually dengue fever is a relatively mild illness, especially for younger children. Two forms of the illness called dengue hemorrhagic fever and dengue shock syndrome are more serious and sometimes deadly forms of the infection.

## What is the cause?

Dengue fever is caused by a virus carried by mosquitoes. You can get infected if you are bitten by an infected mosquito.

Dengue is found mostly in tropical and subtropical areas of:

- Africa
- Asia
- Caribbean countries
- Central and South America
- Mexico
- The Pacific

The infection does not spread from person to person. Mosquitoes get infected if they bite an infected person and then they can pass the infection to other people they bite.

## What are the symptoms?

Symptoms usually start 4 to 7 days after you are bitten by an infected mosquito. Sometimes it may be as long as 2 weeks before you start having symptoms.

Symptoms of dengue fever may include:

- Sudden high fever
- Severe headache
- Severe joint and muscle pain
- Rash
- Nausea and vomiting
- Pain behind the eyes

Dengue hemorrhagic fever may also cause:

- Unusual bleeding such as bleeding gums or nosebleeds
- Easy bruising

Dengue shock syndrome can have any of the symptoms listed above plus:

- Severe swelling
- Severe bleeding

- Shock (very low blood pressure)

Dengue shock syndrome may cause shut-down of the heart, lungs, or kidneys.

## **How is it diagnosed?**

Your healthcare provider will ask about your symptoms and recent travels. Your provider will examine you. You may have a blood test to look for signs of infection.

## **How is it treated?**

There is no medicine that cures dengue. Most people get better within a couple weeks after they started having symptoms.

Your healthcare provider may advise you to:

- Drink plenty of fluids.
- Get lots of rest.
- Take acetaminophen to control fever and pain if necessary.

Your provider may advise you not to take aspirin or other nonsteroidal anti-inflammatory medicines (NSAIDs). These medicines can make it harder for your blood to clot. If you have dengue hemorrhagic fever, they can cause more bleeding.

If you have dengue hemorrhagic fever, you may need to stay at the hospital, where you can be given IV fluids.

Dengue fever usually lasts 5 to 14 days. Sometimes the fever may come back for 1 to 2 days. You may feel tired for days to weeks after getting over the fever.

## **How can I help take care of myself?**

Follow your healthcare provider's instructions. Ask your provider:

- How and when you will hear your test results
- How long it will take to recover
- What activities you should avoid and when you can return to your normal activities
- How to take care of yourself at home
- What symptoms or problems you should watch for and what to do if you have them

Make sure you know when you should come back for a checkup.

## **How can I help prevent dengue fever?**

There is no vaccine that prevents dengue.

Take these precautions to avoid mosquito bites:

- Schedule travel to tropical areas during seasons when mosquitoes are less active.

- Stay in places that are clean, insect free, and have air conditioning or well-screened windows.
- Avoid wearing perfume or other scented products. They may attract mosquitoes.
- Stay indoors at dawn and in the early evening, when mosquitoes are most likely to be around.
- Wear long pants and long-sleeved shirts, especially from dusk to dawn. This is the time when you are most likely to get bitten.
- Use an insect repellent whenever you are outdoors. Don't use more repellent than recommended in the package directions. Don't put repellent on open wounds or rashes. Don't put it on the eyes or mouth. When using sprays for the skin, don't spray the repellent directly on the face. Spray the repellent on your hands first and then put it on your face. Then wash the spray off your hands.
  - Adults should use repellent products with no more than 35% DEET. Children older than 2 months can use repellents with no more than 30% DEET. DEET should be applied just once a day. Wash it off your body when you go back indoors.
  - Picaridin may irritate the skin less than DEET and appears to be just as effective.
  - In some studies, oil of lemon eucalyptus, a plant-based repellent, provided as much protection as repellents with low concentrations of DEET, but it hasn't been as well tested as DEET. Oil of lemon eucalyptus should not be used on children under age 3.
  - Spray clothes with repellents because insects may crawl from clothing to the skin or bite through thin clothing. Products containing permethrin are recommended for use on clothing, shoes, bed nets, and camping gear. Permethrin-treated clothing repels and kills ticks, mosquitoes, and other insects and can keep working after laundering. Permethrin should be reapplied to clothing according to the instructions on the product label. Some commercial products are available pretreated with permethrin. Permethrin does not work as a repellent when it is put on the skin.
- Use a spray that kills flying insects in the room where you sleep. Sleep under a mosquito net if you are sleeping in an area with open and unscreened windows or doors.
- Mosquitoes lay eggs in water. To reduce mosquito breeding, drain standing water from flowerpots, buckets, barrels, cans, and other items that collect water. Avoid swimming in places where mosquitoes breed, like small ponds or lagoons.

The risk of dengue infection for international travelers appears to be small unless there is an epidemic in the area you are visiting.

For additional information, visit the World Health Organization's Web site at <http://www.who.int/csr/don/en/index.html>. You may also contact The Centers for Disease Control and Prevention at 1-888-232-3228 or visit their Web site at <http://www.cdc.gov>.

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