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Dengue fever

Dengue fever is a virus-caused disease that is spread by mosquitoes. Dengue in its mild form causes fever and a rash and lasts about a week. Severe dengue can cause shock, internal bleeding, and death. About 1 out of 20 people with dengue will develop severe dengue within a few hours after symptoms start. The main risk factor for severe dengue is a prior infection with dengue.

Dengue fever is characterized by:

- Fever
- Rash
- Muscle and joint pains



Aedes aegypti mosquito



Causes

Dengue fever is caused by 1 of 4 different but related viruses. It is spread by the bite of mosquitoes, most commonly the mosquito *Aedes aegypti*, which is found in tropic and subtropic regions. This area includes parts of:

- The Indonesian archipelago into northeastern Australia
- South and Central America
- Southeast Asia
- Sub-Saharan Africa
- The Caribbean (including Puerto Rico and US Virgin Islands)

Dengue fever is rare in the US mainland, but has been found in Hawaii, Florida, and Texas. Since 2022, dengue has also been reported in California and Arizona.

Many cases in the United States occur when someone travels to an area where dengue is present and returns home with the illness. Dengue cannot spread from human to human.

Symptoms

Dengue fever begins with a sudden high fever, often as high as 105°F (40.6°C), 4 to 7 days after the infection.

A flat, red rash may appear over most of the body 2 to 5 days after the fever starts. A second rash, which looks like measles, appears later in the disease. Infected people may have increased skin sensitivity and are very uncomfortable.

Other symptoms include:

- Fatigue
- Headache (especially behind the eyes)
- Joint aches (often severe)
- Muscle aches (often severe)
- Nausea and vomiting
- Swollen lymph nodes
- Cough
- Sore throat
- Nasal stuffiness

Symptoms of severe dengue can occur 24 to 48 hours after the fever has gone away. Severe symptoms include:

- Severe stomach pain and tenderness
- Vomiting often (at least 3 times in 24 hours)
- Bleeding from the nose or gums
- Vomiting blood or passing blood in the stools or urine
- Bleeding under the skin (looks like bruises)
- Difficulty breathing, rapid breathing
- Feeling tired, restless, or irritable

If you or anyone you know has symptoms of severe dengue, call 911 or the local emergency number right away.

Exams and Tests

Tests that may be done to diagnose this condition include:

- Antibody titer for dengue virus types
- Complete blood count (CBC)
- Polymerase chain reaction (PCR) test for dengue virus types
- Liver function tests

Treatment

There is no specific treatment for dengue fever. Fluids are given if there are signs of dehydration. Acetaminophen (Tylenol) is used to treat a high fever.

Avoid taking aspirin, ibuprofen (Advil, Motrin), and naproxen (Aleve). They may increase bleeding problems.

Severe dengue is a medical emergency. It must be treated immediately at a hospital. Treatment for severe dengue is supportive and may include:

- Fluids given through a vein (IV)
- Oxygen support
- Blood pressure management
- Blood transfusions

Outlook (Prognosis)

Mild cases of dengue generally last a week or more. Although uncomfortable, mild dengue fever is not deadly. People with the condition should fully recover. In some Latin American and Asian countries, severe dengue is a leading cause of death and severe illness. Early detection and treatment of severe dengue can greatly reduce the risk of death.

Possible Complications

Untreated, dengue fever may cause the following health problems:

- Febrile convulsions
- Severe dehydration
- Death

When to Contact a Medical Professional

Contact your health care provider if you have traveled in an area where dengue fever is known to occur and you have symptoms of the disease.

Prevention

To prevent dengue, take steps to prevent mosquito bites:

- Use insect repellent daily and reapply as needed.
- Wear loose-fitting, long-sleeved shirts and pants.
- Spray clothing and hats with permethrin (an insecticide that repels mosquitos), but do not apply to skin.
- Sleep under mosquito netting if sleeping outside or if there are no screens on windows.
- Limit outdoor activity during mosquito season, especially when they are most active, at dawn and dusk.

When traveling, check to see if dengue is present in the area you will be traveling. Bring protective clothing, mosquito repellent, and netting if needed.

Alternative Names

O'nyong-nyong fever; Dengue-like disease; Breakbone fever; Dengue hemorrhagic fever

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