CONDITION

Dengue fever

Dengue fever is a mosquito-borne viral infection that can cause fever, severe aches, and sometimes serious bleeding or circulation problems.

WHAT IT IS
Acute mosquito-borne viral infection

BODY SYSTEM
Whole body, blood vessels, and immune system

MAIN SYMPTOMS
High fever, headache, body aches, nausea

WHAT CAUSES IT
Dengue virus spread by infected Aedes mosquitoes

HOW IT IS DIAGNOSED
PCR, NS1 antigen, or antibody blood tests

MAIN TREATMENT
Fluids, symptom relief, and close monitoring

CAN IT BE CURED?
Yes - the immune system usually clears it

IS IT AN EMERGENCY?
Sometimes - bleeding or shock signs need emergency care

LONG-TERM OUTLOOK
Most people recover fully, though tiredness may continue

Overview

Dengue fever is a viral infection spread mainly by the bites of infected Aedes mosquitoes. It is sometimes called dandy fever because the joint and muscle pain can be intense.

Dengue is common in many tropical and subtropical areas. Local outbreaks can also occur elsewhere when mosquitoes capable of spreading the virus are present. It does not usually pass directly from one person to another.

Many infections cause no symptoms or only a mild fever. When symptoms do occur, they often include fever, headache, pain behind the eyes, muscle and joint aches, nausea, or a rash.

Most people recover with rest, fluids, and monitoring. A small proportion develop severe dengue. This can cause bleeding, organ problems, or leakage of fluid from small blood vessels.

Fluid leakage may lower blood pressure and lead to shock, meaning the organs are not receiving enough blood.

Warning signs often begin as the fever improves. Feeling less hot does not always mean the risk has passed.

Symptoms

Symptoms usually begin several days after the bite of an infected mosquito. The illness commonly starts suddenly and may include:

Symptoms often last two to seven days. They can resemble flu, COVID-19, malaria, chikungunya, or other infections, so symptoms alone cannot confirm dengue.

The period around the time the fever settles needs particular attention. In severe dengue, blood vessels become unusually leaky. Warning signs can include increasing abdominal pain, repeated vomiting, unusual bleeding, marked drowsiness or restlessness, and difficulty breathing.

Some people then enter a recovery phase. Appetite and energy gradually return, although weakness or tiredness may continue for several weeks.

- High fever
- Severe headache or pain behind the eyes
- Muscle, bone, or joint pain
- Nausea, vomiting, or loss of appetite
- Rash
- Marked tiredness
- Mild bleeding, such as nosebleeds, bleeding gums, or easy bruising

Causes and risk factors

Dengue is caused by four closely related types, or serotypes, of dengue virus. Infection with one type usually provides long-term protection against that type, but not against the other three. This means it is possible to have dengue more than once.

The virus is usually spread by female Aedes aegypti mosquitoes. Aedes albopictus mosquitoes can also spread it. These mosquitoes often bite during the day, including around dawn and dusk, and commonly live near homes.

A mosquito becomes infected by biting someone who has dengue virus in their blood. It can later pass the virus to another person through a bite.

Your chance of exposure is higher if you live in or travel to an area where dengue is circulating, particularly where mosquito control, window screening, or reliable water storage is limited.

A later infection with a different dengue serotype may carry a higher risk of severe dengue. However, severe illness can also occur during a first infection. Infants, pregnant people, older adults, and people with significant medical conditions may need closer assessment.

Rarely, dengue can pass during pregnancy or through infected blood products. It is not spread by coughing, touching, sharing food, or ordinary close contact.

Diagnosis

A healthcare professional will consider your symptoms, where you live or have travelled, when the symptoms began, and whether dengue is circulating locally.

Blood testing can confirm or support the diagnosis. The most useful test depends on how long you have been unwell.

During the first week, a laboratory may look for viral genetic material using a PCR or other nucleic acid amplification test. It may instead test for NS1, a protein from the virus. A positive PCR or NS1 result can confirm a current infection.

Antibody tests look for your immune system's response to dengue. IgM antibodies usually become easier to detect later in the first week. These tests can sometimes react to related viruses or previous vaccination, so results must be interpreted alongside your history and other tests.

A full blood count may show low platelets, which help blood clot, or low white blood cells. A haematocrit test measures the proportion of blood made up of red blood cells. Changes can help identify fluid leakage, but these tests do not confirm dengue on their own.

Repeat blood tests may be needed if symptoms change or the first test was taken early.

Treatment and management

There is no routine antiviral medicine that removes dengue virus. Treatment supports your body while the infection clears and aims to identify complications early.

Mild dengue can often be managed at home after medical assessment. Rest and regular fluids are important. Oral rehydration drinks may help replace water and salts if you are sweating,

vomiting, or eating poorly.

Paracetamol, also called acetaminophen, may be used for fever or pain when it is safe for you and taken according to the product directions. Aspirin and non-steroidal anti-inflammatory drugs such as ibuprofen and naproxen are generally avoided because they can increase bleeding risk.

If you take prescribed aspirin, an anticoagulant, or another medicine that affects bleeding, seek prompt medical advice. Do not stop an essential prescribed medicine without guidance.

Monitor how much you are drinking and urinating. Watch closely for warning signs, especially when the fever begins to fall. A clinician may arrange follow-up examinations or repeat blood tests during this period.

People with severe dengue need hospital treatment. Care may include carefully controlled intravenous fluids, monitoring of blood pressure and urine output, oxygen, and treatment for bleeding or organ complications. Fluid treatment must be adjusted carefully because both too little and too much fluid can cause harm.

Antibiotics like amoxicillin or doxycycline do not treat dengue because it is caused by a virus. They may be used only if there is a separate bacterial infection.

Complications

The main complication is severe dengue. It often develops during a short critical phase around the time the fever settles.

Fluid may leak from small blood vessels into surrounding tissues. If enough fluid leaves the circulation, blood pressure can fall and dengue shock can develop.

Other possible complications include:

Low platelet counts are common, but the number alone does not show how severe the illness is. Symptoms, circulation, bleeding, urine output, and changes in blood tests are considered together.

Most people do not develop these complications. With timely recognition and supportive hospital care, many people with severe dengue recover.

- Significant internal or external bleeding
- Liver inflammation or liver failure
- Inflammation affecting the heart or brain
- Breathing problems caused by fluid around the lungs

- Kidney injury
- Shock and failure of several organs

Prevention

Dengue cannot always be prevented in places where the virus and mosquito species are present. Reducing mosquito bites and mosquito breeding lowers the risk.

Useful measures include:

Aedes mosquitoes can breed in small amounts of water, including buckets, discarded tyres, plant saucers, and blocked gutters.

If you have dengue, continue protecting yourself from mosquito bites during the first week of illness. This helps prevent mosquitoes from picking up the virus and passing it to other people.

Dengue vaccines are used in some countries. Eligibility is based on factors such as age, local transmission, and sometimes evidence of a previous dengue infection. Vaccine availability and recommendations differ by country. Vaccination does not replace protection from mosquito bites.

- Apply an approved insect repellent according to its label
- Wear loose, long-sleeved clothing and long trousers when practical
- Use window and door screens or air conditioning
- Sleep under a mosquito net if rooms are not screened
- Empty or cover containers that hold standing water
- Clean water storage containers and change pet or plant water regularly

Living with it and what to expect

Most people begin to improve within one to two weeks. Fever and pain usually settle first. Appetite, strength, and concentration may take longer to return.

Tiredness can continue for several weeks, particularly after a more severe infection. Return to work, school, exercise, and usual activities gradually. Drinking enough, eating regular meals, and allowing time for rest may help during recovery.

Dengue is not usually a chronic infection. Once the acute illness has cleared, the virus does not normally remain active for months or years. Persistent or worsening symptoms need

assessment because they may have another cause or reflect a complication.

Recovery from one serotype does not prevent infection with the other serotypes. You should continue mosquito precautions when living in or visiting areas where dengue occurs.

Routine follow-up may include checking that bleeding has stopped, hydration and urine output are normal, and blood counts are recovering. Keep any arranged follow-up even if the fever has gone.

When to get medical help

Seek prompt medical advice if you develop fever, headache, rash, or strong body aches while living in or after travelling to an area with dengue. Mention where and when you travelled. Testing for dengue and other infections may be needed.

If dengue has been diagnosed or is suspected, seek urgent same-day care for:

Call emergency services for difficulty breathing, fainting, confusion, a major bleed, or signs of shock such as pale, cold or clammy skin with severe weakness. These symptoms need immediate assessment.

Children, pregnant people, older adults, and people with major heart, kidney, liver, blood, or immune conditions should seek medical advice early because closer monitoring may be appropriate.

- Severe or increasing abdominal pain
- Repeated vomiting or inability to keep fluids down
- Bleeding from the nose or gums
- Blood in vomit, urine, or stool
- Unusually heavy vaginal bleeding
- Marked drowsiness, weakness, irritability, or restlessness
- Much less urine than usual
- Symptoms that worsen as the fever settles

Common questions

Is dengue contagious from person to person?

Not through ordinary contact. You cannot usually catch it by touching, coughing, sharing food,

or caring for someone. A mosquito generally has to bite an infected person and then another person. Rare routes include transmission during pregnancy or through infected blood.

Can I get dengue twice?

Yes. There are four main dengue serotypes. Recovery usually protects you from the type that caused your infection, but you can later catch another type. A later infection may have a higher risk of becoming severe.

When is dengue most dangerous?

The greatest risk is often around the time the fever falls, commonly after several days of illness. Warning signs include severe abdominal pain, persistent vomiting, bleeding, drowsiness, restlessness, breathing difficulty, or reduced urine.

Can I take ibuprofen for dengue fever?

Ibuprofen, naproxen, aspirin, and similar anti-inflammatory medicines are generally avoided because they may increase bleeding. Paracetamol or acetaminophen may be an option when safe for you and used as directed.

How long does dengue fatigue last?

Many people recover within one to two weeks, but tiredness and reduced stamina can continue for several weeks. Seek medical advice if fatigue is worsening, lasts longer than expected, or comes with new symptoms.

Does dengue always need hospital treatment?

No. Many mild cases can be managed at home after assessment, with fluids, rest, and careful monitoring. Hospital care is needed for warning signs, severe dehydration, bleeding, shock, organ complications, or other factors that make home care unsafe.

Sources

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