
Dengue virus disease

Summary

- Dengue virus is a viral disease spread by mosquitoes in many tropical and subtropical parts of the world including Africa, Asia, South America and occasionally, some parts of northern Queensland.
 - Symptoms include high temperature, headache, pain behind the eyes, joint and muscle pains, nausea, rash and malaise.
 - There is no specific medical treatment and no vaccine – the best way to protect against dengue virus and other mosquito-borne diseases is to avoid mosquito bites.
 - Seek medical attention immediately if you think you may have dengue virus.
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Dengue virus is a viral disease that is spread by mosquitoes. It is a problem in many tropical and subtropical parts of the world, including Africa, Asia, South America and some parts of northern Queensland. Estimates suggest that around 100 million cases occur each year.

Dengue virus ranges in severity from a mild flu-like illness through to a severe disease. There is no specific treatment and no vaccine. The best way to protect against dengue virus and other mosquito-borne diseases is to avoid mosquito bites. Seek medical attention immediately if you think you may have contracted dengue virus. Early diagnosis and management of symptoms is critical to reduce the risk of complications and avoid further spread of the virus.

Cause of dengue virus

Dengue virus is caused by infection with one of four closely related viruses known as DEN-1, DEN-2, DEN-3 and DEN-4. Infection with one type gives you lifelong immunity to that particular dengue virus. However, the infection does not offer immunity to the other three types, so it is possible to contract dengue virus again. A person who has had dengue virus once is at increased risk of experiencing more severe dengue virus symptoms if they get infected again.

Symptoms of dengue virus

The typical signs and symptoms of dengue virus may include:

- high temperature
- severe headache
- pain behind the eyes
- joint and muscle aches
- appetite loss
- nausea and vomiting
- generally feeling unwell (malaise)
- skin rash

In most cases, symptoms resolve within one to two weeks.

Symptoms of severe dengue virus

Although rare in Australia, certain people can develop severe dengue virus infection. Babies, young children, and people who have had dengue more than once are at increased risk of this complication.

Warning signs of more severe dengue virus include the typical signs and symptoms in addition to some or all of the following:

- severe abdominal pain
- restlessness and fatigue
- persistent vomiting (which may include blood)
- shortness of breath
- nose bleeds and bleeding gums.

Most people who experience these symptoms recover fully. A small number of people who experience these symptoms will go on to have severe dengue which can include:

- severe bleeding
- extremely low blood pressure caused by blood loss (shock)
- coma
- death.

Where dengue virus commonly occurs

Dengue virus is common throughout tropical and subtropical areas of:

- Africa
- the Caribbean
- Central America
- Central Pacific
- China
- India
- the Middle East
- South America
- Southeast Asia
- the South Pacific.

Dengue virus in Australia

Cases of dengue virus occur in northern Queensland from time to time when travellers who have been infected overseas return and introduce the virus to the local mosquito population. To date, it isn't as common as in other subtropical regions.

How dengue virus is spread

Dengue virus is not transmitted (spread) from person to person. Only infected mosquitoes transmit dengue virus. It is thought that the mosquito contracts the virus when it bites an infected person. The mosquito is then infective for the rest of its life and can spread the virus every time it bites someone.

At least three different kinds of mosquito in Australia are suspected to be dengue carriers. They are *Aedes aegypti*, *Aedes scutellaris* and *Aedes katherinensis*. These mosquitoes are found in northern Queensland, the Northern Territory and northern Western Australia. They are not found in Victoria.

Avoid mosquito bites and avoid dengue virus in commonly affected areas

Protect yourself against **mosquito bites** to avoid dengue virus (and other mosquito-borne diseases) in dengue-affected areas. Suggestions include:

- Wear socks, long pants and long-sleeved shirts. Loose fitting clothing makes it harder for mosquitoes to bite you through your clothes.
- Wear mosquito repellent that contains the active constituents DEET (N,N-Diethyl-m-toluamide) or picaridin. Reapply regularly and make sure you follow directions for safe use on the label. (For kids, it can be safer to spray insect repellent on their clothes rather than their skin.)
- Apply insect repellent first thing in the morning because dengue mosquitoes bite during the day, both outdoors and inside homes and buildings.

- Apply a product, such as permethrin, to your clothes or bedding.
- Use a bed net (mosquito net).
- Stay in air-conditioned accommodation with flyscreens on the windows.

Diagnosis of dengue virus

See a doctor immediately if you think you may have dengue virus. Early diagnosis is important to reduce the risk of complications and avoid further spread of the virus.

Your doctor will ask about your medical history, including any travel, and will do a physical examination. Blood tests are required to diagnose dengue.

Treatment for dengue virus

There is no specific treatment for dengue virus. Medical care aims to manage the symptoms and reduce the risk of complications while the person recovers. Most cases of uncomplicated dengue virus resolve fully within one to two weeks.

During this time, your doctor may advise:

- bed rest
- plenty of fluids
- medication to reduce fever, such as paracetamol (do not take aspirin because of its blood-thinning properties).

Hospital admission is usually required if the person develops warning signs of more severe dengue. Treatment for these complications may include intravenous fluids and replacement of lost electrolytes.

Where to get help

- Your doctor
- **Smartraveller, Department of Foreign Affairs and Trade Travel Advice** Tel. 1300 139 281
- NURSE-ON-CALL Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)

This page has been produced in consultation with and approved by:

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