

Dengue factsheet

Dengue virus is transmitted to people by mosquitoes infected with the dengue virus. Dengue virus infection (also called dengue fever) involves severe flu-like symptoms. The virus and the types of mosquitos that spread it are found in tropical and sub-tropical countries of Asia, Africa and South America. Travellers to affected areas should avoid mosquito bites to prevent infection.

What is dengue?

Dengue is a viral infection that is caused by one of four dengue viruses (DENV-1, DENV-2, DENV-3 and DENV-4). The dengue virus can be spread by two species of mosquito: the Dengue mosquito (*Aedes aegypti*) and the Asian Tiger mosquito (*Aedes albopictus*). Dengue affects infants, children and adults.

What are the symptoms of dengue?

A person with dengue fever develops severe flu-like symptoms including:

- sudden fever
- chills
- severe headache with pain behind the eyes
- swollen glands
- muscle and joint pain
- extreme fatigue
- abdominal pain, nausea and vomiting
- a faint red rash sometimes develops on the upper body around the third day.

Symptoms can differ between infants, children and adults. People with dengue fever develop illness between 3 and 14 days (usually 4-7 days) after being bitten by an infectious mosquito. The fever typically lasts around 6 days. Severe dengue fever is rare but can lead to death if there are complications such as plasma leaking, fluid accumulation, respiratory distress, severe bleeding or organ impairment.

The warning signs to look out for occur 3-7 days after the first symptoms alongside a decrease in the fever (temperature below 38°C) include:

- severe abdominal pain
- rapid breathing
- blood in vomit
- persistent vomiting

- bleeding gums
- fatigue, restlessness.

If you have these symptoms, speak to your doctor or go to the emergency department immediately.

How is dengue spread?

People develop dengue fever after being bitten by a mosquito that is infected with the virus. The virus is not spread directly from person to person. The mosquito becomes infected when it bites a person who has dengue virus in their blood. The virus multiplies inside the mosquito and the mosquito will infect other people when it bites them. The virus may be present in the blood of a person bitten by a mosquito carrying dengue virus for between 3 and 14 days after being bitten. Dengue fever is occasionally transmitted through blood transfusions, tissue or organ transplants, by needlestick injuries or by mucous membrane contact with blood that is infected with dengue virus.

Who is at risk of dengue?

People who travel to dengue-affected areas are at risk of catching the disease. Dengue virus and the types of mosquitoes that spread it are found in tropical and sub-tropical regions of Asia, Africa and South America.

Most areas of Australia do not have the mosquitoes that can spread dengue virus, with the exception of Central and Far North Queensland (where the Dengue mosquito can be found) and in the Torres Strait (where the Asian Tiger mosquito can be found). Outbreaks of dengue fever happen in these areas of Queensland when someone is infected overseas, then is bitten by a local Asian Tiger mosquito or Dengue mosquito, and that mosquito passes the virus on to others.

People with dengue fever usually develop long-lasting immunity to that particular type of dengue virus but are still susceptible to infection with other types of dengue virus.

How is dengue prevented?

There is currently no vaccine to prevent initial dengue infection.

Secondary infection can be prevented with Dengvaxia®, however this dengue vaccine has strict eligibility criteria. Speak to your doctor regarding vaccination.

Protect yourself against mosquito bites with the following steps:

- wear light-coloured, long-sleeved shirts, long trousers and enclosed shoes. Mosquitoes can bite through tight clothing.
- Apply mosquito repellent containing picaridin, DEET or oil of lemon eucalyptus, evenly to all areas of exposed skin. Natural or homemade repellents provide limited protection. Read the instructions to find out how often you should reapply repellent. Always apply sunscreen first and then apply repellent.
- Take special care during peak mosquito biting hours.
- Remove stagnant water around the home as they can become mosquito breeding sites.
- Use mosquito nets, and screen windows and doors.

In addition to the general protection measures above, when travelling overseas or to areas in Australia where dengue mosquitoes can be found, you should also:

- Stay and sleep in screened or air-conditioned rooms.

- Use a mosquito bed net if the sleeping area is exposed to the outdoors. Effective nets are treated with a pyrethroid insecticide, such as permethrin. Pre-treated bed nets can be purchased before travelling, or nets can be treated after purchase.
- Be aware of and take special care during peak mosquito biting hours. Some species of mosquitoes such as *Aedes aegypti* will bite all throughout the day.
- Avoid known areas of high mosquito-borne disease transmission or outbreaks.

For mosquito bite prevention information, see the [Mosquitoes are a Health Hazard factsheet](#). The [Smartraveller website](#) also has health information for specific destinations. See the [HealthMap Dengue website](#) for a map showing areas where dengue has been reportedly recently or where dengue is known to be a risk.

How is dengue diagnosed?

Your doctor can take a blood sample and have it tested for dengue virus. A second blood test may be required to confirm a recent infection.

How is dengue treated?

There is no specific treatment for dengue fever. Patients should seek medical advice, rest and drink plenty of fluids. Paracetamol can be taken to bring down fever and reduce joint pains. However, aspirin or ibuprofen should not be taken since they can increase the risk of bleeding.

For severe dengue, emergency medical care is required for close monitoring and treatment in hospital.

What is the public health response?

Laboratories notify their local public health unit when they confirm someone has dengue fever. Public health units follow up each case to determine where the person acquired the infection. This information is important to help identify if transmission is occurring in areas considered to be low-risk and to prevent transmission. For further information on the public health response, please call your local public health unit on **1300 066 055**.

Additional resources

If you have symptoms of dengue fever and you are concerned, speak to your doctor right away, or in an emergency call Triple Zero (000).

For further advice:

- See [Mosquitoes are a health hazard Factsheet](#) and [Staying safe and healthy overseas](#)
- call your local public health unit on 1300 066 055
- call Healthdirect on 1800 022 222 for free 24-hour health advice
- speak to your local pharmacist.