

# Dengue

## What is dengue fever?

Dengue fever is a viral illness caused by infection with 1 of 4 types of the dengue virus. When a person recovers from dengue infection they develop a long-term (not always lifetime) immunity to that type, but not the other 3 types. If the person is infected again with a different virus type, they may develop the more severe form of the illness known as dengue haemorrhagic fever (DHF).

## How is it spread?

It is usually spread by the bite of an infected dengue, *Aedes aegypti* mosquito. There is no spread from human to human.

## Where and when is it found?

Dengue fever occurs in tropical and sub-tropical areas of the world, including north Queensland.

*Aedes aegypti* mosquitoes have not been established in the Northern Territory (NT) since the 1950s and there has been no dengue fever transmitted in the NT since then.

The mosquito is imported periodically into Darwin on overseas vessels such as cargo vessels, but has been detected and eliminated each time. Dengue mosquitoes were imported into Tennant Creek from Queensland in 2004, 2011 and 2021 and on Groote Eylandt in 2006. Surveys continue in the NT to ensure early detection and identification of any importation of this mosquito.

## What are the symptoms?

It usually takes 3 to 14 days (commonly 4-7 days) between getting bitten by a dengue virus infected mosquito and becoming sick.

### Dengue fever

Dengue fever is more commonly seen in older children and adults. It is characterised by abrupt onset of high fever lasting 3-7 days, severe frontal headache, pain behind the eyes and muscle and joint pains. Other symptoms may include loss of appetite, nausea, vomiting and diarrhoea, a blanching rash and sometimes minor bleeding (eg from nose and gums).

The acute symptoms of dengue fever last up to 10 days. Some people may experience repeated episodes of fever. While dengue fever is rarely fatal, full recovery may be slow and associated with weakness and depression.

## Dengue haemorrhagic fever

DHF is most commonly seen in children under 15 years of age but can also occur in adults. It begins with the same symptoms as dengue fever but is followed by rapid deterioration, bleeding and cardiovascular collapse 2-5 days later.

The duration of DHF depends on the severity of the illness and response to treatment, and it can be fatal.

## What is the treatment?

There is no specific treatment or vaccine.

Supportive treatment includes plenty of oral fluids and paracetamol for relief of fever and body aches and pains. Aspirin and non-steroidal anti-inflammatory drugs should not be used as they can affect blood clotting.

Anyone with DHF should be hospitalised for fluid replacement and observation.

## Things to know about dengue mosquitoes

Only the female mosquito transmits the virus. They are most active during daylight hours, and rest indoors and outdoors in dark and cool places.

Breeding sites are mainly around the home in containers that can hold water. The mosquito rarely flies more than 200 metres from its breeding site. They do not breed in ground depressions, swamps or above ground storm water drains.

The eggs of the mosquito capable of transmitting dengue are drought resistant and can last for months in receptacles that have previously held water. Transportation of pot plant saucers, old tyres and any formerly rain filled receptacles from north Queensland, where dengue mosquitoes exist, could introduce the mosquito into the NT.

## How to avoid getting dengue fever

Be aware of countries or areas where dengue fever is endemic. In our region dengue fever is well established in northern Queensland, southern Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, the Philippines, Thailand, Timor Leste and Vietnam. Make sure to take appropriate clothing and insect repellent to these areas when travelling.

## Residual spray

Outdoor barrier surface spray or similar can be purchased from supermarkets or applied by pest companies to kill adult mosquitoes harboured in or near the house. This is a residual surface treatment for use in dark sheltered areas or dark objects inside houses such as behind wardrobes or cupboards, under tables and chairs, and behind or on curtains. It can be sprayed on outdoor dark sheltered surfaces close to a house such as around the laundry area, in accumulations of rubbish or equipment, and in corners on verandahs. Any treatment should be carried out as per label rate and instructions.

## Personal protective measures

- Avoid areas of likely dengue mosquito activity.
- Ensure flyscreens in houses, caravans and tents are in good condition.
- Use protective clothing in outdoor situations including covering feet, legs and arms. Loose, light-coloured clothing is best.
- use personal repellents containing DEET, picaridin or extract of lemon eucalyptus (PMD) on areas of exposed skin in combination with protective clothing. Repellents only protect against mosquito bites for up to 4 hours, not all night.
- Use electric insecticide devices using repellent treated pads in indoor or enclosed areas.
- Use mosquito coils, or candle heated or gas operated devices using insecticide treated pads for patio and veranda or relatively sheltered or low wind outdoor situations.

## How to prevent dengue fever from being established in the NT

### Avoid importing or spreading mosquitoes

Spray any container or receptacle that has previously held water in north Queensland with a residual surface spray insecticide, or wipe thoroughly with a strong bleach or chlorine solution. Do not spray current eating or drinking utensils.

### Eliminate potential breeding sites

- Empty and apply surface spray to any old unused container that has held water e.g. tyres, plastic containers, black sheet plastic or pot plant drip trays. Store any containers upside down or undercover. Avoid using saucers or drip trays under pot plants or fill them with sand.
- Empty bird baths and pet drinking water at least weekly. Cover and completely seal septic tanks, rainwater tanks or other large water storage containers.
- Dispose of rubbish around the yard that may collect water e.g. plastic sheets or old tarpaulins, pot plant holders, old wheelbarrows, old tyres, and plastic containers of any type.
- Ensure roof gutters drain freely
- Fishponds with fish do not breed mosquitoes. Tadpoles do not eat mosquito larvae. Keep fishponds and frog ponds stocked with fish.

For more information on protection measures see [Personal protection from mosquitoes](#).

## Contact

For more information on mosquitoes and virus ecology contact Medical Entomology at the [Centre for Disease Control](#) on 8922 8901.

Centre for Disease Control:

Location	Phone
Darwin (Top End Region)	(08) 8922 8044 1800 008 002
Katherine (Big Rivers Region)	(08) 8973 9049
Tennant Creek (Central Australia Region)	(08) 8962 4259
Alice Springs (Central Australia Region)	(08) 8951 7540
Nhulunbuy (East Arnhem Region)	(08) 8987 0357