



# Chikungunya

## What is chikungunya?

Chikungunya is a viral disease which causes joint inflammation and general illness. It is caused by an arbovirus, of the alphavirus family, which also includes Ross River virus, Barmah Forest virus and the closely related O'nyong-nyong virus.

## Where is it found?

Chikungunya virus is found mostly in West and East Africa, around the Indian Ocean, Asia, and South East Asia. It caused outbreaks in India, Sri Lanka and Thailand in the 1960s. Chikungunya virus was relatively common in Southeast Asia in the 1960s, then died down, although localised sporadic cases continued in Burma, Thailand, and the Philippines. There was a resurgence in the 1980s and a spread to Indonesia, including the island of Timor, and Malaysia in the late 1990s. In 2005-6 there was a very large outbreak around the Indian Ocean, starting in the Comoros and spreading to Reunion, Mauritius, Seychelles, Madagascar and later spread to India and Java, Indonesia.

The disease occurs mainly during the rainy season especially in areas of high rainfall. There have only been imported cases of disease in Australia.

Since 1990 there have been 1 to 10 cases of chikungunya reported in the Northern Territory each year. All of these cases have been acquired outside Australia. The largest incidence was in 2010, when 10 cases were reported from travellers returning from Bali, Indonesia.

## How is it spread?

Humans and other primates are the natural host for chikungunya virus, which is spread by a bite from an infected *Aedes aegypti* or *Aedes albopictus* mosquito. These are the same mosquitoes which can carry the dengue

virus. The latter species was found in 2006 recently established in a number of islands in the Torres Strait, but is absent from the rest of Australia. *Aedes aegypti* is found routinely in Cairns and Townsville and is also present in other north Queensland towns. In the Northern Territory this species was briefly established and eradicated in Tennant Creek in March 2006 and in Groote Eylandt in May 2008. In November 2011 *Aedes aegypti* mosquitoes were found to established in Tennant Creek again and an elimination program is underway.

Chikungunya virus cannot be spread directly from person to person.

## What are the symptoms?

Symptoms start about 3 to 12 days after infection with the virus. They are flu-like, with fever, chills, and muscular aches. Other symptoms include a sudden severe headache, a flat rash on the arms, legs and trunk, fatigue and nausea or vomiting. The initial symptoms last for about 3 to 5 days, and if rash occurs, it usually lasts about 2 to 3 days.

There is pain or inflammation of the small joints of the hands and feet in about 80% of cases. Sometimes the joint pains can last for weeks to more than a month. The prolonged joint pain associated with chikungunya is not typical of dengue fever.

Complications involving the eye, heart or nervous system can occur.

***Symptoms can be very like those of dengue fever or Ross River virus disease, so suspect cases will need to have a blood test to check for these and chikungunya antibodies.***

## What is the treatment?

There is no specific treatment for chikungunya disease. Medicines such as painkillers and anti-inflammatory drugs can be given to help relieve the symptoms.

## How can it be controlled?

There is no vaccine available for widespread use at the moment.

The main way to prevent chikungunya in the NT is by preventing the importation, or establishment of the mosquitoes that can carry the virus.

The Medical Entomology Unit conducts exotic mosquito surveillance throughout the NT, and in port areas in cooperation with the Australian Quarantine and Inspection Service (AQIS). Sometimes these mosquitoes are imported on overseas vessels in cargo or drinking water, but these are eliminated on arrival by AQIS.

The eggs are laid in artificial receptacles containing fresh water such as water tanks, buckets, tyres, machinery, and pot plant drip trays.

Breeding of *Aedes aegypti* and *Aedes albopictus* are potentially higher during the Wet, but the mosquito eggs can survive in dry receptacles during the Dry.

## What can be done to reduce mosquito establishment?

### *Reduce potential breeding areas*

- Empty water containers or keep them out of the rain. Store empty containers upside down.
- Empty pot plant drip trays, bird-baths and pet drinking water once a week and clean thoroughly.
- Screen rainwater and septic tanks and keep covered and sealed.
- Check roof gutters do not have pools of water.
- Keep fish ponds stocked with fish.

## Personal protection

While in affected areas there are measures which should be taken to reduce the risk of mosquito bites.

- Avoid being outdoors between dusk and dawn to avoid mosquito bites, particularly in poorly lit areas, rural areas, or the outskirts of large towns.
- If accommodation is not well screened, sleep inside mosquito netting. Use insecticide impregnated bed nets and clothing in high risk areas.
- Avoid scents on the body, e.g. perfume, deodorants, and sweat, since these can attract mosquitoes.
- Use protective clothing in outdoor situations including covering feet, legs and arms. Loose, light coloured clothing is best.
- Use personal repellents containing DEET or picaridin on areas of exposed skin in combination with protective clothing.
- Use electric insecticide impregnated vapour pads in indoor or enclosed areas
- Use mosquito coils, or candle heated or gas operated allethrin impregnated pad mosquito protection devices in patio and veranda or relatively sheltered or low wind outdoor situations.

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

For more information contact your nearest Centre for Disease Control (CDC)

Darwin	8922 8044
Katherine	8973 9049
Tennant Creek	8962 4259
Alice Springs	8951 7540
Nhulunbuy	8987 0357

For more information on mosquitoes and virus ecology contact CDC, Medical Entomology on 8922 8901

Further fact sheets and treatment protocols available at: [www.nt.gov.au/health/cdc](http://www.nt.gov.au/health/cdc)