

# Murray Valley encephalitis

## What is Murray Valley encephalitis

Murray Valley encephalitis (MVE) is an uncommon but potentially fatal disease that occurs after being bitten by a mosquito carrying the MVE virus. It is one of the most serious mosquito-borne diseases that occurs in the Northern Territory (NT).

## How is MVE spread?

The MVE virus is spread by the bite of an infected mosquito (usually *Culex annulirostris*, also known as the common-banded mosquito). Only about 1 person in 1000 who is bitten by an infected mosquito will become seriously unwell with MVE. Most people experience no symptoms or very mild symptoms have also been reported.

## Where does MVE usually occur?

Although MVE can occur throughout Australia, it is most common in northern Australia.

The MVE virus is present from February to July in the Top End of the NT, north-west of Western Australia and inland North Queensland during most years, and can extend into the Barkly and Central Australia in wet years. Most cases are detected between March and May.

Mosquitoes can pick up the virus while feeding on animal reservoir hosts which are most commonly waterbirds, such as herons and egrets.

## What are the symptoms?

Symptoms of MVE usually appear 5 to 28 days after being bitten by an infected mosquito. The early symptoms include headache, fever, nausea and vomiting, and muscle aches, which can progress to drowsiness, confusion, and seizures (especially in young children). Severe cases may result in delirium and coma.

Many people with severe MVE virus disease will suffer permanent disability caused by damage to the central nervous system.

## Who is at risk?

People most at risk are babies, young children and newcomers to a region where MVE occurs.

## How is it diagnosed?

A blood test is available to test for recent or past MVE infection.

## What is the treatment?

There is no specific treatment or vaccine available for MVE. The treatment of severe MVE is supportive and often requires admission to an intensive care unit.

## How can MVE be prevented?

Try to reduce the number of places with standing water on your property where mosquitoes can breed.

The only protection from MVE is to avoid being bitten by mosquitoes. Everyone should take measures to avoid being bitten by mosquitoes and protection for young children and babies is absolutely essential.

## Personal protective measures

- avoid outdoor exposure between dawn and dusk, especially if within 2 km of wetlands or flooded areas
- ensure flyscreens in houses or caravans are in good condition
- if camping, sleep in a mosquito-proof tent or under a mosquito net. Repellents only protect against mosquito bites for up to four hours, not all night
- use personal repellents containing DEET, picaridin or extract of lemon eucalyptus (PMD) on areas of exposed skin in combination with protective clothing.
- use protective clothing that covers feet, legs and arms. Loose, light-coloured clothing is best.
- 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. use mosquito coils or mosquito lanterns with insecticide treated pads for small and sheltered outdoor areas

For more information on protection measures see [Protecting yourself against mosquitoes](#).

## Contact

For more information contact your nearest [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