
Murray Valley encephalitis

Summary

- Murray Valley encephalitis (MVE) is a serious disease spread by mosquito bites.
 - MVE can lead to brain damage or death in severe cases.
 - The only protection from MVE is to avoid mosquito bites.
 - When outdoors, use insect repellents containing DEET or picaridin and cover up with loose-fitting clothing.
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Murray Valley encephalitis (MVE) is a serious disease spread by the bite of an infected mosquito. As with other forms of encephalitis, it can cause inflammation (swelling) of the brain tissue, which can lead to brain damage or death. In many cases, however, the person makes a full recovery. The only protection from MVE is to avoid mosquito bites.

How MVE spreads

The MVE virus is spread by the bite of an infected mosquito (usually *Culex annulirostris*, also known as the 'common banded' mosquito). Not all of these mosquitoes carry the virus and only about one person in 1,000 who gets bitten by an infected mosquito will get the disease. Diseases such as MVE that are spread by insects are known as 'vector-borne' diseases. Most mosquitoes don't carry disease and are just a nuisance. MVE cannot be caught from other animals or transferred between humans.

Symptoms of MVE

Many people who get MVE show no symptoms.

For those that do, it can take around five to 28 days between getting bitten and becoming sick. Symptoms include:

- high fever
- nausea and vomiting
- severe headache
- seizure or fits (especially in young children)
- neck stiffness
- drowsiness
- confusion.

In severe cases, delirium and coma can follow.

Where MVE usually occurs

MVE is native to and always present in northern Australia, and cases are reported from time to time. In Victoria, the last recorded human cases occurred in 1974.

Periods of heavy rainfall or flooding can lead to ideal breeding conditions for mosquitoes, even in non-tropical areas. Such conditions raise the possibility of mosquito-borne diseases such as MVE and may cause community concern.

Diagnosis of MVE

MVE is primarily diagnosed through a blood test or a lumbar puncture (also known as a spinal tap).

Treatment for MVE

There is no specific treatment or vaccine available for MVE. Treatment is supportive only (for example, aims to ease symptoms or boost your general health to fight the virus). Your doctor will decide with you what treatment is best suited to your situation.

The severity of MVE can vary from person to person. Generally, the acute phase of the illness lasts around one or two weeks and the symptoms either disappear quickly or subside slowly over a period of time. In many cases, the person makes a full recovery. In other cases, the person can be left with varying degrees of brain damage, which may require long-term supportive care and therapy.

Prevention of MVE

The only protection against MVE is to avoid mosquito bites.

To protect yourself and your family from mosquito bites:

- Avoid being outside when mosquitoes are most active, usually before dawn and around sunset (from just before and until two hours after).
- Wear, loose-fitting clothing with long sleeves, long trousers and socks (mosquitoes can bite through tight-fitting clothes).
- Put mosquito repellent containing DEET (diethyl toluamide) or picaridin onto exposed areas of skin. Lotions and gels work better and can be easier to apply than sprays, but all are effective.
- On young children, insect repellents are safest if rubbed or sprayed on clothing rather than skin. Don't spray on the skin of children under one year of age. Choose repellents that contain no more than 10 per cent DEET. Repellents should not be used on infants less than two months old. Consult with your doctor or pharmacist for further advice and always follow the product instructions.
- Make sure flywire screens in houses or caravans don't have holes in them.
- When camping, sleep in a mosquito-proof tent or under a mosquito net.

Where to get help

- In an emergency dial 000 for an ambulance.
- Your **GP (doctor)**
- **NURSE-ON-CALL** Tel. **1300 60 60 24** – for confidential health advice from a registered nurse, 24 hours a day, 7 days a week
- **Department of Health and Human Services, Communicable Disease Epidemiology and Surveillance Unit** Tel. **1300 651 160**
- Your local council – for information about mosquito control programs in your area
- **Beat the bite**

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

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