Murray Valley encephalitis

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 it 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 like 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 between humans.

Symptoms

Many people who get the virus show no symptoms.

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

- High fever
- 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 endemic (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 led to ideal breeding conditions for mosquitoes, even in non-tropical areas. Such conditions raise the possibility of mosquito-borne diseases like MVE and may cause community concern.

Diagnosis

MVE is primarily diagnosed through a blood test. Always see your doctor if you have any concerns about your health.

Treatment

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.

Long-term outlook
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**

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 light-coloured, 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 last longer than sprays.
- 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 2 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 or advice**

- Your 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
- Always call an ambulance in an emergency Tel. 000 (triple zero)
- Department of Health, Communicable Disease Prevention and Control Unit Tel. 1300 651 160
- Your local council – for information about mosquito control programs in your area

**Things to remember**

- 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 light-coloured, loose-fitting clothing.

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

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