



# Japanese encephalitis virus (JEV)

## Protecting yourself from JEV

Japanese encephalitis is a rare disease caused by the Japanese encephalitis virus (JEV). JEV is spread through mosquito bites.

Since it was first detected in Australia in 1995, human cases of JEV acquired in Australia have been very rare. Since 1 January 2021, human cases have been notified in Victoria, New South Wales, Queensland, South Australia and the Northern Territory.

A small number of people have died of JEV in Australia during the current outbreak.

Most people infected with JEV do not experience any symptoms, but some may experience severe illness and very rarely, permanent neurological complications or death.

Avoiding bites from mosquitoes is the best protection against JEV. Where people are at increased risk of exposure, there are two different vaccines available that are safe and effective for adults and children. Vaccines should be used alongside other protective measures described in this factsheet.

### The JEV lifecycle

JEV is spread through bites from mosquitoes, which become infected through biting infected pigs and waterbirds. Other animals, such as horses may also become infected, if near a source of JEV-infected mosquitoes.

- The virus can only spread to humans through bites from mosquitoes that have fed on infected birds or animals.
- It cannot be spread from person to person, or by eating meat from an infected animal.

- Animals such as pigs cannot directly pass the virus to humans.
- Once infected, people and horses do not play a role in transmitting the virus.

### Protection against JEV this summer

For most people, avoiding mosquito bites is the best way of protecting themselves against JEV. Australians travelling over summer to locations such as lakes, creeks, rivers and dams, should be aware of mosquito activity and take special care when mosquitoes are active at dawn, dusk or in cool, shaded areas during the day.

People should also be vigilant around areas where animals that can infect mosquitoes with JEV – such as waterbirds and pigs – are present.

These simple measures are effective for keeping mosquitoes at bay:

- Apply and reapply an effective mosquito repellent containing DEET, picaridin or Oil of Lemon Eucalyptus on exposed skin.
- Wear long, loose fitting clothing when outside.
- Use insecticide sprays, vapour-dispensing units (indoors) and mosquito coils (outdoors) to clear rooms and repel mosquitoes from an area.
- Cover all windows, doors, vents and other entrances with insect screens in homes and when camping.
- Remove or empty containers or other items such as tyres which may hold stagnant water where mosquitoes can breed around homes and at campsites.



- Always follow the directions on product labels to ensure you are using repellants and insecticides appropriately.

## Symptoms of JEV infection

Most JEV infections are asymptomatic, but some people may experience severe illness and very rarely, permanent neurological complications or death.

- Some infected people experience fever, headache and vomiting. Those with a severe illness may also experience neck stiffness, disorientation, tremors, coma, convulsions (especially in children) and paralysis.
- Symptoms usually develop 5 to 15 days after a person has been bitten by infected mosquitoes.
- If you or someone you know are experiencing symptoms of JEV infection, seek medical attention immediately.

## Vaccination

You can protect yourself against JEV by getting vaccinated.

State and territory public health units are coordinating and implementing JEV vaccination programs for those most at risk of infection.

Eligibility varies across states and territories. At the beginning of the outbreak, JEV vaccination was initially prioritised for those with occupational and/or relevant animal exposure risk.

Eligibility criteria has recently expanded in a number of states and territories to include those living or working in particular regions, and who spend a significant period of time each day outdoors.

To check if you are eligible for a JEV vaccine, contact your local public health authority.

In Australia, two JE vaccines are registered for use: Imojev (Sanofi Pasteur) – single-dose, live attenuated virus vaccine (which cannot be given to some people, such as pregnant women and those who are immunocompromised); and JEspect (Seqirus) – two-dose (inactivated)

vaccine which requires a 28-day interval between doses.

## Origins of JEV

The first documented case of JE was in 1871 in Japan. This is where the virus gets its name.

For information and resources visit the [Department of Health and Aged Care website](#).