

Japanese encephalitis - information for pig producers and owners

WHAT IS JAPANESE ENCEPHALITIS?

Japanese encephalitis is a mosquito-borne viral disease that can cause reproductive losses and encephalitis in susceptible animal species. It is caused by Japanese encephalitis virus which is a member of the Flavivirus genus.

How is it transmitted?

The virus is primarily spread by mosquitoes feeding on infected pigs or some species of water birds and does not usually spread directly from animal to animal (i.e. it is not contagious from animal to animal, animal to human or human to human). Certain types of mosquitoes can become infected with JE virus such as *Culex* spp. and these tend to be most active at dawn and dusk.

Pigs with the infection do not transmit the infection to other animals but may infect mosquitoes if bitten while they still have the virus in their blood.

Other livestock such as horses, cattle, sheep and goats are dead end carriers and cannot transmit the disease back to mosquitoes.

In general, spread is through the movement of some waterbirds (herons and egrets) and through the movement of infected mosquitoes, often over long distances due to wind dispersal.

WHAT HAPPENS IF I HAVE A SUSPECTED OR CONFIRMED ANIMAL INFECTION ON MY PROPERTY?

Farmers should report any cases of unexplained pig deaths, especially piglets, or any suspected JE symptoms in any animal to the 24-hour Emergency Animal Disease Watch Hotline on 1800 675 888, to a vet or to Agriculture Victoria animal health staff.

What are the symptoms of Japanese encephalitis in pigs?

In pigs the virus affects reproductive performance. Adult sows do not appear to be ill but if infected before 60 - 70 days of pregnancy often either abort or give birth to mummified and stillborn or weak piglets, some with neurological signs. In a naïve population, litters from sows and gilts would be expected to be equally affected.

Boars may experience infertility and swollen, congested testicles.

How does the testing process work?

If you suspect Japanese encephalitis in any animal, phone the all-hours Emergency Animal Disease Watch Hotline 1800 675 888.

Agriculture Victoria will arrange for staff to attend your property to collect samples for testing. Laboratory testing is undertaken at both the state and national Diagnostic laboratories and may take from approximately three days to up to a couple of weeks to complete, depending on the type of samples submitted.

If samples from your pigs return a positive result for Japanese encephalitis virus, you will be contacted by Agriculture Victoria staff and will be provided with further advice and information.

Will livestock movements be impacted?

No. There will be no quarantines or controls on the movement of pigs or pig semen from affected farms.

How can I protect my pigs from Japanese encephalitis?

Japanese encephalitis virus is spread primarily through biting insects. There is a possibility of transfer of virus from an infected and viraemic pig to another animal via management practices that involve penetrating the skin, e.g. vaccination, blood collection, etc.

Reducing mosquito habitats and exposure to mosquitoes is an important part of breaking the transmission cycle.

[Integrated vector control practices](#) including the use of insecticides can reduce insect numbers and minimise further spread of the virus.

To minimise the risk of spreading the virus through management practices avoid reusing needles between animals when injecting and thoroughly wash and decontaminate other equipment between animals.

Is there a vaccine available for my animals?

Vaccines for pigs are used in some countries where the disease is endemic. No vaccines for animals are registered for use in Australia. The issues around vaccination of pigs are under consideration.

WHAT HAPPENS IF MYSELF OR MY STAFF ARE INFECTED WITH JAPANESE ENCEPHALITIS?

What are the symptoms of Japanese encephalitis in humans?

More than 99 per cent of JE virus infections are asymptomatic (show no signs of disease). Less than one per cent of people infected with JE virus develop clinical disease.

A small number of people infected with JE virus may become seriously ill with encephalitis (inflammation of the brain).

Other people may develop an illness with fevers, headaches and aches and pains.

Symptoms of encephalitis may include rapid onset of fever, headache, sensitivity to light, neck stiffness, vomiting, confusion or disorientation and sometimes seizures, progressing to coma. Anyone experiencing symptoms, particularly if they've visited regions near the border of Victoria and New South Wales or been in contact with pigs or with mosquitoes should seek urgent medical attention.

What should I do if I suspect I have Japanese encephalitis?

Anyone experiencing these symptoms, particularly if they've visited northern and north-west Victoria or southern New South Wales, along the Murray River and its surrounds, or been in contact with pigs, should seek urgent medical attention.

More public health advice is available on the Department of Health [website](#).

How do I protect myself from Japanese encephalitis?

There are two ways to protect yourself, your family, and staff: avoiding mosquito bites and vaccination.

- Wearing long, loose-fitting clothes outdoors
- Using mosquito repellents containing picaridin or DEET on all exposed skin
- Limiting outdoor activity if lots of mosquitoes are about
- Using 'knockdown' fly sprays and plug-in repellent devices indoors
- Using mosquito coils in small outdoor areas where you gather to sit or eat
- Making sure there is no stagnant water around your home.

Dusk and dawn are when most mosquitoes are more active but some will also bite during the day.

For more information go to the [Protect yourself from mosquito-borne disease](#) page on the BetterHealth channel website.

People handling newborn litters on farms should wear PPE (gloves, masks and goggles), particularly when handling stillbirths, mummified piglets, and afterbirth.

Will a vaccine be available for me and my staff?

In Victoria, stated-funded JE vaccine will be available free-ofcharge for people who may be at risk of exposure to the JE virus including those who may have occupational exposure to the virus or those travelling to endemic areas overseas or to the Torres Strait.

JE vaccinations will be provided by selected General Practitioners (GP) across Victoria.

If you would like further assistance locating a GP service please email your closest Local Public Health Unit (LPHU).

For a list of contacts of relevant participating LPHU go to the [Japanese encephalitis virus](#) page on the Department of Health website.