



Hendra virus information for horse owners



What is Hendra virus?

Hendra virus is a zoonotic disease, which means it can transfer from animals to people. Hendra virus can cause disease in horses but only rarely causes disease in humans.

How Hendra virus is transmitted

Hendra virus can be transmitted from flying fox to horse, horse to horse and horse to human.

While the exact route of transmission is not known, it is thought that horses contract Hendra virus by ingesting material contaminated by infected flying fox body fluids and excretions.

Hendra virus has the potential to spread from horse to horse. This can occur through direct contact with infectious body fluids, or indirect contact via contaminated equipment that could transfer infectious body fluids from one horse to another.

The few cases of Hendra virus infection in people have been the result of very close contact with respiratory secretions (e.g. mucus) and/or blood from an infected horse. Other people have reported having some contact with infected horses but have remained well, and their blood tests have shown no evidence of Hendra virus infection.

There is no evidence of Hendra virus spreading from person to person or from flying fox to human.

The scientific information available on the disease is not complete and research continues to learn more about Hendra virus—particularly about how it is transmitted from flying foxes to horses.

The facts about Hendra virus

While Hendra virus is present in flying fox populations, the risk of horses being infected is very low. Hendra virus is not related to equine influenza or Australian bat lyssavirus.

Hendra virus antibodies have been identified in a dog, which indicates that the dog has been exposed to Hendra virus. There is no evidence of dogs excreting the virus. Dogs that have been injected with Hendra virus in an experimental setting have not shown any clinical evidence of infection.

While cats, guinea pigs, ferrets and pigs have been infected experimentally with Hendra virus, the virus has not been known to occur naturally in these animals (note that it is illegal to keep ferrets in Queensland).

Hendra virus and horses

How to reduce the risk of horses becoming infected

- Horse feed and water containers should be removed from under trees. If possible, place feed and water containers under a shelter.
- Owners should inspect and identify flowering/fruited trees on their property. Horses should be removed from paddocks where flowering/fruited trees are attracting flying foxes. Horses should be returned only after the trees have stopped flowering/fruited and the flying foxes have gone. If horses cannot be removed from the paddock, consider fencing (temporary or permanent) to restrict access to flowering/fruited trees. Clean up any fruit debris underneath the trees before returning horses.
- If it is not possible to remove horses from paddocks, try to temporarily remove your horses during times of peak flying fox activity (usually at dusk and during the night).
- Ensure that sick horses are isolated from other horses, people and animals until a veterinarian's opinion is obtained.
- If there is more than one horse on your property, handle unaffected horses first and then only handle sick horses after taking appropriate precautions (see under *Personal protective equipment* and *How to reduce the risk of people becoming infected* in this brochure).
- Make sure gear exposed to any body fluids from horses is cleaned and disinfected before it is used on another horse. This includes things like halters, lead ropes and twitches. Talk to your veterinarian about which cleaning agents and disinfectants to use.
- When cleaning contaminated equipment from a sick horse, wear gloves, cover any cuts or grazes and wash your hands thoroughly afterwards.
- It is essential that horse owners practise good biosecurity and not travel with, work on or take sick horses to other properties or equestrian events.
- Do not allow visiting horse practitioners (e.g. farriers) to work on sick horses.
- Seek veterinary advice before bringing any sick horse onto your property.

Signs of Hendra virus in horses

Hendra virus can cause a broad range of signs in horses. Hendra virus infection should be considered in any sick horse where the cause of illness is unknown and particularly where there is rapid onset of illness, fever, increased heart rate and rapid deterioration associated with either respiratory or nervous signs.

The following signs have all been associated with Hendra virus cases, but not all of these signs will be found in any one infected horse:

- rapid onset of illness
- increased body temperature/fever
- increased heart rate
- discomfort/weight shifting between legs
- depression
- rapid deterioration with either respiratory and/or nervous signs.

Respiratory signs include:

- respiratory distress
- increased respiratory rate
- nasal discharge at death—can be initially clear, progressing to stable white froth and/or stable blood-stained froth.

Nervous signs include:

- wobbly gait
- apparent loss of vision in one or both eyes
- aimless walking in a dazed state
- head tilting and circling
- muscle twitching
- urinary incontinence
- inability to rise.

Information on the confirmed cases to date suggests some horses will survive acute Hendra virus infection.

Who to contact if you suspect a horse has Hendra virus

If you suspect your horse has Hendra virus, personal protective equipment must be worn prior to making any contact with the sick horse. A veterinarian should be immediately contacted. If you are unable to reach a veterinarian, notify a government veterinarian or Biosecurity Queensland officer (there is a legal obligation to do this). Clearly explain that you are calling to notify a suspected case of Hendra virus infection. Let the officer know if there has been human exposure to body fluids from the sick horse.

Notify suspected cases by contacting:

- **Biosecurity Queensland** on **13 25 23** (business hours)
- **Emergency Animal Disease Watch Hotline** on **1800 675 888** (24-hour hotline).

What to do while waiting for Hendra virus test results

If your veterinarian considers your horse may have Hendra virus, they will take samples from your horse for testing at a government laboratory. Initial test results are usually available 1–2 working days after the laboratory receives the samples from your veterinarian.

While you are waiting for test results:

- Avoid close contact with the horse under investigation and other horses that have been in contact with it. Wait until your veterinarian has advised you of the test results.
- If you must have close contact with a horse under investigation, always take the precautions outlined under *Personal protective equipment* and *How to reduce the risk of people becoming infected* in this brochure.
- Isolate the horse that is under investigation from other animals if it is safe to do so. Ideally, leave the sick horse where it is and move other animals to a different area of the property.
- If you need to provide feed and water for any horses on the property, do this from a distance.
- Observe horses from a distance and notify your veterinarian immediately of any change in the health status of any horses on the property.

If the test result is negative, your veterinarian may wish to take further samples to investigate your horse's illness. You should continue to monitor your horse and notify your veterinarian immediately of any change in the health status of any horses.

What will happen if a horse on your property tests positive for Hendra virus

If a test result is positive for Hendra virus, Biosecurity Queensland will work with you and your veterinarian to manage the situation.

The affected property will be placed under quarantine by Biosecurity Queensland and the following steps will be taken:

- Horses will not be allowed to enter or leave the property without permission from a Biosecurity Queensland inspector.
- Horses assessed as being at risk on the property will be tested for Hendra virus and their health status assessed and monitored.
- Any horses that have moved off the property in the last few weeks will be traced and may be tested for Hendra virus.
- Neighbouring properties with horses will also be assessed for the risk of exposure to Hendra virus. Testing and monitoring may be carried out and movement restrictions applied as a result of this assessment.
- As the horse owner, it is your responsibility to meet the general husbandry needs of your horses during the quarantine period, including treatment of non-Hendra virus illnesses or injuries.
- Other animals on the property may be tested for Hendra virus, including pets (*see Hendra virus and other animals* in this brochure).

Once there is substantial evidence that no animals are infected with Hendra virus, the quarantine on your property will be lifted.

Biosecurity Queensland will notify Queensland Health of the situation. Queensland Health will coordinate risk assessments and appropriate follow-up for people involved.

Transporting horses and horse events

Hendra virus is not highly contagious and the horse industry is not subject to movement restrictions for Hendra virus, except for any properties under quarantine.

If you are organising or competing in a horse event, ensure that good biosecurity measures are followed to minimise the risk of spreading disease.

Event organisers should, as a minimum:

- prepare and implement a biosecurity plan
- collect information on all horses attending events
- maintain strict biosecurity at events
- not allow sick horses to attend events.

Competitors should always practise good biosecurity and hygiene for themselves and their horses and should not take sick horses to events. For more information call **13 25 23** or visit www.biosecurity.qld.gov.au

Property registration

All landholders that have one or more horses on their property are required to register that property with Biosecurity Queensland. Make sure you update your details if your circumstances change. To obtain the necessary forms, call **13 25 23** or visit www.biosecurity.qld.gov.au

Hendra virus and other animals

If your horse becomes ill, particularly if it has been exposed to Hendra virus, it is recommended that other animals be isolated from horses on the property to reduce their potential exposure to the virus. People should have limited access to all animals that are undergoing testing for Hendra virus.

Biosecurity Queensland's policy is to test and monitor at-risk animals (e.g. dogs, cats, pigs) on quarantined properties that have had, or are likely to have had, close contact with horses suspected or known to be infected with Hendra virus.

If you are not located on a property quarantined for Hendra virus, the risk of companion animals contracting Hendra virus is very low. If your companion animal becomes ill in this situation, contact a veterinarian.

Hendra virus and people

Personal protective equipment

The potential seriousness of Hendra virus for humans requires that appropriate measures be implemented to prevent infection.

Sound hygiene and biosecurity (animal disease control) measures should be adopted as a routine work practice for all horse contact.

Personal protective equipment (PPE) is an important part of personal safety when dealing with sick animals. PPE must be worn if you suspect your horse is sick, or if any invasive work is being performed on the horse. Use PPE correctly and always wash your hands thoroughly after removing PPE.

If you own a horse you should always have a PPE kit at your property. You can purchase the items for a PPE kit from most hardware stores.

Always have the following in your kit:

- hand cleansers
- soap
- disinfectants
- waste disposal bags
- disposable gloves
- overalls
- rubber boots
- facial shields
- safety glasses
- P2 respirator (particulate respirator)—this is the minimum level of recommended respiratory protection. Surgical masks do not provide respiratory protection.

If your veterinarian is visiting a sick horse on your property, remind them to bring and wear their own PPE. They can also help you obtain PPE.



Veterinary information kits

Biosecurity Queensland's *Hendra virus—veterinary practice pack* is a useful source of information for veterinarians. The *Guidelines for veterinarians handling potential Hendra virus infection in horses* is another valuable tool for veterinarians. Both are available to download at www.biosecurity.qld.gov.au

How to reduce the risk of people becoming infected

- Ensure safe systems of work are routinely used for all contact with horses, their blood and body fluids and associated equipment. This includes:
 - regular hand washing
 - maintaining standards of cleanliness and stable hygiene
 - cleaning and disinfecting equipment that has been in contact with horses' body fluids.
- If you have a sick horse, isolate the horse from other horses, people and animals (e.g. remove companion animals to another area) until you have obtained a veterinary opinion.
- Avoid close contact with the horse under investigation and other horses that have been in contact with it. Wait until your veterinarian has advised you of the test results.
- If you must have close contact with a horse under investigation, always take the following precautions:
 - Cover cuts and abrasions with a water-resistant dressing.
 - Put on all of the wearable PPE in your kit before approaching the horse.
 - After handling any horse, remove and dispose of PPE carefully, making sure there is no contact with your facial area, particularly your eyes, mouth and nose.
 - Immediately wash your hands with soap and water and dry or use hand wipes and waterless hand hygiene solution.
 - Carefully remove any clothing contaminated with a sick horse's body fluids.
- If you have handled a sick horse, before having contact with other horses:
 - wash off any contamination with plenty of soap and water
 - shower and wash your hair
 - change your clothes and footwear.
- Arrange your activities so that you handle unaffected horses first and have contact with the sick horse last.

Signs of Hendra virus in people

The few known cases of human Hendra virus infection have shown the following signs:

- an influenza-like illness (which led to pneumonia in one case) with symptoms such as fever, cough, sore throat, headache and tiredness
and/or
- encephalitis (inflammation of the brain) with symptoms such as headache, high fever and drowsiness, which progressed to convulsions and/or coma and death.

The time from a person's exposure to a sick horse to the start of illness has been between five and 21 days.

Who to contact about human health concerns

If you have human health concerns at any time, you should seek medical advice. Contact your general practitioner, local hospital emergency department or local public health unit if you have concerns about possible exposure of people to a horse infected with Hendra virus. For general enquiries about Hendra virus infection in humans, call the **Queensland Health Hotline on 13 HEALTH (13 43 25 84)**.

Managing the risk in the workplace

Workplace health and safety measures should be implemented at workplaces where there is occupational contact with horses.

Hendra virus requires careful risk management. You should develop a plan for responding to a suspect or confirmed case of Hendra virus at your workplace. The plan should include how you will minimise the risk to yourself, any employees and others such as visiting horse practitioners (e.g. farriers). You should then train your workers in implementing the plan.

Sound hygiene and biosecurity measures should be adopted as a routine work practice for all horse contact.

For more information about managing the risk of Hendra virus in the workplace, contact **Workplace Health and Safety Queensland on 1300 369 915** or visit www.worksafe.qld.gov.au

Hendra virus and flying foxes

Queensland has four native species of flying foxes: the grey-headed, black, little red and spectacled.

Hendra virus occurs naturally in flying foxes; however, these animals should not be targeted for culling. Flying foxes are protected species and are critical to our environment as they pollinate our native trees and spread seeds. Without flying foxes, we wouldn't have our eucalypt forests, rainforests and melaleucas.

Any unauthorised attempts to disturb flying fox colonies are not only illegal but also ineffective for a number of reasons:

- Flying foxes are an important part of our natural environment.
- Flying foxes are widespread in Australia and are highly mobile.
- There are more effective steps people can take to reduce the risk of Hendra virus infection in horses and people.
- Attempts to cull flying foxes could make the problem worse by further stressing them and causing increased excretion of Hendra virus.

For more information about flying foxes, contact the **Department of Environment and Resource Management on 1300 130 372** or visit www.derm.qld.gov.au

Flying foxes and trees

Flying foxes are attracted to a broad range of flowering and fruiting trees and vegetation as a food source.

Some examples of the trees and vegetation on Queensland properties where Hendra virus in horses has occurred include:

- a range of fig trees (including the Moreton Bay fig tree)
- melaleucas (including paperbarks)
- eucalypts
- wattles
- passionfruit vines.

Other trees that may attract flying foxes include flowering or fruiting trees with soft fruits and stone fruits (e.g. mangoes, pawpaws), palms, lilly-pillies and grevilleas.

Please note this is not an exhaustive list of trees that are attractive to flying foxes. This will vary with the geographical area. Trees that are attractive to flying foxes should be identified on a property to assist the management of horses.

