



What is Hendra virus?



Hendra virus (HeV) was first isolated in 1994 from an outbreak that occurred in a racing stable in the suburb of Hendra, Brisbane. Hendra virus is a cause of sporadic disease in horses and humans.

HeV is a zoonotic disease, which means it can transfer from animals to people. Dealing with HeV involves important public health and workplace health and safety issues, and careful management is a requirement of any possible HeV situation.

The scientific information available on the disease is not complete because of the small number of HeV cases recorded around the world. Research is ongoing in order to find out about the virus and how it is transmitted from flying foxes (fruit bats) to horses.

Facts

The following are facts about HeV:

- While HeV is present in flying fox populations, the risk of horses being infected is very low.
- HeV is a cause of sporadic disease in horses and humans, and is not related to equine influenza or rabies.
- While cats have been infected experimentally with HeV, the virus has not been known to occur naturally in these animals.
- **In previous situations where HeV has been confirmed, no cases of the virus infection have been found in animals other than horses.**
- The few cases of HeV infection in humans have been the result of very close contact with horses infected with the virus. Body fluids or secretions from an infected animal are likely to contain the virus.
- There is no evidence of human-to-human spread of HeV.

- Since 1994, HeV has been confirmed only 11 times, involving about 40 horses and 6 humans.
- Symptoms in horses may include respiratory signs, a temperature higher than 40 °C or neurological changes (including abnormal muscle twitching, weakness and loss of balance).
- HeV is normally carried by flying foxes; **however, these animals should not be targeted for unnecessary culling.** These animals are critical to our environment. They pollinate our native trees and spread seeds. Without them, we wouldn't have our eucalypt forests, rainforests and melaleucas.

What to look for

HeV can cause a broad range of symptoms in horses. **HeV should be considered where there is rapid onset of illness, fever, increased heart rate and rapid deterioration associated with either respiratory or neurological signs.** Occasionally horses will survive HeV infection.

HeV is much more likely to occur in a single sick or dead horse rather than in a number of affected horses. In paddock situations to date, the majority of HeV cases have involved one infected horse that died without any companion horses becoming infected. However, on two occasions one or more companion horses have become infected after close contact with the first infected horse prior to or at the time of death.

It appears that HeV has the potential to spread to other horses either through direct contact with infectious body fluids, or through indirect contact with contaminated equipment that could transfer any body fluid from one horse to another. Two incidents in stables (Hendra 1994 and Redlands 2008) have resulted in multiple infections.

Symptoms

The following symptoms have all been associated with HeV cases, but not all of these symptoms 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.**

Respiratory signs include:

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

Neurological 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.**

A range of other observations have also been recorded in individual horses infected with HeV.

The following points, when combined with the above signs, could also support suspicion of HeV:

- Where there are multiple cases, a high rate of deaths occurs within 48 hours.
- Some cases have initially been reported as colic.
- There are flying foxes in the area, although a lack of sightings does not exclude HeV.

If you see these symptoms:

- Call your local veterinarian, or Queensland Primary Industries and Fisheries (QPIF) on **13 25 23**.
- Shower and change clothes if you have handled a sick horse.
- Stay away from other horses.

Reducing the risk

Take the following steps to reduce the risk of your horses becoming infected with HeV. This advice is based on our current understanding of the virus.

When more information is gathered through research, more specific advice will be available. In the meantime, the following steps are about reducing contact with items that may be contaminated by the body fluids of flying foxes:

- Place feed and water containers under cover if possible.
- Do not place feed and water containers under trees, particularly if flying foxes are attracted to those trees.
- Do not use feed that might be attractive to flying foxes if they are known to be in the area. Fruit and vegetables (e.g. apples, carrots) or anything sweet (e.g. molasses) may attract flying foxes.
- If possible, remove horses from paddocks where flowering trees have resulted in a temporary surge in flying fox numbers. Return the horses after the trees have stopped flowering.
- If removal of horses from paddocks is not possible, try to temporarily remove your horses during times of peak flying fox activity (usually at dusk and during the night).
- Keep any sick horse isolated from other horses, people and animals until you have obtained a veterinary opinion.
- Do not allow visiting horse practitioners (farriers etc.) to work on sick horses. They should only work on healthy horses.
- If there is more than one horse on your property, handle unaffected horses first and then only handle sick horses after taking appropriate precautions.
- 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 vet about cleaning agents and disinfectants to use.
- Wash your hands with soap and water regularly during and after handling multiple horses.
- If in contact with sick horses, shower with soap and shampoo and dress in clean clothes and footwear before handling other horses.
- Seek veterinary advice before bringing any sick horse back to your property.

Personal safety

People have been exposed to HeV while handling infected horses (including sick live horses and dead horses at autopsy examinations). A major problem has been handlers not considering HeV at the time, and thus exposure occurring before the horse was diagnosed.

This means that people need to be aware and carefully consider their safety whenever HeV is suspected. HeV can cause a life-threatening illness. You should therefore be cautious with suspected HeV cases and ensure the personal safety of yourself and others:

- In particular, treat blood and other body fluids (especially lung and nasal discharges, saliva and urine) and tissue as potentially infectious and take precautions to prevent any direct contact with, or splashback of, these body fluids.
- Protect all exposed skin, mucous membranes and eyes from direct contact and cover cuts and abrasions with a water-resistant dressing.

Personal protective equipment

Personal protective equipment (PPE) is an important part of personal safety when dealing with HeV.

However, some PPE items (such as particulate respirators) require proper instruction and training in their wearing and use. Unless you have been trained in the proper use of PPE, your best defence is to isolate your horse, wash any contamination off yourself and wait for professional help to arrive.

If your property is quarantined for HeV, Biosecurity Queensland officers will work with you to ensure a program is put in place and you wear adequate PPE when required.

Who to call

If you as a horse owner or carer suspect HeV, you should immediately contact your local veterinarian. If you are unable to reach your veterinarian, you should notify a government biosecurity inspector (there is a legal obligation to do this). If it appears that human illness may be associated with the case, you should also include this information. Remember, notification is also an opportunity to seek professional advice.

Notify suspected HeV cases by contacting:

- QPIF on **13 25 23** (during business hours)
- the emergency animal disease watch hotline on **1800 675 888** (24-hour hotline).

Clearly explain that you are calling to notify a suspected case of HeV. The person you speak to on the phone will be from Biosecurity Queensland. They will go through the case with you and help you have the case investigated (if needed).

Following notification, and after further investigation, Biosecurity Queensland will decide whether the property in question should be quarantined to stop horses moving off the premises and possibly carrying infection with them.

Biosecurity Queensland will also notify the appropriate professional bodies, including the Australian Veterinary Association and Equine Veterinarians Australia. Private details will not be released in these notifications.

If any person is concerned about their health at any time, they should seek medical advice.