

# Hendra Virus

## What is Hendra virus?

Hendra virus is a zoonotic virus, which means it can be transmitted from animals to humans. The natural host of Hendra virus is the flying fox (fruit bat).

There are four species of flying-fox on mainland Australia (Black flying fox, Spectacled flying fox, Little red flying fox and Grey Headed flying fox). Hendra virus has been found in all 4 species.

Occasionally the virus can spread from flying foxes to horses and, rarely, from horses to people. Infection has also occurred in dogs and it is possible other animals can get infected.

Since the discovery of Hendra virus in 1994 (and the more recent Hendra virus variant HeV-g2) until October 2021, Hendra virus has been the cause of death in 100 horses. Most cases have resulted from spillover infection from flying foxes, with other cases resulting from direct transmission from infected horses. In that time there have also been 7 confirmed Hendra virus infections in humans, all in Queensland. Unfortunately 4 of these people died, the most recent in 2009. Five of these people were veterinary health professionals.

Currently the outbreaks have been restricted to Queensland and northern NSW, although a horse in Newcastle, NSW developed severe illness with Hendra virus in October 2021.

No known cases of Hendra virus infection in horses nor humans have occurred in the Northern Territory despite large flying fox populations in the Top End. There is nevertheless evidence that Hendra virus exists in flying foxes in the NT so there is potential for spread to horses.

## What are the symptoms?

In humans, symptoms typically develop between 5 and 21 days after contact with an infected horse. People infected by the Hendra virus have become unwell with:

- An influenza-like illness (two cases) with symptoms such as fever, cough, sore throat, headache and tiredness
- An influenza-like illness which led to pneumonia contributing to death (one case)
- Meningitis with apparent recovery, then death from encephalitis (inflammation of the brain) 13 months later, with symptoms such as headache, high fever, drowsiness, progressing to convulsions and/or coma and death (one case).
- An acute influenza-like illness followed by encephalitis (recovery in one case and death in two cases)

Hendra virus can cause a wide range of symptoms in horses, usually with rapid onset. Early signs usually include fever, increased heart rate and restlessness. Other common features include difficulty breathing and/or weakness and neurological signs such as uncoordinated gait, muscle twitching, head tilting and circling, quickly leading to death in most cases.

None of the symptoms in horses are specific to Hendra virus infection.

Hendra virus does not cause illness in flying foxes.

## How is it spread?

While the exact route of infection is unknown, it is thought that horses may contract Hendra virus infection from eating food recently contaminated by flying fox urine, saliva or birth products. Spread of the infection to other horses can then follow, especially within stables where horses are in close contact with one another.

The 7 confirmed human cases all became infected following close contact with respiratory secretions and/or blood from a horse infected with Hendra virus. There is no evidence of transmission from one human to another.

There is no evidence that the virus can be passed directly from flying foxes to humans or from the environment to humans. Horses should be considered as potentially infectious from 72 hours prior to onset of symptoms until death (by disease or euthanasia) and safe disposal of the carcass has been completed.

## Who is at risk?

People are at risk if they have had close contact with a horse that has Hendra virus infection, especially contact with blood and other body fluids including respiratory and nasal secretions and saliva.

People who have cared for an infected horse or veterinary staff who have treated or performed a post mortem on an infected horse without wearing appropriate personal protective equipment are most at risk.

## How is it prevented?

### Preventing horse infection

Horses can be infected with the virus when they come into contact with flying fox urine and faeces. It is important to protect horse food from contamination by fluids from flying foxes, and pay attention to personal hygiene, cleaning and biosecurity practices commensurate with the level of suspicion and/or risk.

Sick horses must not be moved from their location and should be isolated from other animals on the property whilst awaiting test results.

A registered Hendra virus vaccine for horses has been available in Australia since November 2012 (and also affords protection from the Hendra virus variant HeV-g2).

### Preventing human infection

Standard hygiene practices should be performed in all contact with horses because they may be infectious with Hendra virus before becoming noticeably unwell. The use of personal protective equipment, gloves, eye protection, respirator (mask) and overalls, is recommended when it is likely that a person will come into contact with body fluids from any horse.

If the exposure involves a cut or puncture wound, gently encourage bleeding and then wash the area with soap and water. Where water is not available, wipe the area clean, then use a waterless cleanser or antiseptic. Cover any cuts or abrasions on exposed skin with a waterproof dressing before handling horses and wash your hands well with soap and water regularly, but especially after handling your horse's mouth or nose (e.g. fitting or removing a bridle) and before eating, smoking or touching your eyes, nose or mouth.

Hendra virus is killed by heat, drying and cleaning with detergents and disinfectant products.

If a person thinks they have come into close contact with a horse which is displaying symptoms of Hendra virus infection they should contact both their local veterinarian and the Centre for Disease Control (8922 8044).

## Other resources

For more information on animal management see Hendra AUSVETPLAN at: [Informing EAD Responses - AUSVETPLAN - Animal Health Australia](#).

## Contact

For more information contact the [Centre for Disease Control](#).

Location	Phone
Darwin (Top End Region)	(08) 8922 8044 1800 008 002
Katherine (Big Rivers Region)	(08) 8973 9049
Tennant Creek (Central Australia Region)	(08) 8962 4259
Alice Springs (Central Australia Region)	(08) 8951 7540
Nhulunbuy (East Arnhem Region)	(08) 8987 0357