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## Hendra virus

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### Summary

- Hendra virus is a rare disease – the very few reported cases in Australia were in people who had close contact with infected horses.
  - There is no cure, specific treatment or human vaccine for Hendra virus.
  - The best defence against Hendra virus is to avoid contact with an infected horse.
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Hendra virus is a rare disease that can be passed from an infected horse to a human. This type of illness is called a zoonotic disease. The cases reported in Australia have all been in people who had close contact with infected horses. Without prompt medical treatment, the complications of Hendra virus can be fatal. There is no cure, human vaccine or specific medical treatment for Hendra virus. A vaccine for horses has been available since 2012. The best defence is avoiding contact with an infected horse. If one of your horses gets sick, seek immediate advice from your veterinarian as to whether this could be Hendra virus and see your doctor. Hendra virus is a different disease to equine flu. Equine flu is a highly contagious viral disease that infects horses, but not people.

### Hendra virus in Australia

The virus was discovered in 1994 after a Queensland horse trainer and 14 of his horses died. One stable hand was also infected, but recovered. The virus was named Hendra virus after the Brisbane suburb where it first occurred. In 1995, a Mackay farmer and horse breeder was the second recorded death and in 2008, a vet became the third person to die after catching the infection from horses in Queensland. Four people have died in Australia to date.

### Symptoms of Hendra virus in horses

In Australia, Hendra virus has occurred in people who had close contact with infected horses. The symptoms in a **horse** can include:

- frothy nasal mucus
- high temperature
- rapid heart rate
- sweating
- muscle spasms and twitching
- muscle weakness
- balance difficulties
- rapid deterioration.

### Symptoms of Hendra virus in humans

The symptoms of infection in a **person** can include:

- fever
- headache
- dry cough
- sore throat
- breathing difficulties
- dizziness

- unusual sleepiness
- confusion.

### **Complications of Hendra virus**

Hendra virus tends to attack either the respiratory system (lungs) or the nervous system (brain). In Australia, fatal complications have included:

- **septic pneumonia** – severe lung infection involving pus, abscesses and destruction of lung tissue
- **encephalitis** – severe brain inflammation and swelling, which can lead to convulsions or coma.

### **Spread of Hendra virus infection**

Hendra virus is not particularly infectious, which means that exposure doesn't always lead to infection. If infection does occur, the incubation period usually ranges from about five to 16 days, up to 21 days. Evidence has shown that the virus cannot be passed from one person to another.

Scientists believe that the reservoir (host) of the Hendra virus in Australia is the fruit bat (flying fox), which appears to carry the virus without suffering any ill effects, and excretes the virus in its urine. Exactly how it is transmitted from bats to horses is unknown. One theory is that the horse ingests pasture or fruit contaminated with infected bat urine, droppings or saliva. The virus in the horse's body fluids (including blood, urine, saliva or nasal secretions) can then be transmitted to a person during close contact.

### **Risk factors for Hendra virus**

People at increased risk of infection include:

- veterinarians and veterinary assistants
- farriers
- equine dentists
- strappers
- feed delivery merchants
- horse owners and stud workers.

### **Diagnosis of Hendra virus**

Tests used to diagnose Hendra virus may include:

- medical history
- lifestyle factors – for example, degree of contact with horses
- physical examination
- blood tests
- biopsy of infected tissue.

### **People in contact with infected horses**

Those people with high exposure to infected horses should see an infectious disease specialist for consideration of post-exposure prophylaxis (although this treatment is currently experimental). High exposure includes coming within five metres of an infected or suspect horse, or contact with blood, body fluids or faeces of infected or suspect horses or with contaminated surfaces.

### **Treatment for Hendra virus**

Currently, there is no cure or specific treatment for Hendra virus. Treatment aims to ease symptoms and reduce the risk of complications while the person recovers. Options may include:

- hospital admission and close monitoring

- drugs and fluids given intravenously
- life support if necessary – for example, mechanical ventilation.

### **Hendra virus outbreak control**

One confirmed case of Hendra virus in a person is considered an outbreak. If an infection occurs, state and Commonwealth government departments work as a team to locate and control the infection to reduce the risk of transmission. To date, Victoria has not had a single animal or human case of Hendra virus. However, the increased spread of fruit bats to the southern states of Australia has raised concern of a related spread of the virus.

### **Prevention of Hendra virus**

There is currently no vaccine to protect against infection. Good hygiene practices are the best defence. Suggestions include:

- Always wash hands with soap and water after handling horses. Dry hands thoroughly.
- Don't put unwashed hands near your eyes, nose or mouth.
- Clean used equipment between handling each horse.
- Avoid contact with a sick horse, keep it isolated from other horses and seek immediate advice from your veterinarian.
- Wear protective equipment such as goggles and gloves if you must come in contact with a sick horse. Wear long sleeves and long trousers with sick horses, or if splashes and splatter of blood or body fluids to clothing is likely (even from a well horse).
- Shower and change clothes as soon as possible after any contamination with a horse's blood or body fluids and put in a normal wash before re-use.
- If wearing gloves when in contact with blood, body fluids or faeces, remove and dispose of gloves immediately after contact and wash hands immediately after removing gloves.
- Avoid contact with secretions (including blood, urine, saliva or nasal secretions) even when the horse is dead – the virus may still be active.
- Refrain from kissing horses on surfaces such as the muzzle and side of the face.
- Wash and dry the contaminated area thoroughly with soap and water if you come in contact with secretions. See your doctor.
- Veterinarians (or other workers) who must handle a sick horse should wear full protective gear, including face shield, respirator mask, non-permeable overalls, gloves and boots.

Don't place water or feed troughs for horses under trees or in other areas where bats may roost.

### **Contact with bats**

Evidence suggests that the Hendra virus cannot be passed directly from infected fruit bats to humans. However, it is important to avoid handling fruit bats because of possible infection with **Australian bat lyssavirus (ABLV)** – a serious disease, closely related to the rabies virus, that can cause fatal encephalitis (brain infection). Bites, scratches or splashes of infected blood, saliva or urine into the eyes, nose, mouth or broken skin can cause infection.

Report a sick or injured bat to the Department of Environment, Land, Water and Planning (DELWP) Customer Service Centre on 136 186 for referral to an authorised wildlife carer. Do not attempt to handle the animal yourself. All bat handlers or carers should be vaccinated with the rabies vaccine to protect against ABLV infection.

### **Where to get help**

- Your doctor
- Veterinarian
- Community health centre

- Wildlife service
- **Communicable Disease Prevention and Control Unit** (Public Health Branch), Department of Health and Human Services Victoria Tel. 1300 651 160

**This page has been produced in consultation with and approved by:**

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