



HENDRA VIRUS

INFORMATION FOR VETERINARIANS

What is Hendra virus?

- Hendra virus (HeV) is a virus of flying foxes (fruit bats) that on very rare occasions may cause acute disease including respiratory and neurological signs in horses and people which can be fatal.
- Flying foxes are the natural host for HeV.
- Four species of Australian flying foxes (grey-headed flying fox, black flying fox, little red flying fox and spectacled flying fox) carry the virus but do not show clinical signs.
- The virus was first identified during an outbreak in horses in Hendra, Queensland in 1994.

How is it spread?

- HeV is believed to be spread between flying foxes through faeces, urine and saliva.
- On very rare occasions horses can become infected with HeV. Infection is thought to occur through ingestion of grass or partially eaten fruit contaminated with bat urine, saliva or other body fluids, such as birthing fluids.
- HeV has only been transmitted to people through very close contact with secretions or body fluids of infected horses.
- There is no evidence of spread between flying foxes and humans or human to human spread.

Occurrence in the Northern Territory

- There have been no known cases of Hendra virus infection in horses or people in the Northern Territory.
- In all cases where Hendra virus was suspected in horses, HeV has been excluded.

Hendra virus in horses

- Horses are the only known domestic animal to be naturally infected with HeV.
- HeV should be considered where there is acute onset with increased temperature, increased heart rate, and rapid progression to death associated with respiratory or neurological signs.
- The incubation period from infection to onset of clinical signs may vary between 5 -16 days.
- Horses infected with HeV deteriorate rapidly and most die within two days of developing clinical signs.

Investigation of a suspect Hendra case

Initial investigation of horses with acute disease is performed by the local private veterinary practitioner. An appropriate level of personal protective equipment (PPE) should be adopted.

If following risk assessment and clinical assessment, HeV is suspected, the private veterinarian should consult with the Department of Resources (DoR) Veterinary Officer. Biosecurity advice should be provided to the owner and appropriate decontamination procedures adopted. Confirmed cases of HeV will be managed by DoR.

Private veterinary practitioners who examine horses should be familiar with the Guidelines for veterinarians handling potential Hendra Virus infection in horses available at

http://www.dpi.qld.gov.au/documents/Biosecurity_GeneralAnimalHealthPestsAndDiseases/Hendra-GuidelinesForVets.pdf

The guidelines focus on procedures for investigation of suspect and highly suspect cases of HeV in horses, and can be used to develop infection control procedures for routine veterinary practice. They do not address the changes to procedures for normal work practices.

ADVICE TO HORSE OWNERS

A Hendra virus information sheet for horse owners is available at www.nt.gov.au/d/Primary_Industry/

Horse owners should be advised to take the following basic steps to reduce the risk of infection:

- Do not place feed and water containers under trees where flying foxes are known to feed and roost.
- Avoid leaving fruit/vegetables in feed containers when flying foxes are known to be in the area.
- Remove horses from paddocks when flowering/fruited trees have resulted in a temporary surge in flying fox numbers.
- Reduce contact with items that may be contaminated with body fluids of flying foxes.
- Clean and disinfect gear exposed to body fluids of a horse before it is used on another horse. This includes things like halters, ropes and twitches.
- Wash hands thoroughly with soap and water before and after handling horses.
- Wear gloves when giving injections and consider wearing a facemask.
- Isolate sick horses from other horses, animals and people and seek veterinary advice.
- Report any horses with acute illness, serious respiratory signs or neurological signs to a veterinarian.
- People concerned about their health should be advised to seek medical advice.

Procedure for investigating suspect Hendra case

1. Risk assessment

- Assess case history and determine appropriate level of personal protective equipment (PPE) for examination.
- Consider exposure to flying foxes and recent deaths of horses on the property.
- Minimum PPE for suspect HeV case is Protection Level 3
 - P2 (N95) particulate respirator
 - disposable impermeable gloves – double gloved (nitrile recommended)
 - impervious overalls OR disposable overalls with impervious apron
 - impervious rubber boots
 - face shield or safety eyewear.

2. Clinical assessment

- Examine horse and determine whether clinical signs are consistent with case definition for HeV infection.
- **HeV should be considered where there is acute onset with increased temperature, increased heart rate, and rapid deterioration associated with respiratory or neurological signs.**
- Horses may excrete HeV in nasal and naso-pharyngeal secretions for at least 2 days prior to the onset of clinical signs.

Respiratory signs

Respiratory distress

Increased respiratory rate

Pulmonary oedema and congestion

Nasal discharge at death

- initially clear with progression to stable white froth and/or stable blood-stained froth

Terminal weakness, ataxia and collapse

Neurological signs

Ataxia

Altered consciousness

- Apparent loss of vision

- Aimless walking in a dazed state

Head tilt and circling

Muscle twitching

Urinary incontinence

Recumbency

3. Implement biosecurity measures to prevent spread

- If HeV is suspected take steps to minimise the risk of exposure to yourself and others.
- Reduce contact time with horses and minimise contact with blood and other body fluids and tissues.

4. Sample collection and decontamination

- Collect only the essential samples required to diagnose or exclude HeV infection.
- Live horses (Protection Level 3 or 4)
 - EDTA and clotted blood (7-10ml)
 - nasal swab in phosphate buffered glycerol saline (PBGS)
 - oral and urine swab in PBGS may also be useful
- Dead horses (Protection Level 3 or 4)
 - nasal and oral swab in PBGS
 - clotted blood from cut down jugular vein (1-5ml)
 - fresh and fixed submandibular lymph node
- Post-mortem is not recommended, but if necessary a limited approach should be used.
- Apply appropriate decontamination procedures for level of risk.
- Disinfectants include Chlorhexidine, Iodine, Virkon, hypochlorite and soap and detergent

5. Disposal of carcass

- Deep burial is recommended.

6. Biosecurity advice to client

- It is important to advise the owner of the zoonotic potential of HeV and steps to manage the risk on exposure.

7. Reporting

- Contact DoR for further advice and to notify the Chief Veterinary Officer.
- Media enquiries can be directed to the DoR media manager on 8999 2073.

Who do you contact when you suspect a Hendra case?

Hendra virus is a notifiable disease and all suspect cases should be reported to the Chief Veterinary Officer.

Alternatively, call the Emergency Animal Disease Hotline on 1800 675 888

Contact your Regional Biosecurity Office

DARWIN

Ph: 08 8999 2035

KATHERINE

Ph: 08 8973 9716

TENNANT CREEK

Ph: 08 8962 4490

ALICE SPRINGS

Ph: 08 8951 8181