

# HENDRA VIRUS

SPECIAL REPORT by Dr Leanne Begg

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**H**endra virus is, thankfully, a rare virus infecting horses in Australia. Only 36 horses have been diagnosed with this virus in the last fourteen years, since it was first recognised in 1994. In comparison, it is estimated approximately 100 000 horses were infected with Influenza virus in 2007, in the space of approximately 4 months. The case fatality rate, that is the numbers of infected horses dying from Hendra virus, is high at 75%. The most worrying concern with Hendra virus however, is its ability to infect people. Six cases of human infection have been recorded with a fatality rate of 50%. These people were infected by close association with infected

horses or performing post mortem examinations on infected horses.

Another disturbing feature of this virus is its ability to recrudesce, or stay latent in the body for a period of time before again producing illness. In one of the human infections, after apparently recovering from the initial infection, the person became seriously ill 13 months later and eventually died. It is for this reason that the horse which survived the disease in Queensland this year was euthanased. The possibility that this horse could start excreting virus again was considered too great a risk.

It is known that Hendra virus can be recovered from flying foxes and is found in four species of flying foxes present in Australia. The seroprevalence rate is approximately 47%, meaning that 47% of a group of flying foxes that were sampled showed evidence of exposure to the virus. What we don't know however is why the infections in horses have been confined to Queensland and very northern New South Wales, when flying foxes are prevalent further south.

The initial cases of Hendra virus infection presented with predominantly respiratory signs with fever. These horses showed respiratory distress, then bloody, frothy nasal discharge and rapidly deteriorated and died. The most recent cases found this year, however showed predominantly neurological signs with ataxia (inco-

ordination), depression, head tilt, circling, loss of vision and muscle twitching. These horses also showed a fever and rapid deterioration.

Infection in horses is thought to be related to exposure to the birthing fluids and placental material of flying foxes. Cases were originally found between August and January, which correlates with the late pregnancy and birthing season of most of the flying fox species. The 2007/2008 cases were however found in June and July. Cases have typically been horses paddocked in areas that are attractive to flying foxes, with only rare spread between horses. In a stable situation, horse to horse transmission has occurred with more horses infected. Cats are also susceptible to infection, with cats showing respiratory signs and most dying one day after appearance of respiratory distress.

Recommendations for horse owners include separating or stopping potential contact between horses and flying foxes, including separation from anything potentially contaminated by body fluids from flying foxes. Horse owners should be discouraged from placing feed and water troughs under trees where bats are known to roost and breed. Horse owners or carers should also be aware of the potential presence of this disease and report any signs of disease in their horses to their local veterinarian. **R**