

Hendra and Nipah Viruses Fact Sheet

1. **What are Hendra and Nipah Viruses?** - Hendra and Nipah viruses are both members of the Paramyxoviridae family and cause respiratory and nervous system disease. Nipah virus was first discovered in 1999 after an outbreak of encephalitis and respiratory disease outbreak in Malaysian pig farmers. During this outbreak, there were more than 200 illnesses, 40% of which involved serious neurologic disease and death. Since the original outbreak in Malaysia, Nipah Virus outbreaks have been repeatedly identified in Bangladesh and India. Hendra virus was first isolated in 1994, during an outbreak of respiratory and neurologic disease in horses and humans in Australia. This outbreak resulted in two human fatalities. Hendra and Nipah viruses have only been reported in Southeast Asia and Australia, not in the United States.
2. **How are Hendra and Nipah viruses transmitted?** - Close contact with tissues or bodily fluids of infected animals is required for infection. While the Hendra virus is not very contagious, Nipah virus appears to be much more easily transmitted. In Malaysia, pigs were the primary source of Nipah infection. In south Asia, chains of person-to-person transmission have been clearly documented.
3. **What are the animal reservoirs of these diseases?** - These diseases are carried by a family of very large bats called flying foxes (genus *Pteropus*). Infected flying foxes have been found in Southeast Asia, Australia, Papua New Guinea, and Bangladesh.
4. **What are the risk factors?** - Persons at risk include those who come in contact with infected animals or bats, in the rural areas of Australia, southeast Asia, and south Asia. Horses become at risk for infection with Hendra virus after grazing under trees in which flying foxes have perched and eaten fruit. The foxes urinate, defecate and drip saliva onto the ground under the trees. Fencing around trees and vaccination of horses against Hendra virus infection can protect both horses and humans that come into contact with them.
5. **What is the incubation period?** - Normally the incubation period is 4 to 18 days.
6. **What are the common symptoms?** - Symptoms of Hendra and Nipah virus include flu-like symptoms, including fever and muscle soreness. The diseases can also cause headache, drowsiness, and disorientation. In some cases infection can lead to coma and death. In the India outbreak, the fatality rate approached 70%.
7. **What are the symptoms in animals?** - Horses infected with Hendra virus usually have an acute fever and appear sick. The most common symptoms in dogs include a loss of appetite, vomiting, and fever. Pigs infected with Nipah virus develop a loud cough and appear sick with fever. Flying foxes do not appear to develop illness.
8. **How are Hendra and Nipah virus infections diagnosed?** - A blood test can detect the body's immune response to infection. The virus can also be isolated from clinical samples.

9. **How are Hendra and Nipah viruses treated?** - No specific treatment besides supportive care has been identified.

10. **How can infection be prevented?** - Because most infections require direct contact with infected tissues or bodily fluids, avoidance of these will prevent disease. If viral infection of an animal is suspected, precautions should be taken by wearing impermeable gloves, protective clothing, and face and eye shields. In areas where person-to-person spread has been seen, gowns, gloves and masks are recommended when caring for an infected patient. Fencing around trees and vaccination of horses against Hendra virus infection can protect both horses and humans that come into contact with them.

11. **For more information:** <http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/nipah.htm>

This fact sheet provides general information. Please contact your physician and/or veterinarian for specific clinical information related to you or your animal.