

Equine Influenza

This disease is not currently in Australia. In 2007 there was an outbreak that caused huge disruption to the horse industry. In December 2008, after considerable testing and investigation, Australia was proved EI free after no cases were detected for the previous 12mths.

Equine influenza (EI) is caused by a type A Orthomyxovirus. There are two major strains known to cause this disease in equids, and sublineages of the two major strains have emerged due to antigenic shift and antigenic drift causing minor alterations in the genetic make up of the disease.

Equine influenza affects horses, donkeys, mules, and other members of the horse family "equidae". The virus is widespread with only Iceland, New Zealand, and Australia considered to be free of the virus.

Equine influenza is spread via airborne respiratory secretions and fomites, including contaminated inanimate objects and people moving between infected and uninfected horses. The incubation period is usually one to three days. Incubation periods approaching seven days have been observed, but are less common.

Infected horses shed virus in their respiratory secretions during the incubation period, and continue to excrete the virus for four to five days after clinical signs are observed. It is also possible for an infected animal to shed the virus for 7-10 days after the animal has appeared to recover.

Viral shedding is thought to reach its peak during the first 24 to 48 hours the animal is febrile. Infected droplets may be able to spread as far as 50 mtrs. Virtually 100% of horses that are exposed become infected. Some infected horses do not exhibit clinical signs of disease, but still shed virus and can spread the infection.

Biosecurity is very important when dealing with EI as it is one of the most contagious diseases of horses. Humans do not get infected with equine influenza. However, humans can physically carry the virus on their skin, hair, clothing and shoes, and can therefore transfer the virus to other horses. It is

vital that you shower and wash carefully, wash your hair and put on a completely fresh set of clothes (including shoes) after contact with any horses (including your own horses) that might be infected with EI. The virus can also be physically carried on equipment and vehicles or transferred by their pets (dogs/cats).



Equine influenza virus causes clinical disease of the upper respiratory tract. The virus spreads rapidly, and naïve or horses with compromised immune systems are at higher risk of developing the disease. Clinical signs include:

- Fever
- Coughing
- Nasal discharge



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- Depression
- Muscle soreness
- Loss of appetite
- Enlarged regional lymph nodes
- Colic (abdominal pain) and oedema of the legs and scrotum have also been observed



In the absence of secondary complications, healthy, adult horses usually recover from EI within one to two weeks; however, coughing may persist for a longer period. Young foals lacking adequate maternal antibodies are at risk of developing a rapidly fatal viral pneumonia.



Recovery from EI is complicated and prolonged by the development of secondary bacterial infections. Deaths have been reported as caused by secondary bacterial pneumonia and pleuritis. Purpura hemorrhagica, a potentially fatal, immune-mediated disease, has also developed secondary to EI infection. Fatal interstitial myocarditis (inflammation of the heart muscle) can occur during or after infection.

A tentative diagnosis of EI is often made based on clinical signs. Diagnosis can be confirmed by detection of the virus in samples from nasal swabs.

As for all viral disease, treatment is largely supportive. Good husbandry and nutrition may assist horses in mounting an effective immune response. Rest reduces viral shedding. Because tracheal clearance rates (an indication of the ability of the respiratory tract to eliminate particles, mucus, and infective organisms) are reduced for up to one month after infection, rest is also recommended after resolution of clinical signs. Antipyretics are recommended for horses with fevers exceeding 40.5 C and/or severe depression and anorexia.

Pneumonia in more severely affected horses responds best to a combination of broad-spectrum bactericidal antibiotics and maintenance of hydration via intravenous administration of fluids.

Morbidity associated with EI in naïve populations is estimated at 60 to 90%; to date, mortality of horses with confirmed infection has ranged from 1% to 20%. Higher fatality rates are observed in foals, elderly or malnourished horses or those with compromised immune systems.

