

Equine influenza



What is Equine influenza?

Equine Influenza (EI) is a highly contagious though rarely fatal respiratory disease of horses, donkeys and mules and other equidae. The disease has been recorded throughout history, and when horses were the main draft animals, outbreaks of EI crippled the economy. Nowadays outbreaks still have a severe impact on the horse industry.

EI is caused by two subtypes of influenza A viruses: H7N7 and H3N8, of the family *Orthomyxoviridae*. They are related to but distinct from the viruses that cause human and avian influenza.

Equine Influenza is a disease listed in the OIE *Terrestrial Animal Health Code* and countries are obligated to report the occurrence of the disease according to the OIE *Code*.



Where is the disease found?

The disease is entrenched in most of the world, with the exceptions of Australia (where an important outbreak occurred in 2007), New Zealand, and Iceland.

How is the disease transmitted and spread?

Highly contagious, EI is spread by contact with infected animals, which in coughing excrete the virus. In fact animals can begin to excrete the virus as they develop a fever before showing clinical signs. It can also be spread by mechanical transmission of the virus on clothing, equipment, brushes etc carried by people working with horses.

Once introduced into an area with a susceptible population, the disease, with an incubation period of only one to three days, spreads quickly and is capable of causing explosive outbreaks. Crowding and transportation are factors that favour the spread of EI.

What are the clinical signs of the disease?

In fully susceptible animals, clinical signs include fever and a harsh dry cough followed by a nasal discharge. Depression, loss of appetite, muscle pain and weakness are frequently observed. The clinical signs generally abate within a few days, but complications due to secondary infections are common. While most animals recover in two weeks, the cough may continue longer and it may take as much as six months for some horses to regain their full ability. If animals are not rested adequately, the clinical course is prolonged.



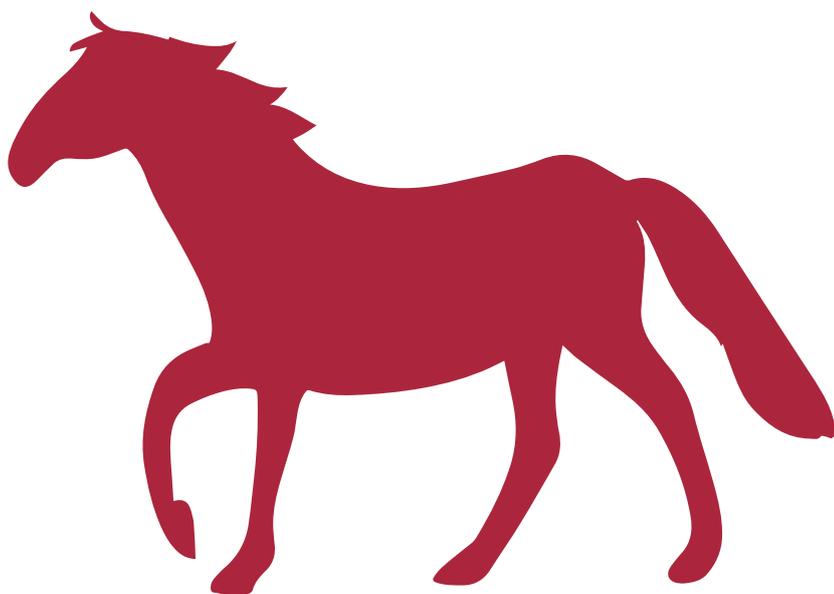
While the disease is rarely fatal, complications such as pneumonia are common, causing long term debility of horses, and death can occur due to pneumonia, especially in foals.

How is the disease diagnosed?

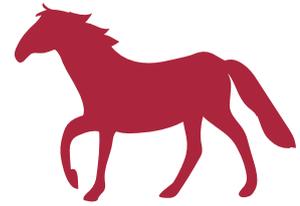
Clinical signs are suggestive of EI, but definitive diagnosis is by serology or isolation of the virus according to procedures in the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*.

What is being done to prevent or control the disease?

Vaccination is practiced in most countries. However, due to the variability of the strains of virus in circulation, and the difficulty in matching the vaccine strain to the strains of virus in circulation, vaccination does not always prevent infection although it can reduce the severity of the disease and speed recovery times. Vaccines are produced according to the guidelines in Chapter 2.5.7 of the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*. The OIE also convenes an Expert Surveillance Panel on Equine Influenza Vaccine that examines the strains of virus in circulation making recommendations on which strains should be included in the vaccines.



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When the disease appears, efforts are placed on movement control and isolation of infected horses. The virus is easily killed by common disinfectants, so thorough cleaning and disinfection is part of biosecurity measures in responding to the disease.

Since the disease is most often introduced by an infected animal, isolation of new entries to a farm or stable is paramount to preventing the introduction of disease to a premise.

For movement of horses across international boundaries the OIE *Terrestrial Animal Health Code* sets the standards by which countries should control the import of horses.

What is the public health risk associated with this disease?

There is little risk to public health. In experimental settings the virus has shown the ability to infect humans, and a few people in contact with infected horses developed antibodies to equine influenza viruses, but no humans exposed to the virus have become ill.



More Information?

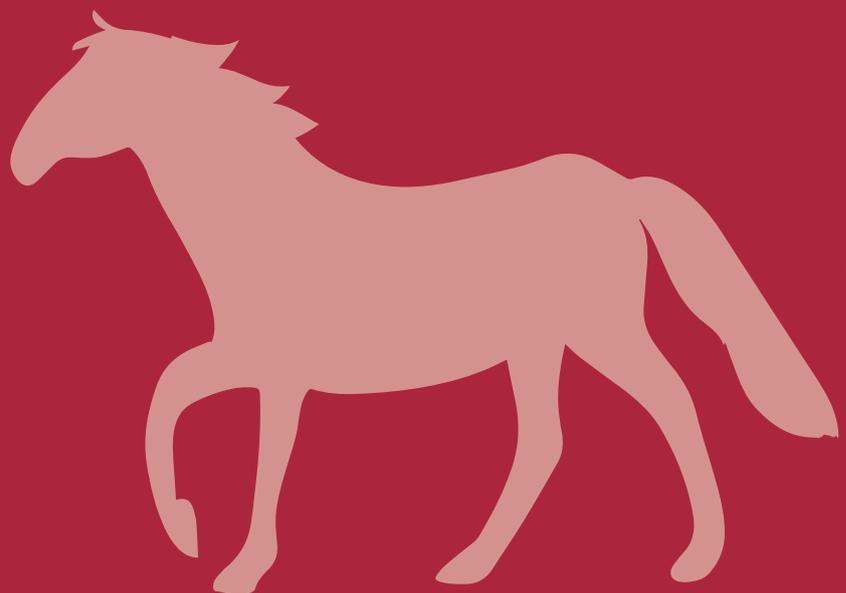
References:

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Key Facts

- Absyrtus, a Greek veterinarian, recorded a disease outbreak resembling influenza in horses in 433 AD.
- In 2004 an outbreak of influenza in dogs in the United States was caused by the equine influenza virus H3N8.
- An outbreak in 1872 that spread throughout North America affected so many horses that it crippled the transportation of goods: ships were unable to be unloaded, street cars could not run, and even the firefighters were unable to operate.
- In 1987, an equine influenza epidemic in India affected more than 27,000 animals killing several hundred.
- An outbreak in Australia in August 2007 infected horses on 10651 premises in three months despite the imposition of movement controls. The disease was eradicated, but the cost of treatments and cancellation of events was about 1 billion dollars Australian.

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