



Equine influenza (EI)

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Equine influenza (EI) is a highly contagious respiratory disease of horses and related animals such as donkeys, mules and zebras (collectively known as equines). EI is caused by a type A influenza virus in the family Orthomyxoviridae (genus Influenzavirus).

Equine influenza is similar in many ways to human influenza. Despite the equine influenza outbreak in 2007, it is considered exotic to Australia.

Equine influenza is endemic in virtually all other countries with significant equine industries and outbreaks are common despite the disease being managed in these countries by vaccination. Australia, New Zealand and Iceland are the only countries with large equine populations that are free of the disease.

In Australia, equine influenza is a notifiable disease. This means that any suspicion of the disease being present must, by law, be reported to Department of Agriculture and Food, Western Australia. If a case of equine influenza was detected in Western Australia, an immediate horse movement standstill would be imposed for at least three days while the source of equine influenza and any potential spread were investigated. A horse movement standstill means it is illegal to move a horse from its current place of residence, even if it is only at a temporary residence. Horse movement would only be allowed under exceptional circumstances, and under a permit issued by a government inspector.

Disease control and eradication strategies for equine influenza do not involve destroying animals. All equines are quarantined for a minimum of 30 days after the last signs of the disease are seen on the property. Quarantine is critical in preventing further spread of the disease.

The occurrence of any exotic horse disease in Australia will have a significant impact on many people involved in the horse industry. This includes those involved in horse competitions and events, racing and breeding, as well as service providers to the industry such as veterinarians, farriers and horse dentists. Rapid reporting and identification will minimise this disruption.

Transmission of the equine influenza virus to humans has not occurred during outbreaks of the disease in horses. Equine influenza poses no threat to people, however people can easily spread the virus between horses via contaminated skin, hair and clothing.

Signs and symptoms

Horses with equine influenza may display some or all of the following clinical signs:

- deep, dry hacking cough
- nasal discharge, initially watery and later thick, cloudy or coloured
- sudden increase in temperature (39 °C to 41 °C)
- depression
- loss of appetite
- laboured breathing
- muscle pain/stiffness.

In some cases the clinical signs can be very mild. Affected horses show varying degrees of fever, loss of appetite, coughing and nasal discharge. Most horses that have contact with the virus will become infected.

Healthy adult horses usually recover from uncomplicated equine influenza within 10 days but coughing may persist for longer. Performance horses usually need several weeks off work to recover fully.

Some horses, particularly those worked or stressed while sick or during recovery, may develop secondary bacterial infections such as pneumonia. This rarely results in death but the elderly, sick and very young are most at risk.

A very high fever due to equine influenza may also cause pregnant mares to abort and stallions to suffer testicular degeneration causing reduced fertility.

There is no treatment for equine influenza apart from rest and supportive therapy for the fever and cough. Rest horses for at least one week for every day of coughing. So if a horse coughs for five days, it will need five weeks with no exercise. Contact your veterinarian for specific information on supportive treatment.

A video of the clinical symptoms can be viewed at www.agric.wa.gov.au.

If a horse shows any of these symptoms:

- Isolate the sick horse from other horses on the property.
- Contact a private veterinarian and/or the exotic animal disease hotline on 1800 675 888.

Important Disclaimer

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- Prevent contact between other horses on the property and neighbouring properties.
- Follow proper biosecurity procedures when handling or moving between horses. Recommended biosecurity practices specific to equine influenza can be found at www.agric.wa.gov.au.
- Avoid contact with horses, horse equipment, horse transport vehicles and people on other properties. If contact is unavoidable, follow thorough decontamination procedures.
- Enforce hygiene practices, boot disinfection and hand washing for all visitors.
- Keep a detailed log of all horse movements, people movements and contacts with horses.
- Avoid the use of communal horse facilities.

Note: Organic material such as dirt, manure and straw may make disinfectant ineffective. Clean equipment before disinfection.

How the disease is spread

Equine influenza virus is spread primarily by the movement of infected horses. The incubation period is about two to five days and infected horses excrete the virus for up to eight days. Their coughing or sneezing can expel virus-laden mucus several metres into the environment. The virus can also be shed in urine. During the incubation period, infected horses appear healthy but may shed the virus, allowing the disease to spread undetected.

The virus can survive in the environment, on different surfaces, for up to 48 hours. Spread of the disease has been associated with the movement of people, pets, horse equipment and tack where proper biosecurity procedures have not been followed. Horses have also been found to contract equine influenza if they have been in buildings or vehicles previously occupied by infected horses in the preceding 24 hours.

Equine influenza is highly contagious and all in-contact horses will usually develop clinical signs within a short time. Outbreaks are most likely to occur when many horses congregate, commonly at horse events, race meetings, stables and studs.

Effective biosecurity practices

All horse property owners should have and enforce their own biosecurity rules. In general terms, a 'clean-on and clean-off' practice is required in order to prevent the spread of infection during an outbreak. It is the responsibility of horse owners to ensure their animals remain free of disease.

- Health-check, isolate and observe new arrivals on the property for about 10 days.
- Isolate any horse showing signs of illness and report it immediately.
- When moving from property to property, follow effective hygiene practices to minimise the chance of spreading disease. Shower and change clothes between properties after contact with horses.
- Limit the sharing of tack and equipment between horses from different properties and keep gear clean.
- Do not recycle or swap bedding such as straw between horses or properties.
- When moving horse equipment between properties ensure it is clean.
- Enforce boot disinfection before entering and leaving the property.

Vaccination

Currently (July 2008), there are no equine influenza vaccines registered for use in Australia except under permit for export or under emergency conditions.

Vaccination will not prevent horses from catching the disease but vaccinated horses usually do not get as sick as unvaccinated horses and will be infectious to other horses for a shorter time. A vaccinated horse can still shed the virus and infect other horses but the milder symptoms mean the horse is less likely to transmit the disease.

If an equine influenza outbreak occurs, vaccination may be used as part of a disease control strategy to reduce the spread of the virus. However, countries where vaccination is practised still have sporadic outbreaks due to inadequate vaccine coverage, new strains of the virus and variations in horse immunity levels.

Some overseas examples of outbreaks of equine influenza despite vaccination include:

- Japan 2007 – All racehorses in Japan are vaccinated twice annually. This did not prevent the 2007 outbreak from occurring.
- Croatia 2004 – Equine influenza entered racehorses stabled at the Zagreb hippodrome, causing clinical disease in both vaccinated and unvaccinated horses.
- United Kingdom 2003 – Britain has had a twice-yearly vaccination policy in place for decades. This did not stop equine influenza entering the Newmarket racing stables in 2003 and spreading through 1300 vaccinated animals.
- Hong Kong 1992 – All racehorses in Hong Kong are vaccinated regularly. This did not stop equine influenza infecting 75 per cent of the population.

The equine influenza vaccine is short-lived and requires boosters to maintain adequate protection. Vaccination schedules vary depending on which vaccination is used. Routine vaccination will be a financial burden on industry and will only be effective in limiting disease spread if more than 80% of the horse population are fully vaccinated.

Note that because vaccination will not prevent infection or disease spread, it is unlikely that events such as race meetings will be allowed to proceed in the face of an equine influenza outbreak.

More information about equine influenza vaccination can be found at www.agric.wa.gov.au.