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## Equitait Veterinary Practice Factsheet Equine Influenza

Outbreaks of influenza are perhaps not as infrequent as many would like to think. With the increased international travel of horses the risk of outbreaks increases and it is not uncommon for there to be more outbreaks during activities that promote mixing of horses (eg show and sales). It does however highlight the need for all in the equine community to be vigilant when considering respiratory symptoms, the isolation of newly introduced animals and regular flu vaccinations.

### Facts about equine flu

Equine influenza ('flu') is a viral disease that affects the upper and lower respiratory tract of horses, donkeys and mules. It is caused by several strains of the equine influenza virus. The disease is very infectious and spreads rapidly through groups of horses. Horses become infected directly by inhaling the influenza virus that is shed by infected, coughing horses or indirectly via contaminated equipment such as feed buckets, tack or grooming aids.

Thankfully the virus is not airborne over long distances like some other viruses such as the foot and mouth disease virus. The virus has a short incubation period of only 1 – 3 days and replicates in the epithelial cells that line the entire respiratory tract.

Vaccinated horses can still show signs but these are usually milder than those experienced by unvaccinated horses. The reason that vaccines do not always provide 100% protection is because the virus can evolve, developing different strains. Vaccines are regularly updated in order to provide maximum protection.

### Clinical signs

- a very high temperature (fever) of 39-41°C (103-106°F) which lasts for 1-3 days
- a frequent harsh, dry cough that can last for several weeks
- a clear, watery nasal discharge that may become thick and yellow or green
- enlarged glands under the lower jaw
- clear discharge from the eyes
- depression, lethargy and loss of appetite
- swelling (swelling) of the lower limbs

In some horses a secondary bacterial infection can develop, resulting in pneumonia. The severity of clinical signs is highly variable depending on the immune status of the horse, and sometimes horses can be infected and contagious without showing any clinical signs.

### If you suspect your horse may have equine influenza:

Contact Equitait Veterinary Practice on 01361 889106 and instigate strict hygiene and isolation procedures. Horses that have been in contact with the affected horse should be carefully monitored and ideally should not attend shows or any other competitions as they may also be incubating the disease. The stress of travelling can increase the likelihood of developing the infection.



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### **Diagnosis:**

An accurate diagnosis is necessary to rule out more serious causes of respiratory tract infection. It is also necessary to limit the further spread to other animals and additionally to determine the efficacy of existing vaccines. In many cases a presumptive diagnosis of influenza is made based on the history (in particular recent contact with a confirmed or suspected case) and the clinical presentation. Virus identification from nasopharyngeal swabs and/or blood samples (2 weeks apart) that examine antibody levels are then generally required to make a definitive diagnosis.

### **What causes the illness?**

Once a horse has breathed in the virus, it invades the lining epithelium of the airways, which becomes swollen and inflamed producing a very sore throat and a nasty cough. The viral damage causes patches of the membrane that lines the airways to ulcerate and these changes disrupt the clearance of mucus and other debris from the airways. In turn these damaged areas end up being invaded by bacteria and further infections ensue.

### **Treatment:**

- Affected horses are isolated and general supportive care is given. This includes encouraging the horse to eat and drink and administering non-steroidal anti-inflammatory drugs to control high fevers.
- Complete rest is recommended and commencement of exercise should not begin until at least 2 weeks after all signs have ceased. This is to prevent long-term lung or heart damage.
- Ensure that the air is as clean as possible. Good stable ventilation and minimising exposure to dust and spores are important because horses with respiratory infections are susceptible to developing recurrent airway obstruction (RAO). If hay is fed it should be of good quality and soaked.
- If weather conditions permit, affected horses will benefit from being turned out into a small paddock for at least part of the day once their temperatures have returned to normal.
- Treatment with antibiotics to lessen the impact of secondary infections is recommended when fever persists beyond 3 to 4 days or when purulent (snotty) nasal discharges or pulmonary involvement are present.
- While human anti-viral drugs have been used in horses there is little current evidence of their efficacy. Some of the new antioxidant feed supplements marketed to help respiratory function may well be of some benefit.

### **Prognosis:**

In uncomplicated mild cases that require only rest and good nursing, horses will often completely recover and return to exercise within three to four weeks of infection. In more severe cases, horses might require up to 100 days of rest.

Horses that develop secondary bacterial infections require longer recovery periods and have a more conservative prognosis for return to previous athletic function due to damage to the lung tissues. It is thought that some horses can also develop a post viral syndrome characterised by lethargy.



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**Prevention:**

Control of equine influenza requires sound management and use of vaccination. Regular vaccinations are key to our control of influenza in the UK with the racing and many other equine authorities requiring vaccination prior to taking part in competitions. Most of the licensed flu vaccines are made from inactivated or killed flu viruses and as such cannot cause the flu or flu-like illness. While the duration of protection provided by flu vaccines is limited they are very effective assuming the strain in the vaccine is similar to the circulating viruses. When the disease occurs locally, it may be advisable to give a booster to any horse that has not been vaccinated in the previous 6 months. Maximum immunity is not reached until about 2 weeks after the vaccination.

Most competitive organisations that insist on influenza vaccination conform to the Jockey Club regulations which are two vaccinations to be given not less than 21 and not more than 92 days apart. The first booster vaccination is to be given between 150-215 days after the second part of the primary vaccination. Thereafter yearly booster vaccinations to be given no more than yearly (365 day) intervals. Following a primary vaccination course those horses competing under FEI rules require vaccination within six calendar months plus 21 days of the competition. Horses competing regularly at FEI level consequently require twice yearly boosters.

It is good practice to quarantine all new horses for a minimum of 14 days prior to mixing them with resident horses. Also we would advise that you limit the sharing of equipment between horses and be particularly cautious of any horse with a fever, nasal discharge or a cough.