



Equine Influenza Vaccination

Equine influenza is the most potentially damaging of the respiratory viruses that occurs in UK equines.

The disease symptoms in non-immune animals include high fever, coughing and nasal discharge and, in cases where secondary bacteria are involved, bronchitis and pneumonia can result. Young foals and elderly animals, particularly those with pre-existing lung disease, can suffer fatal pneumonias. Unvaccinated animals may suffer permanent lung damage and those that are very badly infected may never regain their previous athletic performance. It is a highly contagious disease and one sub-clinically infected animal can introduce the infection to and cause a severe disease outbreak in unvaccinated populations. Natural immunity following infection lasts on average for no more than 1 year.

Influenza outbreaks in unvaccinated or poorly vaccinated populations can disrupt equine sporting activities for weeks or months and it was for this reason that the British Horseracing Authority introduced mandatory vaccination of all racehorses and those using racecourse premises in 1981. Since that time, outbreaks have not caused such severe widespread disruption to the vaccinated populations. The recent outbreak in Australia, however, demonstrated the problems that can arise if the virus is introduced to a naïve population. Horses now traveling to Australia have to be vaccinated with the Merial vaccine, ProteqFlu.

It is essential that as much of the UK equine population as possible is fully vaccinated. It is a common misconception that only those animals **competing** in various disciplines require vaccination. However, it is well established that partially vaccinated healthy horses can carry influenza back to susceptible unvaccinated animals and an influenza outbreak may then occur.

Modern vaccines available in the UK can provide significant protection against infection and disease with equine influenza viruses, largely through stimulating circulating antibodies. However, vaccines must be given at appropriate intervals, often shorter than those recommended by vaccine manufacturers in the case of younger

animals, and must contain epidemiologically relevant strains in order to remain effective against different circulating viral lineages. Periodic and timely updating of vaccine strains will always be required to prevent significant new influenza epidemics. Circulation of the virus may persist mostly through continuous propagation of small scale outbreaks. Virological investigation of disease outbreaks is essential for surveillance and for ensuring that vaccines continue to be regularly updated.

Pregnant mares should be fully vaccinated and boosted with influenza (and tetanus) 4-6 weeks pre-foaling, to ensure that the young foal can be protected through maternally derived antibody in colostrum.

The side effects from equine influenza vaccination are minimal. The documented evidence for hundreds of thousands of vaccinations is that considerably less than 1 in a thousand horses have **any** adverse response.

Performance – Two independent controlled veterinary studies, one in the UK which included horses with known respiratory disease (COPD) and one in Sweden, have been conducted to thoroughly examine any adverse effects that vaccination injection have on performance. No adverse effects on performance were observed.

From the numbers of vaccine doses sold, the percentage of horses protected against equine influenza is no more than 35% of the population (assuming a UK population of 1 million horses). Moves to drop mandatory vaccination will make the UK horse population increasingly vulnerable to an epidemic.

Dr James Wood 06

Reviewed by Deidre Carson Feb 2008