

Why vaccinate?



This information is brought to you by Intervet, leading manufacturer of the Equilis range of respiratory vaccines, Prequenza, Resequin and StrepE.

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Introduction

Potentially fatal equine infectious diseases such as equine influenza, equine herpes virus (EHV) and Strangles can severely affect a horse's health and performance. As in humans, prevention is better than cure and vaccination is a key element in the fight against infectious disease.

Why vaccinate?

Just as with human disease, vaccination helps horses fight infection and if a horse does develop disease, it will decrease the severity of signs. Immunisation is most effective when a high percentage of the horse population is vaccinated (known as herd immunity). The fact that equine 'flu epidemics are now quite rare is largely attributed to the success of vaccination.

In the UK, vaccines are available against the following diseases:

- Equine 'flu
- Tetanus
- Equine Herpes Virus (EHV)
- Strangles
- Rotavirus

Your vet will be able to advise you on a vaccination or prevention programme and the frequency of booster vaccinations.

What do vaccines do?



Vaccines stimulate an immune response in horses by tricking their bodies into believing that they're being attacked by a disease



When horses are infected naturally, defence proteins called antibodies are produced and, together with a type of white blood cell called a killer cell, they will help the horse fight disease. Both antibodies and killer cells are specific for a particular infectious organism and can continue to circulate within the immune system for a time after the horse has recovered from the disease. This will help protect the horse from getting the disease again. However, the limitation with this natural immunity is that this response can take days, by which time the disease can cause significant harm and spread to other horses. Over time, the response weakens further unless the horse is re-exposed.

Vaccines stimulate an immune response in horses by tricking their bodies into believing that they're being attacked by a disease and creating antibodies and killer cells to fight infection. This means that when natural infection does occur, the immune system is able to produce a much faster and stronger response. It is this strong response, as a result of vaccination, that prevents the disease becoming debilitating and spreading to others.

Vaccines contain antigens (the proteins on the surface of the organism) that are altered slightly but are still recognisable to the horse's immune system. Therefore when a horse is vaccinated the immune system is primed and able to fight the disease it is immunised against, but not suffer the ill effects of the disease itself.

What are the different types of vaccines?



There are two types of vaccines - live (attenuated) and killed (inactivated)



Live and killed vaccines stimulate an immune response in horses to protect them against infectious diseases such as 'flu, EHV, tetanus and strangles.

- **Live (attenuated) vaccines** Live vaccines are derived from live organisms or intact viruses which are treated until they lose their capacity to induce the disease fully within the horse, but retain the capacity to trigger the immune system. Live vaccines are usually more effective than inactivated vaccines as they multiply within the horse and produce more antigens, but they are often much harder to produce.
- **Killed (inactivated) vaccines** Inactivated vaccines are produced when organisms are killed off by heat or chemicals and then introduced into the body to stimulate immunity. Antigens are introduced to a horse's body in a dose of vaccine and there is no multiplication within the horse following vaccination. Therefore, two doses of an inactivated vaccine are normally required to stimulate immunity, and prolonged immunity requires the administration of additional doses known as a booster.

Rules and regulations



Most competition and stable yards insist on 'flu vaccination



It is advisable to vaccinate all horses that regularly encounter large groups of unfamiliar horses, for example hunters and horses that take part in Riding Club and Pony Club activities.

Riders or trainers who compete under the International Equestrian Federation (FEI) or Jockey Club rules, have to ensure their horses' vaccinations are up-to-date to enable them to compete. Most competitions do not permit vaccination within seven days of the event.

- **Jockey Club rules** The Jockey Club rules stipulate that a horse must have two primary vaccinations against 'flu given no less than 21 days apart and no more than 92 days apart. In addition, where sufficient time has elapsed subsequent to the primary vaccinations, the vaccination section of the passport must be completed to show that:
 - A horse has received a booster vaccination given no less than 150 days and no more than 215 days after the second component of the primary vaccination, and
 - A horse has received booster vaccinations at intervals of not more than a year apart or such lesser time as the Stewards of the Jockey Club may, in an emergency, decide.
- **FEI rules** Horses competing in FEI competitions require a primary course, in accordance with Jockey Club guidelines, but importantly a booster every six months.

Frequently asked questions



■ Why should I vaccinate my horse?

Vaccination is the only proven means of helping protect horses against potentially fatal diseases such as equine 'flu, tetanus, EHV and strangles which can severely affect a horse's health and performance.

■ What should my horse be vaccinated against?

The most common diseases to vaccinate against are equine 'flu and tetanus, although it is also advisable to protect your horse against EHV and strangles. Your vet will be able to advise you on a vaccination or prevention programme and the frequency of booster vaccinations. If you are concerned about any diseases during breeding, for example rotavirus, you should also talk to your vet for information on a suitable prevention programme.

■ How often should I vaccinate my horse?

Booster vaccinations for respiratory disease are required from every three months to fifteen months, depending on the vaccine. Your vet can advise you on this.

■ How effective is vaccination?

As in humans, vaccination is never a 100% guarantee since it relies on the ability of each horse to individually mount a satisfactory immune response. As a result, you should never vaccinate a horse that is unhealthy or stressed. A combination of having a complete vaccination programme and enough of the population vaccinated (herd immunity) is how viruses and bacteria are kept at bay. The gold standard is to have a whole yard vaccinated and follow good stable management and hygiene procedures. This will reduce the amount of infective organism in the horse's environment.

■ What should I do if my horse appears sick following vaccination?

Just as humans sometimes feel unwell following immunisation, horses also can appear off colour after being vaccinated. This is not usually a cause for concern, but if you are worried you should talk to your vet.

An overview of infectious respiratory diseases



■ Equine 'flu 'Flu is a highly infectious viral disease which affects the respiratory tract including the windpipe and lungs.

Widespread throughout the horse population, the virus spreads rapidly, due to a combination of a short incubation period of one to three days and coughing during early stages of the disease. 'Flu is transmitted by direct horse-to-horse contact and indirect contact via humans, tack, feed and equipment.

■ Equine Herpes Virus (EHV) Equine Herpes Virus is a viral disease which can cause severe loss of form and associated problems including abortion and paralysis and, as in humans, the virus can recur time after time. It's estimated that a staggering 75% of horses become 'silent' carriers, able to pass it on to others without displaying any signs.

The disease can also remain dormant in previously infected horses and can be reactivated by 'stress' factors such as transport, competing, a change in environment and - in the case of youngsters - weaning, sales and breaking-in.

■ Strangles Strangles is a highly contagious disease caused by the bacterium, *Streptococcus equi*. Whilst the incubation period of strangles is approximately two weeks, infected horses can release the bacterium for long periods, so new outbreaks can occur up to three weeks after the initial outbreak. About 10% of horses can carry the disease after an infection of strangles up to a year previously.

Strangles is transmitted by direct and indirect contact and particularly through shared water sources, where the bacterium lives for longer periods. It can affect all ages and types, but those most at risk are youngsters; those kept in large numbers that mix with others and horses that travel a lot to competitions and riding club events.