

Vaccinations for Horses

A vaccine is a specially-made medicine that stimulates the body to produce an immune response to a particular infection. Most vaccines are given by injection of a small volume of liquid into the muscle, although there are a few given intranasally (i.e., via the nostril) (strangles vaccine), or by mouth (e.g., polio vaccine in humans). In most cases a course of vaccine needs to be given in order to stimulate the body to produce an effective and lasting immune response and this usually means two initial doses followed by booster doses at regular intervals thereafter.



Which diseases can be vaccinated against?

1. **Equine influenza** 'Flu' is a viral respiratory disease that affects horses of all ages although younger horses more commonly show clinical signs of illness (fever, runny eyes and nose and coughing). Whether signs are shown or not, equine influenza infection can result in days or weeks off work and the virus rapidly spreads to other horses by nasal aerosol (coughing). Occasionally, horses can become very ill with secondary complicating infections, e.g., pleuropneumonia.

Specific vaccinations reduce both the chance of becoming infected, if challenged, and the severity of illness, if infection occurs, allowing more rapid recovery, as well as reducing the risk of spread to other horses. Different types of equine influenza vaccine are available and manufacturers have different recommendations for their vaccination program but the following is generally appropriate:-

The first two (primary) vaccinations are given 4 to 6 weeks apart

Subsequently, booster vaccinations are given at 6 monthly intervals

Foals can be vaccinated against influenza from 3-4 months of age but many veterinarians now wait until 5 months.

2. **Tetanus** 'Lockjaw' is a serious, usually fatal, disease caused by toxin-producing bacteria (*Clostridium tetani*) that are present in soil and droppings. They enter the body via wounds or foot injuries. The bacteria produce toxins that causes a progressively worsening rigidity of the muscles so that the horse looks stiff and is reluctant to move. First signs may be a frightened expression (the muscles of the face are in spasm) and the third eyelid characteristically flicks over the eye when the horse is stimulated. As the jaw muscles become affected, the horse may become unable to eat (hence the old name 'lockjaw') and as paralysis spreads, breathing may also be affected.

Tetanus is easily and effectively prevented by vaccination:-

The first two (primary) vaccinations are given 4 to 6 weeks apart

Subsequently, booster vaccinations are given at 12 month intervals

Foals can be vaccinated against tetanus from 3–4 months of age

At the appropriate stages, Tetanus and Influenza vaccines are usually given in combined vaccinations, for practical and economic reasons.

3. Equine herpes virus (EHV) There are two main disease-causing herpes viruses in horses. EHV-1 is a common cause of respiratory disease and (less commonly) abortion and paralysis. EHV-4 is a common cause of respiratory disease. EHV is an important cause of respiratory disease ('snotty noses') in weanlings and yearlings that can lead to pneumonia with potentially serious complications. It is an important cause of illness and poor performance in horses in training for racing and other performance sports. Abortion in brood mares can cause the loss of up to 50% of a foal crop. Neurological disease (paralysis) may be fatal.

Specific vaccinations reduce both the chance of becoming infected, if challenged, and the severity of illness, if infection occurs, allowing more rapid recovery, as well as reducing the risk of spread to other horses. Population vaccination reduces the concentration of virus in the local environment, also making infection less likely.

Unfortunately, protection is short-lived even after vaccination:-

The first two (primary) vaccinations are given 4 to 6 weeks apart.

Booster vaccinations are given at 6 month intervals.

Foals can be vaccinated against tetanus from 3–4 months of age.

Pregnant mares are vaccinated during their 5th, 7th and 9th months of gestation.

4. Rotavirus This virus is commonly found in the environment, but can cause epidemic diarrhea in young foals. In some it is a transient and insignificant problem but in others, especially foals under three months old, can cause serious, life-threatening illness, requiring intensive care, sometimes resulting in serious complications of stomach ulcer formation, that may be fatal.

An equine Rotavirus vaccine is now available to stimulate immunity in mares so that their colostrum contains specific antibodies that give their foals protection during their first few months of life, until their intestines are mature enough to cope with viral challenge and they can develop their own immunity.

Pregnant mares are vaccinated during their 7th, 9th and 10th months of gestation and may be usefully boosted by revaccination with a foal at foot during a rotavirus diarrhea outbreak.

5. Equine Viral Arteritis (EVA) This virus causes a 'flu'-like respiratory disease, with characteristic conjunctivitis ('pink-eye') and leg swelling (edema) in horses throughout the world. It can cause abortion in pregnant mares. In stallions and other entire male horses who become infected, the virus can live in a 'carrier' state in their accessory sex glands (e.g., bulbourethral gland), resulting in venereal transmission of the virus to mares during natural mating or artificial insemination (AI) with fresh, chilled or frozen semen.

An EVA vaccine is available and many reputable stud farms vaccinate their stallions and teasers to help reduce the risk of their becoming 'shedding' carriers if they were to become infected.

The first two (primary) vaccinations are given 4 to 6 weeks apart

Blood samples should always be taken before the first vaccination is given, to prove EVA seronegativity (no antibodies in the blood, i.e., no evidence of previous infection) and the results should be certified in the horse's passport.

Booster vaccinations are given biannually after the breeding season (September or October) and before the next one (December or January).

Will the vaccine make my horse ill?

In the vast majority of horses who receive modern equine vaccines, there are no adverse reactions whatsoever. For the other vaccines, occasionally, a small lump may appear the next day at the site of injection. This may be sore for a few days but usually disappears, either on its own or with warm bathing and massage, that may be helpful. Much less commonly, an abscess may develop at the site of vaccination. This will require warm bathing and veterinary treatment. Occasionally, some horses appear 'off color' for a day or two after vaccination.

It is always sensible to give a horse a couple of 'easy' days after vaccination. This just means that the horse should not be stressed by travel or strenuous exercise.

Is it necessary to vaccinate my horse?

Vaccination against tetanus is a simple and effective way of preventing a severely debilitating and life-threatening disease. Horses often get small wounds that are not noticed, it makes sense to protect your horse against this disease and it is inexcusable not to.

If you wish to compete with your horse, you might find that vaccination for influenza is compulsory. This is to reduce the risks of major epidemics that might seriously disrupt racing and other equine performance sports. You will need an up-to-date vaccination certificate showing dates of vaccination and the veterinarian's signature. Vaccination helps to protect your horse as well as everyone else's from influenza. If you have a stud farm, keep a brood mare, or train horses for racing or other performance sports, you will be well advised to vaccinate your horses with EHV-1 and 4 vaccine in order to reduce the risks of infection that can cause serious losses of performance, abortion and paralysis. If you have a stud farm you may wish to make it a condition of entry for visiting pregnant mares that they are fully vaccinated against EHV-1 and 4 and Rotavirus, to help prevent epidemics of abortion and diarrhea that are so distressing in terms of welfare and potentially catastrophic in terms of financial implications. It is sensible to vaccinate stallions and teasers against EVA. The new strangles vaccine may be helpful in reducing signs of disease (abscess formation) in high risk situations but it is clearly not claimed to be fully protective.

Although seldom (except in the case of tetanus vaccine) 100% protective, vaccination is good 'insurance' against epidemic disease on the basis that prevention is always better than cure, both for the welfare of your horses and for the cash flow of your business.

This client information sheet is based on material written by: Deidre M. Carson, BVSc, MRCVS & Sidney W. Ricketts, LVO, BSc, BVSc, DESM, DipECEIM, FRCPath, FRCVS.

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