EQUINE VACCINATIONS

Horses, ponies and donkeys are susceptible to a number of diseases which thankfully we can vaccinate against.

What is a vaccination?
A vaccination is a way of producing an immune response against a specific disease. It primes the immune system so that an appropriate immune response can be stimulated if your horse comes in to contact with the disease. Initially a primary vaccination course will be required when vaccinating against a specific disease. This involves two or three vaccinations fairly close together. Regular booster vaccines at set time intervals depending on the disease you are vaccinating against.

Is vaccinating compulsory?
Vaccinating your horse is not compulsory. It is not cheap but the cost of treatment will be considerably more if your horse does contract one of these diseases that can be protected against. With some diseases such as tetanus, there is little treatment that can be administered and many horses will die. However, if you wish to enter your horse into any competitions, if it’s entering a racing yard then vaccination against equine influenza (flu) is compulsory. If you are putting your horse into livery then some yard owners will also insist on vaccination before allowing your horse onto the premises.

Is it Dangerous to vaccinate my Horse?
All vaccines are tested extensively by the drug companies to ensure they are safe and there are no adverse reactions before being put on the market. Some adverse reactions have been seen but these are incredibly rare when you consider the number of horses routinely vaccinated against flu and tetanus. Of these reactions, most are either a local soft tissue reaction to some of the components of the vaccine or mild muscle stiffness. The risk of your horse contracting flu or tetanus is much greater and can even be fatal compared with the risk of your horse developing a reaction to a vaccine.

Following vaccination how long before I can ride again?
It is advisable that for the first 24-48 hours following vaccination of your horse or pony stress is minimised. This will reduce the risk of adverse reactions developing. After this time period you ride your horse as normal. If you vaccinate against influenza then you are not allowed to compete until 7 days after the vaccine has been given.
EQUINE HERPES VIRUS
This is a common virus in the worldwide horse population. The most common strains to infect horses are EHV1 and EHV4. EHV4 is most commonly associated with respiratory disease whilst EHV1 is more commonly associated with neurological disease and abortion.

Abortion
Abortions generally occur in late gestation at about 7 months and pregnant mares don’t always show signs of infection prior to abortion. Following infection, abortion occurs from 2 weeks to several months later. Foals can become infected whilst still in the mares uterus, which can lead to premature birth, birth of weakly foals or foals that initially appear healthy but become progressively weak and lethargic within the first week of life. Ideally pregnant mares should be kept in small groups and kept separate from any other horses that come on to the premises.

Respiratory Disease
Respiratory disease due to EHV is most commonly seen in weaned foals and yearlings in the autumn and winter. Following infection with the virus, it is likely that they will develop a secondary bacterial infection.

Carriers
Horses that have recovered can become latently infected with the virus, that is they don’t appear unwell but the virus is still within the body. When the horse becomes stressed the virus can then be reactivated and re-infection can occur.

Vaccination
Vaccinated horses can still become infected with the virus, shedding it in the environment and infecting other horses but the severity and length of disease will be reduced
Horses can be vaccinated from 5 months of age. The primary course involves two injections 4-6 weeks apart. Foals with insufficient colostrum intake can be vaccinated with a single dose at 3 months then again at 5 months, then 4-6 weeks after.
It is advisable that all animals on a stud farm are vaccinated against EHV, whether they are pregnant or not, although pregnant mares can still abort following vaccination. It is not advisable to vaccinate in the face of an outbreak of EHV on a yard since it can exacerbate clinical disease.
Vaccination of Pregnant Mares
Pregnant mares that have had the primary course of vaccination should then also be vaccinated in months 5, 7 and 9 of pregnancy. Boosters are required every 6 months.
EQUINE INFLUENZA VIRUS
This is a highly contagious viral disease of the upper and lower respiratory tracts. There are many different strains of the flu virus but the most common ones seen in this country are H7N7 and H3N8. Whilst equine flu is now endemic within the horse population the virus strains continually mutate and therefore epidemics or outbreaks of disease can be seen. Vaccine companies regularly update the vaccine to protect your horse against the strains that are currently circulating in this country.

Equine influenza can be spread rapidly through a group of horses either via direct contact with an infected horse or indirectly via virus particles in the environment. It is therefore important to isolate any horse you suspect of having flu.

Clinical signs of Flu
Clinical signs are generally seen 1-5 days after infection and can last for 2-3 weeks or longer if complications occur. Signs to look out for are;

- Harsh dry cough that can last for 2-3 weeks
- High temperature 43°C (106°F)
- Clear moist nasal discharge that progresses to become thick and creamy yellowy-brown
- Depressed and lethargic
- Decreased appetite

Infection with the flu virus can make the horse more susceptible to bacterial infections and bronchitis or bacterial pneumonia can subsequently develop. This can prolong recovery time and increased treatment will be required.

Vaccination
Vaccinating against flu is highly recommended and is in fact mandatory if your horse is going on to any race courses. The jockey club, international equestrian federation and many show societies produce vaccination protocols to follow for equine influenza. These all vary and it is therefore important that you check the requirements for your particular society. Different vaccination companies also have different vaccination protocols so it can get very confusing to work out when each vaccination is required. The most common vaccination protocol is;

- Initial primary vaccination course which involves two injections no less than 21 days and not more than 92 days apart.
- First booster is then required at not less than 150 days and not more than 215 days after the 2nd injection of the primary course.
- Subsequent boosters are then required at intervals of not more than 365 days apart.
Competition Rules

- Each horse must have a valid vaccination certificate which is completed, signed and stamped by a veterinary surgeon.
- You must be able to show that your horse has had a primary vaccination course against equine influenza as stated above.
- No vaccination should be given in the 7 days leading up to a competition or entry into a competition stables.
- Check with the competition organisers/society as to what the protocol is for vaccinating against flu.
TETANUS
Of all the domestic species, the horse is the most susceptible to tetanus. Tetanus is caused by the bacterium Clostridia tetani which can be found in the soil. The Clostridium tetani spore enters the body through wounds, in particular, puncture wounds.

Deep puncture wounds have very low oxygen availability and this allows the Clostridia organism to thrive. As the organism replicates it produces spores that bind to nerve endings and this causes the clinical signs that you see.

Clinical Signs
- Progressive stiffness
- Difficulty swallowing, dropping of food
- Erect ears and tail raised
- Startled expression, eyes wide
- Flaring of the nostrils
- Hypersensitive to sudden movements and noises
- Temperature 43 C

Once signs of disease are present there is very little medically that can be done. Tetanus anti-toxin can be given but this only works against the toxins that have not yet bound to the nerve endings. Once the toxin is bound to the nerves nothing can be given to break it down and all you can do is wait. The convalescent period is around 6 weeks and during this time good nursing care is essential. Even with good nursing care the mortality rate is high.

Prevention
Vaccines are available to protect against tetanus and are quick and highly effective. They can be started from 3 months of age. A primary vaccination course is required, consisting of two injections 4 weeks apart. A booster is then required one year later. After the first booster, subsequent boosters are required every 2-3 years but this will vary depending on the risk.

Pregnant mares should receive a booster in the 11th month of pregnancy. This increases the level of antibodies in the milk and provides protection to the foal for about 6 weeks after birth as long as they receive sufficient intake of colostrum at birth. Foals can be given tetanus anti-toxin at birth to provide them with protection.

You can further minimise the risk to your horse by ensuring good hygiene practice. Regularly inspect your horses legs and hooves for cuts and penetrating wounds. Ensure the stable, yard and paddock are clear of all potential hazards such as barbed wire, nails, disregarded pieces of wood or metal.

For further information or for us to come and vaccinate your horse please contact us.
EQUINE ARTERITIS VIRUS

EAV is a notifiable contagious disease affecting horses, donkeys and mules worldwide. It is a virus that replicates in the walls of the arteries throughout the body, therefore having the potential to cause widespread inflammation, respiratory disease and occasionally abortion. It is seen in both the northern and southern hemispheres and prevalence varies between countries and even between breeds in the same country. The standard bred and the warmblood breeding populations seem to be more susceptible to infection. The number of cases of EAV being diagnosed is on the increase. This is partially due to improved diagnostic tests but also due to increased international trade of horses and semen. Although not life threatening to the healthy individual EAV is of great importance to the breeding industry since it can cause outbreaks of abortion in pregnant mares. Occasionally instead of causing abortion, the virus crosses the placental barrier and infects the foal, resulting in a live but diseased foal. Stallions can be carriers of the virus, spreading it to the mare in semen.

Transmission of EAV

Your horse can get EVA from either direct or indirect contact with an infected horse. The virus is transmitted by respiratory infection, ingestion of contaminated material or via venereal spread in the semen. Examples of ways transmission can occur are;

- Direct transmission during mating
- During teasing
- Using semen from infected stallions to artificially inseminate a mare. The virus can survive even when the semen is chilled or frozen
- Contact with an aborted foetus or associated aborted material such as the placenta, amniotic fluid
- From respiratory secretions in the environment such as aerolised droplets from coughing

The stallion is a very important source of the virus. When infected, the virus localises in the accessory gland and is then shed in his semen for weeks or months after infection. In some cases, the stallion will shed the virus for life. Whilst shedding the virus in the semen the stallion can appear perfectly healthy but they will have the ability to infect mares via teasing, natural mating or through their semen via artificial insemination.

Clinical Signs
Depending on the route of infection, clinical signs can be seen from 3-7days after infection. There are a range of clinical signs which can all vary in severity from mild to severe. A combination of the following signs are associated with EAV;

- High temperature
- Swelling of the dependant parts of the body such as the lower limbs, scrotum, mammary glands, sheath, lower abdomen
- Discharge from the eyes and swelling of the eyelids
- Depression and loss of appetite
- Stiff gait
- Skin rash, usually localised around the head but can become more widespread or be found in other areas
- Abortion early or late in pregnancy and may be seen before the onset of any other clinical signs

Any stallion that develops a high temperature for a period of time may become temporarily infertile. Within 3-4 months semen levels should return to the level they were before infection with EVA.

**Prevention**
The main way of preventing infection with EVA is via vaccination, particularly of your teasers and breeding stallions. In the UK it is not recommended that you routinely vaccinate the mares and emergency vaccination may only be considered in exceptional circumstances involving widespread disease outbreaks.

When you vaccinate against EVA, the horse will produce antibodies in response to the vaccine. The antibodies produced following vaccination cannot be differentiated from those that are produced following infection. Therefore it is very important that before vaccination a blood test is taken from your horse to prove that it is not infected with EVA. A record of this test should be kept, preferably in your horses passport. Only once it is proven that the horse is not infected with EVA can the vaccine be given.

It is recommended that colts are vaccinated from 9 months of age. A primary vaccination course is initially required which consists of two vaccinations 3-6 weeks apart. It is then recommended that boosters are given every 6 months thereafter since immunity will only last for 6 months.

It is advisable that after January 1st blood samples are taken from all mares intended for breeding from that year and all unvaccinated stallions and teasers. Until the blood results are received it is not advisable to breed.
ROTAVIRUS
Many viruses can cause diarrhoea in foals but the commonest is the Rotavirus. Foals under the age of 3 months are the most susceptible to infection. The virus is found widely in the environment so good hygiene is essential at controlling infection.

Clinical Signs
- Depression
- Not suckling
- Diarrhoea
- Temperature can be normal

Diarrhoea can be profuse and the foal can quickly become very dehydrated and die. We cannot treat the virus directly but we can offer supportive care such as putting the foal on a drip to maintain hydration status and monitor electrolyte imbalances. Good nursing care is essential in the treatment of these foals as they can be unwell for several weeks. Treatment is therefore expensive and takes a lot of time.

Prevention
Good hygiene is essential at preventing infection. Keep stocking density of mares and foals low, don’t mix age groups of foals together and regularly clean out the pens to avoid a build up of infection in the environment.

Foals receive antibodies against the rotavirus via the mares colostrum. It is therefore essential that they receive adequate intake of colostrum from birth. Prior to foaling, a blood sample can be taken from the mare to ensure she has adequate levels of antibody against the virus.

If mares do not have enough antibodies against rotavirus then they can be vaccinated to boost the levels in the 8th, 9th and 10th month of each pregnancy. The foals of vaccinated mares show an increase in the level of antibodies against rotavirus for about 60 days.

For further advice please contact us.