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Vaccinating your horse

Following on from last months article on West Nile Virus, this article discusses other vaccines available to horse owners. Horses are susceptible to a number of life threatening conditions. Fortunately there are vaccines available for some of these.

What is a vaccination?

A vaccination is an injection that stimulates an immune response in your horse against a specific disease. A vaccination program ensures that your horse has maximum protection against the disease. It doesn't mean that your horse can't contract the disease though. If contracted, symptoms will be much milder than in non vaccinated horses, with far fewer fatalities and much less spreading of the disease.

Do I have to have my horse vaccinated?

If you wish to show, race or enter your horse in competitions it must be vaccinated against influenza and AHS (African Horse Sickness) according to the regulations of the event committee or organisation. This usually involves the presentation of an up-to-date vaccination certificate signed by a veterinary surgeon.

Some owners give the excuse that vaccination is too expensive as the reason for not vaccinating their horse. Although courses of vaccinations and annual boosters may not be cheap, if your horse contracted one of these illnesses the cost of treatment would be considerably more expensive. These conditions can lead to a severely debilitated horse and, if complications develop, this can result in death.

Is vaccination dangerous?

No, vaccination is not dangerous. Millions of horses have been vaccinated against tetanus and influenza over many years and the number of adverse reactions reported from these vaccines is insignificant. Of these reported adverse reactions most are only local injection site reactions or mild muscle stiffness and very rarely muscle wasting.

The risk to your horse of contracting and suffering serious or fatal consequences of tetanus and influenza or West Nile Virus is many, many times greater than the risk of your horse having an adverse reaction to a vaccination.

Can I still ride my horse?

You should try and reduce stress, eg heavy exercise, on your horse for the 24-48 hours after vaccination. This will further reduce the very small chance of any adverse reaction. During AHS vaccinations, the horse should be kept in only very light work, especially through the second week post vaccination. It is not uncommon following AHS vaccination for horses to have a temperature and/or stacked legs.

My horse hates needles - is there any way around this?

No - it is important to ensure that your horse is vaccinated. Very small needles are used and vaccination only takes a matter of seconds. Your vet will be used to vaccinating awkward horses!

What diseases can I vaccinate my horse against?

The following diseases can be vaccinated for in South Africa using licensed, registered vaccines:

Influenza

Tetanus

African Horse Sickness

West Nile Virus

Herpes virus

Strangles (Strep.Equi)

Botulism

Rabies

Influenza

Equine influenza is a major virus disease that causes Flu-like symptoms in horses and is from the group of viruses that causes flu in humans. The Influenza A/equi-2 virus causes most of the major disease outbreaks worldwide. It caused an epidemic in South Africa at the end of 2003, resulting in the cancellation of various horse races, bringing the multi million rand industry to a crashing halt. South Africa is currently 'free' of equine influenza, but vigilance needs to be maintained.

The reason why people get the "flu" every year is because new strains of the virus causing the disease appear. The same scenario applies to the Nequi-2 viruses; it underwent something called "antigenic drift". This resulted in two distinct lineages of the viruses, one called the North American lineage and the other the European lineage. The problem with the emergence of these two lineages is that strains from each lineage will not protect against the other lineage.



Tetanus

Tetanus is caused by *Clostridium tetani*, a bacterium which is found in soil. This enters the horse's bloodstream via an open wound. Even small wounds can allow *Clostridium tetani* contamination and, because the incubation period is 7-21 days, the wound has usually healed by the time the first signs of the disease are apparent. Often owners are not even aware that their horse has received a wound, or thought it minor and of no importance and yet their horse develops tetanus.

Approximately 90% of unvaccinated horses that develop tetanus die. In the small number of horses that do recover, intensive veterinary treatment and nursing care is required for a period of about 6 weeks.

Tetanus vaccines should be given at least every two years and can be combined with the flu vaccine.



A horse with tetanus. Note the stiffness, raised tail head and outstretched neck.

Strangles

Strangles is a bacterial disease caused by *Streptococcus equi*. Signs of the disease include a fever, mucopurulent nasal discharge, swollen lymph nodes, depression, off feed. Most horses do recover. Although vaccination is not 100% efficacious it prevents horses from developing the more serious signs seen in unvaccinated horses, which can lead to death.

The strangles vaccine is given as an injection into the upper lip and should be given every 6-12 months.



Equine Herpes Virus (EHV)

EHV is a highly contagious infection which is a common cause of abortion in pregnant mares. Infection is usually acquired via the respiratory route, either directly by respiratory aerosols or indirectly via ingestion of infected feed sources/fomites. EHV also causes respiratory tract disease, neurological disease and disease of the neonatal foal.

It is usually recommended that only brood mares and horses in race training are vaccinated against herpes.

African Horse Sickness

African horse sickness (AHS) is a highly infectious non-contagious, vector born viral disease affecting all species of Equidae. It is classified as an Orbivirus of the Reoviridae family of which there are 9 serotypes. All serotypes (1-9) are distributed throughout South Africa, although there is a variation in their temporal distribution. It is endemic to (occurs naturally on) the African continent, and is characterised by respiratory and circulatory damage, accompanied by fever and loss of appetite.

Animals affected are, all breeds of horses (mortality rate of 70-90%), mules and donkeys. Wild life Equine species (Zebras) are resistant to the disease. The vector host, Culicoides midge, spreads AHS virus.

AHS does not spread directly from one horse to another, but is transmitted by the Culicoides midge, which becomes infected when feeding on other infected horses. It occurs mostly in the warm, rainy season when midges are plentiful, and disappears after frost, when the midges die. Most animals become infected in the period associated with sunset and sunrise, when the midges are most active.

African Horse Sickness (AHS) is one of a number of diseases known to be potentially damaging to the livestock economy. By way of the Animal Diseases Act (Act No. 35 of 1984), AHS has been declared a state controlled disease, thereby empowering the state to implement measures to control the disease. Horse owners are also required by this law to notify their local state veterinarian of any cases of AHS. **The Act also requires that all equines (horses, donkeys and mules) must be vaccinated at least once a year with an approved AHS vaccine.**

There are two vaccines covering the 9 serotypes between them. The vaccines are given a minimum of three weeks apart on an annual basis. The state vets have to be notified of vaccination but your vet will do this for you.

Ideally vaccinate during the low vector activity period (August – October). This ensures that optimal vaccine immunity is provided during the high-risk period of March and April. This increased vaccine coverage will reduce the impact of outbreaks and the risks of the rapid spread of the disease in high-risk periods.

Previously vaccinated horses can be worked normally during the vaccination period only if no temperature reaction to the vaccine is indicated. Horses receiving their first AHS vaccine should not be exercised or only minimally exercised during the 6-week vaccination period.

Please go to www.africanhorsesickness.co.za for further information.



Rabies

Rabies is an infrequently encountered viral neurologic disease of horses. While the incidence of rabies in horses is low, the disease is invariably fatal and has considerable public health significance.

Exposure occurs through the bite of an infected (rabid) animal, typically a wildlife source such as, fox, dog, or bat. Bites to horses occur most often on the muzzle, face, and lower limbs. The virus migrates via nerves to the brain where it initiates rapidly progressive, invariably fatal encephalitis.

The vaccines are given by intramuscular injection and appear to be safe. Rabies is an excellent immunogen (rapidly stimulates excellent immunity) and these vaccines induce a strong serologic response after a single dose.

Horses should be vaccinated annually. Pregnant mares should be vaccinated 4-6 weeks prior to foaling. Foals should then be vaccinated from 6 months of age with a primary course or two injections 4-6 weeks apart, then annually. If the foal is from an unvaccinated mare then it only needs one primary vaccine at 4 months of age, then annually thereafter.



Botulism

Botulism is caused by a toxin produced by a certain type of bacteria, *Clostridium Botulinum*. There are several different strains of toxin produced. The bacteria are usually associated with organic material like rat carcasses among feed, or in big bale silage/haylage, or rotting hay bales on the ground.

Clinical signs that may be seen include inability to swallow leading to paralysis and death. There are conflicting thoughts on whether to vaccinate for botulism or not. Reactions are common and can be severe. The vaccine available only covers for some of the strains of botulism toxins, so is not a complete vaccine. Whether to vaccinate or not has to be considered carefully and each horse's individual status considered. Some insurance policies may also be affected by botulism vaccine status. It is advised that botulism vaccination is discussed carefully with the owner's own veterinarian.

If vaccination is decided upon then foals should receive their first vaccination at 6 months with a booster 4-8 weeks later. Unvaccinated horses receive a first vaccination followed by a booster 4-8 weeks later. Previously vaccinated horses are revaccinated annually. Pregnant mares should be vaccinated 1-3 months before foaling.

West Nile Virus

Please see last month's information sheet for further details on WNV. There is now a fully licensed west nile vaccine available in South Africa, West Nile Proteq. Horses should have a primary course of 2 vaccines 4 weeks apart, followed by a booster at 6 months. To then be followed by bi annual or annual boosters depending on the risk.