



# UNDERSTANDING VACCINATIONS in Horses



## WHAT TO KNOW ABOUT VACCINATION

Few measures will protect your horse from the ravages of disease as easily and effectively as vaccination. The vaccines administered by your veterinarian to your horse ensure a protective barrier between the animal and a range of potential diseases such as tetanus, equine influenza, rabies and African Horse Sickness.

Vaccination involves the sterile injection of bacteria, viruses or toxoids that are inactivated or modified to avoid causing actual disease in the horse. Two or more doses are usually required to stimulate an adequate initial immune response. Once the vaccine has been administered protective cells and antibodies are generated in the body to guard against invasion by disease agents or to guard against the effects of toxins. Some vaccines require annual boosters to stimulate adequate levels of immunity, whilst others require administration at more frequent intervals to provide adequate protection. Administration of a vaccine to your horse should not be associated with any serious side-effects.

The specific vaccinations needed by a particular horse depend on several factors such as age, risk of exposure, geographic location, use and general management factors. Your equine veterinarian can help you determine the vaccination program best suited for your horse's individual needs. A good vaccination programme is an essential component of responsible horse ownership, but as in humans, vaccination does not always guarantee 100% protection from disease. In some situations, whilst vaccination may decrease the severity of the disease it may not prevent it completely. This may be due to many reasons, such as differences in the virulence of the infectious agents encountered, stress, nutritional status and concurrent medications.

The following diseases are those most often vaccinated against in Southern Africa.

## AFRICAN HORSE SICKNESS

African Horse Sickness (AHS) is a mild to fatal, non-contagious viral disease caused by an Orbivirus of the Reoviridae family. Nine serotypes of AHS virus are known. In South Africa the disease occurs every summer in the northern and north-eastern region and spreads further dependent on favourable climatic conditions. AHS is generally more prevalent in low-lying moist inland conditions or warm coastal regions in the summer rainfall area, with most serious outbreaks occurring in March and April. Horses are most susceptible to the disease with a 70 to 95% mortality rate, whilst donkeys and zebras are resistant.

### Spread of the disease

*Culicoides* species biting midges are responsible for transmitting the virus between equids.

### Clinical Signs

The outcome of infection in horses, including the incubation period and the severity of infection, is largely dependent on virus virulence and susceptibility of the horse.

**Signs ranging from:** fever, sweating, laboured breathing, nasal discharge, coughing, swelling above the eyes and swelling of the head, to sudden death, may be associated with the 4 forms of the disease namely the "dunkop" lung form, "dikkop" cardiac form, mixed form and mild fever form.

### Treatment and prevention

There is no specific therapy as the condition is caused by a virus. Strict rest, good nursing care and the administration of anti-inflammatories, antibiotics and judicious fluid therapy under veterinary supervision, is generally recommended. The most important components of prevention are regular vaccination and avoidance of *Culicoides* biting midges by stabling at night, screening of stables and regular use of insect repellents.

### Vaccination guidelines

The OBP AHS vaccine is a polyvalent, live attenuated vaccine with the various serotypes divided between 2 vials for administration at least 3 weeks apart.

- Foals born from unvaccinated mares can be inoculated before 6 months of age.
- Foals born from vaccinated mares should only be inoculated from 6 months of age.
- Animals should be vaccinated during spring/early summer.
- Annual booster vaccination is required.
- Pregnant mares should not be vaccinated in the first 3 months of pregnancy.
- Animals should be monitored for reaction between the 7<sup>th</sup> and 14<sup>th</sup> days after vaccination, and should not be worked excessively during this period and for a week thereafter.
- Note that it takes up to 3 vaccinations for horses to generate immunity to all serotypes in the vaccine.

Please consult your veterinarian regarding vaccination guidelines if your horse is located in an area of South Africa with vaccination restrictions.



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## EQUINE INFLUENZA

Equine influenza is an acute, contagious respiratory disease of equids caused by type A influenza viruses of the Family Orthomyxoviridae. Only 2 subtypes classified as H7N7 (subtype 1) and H3N8 (subtype 2) are known to infect equids, in particular horses.

### Spread of the disease

The virus has the ability to spread quickly from horse to horse through direct and indirect contact. The disease is thus very contagious with almost 100% infection rate in an exposed susceptible population.

### Clinical signs

The disease has an incubation period of 2-3 days, followed by signs of fever, dry to moist cough, lethargy and anorexia, watery nasal discharge, and signs of secondary bacterial infection of the respiratory tract.

### Treatment and prevention

There is no specific therapy as the condition is caused by a virus. Adequate rest, good nursing care and the administration of anti-inflammatories and antibiotics to selected cases, under veterinary supervision, is generally recommended. The most important components of control are isolation of clinical cases, and prevention by vaccination with an appropriate vaccine.

### Proposed vaccination schedule (OBP Vaccine)

- Foals born from unvaccinated mares can be vaccinated from 2 weeks of age.
- Foals born from vaccinated mares should be vaccinated from 3 months of age.
- A primary course of 2 inoculations should be given, with the second inoculation given 3-4 weeks after the first, and the third 3 months later.
- Older horses should receive 2 initial inoculations 4-6 weeks apart.
- Booster inoculations should be administered to all animals at 6 month intervals.
- The vaccine can be safely used in pregnant mares.

In order to prevent extensive outbreaks it is necessary to follow the vaccination schedule outlined above, especially adhering to administering a 6 monthly booster to all horses.

## TETANUS

Tetanus, also known as "lockjaw", is a fatal infectious disease caused by the toxin of *Clostridium tetani* bacteria. The most common route of infection is by contamination of wounds with infectious spores which are found in soil. Newborn foals may be infected via the umbilicus.

### Clinical Signs

The disease causes signs of muscle rigidity with a stiff gait, "sawhorse" stance, hypersensitivity to stimulation, convulsions and inability to stand. More than 75% of affected horses may die.

### Treatment and Prevention

Treatment is generally supportive with good nursing care. Veterinary supervision of wound care, antibiotic, tetanus antitoxin, and sedative administration is essential. The most important component of prevention is vaccination.

### Vaccination Guidelines (OBP Vaccine)

- The OBP Tetanus vaccine is a toxoid.
- Horses vaccinated for the first time at 3 months of age and older should be inoculated twice at an interval of 4-6 weeks.
- Thereafter they should be inoculated annually.
- Pregnant mares should be vaccinated annually 4 weeks before foaling.
- Boosters may be administered after lacerations or other tetanus-prone wounds.

## OTHER VACCINATIONS

Please consult your veterinarian for recommendations regarding administration of other vaccines such as equine Herpes virus vaccine, Rabies and Botulism vaccines.



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