

# The why, when, where and what of equine vaccination

by Dr Barry Coates

**Apart from good management and husbandry, the next best, and sometimes the only way to prevent our beloved horses from getting some of the deadly diseases, is vaccination. Even though not all vaccines are 100% preventative, provided that a good quality vaccine is used, it is the least we can do to limit the severity of the disease.**

Answering the four W-questions is not always as clear as black and white. Therefore it must be made clear that the guidelines below are exactly that – guidelines. It is essential that you consult with your local veterinarian to determine what disease is of importance in your part of the country and what your horse's main activity is.

## Diseases

**African horse sickness (AHS)** is a disease that we simply should not take any chances with, especially if one considers that if your horse gets AHS it has a 29% chance of dying. There are nine different serotypes (strains) of the virus and the combination vac-

cine available contains seven of the nine serotypes. The vaccine (Horse sickness, Onderstepoort) comes as Combination 1 and Combination 2 that each contains completely different serotypes. The second injection, Combination 2, is not a booster for the first injection (Combination 1). Therefore it is essential that the directions are followed accurately and both combinations are given subcutaneously 3-4 weeks apart. It is thought that after 3-4 vaccination courses (3-4 years/seasons) that there will be some cross immunity against the two outstanding strains.

**Equine flu** is a highly contagious but, to an extent, preventable disease that recently crippled the racing and sporting horse industry in South Africa. It cost the country millions of rand and a number of horses died due to the secondary complications. It is caused by the *influenza equi* virus and is transmitted from horse to horse through the air and nasal/respiratory secretions. After a very short incubation period of 18-24 hours, the signs can vary from a runny nose and fever for a few days to a serious cough and upper respiratory infection and possibly even deadly pneumonia and heart muscle damage.

**TABLE 1: Best age to vaccinate against various diseases**

| Disease / vaccine            | Time / age   | Route               |
|------------------------------|--|---------------------|
| African horse sickness (AHS) | Foals of susceptible, unvaccinated mares can be vaccinated at any age (especially when faced with an outbreak), but preferably at age 1-2 months.<br><br>Foals of immune, (vaccinated) mares should be vaccinated at 5-6 months and then again in early spring (July-September).   | S/C                 |
| Equine flu                   | Foals of susceptible (unvaccinated) mares can be vaccinated as early as two weeks old followed four weeks later by booster with the same vaccine (ie at six weeks old), when faced with an outbreak and uncertain about mare's vaccination/immune status.<br><br>Foals of immune (vaccinated) mares should be vaccinated at 5-6 months, followed four weeks later with a booster of the same vaccine (ie at 6-7 months).<br><br>All foals should then receive a third booster six months after the second booster. | I/M                 |
| Strangles                    | Foals older than four months as well as unvaccinated horses of any age, followed by booster four weeks later.  | Inside of upper lip |
| Tetanus                      | Foals at 5-6 months, with booster at 6-7 months.   |                     |
| Equine flu and Tetanus       | A combination vaccine is available, making the management of the vaccine much easier.  | I/M                 |

To prevent a significant outbreak, one firstly needs to regularly vaccinate individual animals to protect them from contracting the disease and becoming ill themselves, and to prevent them from spreading the virus to other horses. Secondly, one needs to limit the movement of horses to contain the outbreak to the smallest possible area. When selecting an equine flu vaccine, always ensure that the vaccine contains the most recent strain or type of flu virus. Vaccinating with a vaccine containing an older strain can make horses even more susceptible to the newer strains.

**Equine herpes virus** (EHV 1 and EHV 4) is another important disease that not only causes respiratory disease similar to flu, but can also cause abortions in brood mares. Vaccinating against EHV is highly recommended especially for horses that are intended to be bred.

A horse suffering from **tetanus** is one of the most unpleasant sights that one can see. Of all mammals, the horse is the most susceptible to the effects of the tetanus toxin. The clinical signs are erect ears and tail, twitching, dilated nostrils, protruding third eyelids, difficulty walking and turning, intense spasms of the neck and back muscles, “sawhorse” stance (legs stiff and extended), profuse sweating, spasms of muscles which affect the breathing and heart rate, and congested mucous membranes. Death occurs in about 80% of cases that develop full-blown tetanus. Regular vaccination with a quality vaccine can prevent, or at least minimise, the severity of the disease.

**Strangles** (*Streptococcus equi*) is the last of the five most important diseases in South Africa that can be prevented, or controlled by vaccination. Read more about strangles in the April edition of *SA Horseman*. Although one often achieves complete protection against strangles, the main aim of vaccinating against it is to significantly reduce the symptoms of the disease.



Horses are also susceptible to a number of other diseases such as rabies, botulism, encephalomyelitis and anthrax, but the necessity of preventative vaccination against these diseases should be discussed with your local veterinarian.

#### Very important points to remember:

- Follow the instructions carefully especially regarding route of administration (intramuscularly or subcutaneously) and at what stage of the mare’s pregnancy is the safest
- Boosters (whether quarterly, twice yearly or yearly) are absolutely essential. Immune systems have a “memory” and it needs constant reminding. Not giving regular boosters makes the initial vaccination a waste of time and money
- Your local vet should have the best knowledge regarding what diseases occur where. **SAH**

**TABLE 2: Yearly vaccination programme (booster)**

| Vaccine              | Time / age   | Route               |
|----------------------|--|---------------------|
| Horse sickness (AHS) | Yearly in early spring (July-September) Combination 1, followed 3-4 weeks later by Combination 2 (pregnant mares in the first trimester of pregnancy). | S/C                 |
| Equine flu           | Twice yearly (ie every 6 months), at any time of year.   | I/M                 |
| Tetanus              | Yearly to twice yearly, depending on risk and area.  | I/M                 |
| Strangles            | Yearly to twice yearly, depending on risk and area.  | Inside of upper lip |

I/M = Intramuscularly and S/C = Subcutaneously