



VACCINATION IN HORSES

There are several vaccines which have been developed specifically for horses around the world, but only a handful that are relevant to Australian conditions. Of those, there are two diseases that are commonly vaccinated against in this area, Tetanus and Strangles.

How do vaccines work?

Vaccines are injected to trigger an immune response without causing symptoms of the disease. Only a portion of the offending agent (bacteria/toxin/virus) is included, but it is a portion which will sensitise the immune system, producing antibodies and specific cells to combat the disease, plus trigger a “memory” to reactivate if the disease is encountered. The most common vaccination protocol is to give an initial sensitizing dose, and then follow up in 2-4 weeks with a second dose. Usually, boosters are required thereafter to maintain the immunity. ***It is critical that the correct number of doses of vaccine are used-*** if the first dose is given, but the second forgotten, the initial dose is wasted and the horse has no effective immunity. The vaccines are too expensive not to do it correctly.

TETANUS

Tetanus, or “Lockjaw”, is caused by bacteria called *Clostridium tetani*. The tetanus bacteria forms resistant spores that can survive long periods in the environment. These spores are found in abundance in horse manure everywhere, and are therefore widespread. The spores cause disease when they are carried into a wound where there is a poor blood supply. This occurs typically with puncture wounds, but can also occur with routine surgery, if the surgery site gets contaminated during the healing phase, like with castration wounds. The poor oxygen levels in the wound triggers the spores to multiply and start producing a toxin. Tetanus is commonly fatal, even with treatment. **We recommend that every horse is vaccinated against Tetanus.**

There are two products commonly used in Tetanus prevention.

One is the Tetanus Toxoid (Equivac T) – this is the vaccine, which is used to stimulate an immune response. It requires 2 intramuscular injections be given 4 weeks apart, followed by an annual booster, and thereafter boosters every 3-5 years will maintain adequate immunity. Foals can have their first dose at 6 weeks. It is important to note that adequate immunity will only occur 7-10 days after the second dose.

Because of this, there is an Antitoxin available (Equivac TAT), which gives immediate cover when an unvaccinated horse is wounded, but will only last approximately 2 weeks. The antitoxin has become relatively expensive, doubling in price in recent years, and it is therefore more economical to vaccinate to prevent the disease.

In summary – vaccination can start from 6 weeks of age.

- **Initial course requires 2 injections 4 weeks apart.**
- **Follow up with an annual booster for long term immunity.**
- **Boosters every 3-5 years will maintain immunity.**
- **If you miss the second (4 week) or third (annual) dose, you need to start the course again to be sure of immunity.**
- **Antitoxin (Equivac TAT) gives immediate cover, but for only 2 weeks. This can be used at any age, even a 1 day old foal.**

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STRANGLES

Strangles is a common disease in horses, caused by the bacteria *Streptococcus equi*. It is transmitted from horse to horse, but can survive in snotty discharges carried on tack or clothes, or in water troughs, long enough to transmit indirectly.

Horses with Strangles have creamy yellow pus nasal discharges, and usually develop large abscesses under their jaw in their submandibular or retropharyngeal lymph nodes (glands). Most horses get quite sick, and the abscesses can become large (ie fist size) and cause breathing difficulties. Some untreated horses can die from this.

Some recovered horses harbour the bacteria in their guttural pouch, shedding intermittently, which is often how outbreaks start, as these horses usually don't have symptoms.

There have been several outbreaks of Strangles in our practice area, and we recommend that any horse which goes to shows, competitions, pony clubs, to stud, or even has contact with other horses over a fence should be vaccinated for Strangles.

Strangles vaccination (Equivac S) requires 3 injections each 2 weeks apart, followed by annual boosters, and even sometimes 6 monthly boosters are recommended in endemic areas (ie on properties where outbreaks have occurred, and there may be carrier horses). If booster shots are missed for a year, the initial 3 injection course has to be repeated to ensure adequate immunity. Immunity will not be adequate in the face of an outbreak till 14 days after the third dose, and foals can be vaccinated from 6 weeks of age.

In summary – vaccination can start from 6 weeks of age.

- **Initial course requires 3 injections, each 2 weeks apart.**
- **Annual boosters are required to maintain any immunity.**
- **In endemic areas, 6 monthly boosters are recommended.**
- **If boosters are missed, or the initial course is not done correctly, you have to start again.**

There is a combination vaccine "Equivac 2 in 1" which combines Tetanus Toxoid and Strangles vaccination.

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VACCINATION REGIMES – Common scenarios

Vaccine scenario	Day 0	Day 14	Day 28	Year 1	Year 2	Year 3	Year 4	Year 5
Tetanus and Strangles	Equivac 2 in 1	Equivac S or 2 in 1	Equivac 2 in 1	Equivac 2 in 1	Equivac S or 2 in 1	Equivac S or 2 in 1	Equivac 2 in 1	Equivac S or 2 in 1
Tetanus Only	Equivac T		Equivac T	Equivac T			Equivac T	
Strangles only	Equivac S	Equivac S	Equivac S	Equivac S	Equivac S	Equivac S	Equivac S	Equivac S

OTHER DISEASES

During the Equine Influenza (EI) outbreak, many horses were vaccinated against EI, but as this disease has been eradicated, routine vaccination has been deemed unnecessary. We sometimes vaccinate horses in quarantine prior to export with an Equine Influenza vaccine, but it is different to the vaccine used during the 2007 outbreak, which is currently unavailable.

There are also vaccines available for Herpes virus abortion in mares, which is also used to help reduce the incidence and severity of Herpes virus respiratory disease, and these are more commonly used on valuable broodmares at intensive studs, or racehorses in high population areas.

For intensive stud farms with problems with diarrhoea in foals, there are also vaccines available for Salmonellosis and Rotavirus, which can be used once the specific cause is diagnosed.

Finally, there is a vaccine called “Equity”, which is a vaccine against a sex hormone (GnRH), and it effectively abolishes sexual activity. It can be useful for performance fillies that are difficult to train when they are in season. However, it is not recommended for any horse that is intended for breeding.

If you have any queries regarding vaccinations in your horse or horses, please don't hesitate to contact our clinic and discuss what options are available with our friendly staff.

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