

Horse health – vaccination against tetanus and strangles

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Introduction

Vaccinations against tetanus and strangles are routinely given to horses. Vaccinations should be given because:

- these diseases can be severe and fatal
- they are reasonably common
- protection following vaccination is generally excellent provided regular boosters are given
- the cost of the vaccination is very cheap when compared with the cost of attempted treatment and the value of the horse.

Tetanus

This bacterial disease causes fatal tetany in about 80 per cent of infected horses.

The organism *Clostridium tetani*, which causes the disease, lives in soil and manure. It enters the body through wounds. The bacteria multiply only in sites where there is a poor oxygen supply, such as in deep wounds. The time from when the bacteria first begin producing toxins to the first signs of tetanus may be 1–3 weeks, typically 9–10 days. The bacteria produce a powerful nerve toxin, which causes a progressive contraction (cramp) of many muscles of the body. Death follows within a few days of the signs first appearing.

The first sign of the disease may be a difference in the animal's normal resting stance, its behaviour and the way it moves. There is muscle stiffness, especially of the muscles of the face and legs. The ears become erect and the tail stiff, and the animal may be unable to eat. An increasing number of the body's muscles then go into spasm, including a characteristic spasm of the third eyelid when the side of the face is slapped. A very painful death occurs.

Treatment necessitates very intense nursing care and the use of sedatives and muscle relaxants, antibiotics, antitoxin and in some cases tube feeding if the animal is unable to eat. Early treatment is essential to give any hope of success, and a veterinarian should be consulted immediately tetanus is suspected.

Strangles

Strangles is a disease of the upper respiratory system and the lymph nodes of the head. It is caused by the organism *Streptococcus equi*. It rapidly spreads from horse to horse through coughing, or by the horse eating or drinking infective droplets. The discharge may remain infective for over a month.

Within 3–8 days of becoming infected, the horse will show a fever (39.5–40.5°C). The throat and larynx become so extremely inflamed that swallowing food or water becomes very painful or impossible. The lymph nodes of the head become swollen and very painful, and may eventually burst and discharge a thick creamy yellow pus.

Occasionally the infection spreads to other parts of the body, when it is then known as 'bastard strangles'. This form is difficult and sometimes impossible to cure. Treatment involves isolation, antibiotics and supportive nursing. Disinfection of saddlery, grooming equipment, food boxes etc. must be done to stop transmission of the disease to other horses.

Prevention

The vaccination program that is best for your horse can be determined through discussion with a veterinarian.

Tetanus and strangles

- Foals can be started on their vaccination course against both diseases at about 12 weeks of age.



- Protection for the first 12 weeks of life occurs if a previously vaccinated mare is given another booster at least 2–6 weeks before foaling.
- Strangles and tetanus both require two or more primary doses at specific time intervals to produce effective immunity (see the chart below, and the information that is supplied with the vaccine).

Tetanus

- All horses should be vaccinated against tetanus because of the widespread occurrence of the organism.
- Boosters with tetanus toxoid should be given at the time of injury, as this gives good immunity after the initial course. Boosters are required at intervals of no longer than 5 years.
- Tetanus antitoxin will give immediate but short-term protection to injured foals or horses not previously vaccinated with tetanus toxoid. This protection will last at most only about 3 weeks. The tetanus toxoid and antitoxin may be administered at the one time if different injection

sites are used – preferably on different sides of the body.

Strangles

- Strangles is a disease transmitted from horse to horse – animals that remain in isolation are not at risk. Horses attending studs, shows or camps, or those which are away on agistment, are at risk, and epidemics may follow such events. These horses should be vaccinated throughout their life.
- Boosters should be given annually.
- Unfortunately the strangles vaccine is not as effective as the tetanus vaccine. Occasionally the disease occurs in horses which have been vaccinated. However, vaccination is still recommended to reduce risks.
- There is no immediate short-term protection for strangles should an outbreak occur. Seek immediate veterinary attention.

VACCINATION CERTIFICATE

STRANGLES VACCINE

PRIMARY COURSE

VACC.	DATE	SIGNATURE	DATE NEXT DUE
1st			
2nd			
3rd			

When horses and foals are vaccinated against strangles for the first time, a course of three doses of strangles vaccine should be given with an interval of not less than two weeks between each dose.

As artificial immunity has been shown to wane significantly towards the end of the year of vaccination, all horses should receive annual booster doses.

BOOSTER DOSES

VACC.	DATE	SIGNATURE	DATE NEXT DUE
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			

TETANUS TOXOID

PRIMARY COURSE

May be administered simultaneously with tetanus antitoxin injection. (Give tetanus toxoid vaccine at different injection site.)

VACC.	DATE	SIGNATURE	DATE NEXT DUE
1st			
2nd			

After the initial dose, a period of 9–14 days is required for the development of an effective immunity. If a third (booster) dose is given a year later, long-lasting immunity will ensue. It is advisable, particularly in valuable animals, to repeat the booster dose at approximately 5-year intervals.

BOOSTER DOSES

VACC.	DATE	SIGNATURE	DATE NEXT DUE
1st			
2nd			
3rd			
4th			
5th			
6th			

Record keeping

A vaccination certificate such as the one above can be supplied by your veterinarian.

A formal record of vaccinations is useful for maintaining the required intervals. It is useful information both for a stud receiving a mare and for the new owner if a horse is sold.

Further information

For further information, contact your veterinary practitioner, veterinary inspector or NSW Department of Primary Industries.

Acknowledgment

The original version of this Primefact was written by Phil Hazzard, formerly of NSW Agriculture (now NSW DPI).

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (June 2007). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Primary Industries or the user's independent adviser.

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