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# Vaccination of Horses

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## Vaccination of Horses

Rebecca Bott, Extension equine specialist

A comprehensive health plan for horses includes vaccinations. Vaccinating a horse prepares its immune system to recognize and diminish the effects of a specific disease. Vaccines are not 100% effective in disease prevention or management, yet vaccinations can be very beneficial in guarding a horse against illness if the horse is in good general health. Management of overall health in conjunction with a vaccination program is the most effective way to ensure the health of your horse. While vaccinating your horses will help protect them in the event of local disease outbreak, vaccinations

alone are not an effective health plan; proper nutrition, parasite management, and routine hoof and teeth care are also critical components of horse care.

### VACCINATION SCHEDULE

The American Association of Equine Practitioners (AAEP) designed guidelines for vaccination of horses. Core vaccinations should be given to all horses because of prevalence of the disease and low risk of side effects from the vaccination. Risk-based vaccinations are vaccines that are recommended for horses that

have frequent contact with horses from other farms or are located in regions of the country with a high risk factor for certain diseases. This vaccine schedule is based upon the assumption that your horse has been routinely vaccinated. If your horse has not been routinely vaccinated (including foals), or if you are uncertain of their vaccination history, please consult your veterinarian before beginning.

Vaccinations challenge the immune system and in some horses may cause adverse reactions. Consult a veterinarian regarding the brand, type (killed vs. modified live), and schedule before giving any treatment or vaccine to your horse. It is also important to note that a single vaccination will not protect your horse for life. Horses need to receive routine boosters as indicated in table 1.

**Table 1. Schedule of Vaccinations.**

Core Vaccinations		
Disease	All Adult Horses	Broodmare
Tetanus	Annual	4-6 weeks pre-partum
Eastern/Western Encephalomyelitis	Annual - in early spring	4-6 weeks pre-partum
West Nile Virus*	Annual - in early spring	4-6 weeks pre-partum
Rabies	Annual	4-6 weeks pre-partum**
Risk- based Vaccinations		
Disease	Adult Horses	Broodmare
Equine Herpes Virus Types 1 and 4	Semi-annual to annual	5, 7, 9 months gestation***
Influenza	Semi-annual to annual	4-6 weeks pre-partum
Anthrax	Annual	Not recommended
Botulism	Annual	4-6 weeks pre-partum
Equine Viral Arteritis	Annual	Not recommended
Potomac Horse Fever	Semi-annual to annual	4-6 weeks pre-partum
Rotavirus	Not applicable	8, 9, 10 months gestation
Strangles	Semi-annual to annual	4-6 weeks pre-partum

*Adapted from the AAEP Guidelines for Vaccination of Horses, 2008.*

\* Information specific to vaccination for West Nile Virus can be found in SDSU Extension Extra 11009, "What You Need to Know Before Vaccinating Your Horses for West Nile Virus." [http://pubstorage.sdstate.edu/AgBio\\_Publications/articles/exex11009.pdf](http://pubstorage.sdstate.edu/AgBio_Publications/articles/exex11009.pdf).

\*\* Alternatively, rabies vaccine may be given to the mare prior to breeding.

\*\*\*Must use a product labeled for protection against EHV abortion.

## **BROODMARES AND FOALS**

Vaccinating your pregnant mare is important not only to maintain her health in the face of a viral outbreak, but also to provide protection for the foal once it is born. A horse does not transfer antibodies to the foal from the maternal blood supply during pregnancy. Instead, a mare will produce very thick milk called *colostrum* for the foal to drink immediately after birth. Colostrum from a properly vaccinated mare contains antibodies that will provide the foal with protection against diseases.

Foals will receive immune function and protection in colostrum from their vaccinated dams. Like human children, foals will need an initial vaccination and a series of booster shots for each disease. Your local veterinarian and Extension personnel (equine specialists) will be able to help you determine which vaccinations to use and the timing of those vaccinations. Generally, vaccination will begin 3–4 months after birth, unless the dam was unvaccinated or if the horse has unknown vaccination history; in the latter cases, vaccination of the foal may be initiated earlier in its life.

## **HANDLING VACCINES**

Each product will have specific guidelines for handling. It is essential to adhere to these guidelines for your vaccinations to be effective. Information about vaccine handling can be found in SDSU Extension Extra 11025, Livestock Vaccines: How They Work and How to Ensure They Do Their Job ([http://pubstorage.sdstate.edu/AgBio\\_Publications/articles/exex11009.pdf](http://pubstorage.sdstate.edu/AgBio_Publications/articles/exex11009.pdf)).

## **ADMINISTERING VACCINATIONS**

Safety for both horse and handler should be the No. 1 priority when administering a vaccine. Only a veterinarian or trained individual should administer vaccines. It is important to always make sure vaccines have been properly handled and have not expired. In order to ensure the safety of you and your horse, it is best to ask someone to hold your horse while administering vaccines, rather than tying your horse. Always verify the method of administration that is required for each vaccine. Some vaccines are labeled to be given as a spray in the nose, while others are labeled to be injected into a large muscle such as the neck muscle. Using the incorrect method of administration can lead to very serious and potentially lethal side effects. If you are giving a combination of intra-muscular and intra-nasal injections, give all intra-muscular injections first, before proceeding to the intra-nasal vaccines.

Many vaccines are recommended annually. Rather than giving all of them on the same day, try spacing them out by a couple of days and injecting each vaccine into a different part of the safe region. If any adverse reactions occur, you will be better equipped to determine which vaccine caused the problem.

### **Steps for Giving an Intra-muscular Vaccination**

1. Read the information packet that comes with the vaccine.
2. Ensure that the vaccine should be given intra-muscularly.
3. Have a helper hold your horse to keep them distracted. Don't tie the horse.
4. If indicated, gently shake the product.
5. Draw up the vaccine and get rid of bubbles.
6. Locate the injection site. The large neck muscle is recommended.
7. Pinch the skin and quickly plunge the needle into the muscle perpendicular to the surface.
8. Draw back on the syringe. If there is any blood, do not inject in this site. Pull the needle out and move to another injection location.
9. Slowly dispense the vaccine into the muscle.
10. Watch the horse over the next day or two for signs of inflammation, irritation, lethargy, or unusual behavior. Contact your veterinarian if any of these signs are noted.

**Figure 1. Steps for giving an intra-muscular vaccination**

## **VACCINATION RECORDS**

Detailed records are essential for every horse operation, especially when it comes to health. Vaccinations are no exception to this rule. At a minimum, the vaccine type, brand, lot number, date of expiration, and date of vaccination should be recorded. The method of administration (intra-muscular vs. intra-nasal) and site of injection (which side of the neck) are also helpful data to record. In the event that your horse has any adverse reactions to being vaccinated, these records will be useful to your veterinarian.

## **SUMMARY**

There is a risk with all vaccinations that the horse may have an adverse reaction. Always consult your veterinarian before administering any vaccines. They will help you choose which vaccines are appropriate for your horse and how to administer them. Remember that properly vaccinating your horse is a critical component of a comprehensive health plan.

## **REFERENCE**

AAEP. 2008. Vaccination Guidelines. [http://www.aaep.org/vaccination\\_guidelines.htm](http://www.aaep.org/vaccination_guidelines.htm).



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