

Vaccinating Horses

Vaccination is considered the most cost-effective method of preventing infectious diseases

Overview

Vaccination refers to the administration of antigenic material (the vaccine) to produce immunity or protection to a disease. Vaccination is generally considered to be the most cost-effective method of preventing infectious diseases; however, vaccines do have limitations. It is important for horse owners to recognize that vaccines are not 100% effective and will not prevent all horses from becoming ill should they be exposed to a pathogen (a disease-causing organism such as a bacteria or virus). Vaccines do not provide immediate protection against a disease; the vaccines (either the primary series or subsequent boosters) need to be administered prior to exposure to a pathogen. Good management practices also play an important role in limiting the spread of infectious diseases.

Which Vaccines?

The selection and recommendation of the most appropriate vaccines lies solely in the hands of the horse's attending veterinarian. While the American Association of Equine Practitioners (AAEP) has created a set of guidelines that assist veterinarians in selecting the most appropriate vaccine schedule, it is ultimately the veterinarian's responsibility to recommend the use of one or more vaccines based on a valid veterinary-client-patient relationship and professional judgment. Factors that influence the development of a vaccine schedule include risk of disease, the consequences of the disease, the effectiveness of the vaccine, occurrence of adverse reactions to the vaccine, and economic factors such as the cost of the vaccine versus the cost of the disease.

Core vaccines The term "core vaccines" refers to vaccines that protect horses from diseases that: are endemic to a region (i.e., a disease that is present at all times in a specific geographical area); pose a significant public health risk; are highly infectious, or; can cause severe disease. Vaccines consid-



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Vaccinations should be done by a licensed equine practitioner to ensure the vaccines were handled properly and in case any severe adverse reactions take place.

ered to be core vaccines in equine medicine include rabies, Eastern and Western equine encephalomyelitis, West Nile virus, and tetanus.

Risk-based vaccines Other vaccines that horses might be immunized with include anthrax, botulism, equine herpesvirus (rhinopneumonitis), equine viral arteritis, equine influenza (flu), Potomac horse fever, rotaviral diarrhea, and strangles. Horses are typically only vaccinated against these diseases when there is a real risk of exposure. The decision of whether or not to administer one or more of these vaccines should only be made after consulting with your veterinarian.

Keep in mind that multivalent vaccines (several diseases combined in one shot) are available and are considered safe and effective.

Vaccine Schedules

There is no "vaccine schedule" that is appropriate for all horses or all farms. Formulating the most appropriate vaccine schedule is best achieved on a case-by-case

basis in conjunction with a licensed veterinarian who is familiar with your horses and circumstances. Once a schedule has been devised, it is recommended (by the AAEP) that all of the horses on the farm be vaccinated according to the schedule. This practice will optimize herd-immunity by:

- Facilitating record keeping;
- Minimizing replication and transmission of infectious agents in a herd;
- Protecting horses in the herd that might have responded poorly to vaccination, and;
- Ensuring that no horse has been accidentally left unvaccinated.

Examples of vaccine schedules for all of the core and risk-based vaccines are available on the AAEP Web site (http://www.aaep.org/vaccination_guidelines.htm).

Vaccinating Broodmares

Not only are broodmares vaccinated to minimize the chance of infection in the adult herd, but also to protect their foals against disease via antibodies passed through colostrum (first milk). This is re-

ferred to as “passive transfer” of immunity, and it is important because foals are born with virtually no ability to fight off infections. Instead, foals obtain antibodies (proteins that circulate in the blood to help fight infection) from their dam’s colostrum. Colostrum is a special type of milk produced and “stockpiled” by the mare during the last one or two weeks of gestation and available to newborn foals. Most foals nurse from their dams and obtain at least one liter of good-quality, antibody-rich colostrum within the first eight hours of life. Foals that do not obtain or absorb adequate amounts of high-quality colostrum early in life are at-risk for failure of passive transfer and the subsequent development of serious, life-threatening medical conditions including pneumonia, diarrhea, and joint infections.

Adverse Reactions

Side effects to vaccines are thought to be extremely rare in veterinary medicine. The most common adverse event following the administration of a vaccine intramuscularly (the most common route of vaccine administration) is muscle swelling and

soreness at the site of injection. Rarely abscesses at the site of injection or clostridial myositis/myonecrosis (muscle inflammation/gas gangrene) can develop secondary to an intramuscular injection.

Some horses might experience a mild and self-limiting fever, anorexia (loss of appetite), and lethargy post-vaccination. Rarely, horses can suffer more severe systemic reactions, including urticaria (hives) or anaphylaxis (a life-threatening allergic reaction). On rare occasions horses vaccinated against strangles can develop purpura hemorrhagica.

The development of adverse events following vaccination is unpredictable. Therefore, it is recommended that horses be vaccinated at least two weeks prior to an event such as a show, performance, sale, or shipping.

Vaccines should always be administered by a veterinarian so a professional is on hand to monitor and react to any adverse events, and all adverse events should be reported to your practitioner after he/she leaves the property. Veterinarians are advised to report all reactions to both the manufacturer and the United States De-

FAST FACTS

- Vaccination refers to the administration of antigenic material (the vaccine) to produce immunity to a disease and is the most cost-effective method of preventing infectious diseases.
- Vaccines do have limitations and are not able to prevent all horses from becoming ill should they be exposed to a pathogen. Good management practices also play an important role in limiting the spread of infectious diseases.
- No predetermined “vaccine schedule” is appropriate for all horses or all farms.
- Formulating the most appropriate vaccine schedule—using both core and risk-based vaccines—is best achieved on a case-by-case basis in conjunction with a licensed veterinarian familiar with your horses and circumstances.

partment of Agriculture (USDA) Center for Veterinary Biologics.

While the AAEP does not recommend any particular schedule, the organization does suggest that a staggered schedule be adopted when multiple vaccines are administered to minimize risk of adverse events. ◀

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