

## **The value of a vaccination program: Expert advice from Dr. Roberta Dwyer**

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### **What are the core vaccinations and why are they important for my horse?**

The AAEP recommends all horses receive four core vaccinations: tetanus, rabies, Eastern and Western equine encephalomyelitis (EEE/WEE) and West Nile Virus (WNV). The term “core vaccinations” means these vaccines help protect from diseases that are common in the United States, help reduce diseases of public health significance and can help protect horses from serious diseases.

Horses are quite susceptible to infection with *Clostridium tetani*, or tetanus, which can be prevented with proper vaccination. Rabies is a viral disease that can be transmitted between mammals (including animals to people) and is deadly. EEE/WEE viruses are spread by mosquitoes and can result in significant neurologic disease and even death in horses. WNV causes neurological disease and is also spread by mosquitoes. While some horses do recover, the road to recovery is often intensive. WNV can also cause very severe disease that result in death or the need for euthanasia.

### **How do vaccines protect against disease?**

Vaccines stimulate the animal’s immune system to produce antibodies that protect against the disease-causing agent. For optimum protection, a booster dose is needed several weeks after the primary vaccine is administered. It takes time for the body to produce an immunologic response to vaccines, so protection does not occur immediately.

For example, let’s say a healthy adult horse has been adequately vaccinated against WNV and is bitten by mosquitoes that carry the virus. Because the horse’s immune system is primed for action due to vaccination, the horse may not develop the disease at all or only be mildly affected, versus contracting the full-blown disease.

### **Do vaccines provide 100 percent protection?**

No vaccine (human or animal) is 100 percent effective. While some vaccines are more efficacious than others at reducing the risk of disease, many factors also influence vaccine efficacy: concurrent diseases of the animal, use of medications that can reduce the immunologic response to vaccines, stress, and improper vaccination storage and use.

### **What time of year is best for my horse to receive vaccinations?**

Because geography and the use of your horse during the year can vary, this is best determined by your veterinarian, who can design a custom vaccination program for your horse. For example, if your horses are in Michigan, but are transported to Florida for the winter show circuit, the recommendation for EEE/WEE vaccinations might be different than a horse that stays on the farm year-round. This is because mosquitoes are year-round pests in Florida, whereas they are seasonal in Michigan.

By working with your veterinarian, you can create a customized vaccination program that is best for your horses. In the long run, this minimizes costs to you and maximizes the health of your horses.

### **Can vaccines have harmful side effects?**

Any injection can result in adverse effects. While some horses might only have mild swelling at the injection site, lethargy and a slight fever for one to two days, other animals can have more severe reactions including immediate development of hives (urticaria) to anaphylaxis (collapse and death). Recording and reminding veterinarians of any past adverse reaction to any medication is critical when discussing vaccination programs.

### **What other vaccines might my horse need in addition to the core vaccines?**

Many equine vaccines besides the core vaccines are available and their use should be based on the horses' needs, risks and uses. These vaccines include anthrax, botulism, equine herpesvirus, equine viral arteritis, Potomac Horse Fever, rotaviral diarrhea and strangles.

In states where botulism is a problem, a vaccine might be added to a horse's regimen by the veterinarian. Some horse event venues, such as racetracks and large horse show facilities, might require influenza or equine herpesvirus vaccinations prior to a horse's entry to show grounds.

Foals born to vaccinated mares have an entirely different vaccination schedule than foals from unvaccinated mares (assuming all foals nurse adequate colostrum). The mares should be vaccinated for diseases that are common to the area where they will foal so they can confer immunity via colostrum. This is best orchestrated by the veterinarian in consultation with the owner or manager.

### **In addition to creating and implementing a vaccination plan, what can I do to protect my horse against infectious disease?**

Unfortunately, no commercially available vaccines are available for important horse diseases such as salmonellosis, leptospirosis, *Rhodococcus equi* and clostridial diarrheas. Biosecurity measures are needed for every farm, such as quarantining new horses to the farm for two weeks to avoid introducing pathogens to the resident horses; grouping horses by use; disinfecting equipment and stalls; and making a plan with your veterinarian on procedures to implement when a horse is suspected of having an infectious disease.

Horses that are exposed to multiple other horses, such as at horse shows, trail rides, racing and sales, are at an increased risk of being exposed to disease-causing organisms. One easy method to reduce this risk is to avoid nose-to-nose contact between horses. Do not allow sharing of equipment to other people, or if you do, be sure to wash and disinfect the equipment prior to use again with your horse.

Horse trailers are often overlooked. If a trailer is used to transport a sick horse to a veterinary clinic, it should be thoroughly cleaned and disinfected prior to another horse being loaded. If it is used to transport other owners' horses, it should also be cleaned and disinfected prior to use with resident animals.

### **Should horse owners vaccinate their horse without the supervision of a veterinarian?**

Ideally, vaccines should be administered by a veterinarian or under his/her direct supervision to ensure proper handling of the vaccine, safe administration and availability for treatment of adverse reactions.

### **Can I use cattle vaccines to protect my horse from leptospirosis and blackleg (clostridial infection)?**

Cattle vaccines are tested for safety and efficacy in cattle, not horses. Only vaccines that are labeled for horses should be used with the advice of the farm veterinarian.

**Where can I get more information about vaccinations?**

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

AAEP Infectious Disease Control Guidelines: [www.aaep.org/control\\_guidelines\\_intro.htm](http://www.aaep.org/control_guidelines_intro.htm)