



Livestock Management

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What vaccines does my horse need?

All horse owners are concerned about the health and well-being of their animals. In order to provide the best care for them, owners must consider housing, feeding, exercise schedules, parasite control, and vaccination schedules.

In the past, vaccination programs were relatively simple because there were fewer vaccines and less chance of exposure to other horses and the diseases they may be carrying. With the increase in horse shows and other equine events, however, it is not uncommon for people to travel longer distances with their horses. With this increased mobility comes increased risk of disease to the horses.

One of the most commonly asked questions by horse owners is, "What vaccinations should my horse have?" The answer to this question depends on where the horse is located, exposure to other livestock, and expected exposure to other horses.

Equine vaccines were available as of this summer for tetanus, Eastern, Western, and Venezuelan encephalomyelitis, influenza, herpesvirus-1 and -4, strangles, rabies, Potomac horse fever, equine protozoal myelitis, West Nile virus, botulism, viral arteritis, anthrax, and endotoxemia. Which vaccines you use in your horses should be based on their risk of contracting the disease and the severity of the disease. You should consult with your veterinarian for recommendations.

Tetanus spores, which can live in the soil for years, are common around all animal environments. "Lockjaw" is contracted after the tetanus organism enters a wound (usually a cut or puncture), multiplies, and produces toxin. Eighty percent of the horses that contract tetanus die. This is probably the most important vaccine a horse should receive. Colts should receive an initial vaccination and then a booster to establish immunity. After this, horses should be vaccinated at least annually and more often if an injury increases the risk of tetanus.

Eastern, Western, and Venezuelan encephalomyelitis are usually grouped as "sleeping sickness." Half or more of the horses that contract one of these diseases usually die. Because mosquitoes transmit these diseases, there is a higher

risk of contracting these diseases during warm weather. Since these diseases are transmitted by an insect, your horse does not have to come in direct contact with an infected animal to become infected. Spring is the ideal time to vaccinate against these viruses.

Equine influenza is fairly common. This viral disease is spread by contact from horse to horse. Symptoms of influenza include fever, depression, loss of appetite, and hacking cough. A horse may have influenza, but show few symptoms until a secondary bacterial disease infects the animal. Horses that come in contact with other horses are at greater risk of getting influenza and definitely should be vaccinated. Two types of vaccine are available for use in horses. One vaccine is injected either alone or in combination with other vaccines such as tetanus and/or encephalitis. A new intranasal vaccine is available for influenza.

"Rhino" or equine viral rhinopneumonitis is another viral disease caused by herpesviruses. There are three forms of this disease. A respiratory form is common in weanlings, yearlings, and 2-year-olds. An abortigenic form causes abortions or the birth of weak foals. A neurological form causes posterior paresis, ataxia, and paralysis. Several vaccines are available for this disease, which are administered alone or in combination vaccines. These viruses are spread by direct contact. Horses that come in contact with other horses should be considered for vaccination to prevent the respiratory form of the disease. Some veterinarians recommend vaccinating show horses as often as every two or three months to prevent the respiratory form. Only one vaccine at this time is labeled as an aid in preventing abortions due to rhinopneumonitis.

Strangles, another disease commonly found in horses, is caused by the bacteria *Streptococcus equi*. This bacterium is found in a normal horse's respiratory tract. This bacterium can spread directly between horses or be spread on inanimate objects such as grooming equipment, water buckets, or even clothing. This highly contagious disease usually runs its course in three to six weeks. Two types of vaccines are commercially available. One is an intramuscular injection, and the other is an intranasal vaccine that is sprayed in the nostrils.

Rabies should be considered in your horse's vaccination program. This disease is of importance not only to the horse, but also to the people who come in contact with a horse having rabies. Several years ago a horse came to a veterinary school clinic as a referral. Several students, faculty, and staff were exposed to the animal before rabies was diagnosed. The symptoms accompanying rabies are unpredictable and highly variable. This vaccine should be boosted annually.

Potomac horse fever was first diagnosed about 20 years ago in the Northeast near the Potomac River. Since then, blood titers have been found in horses in 35 states. Symptoms may include high fever, abortion, diarrhea, and laminitis. An insect vector is suspected to be involved in transmitting this disease. Most cases occur in late spring to early fall. Annual vaccinations may be timed to have peak immunity at that time.

Equine protozoal myelitis (EPM) is caused by the protozoa *Sarcocystis neurona*. The opossum is the end host for this organism. The sporocysts, which infect the horse, are passed in the opossum feces and then ingested by the horse while grazing. Random blood tests have shown that approximately half of the horses in the United States have been exposed to this organism but only 2 percent to 3 per-

cent have contracted the disease it causes. This neurological disease may take from two weeks to two years to develop. A vaccine that may prevent this disease recently received conditional approval.

The U.S. Department of Agriculture recently issued a conditional license for a vaccine to aid in preventing West Nile virus. This mosquito-borne virus was first detected in the United States in 1999. The virus causes encephalitis, which may result in stumbling, limb weakness, abnormal muscle twitching, and death. This vaccine, which has been licensed for a year, is subject to restrictions by state regulatory agencies.

Vaccines for botulism, viral arteritis, anthrax, and endotoxemia are not commonly used due to the low risk of infection in West Virginia or because of regulatory restrictions.

Although all vaccinations may not successfully prevent a disease, this is the best way to attempt to protect your horse. In all cases, ask your local veterinarian about the diseases your horse is most likely to encounter. Your local veterinarian is also best qualified to recommend vaccination schedules and inform you of manufacturer's recommendations for initial immunization and boosters.