

PROTECT YOUR HORSE AGAINST CONTAGIOUS DISEASES

Few things will protect your horse from the ravages of diseases as easily and effectively as immunizations. The vaccinations administered by your veterinarian to your horse place a protective barrier between the animal and a whole list of problems: tetanus, encephalomyelitis (sleeping sickness), influenza, rhinopneumonitis, rabies, strangles, west nile virus, and Potomac Horse Fever, to name the most common.

Vaccinations are a vital part of proper equine management. If incorporated into a program that includes regular deworming, an ample supply of clean water, a good nutrition program, and a safe environment, you and your horse will be all set to enjoy many happy, healthy, productive years together.

WHAT TO EXPECT

A good immunization program is essential to responsible horse ownership, but just as in humans, vaccination does not guarantee 100% protection. In some situations, immunization may decrease the severity of disease but not prevent it completely. This is due to many complicated scientific reasons, such as differences in the virulence or severity of some diseases (such as influenza).

Vaccination involves the injection (with a sterile syringe and needle) of bacteria or viruses that are inactivated or modified to avoid causing actual disease in the horse. Two or more doses are usually needed to initiate an adequate immune response.

Once the immunization procedure is completed, the protective antibodies in the blood stand guard against the invasion of specific diseases. Over time, however, these antibodies gradually decline. Therefore, a booster shot is needed at regular intervals. Protection against some diseases such as tetanus and rabies can be accomplished by boosting once a year. Others require more frequent intervals to provide adequate protection.

VACCINATIONS NEEDED

The specific immunizations need by a particular horse or horses depend upon several factors: environment, age, use, exposure risk, value, geographic location, and general management. Your local equine veterinary practitioner can help you determine the vaccination program best suited to your horse's individual needs.

The following diseases are those most often vaccinated against. Again, your local practitioner will know what is best for your horse.

- **TETANUS** – Sometimes called “lockjaw,” tetanus is caused by toxin-producing bacteria present in the intestinal tract of many animals and in abundance in the soil where horses live. Its spores can exist for years. The spores enter the body through wounds, lacerations, or the umbilicus of newborn foals. Therefore, although not contagious from horse to horse, tetanus poses a constant threat to horses and humans alike.

Symptoms include muscle stiffness and rigidity, flared nostrils, hypersensitivity, and the legs stiffly held in a sawhorse stance. As the disease progresses, muscles in the jaw and face stiffen, preventing the animal from eating or drinking. More than 80 percent of affected horses die.

All horses should be immunized annually against tetanus. Additional boosters for mares and foals may be recommended by your veterinarian. Available vaccines are inexpensive, safe, and provide good protection.

- **ENCEPHALOMYELITIS** – More commonly known as “sleeping sickness,” this disease is caused by the Western Equine Encephalomyelitis (WEE) virus or the Eastern version (EEE). WEE has been noted throughout North America, while EE appears only in the east and southeast. VEE, the Venezuelan variety, has not been seen in the United States for many years. However, recent outbreak of VEE occurred in Mexico. Sleeping sickness is most often transmitted by mosquitoes, after the insects have acquired the virus from birds and rodents. Humans also are susceptible when bitten by an infected mosquito, but direct horse-to-horse or horse-to-human transmission is very rare.

Symptoms vary widely, but all result from the degeneration of the brain. Early signs include fever, depression, and appetite loss. Later, a horse might stagger when it walks, and paralysis develops in later stages. About 50 percent of horses infected with WEE die, and the death rate is 70 to 90 percent of animals infected with EEE or VEE.

All horses need an EEE and WEE vaccine at least annually. Pregnant mares and foals may require additional vaccinations. The best time to vaccinate is spring, before the mosquitoes become active. In the South and West, some veterinarians choose to add a booster shot in the fall to ensure extra protection all year-round.

- **INFLUENZA** – This is one of the most common respiratory diseases in the horse. Highly contagious, the virus can be transmitted by aerosol from horse to horse over distances as far as 30 yards, for example, by snorting or coughing.

Symptoms and signs to watch for are similar to those in a human with a cold, i.e., dry cough, nasal discharge, fever, depression, and loss of appetite. With proper care, most horses recover in about 10 days. Some, however, may show symptoms for weeks, especially if put back to work too soon. Influenza is not only expensive to treat, but results in a lot of “down time” and indirect financial loss, not to mention discomfort for your horse.

Unfortunately, influenza viruses constantly change in an effort to bypass the horse's immune defense. Therefore, duration of protection is short-lived and revaccination is recommended every two to four months.

Not all horses need influenza vaccination. However, animals that travel or are exposed to other horses should be regularly immunized against influenza. Follow your veterinarian's advice as to whether your horse needs influenza vaccine.

- **RHINOPNEUMONITIS** – Two distinct viruses, equine herpes virus type 1 (EHV-1) and equine herpes virus type 4 (EHV-4), cause two different diseases, both of which are known as rhinopneumonitis. Both cause respiratory tract problems, and EHV-1 may also cause abortion, foal death, and paralysis.

Symptoms of infected horses may be feverish and lethargic, and may lose appetite and experience nasal discharge and a cough. Young horses suffer most from respiratory tract infections any may develop pneumonia secondary to EHV-1.

Rhinopneumonitis is spread by aerosol and by direct contact with secretions, utensils, or drinking water. Virus may be present but inapparent in carrier animals.

All pregnant mares must be immunized. Foals, weanlings, yearlings, and young horses under stress also should be vaccinated. Immune protection is short. Therefore, pregnant mares are vaccinated at least during 5th, 7th, and 9th months of gestation, and youngsters at high risk need a booster at least every three months. Many veterinarians recommend vaccinations at two-month intervals year-round.

- **WEST NILE** – Is transmitted by infected mosquitoes who attach themselves to birds, often a crow, raven or blue jay. The birds then become reservoir hosts for the virus, and when other virus-free mosquitoes bite the avians these insects in turn become carriers. The birds may or may not become sick, but their blood always acts as a reservoir for the virus. West Nile Virus can be difficult to diagnose.

Symptoms the first thing horse owners should look for, especially if they live in year-round mosquito environments, are changes in the animal's alertness, attitude, appetite, movement or reactions. West Nile Virus symptoms are similar to early stages of EPM and EEE, such as...

- Ataxia or stumbling and incoordination
- Depression or apprehension
- Weakness of limbs, partial paralysis, or the inability to stand
- Muscle twitching

Prevention: Vaccination and Mosquito Control:

With the right steps and procedures, the incidence of the disease can be controlled, if not prevented altogether. Basically there are two ways to prevent viral infection from West Nile Virus: vaccination and mosquito control.

- A vaccine is available and is administered intramuscularly in two doses, given about three to six weeks apart. The Animal and Plant Health Inspection Service (APHIS) of the USDA suggests that horses receive the second of the two initial doses at least two weeks before mosquitoes are likely to bite and infect the horses. Although the label stipulates that horses should receive an annual booster, some state veterinarians, according to APHIS, are suggesting that horses get more than one booster per year. Note: Horses vaccinated against Eastern equine encephalitis, Western equine encephalitis or Venezuelan equine encephalitis are not protected against West Nile Virus, unless they are vaccinated with West Nile – Innovator vaccine.
- Aggressive mosquito control is the other preventive measure horse owners can take, starting with the reduction or elimination of mosquito breeding sites. Mosquitoes can breed in any puddle of water that stands more than four days. The best way to reduce the risk is to remove any potential sources of standing water in which breeding can take place. Applying insecticides and repellents directly on the horse can also be effective. But you must be aware of the side effects. Synthetic and natural pyrethroid insect sprays will repel mosquito attacks, but it is difficult to cover an animal entirely and perspiration will dissipate the effectiveness. Face masks, sheets and other covers (such as car covers) all help. Health officials and researchers believe West Nile Virus has taken up permanent residence in the United States. But with mosquito control programs and vaccination, owners can keep their horses healthy.

OTHER DISEASE THREATS

Several other diseases are common, although the need for vaccination against them is highly individual one. Rely on your veterinarian to guide you.

Other diseases include:

- **Strangles** – A highly contagious and dangerous disease. There may be some side effects associated with vaccination; therefore, it is important to discuss the risks versus benefits of vaccination with your veterinarian.
- **Rabies** – A frightening disease which is more common in some areas than others. Horses are infected infrequently, but death always occurs. Rabies can be transmitted from horses to humans.
- **Botulism** – Known as “shaker foal syndrome” in young horses, this disease can be serious. Botulism in adult horses, “forage poisoning,” also can be fatal. Vaccines are not available for all types of botulism, but pregnant mares can be vaccinated in endemic areas.
- **Equine viral arteritis (EVA)** – A complicated disease which can result in some breeding restrictions and export problems. Follow your veterinarian's recommendations.
- **Potomac Horse Fever** – A seasonal problem with geographic factors. One third of affected horses die. Contact your veterinarian.

IN A NUTSHELL

For primary immunization, an initial vaccination is required, followed by a repeat dose in 3-4 weeks. The following is a handy reference guide for scheduling your horse's immunizations:

- **Tetanus** – All horses. Foals at 2-4 months. Annually thereafter. Brood mares at 4-6 weeks before foaling.
- **Encephalomyelitis** – All horses. Foals at 2-4 months. Annually in spring thereafter. Brood mares at 4-6 weeks before foaling.
- **Influenza** – Most horses. Foals at 3-6 months, then every 3 months. Traveling horses every 3 months. Brood mares biannually, plus booster 4-6 weeks pre-foaling.
- **Rhinopneumonitis** – Foals at 2-4 months and younger horses in training. Repeat at 2-to-3month intervals. All brood mares at least during 5th, 7th, and 9th months of gestation.
- **Rabies** – Foals at 2-4 months. Annually thereafter.
- **Strangles** – Foals at 8-12 weeks. Biannually for high-risk horses. Brood mares biannually with one dose 4-6 weeks pre-foaling.
- **Potomac Horse Fever** - Foals at 2-4 months. Biannually for older horses. Brood mares biannually with one dose at 4-6 weeks pre-foaling.
- **West Nile Virus** – All horses. Foals at 2-4 months. Booster in three to six weeks after initial vaccination. Booster once a quarter during mosquito season.

Many combination vaccinations are available. Please check with your local equine practitioner.

Appropriate vaccinations are the best and most cost-effective weapon you have against common infectious diseases of the horses. A program designed with the help and advice of your local veterinarian will keep your horses-and you-happy and healthy for many years to come.