Equine Vaccination

by Dr. Kari Lyon VMD

Proper vaccination against infectious diseases is important to the overall health of your horse. Each farm and each horse differs in its vaccination requirements, which is why there is no standard vaccination program. Your veterinarian will evaluate your horse's needs based on such information as breed, age, sex, risk of exposure to disease, geographical location, and intended use.

The American Association of Equine Practitioners (AAEP) has developed a set of guidelines for owners and veterinarians to use when determining which vaccines are appropriate for your horse. The core vaccines as defined by the American Veterinary Medical Association are those vaccines that, "protect from diseases that are endemic to a region, those with potential public health significance, required by law, virulent/highly infectious, and/or those posing a risk of severe disease". The core vaccines currently recommended by the AAEP are rabies, eastern equine encephalitis, western equine encephalitis, tetanus and west nile virus.

Rabies virus: Rabies is a rare neurologic disease that can be transmitted to horses by the bite of an infected animal. There is no cure for rabies and the disease is inevitably fatal. All horses, no matter what the intended use, should be vaccinated against rabies. Foals should receive a series of 3 doses approximately 4-6 weeks apart with the age at which to start dependent on the vaccination status of the mare. All adult horses should receive a yearly booster and pregnant mares should be boostered 4-6 weeks before foaling. If you think your horse may have been exposed to a rabid animal, please contact your veterinarian.

Eastern/Western Equine Encephalitis: Eastern and Western equine encephalitis (EEE, WEE) are viruses transmitted to horses by mosquitoes. The life cycle of the virus alternates among birds, mosquitoes, and rodents. Horses and humans become infected by the bite of an infected mosquito and both are considered dead end hosts, which mean that they can not pass the virus on to other horses or humans because there is not enough virus in their system. The mortality rate of unvaccinated infected horses is extremely high, reaching almost 90% for EEE.
Horses should be vaccinated for both EEE and WEE based on likelihood of exposure. Adult horses that have previously been vaccinated should be vaccinated yearly in the spring prior to peak mosquito season. Some veterinarians may recommend more frequent vaccination if the horse is at a higher risk of exposure. Adult horses of unknown vaccine history or who have never been vaccinated should receive 2 doses 4-6 weeks apart and then revaccinate in the spring before peak mosquito season. Foals receive a primary 3-dose series beginning at either 3 or 4 months depending on the vaccination status of the mare. The last dose should be given prior to the next peak mosquito season. Pregnant mares should be vaccinated 4-6 weeks prior to foaling. Vaccines schedules may change depending on geography and risk of exposure.

Tetanus: Tetanus is a bacterial disease that can affect the nervous system of horses. The organism responsible for the disease is caused by a bacteria which lives in the soil called

Clostridium tetani. Horses are extremely susceptible to infection because of the environment in which they live and given their tendency for injury.
The disease is very difficult to treat and is highly fatal. Adult horses are initially given a primary 2 dose series 4-6 weeks apart and then are vaccinated yearly there after. Foals are given and primary 3-dose series beginning at either 1 or 4 months of age depending on the vaccination status of the mare. Pregnant mares should be vaccinated 4-6 weeks prior to foaling. Your veterinarian may decide to revaccinate your horse if he/she sustains an injury and it has been over 6 months since the last tetanus vaccination.

West Nile Virus: West Nile Virus (WNV) is a mosquito-borne disease first identified in the United States in 1999 and has since spread throughout the country. The virus causes an encephalitis/meningitis (inflammation of the brain/spinal cord). There are three licensed vaccines available in the United States. A primary 2-dose series is given for all vaccines and revaccination is done either annually or semiannually based on the label of the particular vaccine used. Foals should begin their vaccination series at approximately 3 months of age and if possible finish prior to peak mosquito season. Pregnant mares should be vaccinated 4-6 weeks before foaling.

Your veterinarian may recommend vaccines other than the core vaccines after analyzing your horse's risk. Vaccines that may be recommended include botulism, anthrax, equine herpesvirus, equine viral arteritis, equine influenza, Potomac horse fever, rotaviral diarrhea and strangles. Please contact your veterinarian so that together you can develop a vaccination program based on your horse's needs.