

## **Core Vaccinations**

The AVMA defines core vaccinations as those “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. Core vaccines have clearly demonstrated efficacy and safety, and thus exhibit a high enough level of patient benefit and low enough level of risk to justify their use in the majority of patients.” The following equine vaccines meet these criteria and are identified as ‘core’ in these guidelines:

### **Eastern & Western Encephalomyelitis (Annual in Spring)**

Eastern and Western equine encephalomyelitis (also known as "sleeping sickness") are mosquito-borne, viral infections that can cause severe encephalitis in horses and humans. No specific treatment is available, and depending on the virus and host, the case fatality rate may be as high as 90%. *Vaccination is given in the muscle.*

### **Rabies (Annual)**

While the incidence of rabies in horses is low, the disease is invariably fatal and has considerable public health significance. Exposure occurs through the bite of an infected animal, typically a raccoon, fox, skunk, or bat. The virus migrates via nerves to the brain where it initiates rapidly progressive, invariably fatal encephalitis. Symptoms can often mimic colic or choke. *Vaccination is given in the muscle.*

### **Tetanus (Annual in Spring)**

All horses are at risk of development of tetanus, an often fatal disease. The bacteria that cause tetanus are present in the intestinal tract and feces of horses, other animals and humans, and are abundant as well as ubiquitous in soil. Organisms can survive in the environment for many years, resulting in an ever-present risk of exposure of horses and people on equine facilities. Tetanus is not a contagious disease but is the result of an infection of puncture wounds, open lacerations, surgical incisions, exposed tissues such as the umbilicus of foals and reproductive tract of the postpartum mare (especially in the event of trauma or retained placenta). *Vaccination is given in the muscle.*

### **West Nile Virus (Annual in Spring)**

This virus has been identified in all of the continental United States, most of Canada and Mexico. The virus is transmitted from avian reservoir hosts by mosquitoes to horses, humans and a number of other mammals. The case fatality rate for horses exhibiting clinical signs of WNV infection is approximately 33%. Data have supported that 40% of horses that survive the acute illness caused by WNV still exhibit residual effects, such as gait and behavioral abnormalities, six months post-diagnosis. Thus vaccination for West Nile virus is recommended as a core vaccine and is an essential standard of care for all horses in North America. *Vaccination is given in the muscle.*



## **Risk-Based Vaccination Guidelines**

These are vaccinations included in a vaccination program after the performance of a risk-benefit analysis. The use of risk-based vaccinations may vary regionally, from population to population within an area, or between individual horses within a given population. Disease risk may not be readily identified by laypersons; it is important to consult a veterinarian when developing a vaccination program.

### **Botulism**

Botulism has been observed in horses as a result of the action of potent toxins produced by the soil-borne, spore-forming bacterium, *Clostridium botulinum*:

- *Wound botulism* results from vegetation of spores of *Cl. botulinum* and subsequent production of toxin in contaminated wounds.
- *Shaker Foal Syndrome (toxicoinfectious)* results from toxin produced by vegetation of ingested spores in the intestinal tract.
- *Forage poisoning* results from ingestion of preformed toxin produced in decaying plant material, including improperly preserved hay or haylage, or animal carcass remnants present in feed. *Vaccination is given in the muscle.*

### **Equine Influenza**

Equine influenza is one of the most common infectious diseases of the respiratory tract of horses. It is endemic in the equine population of the United States. Equine influenza is highly contagious and the virus spreads rapidly through groups of horses in aerosolized droplets dispersed by coughing. All horses should be vaccinated against equine influenza unless they live in a closed and isolated facility. *Vaccine can be given in the muscle or intranasally.*

### **Equine Herpes Virus (Rhinopneumonitis)**

Equine Herpesvirus (rhinopneumonitis) type 1 (EHV-1) and type 4 (EHV-4) can each infect the respiratory tract, causing disease that varies in severity from sub-clinical to severe and is characterized by fever, lethargy, anorexia, nasal discharge, and cough. Both EHV-1 and EHV-4 spread via aerosolized secretions from infected coughing horses, by direct and indirect contact with nasal secretions. *Vaccination is given in the muscle.*

### **Leptospirosis**

Equine leptospirosis is typically a sporadic disease. The primary leptospiral-associated equine clinical disease presentations include; recurrent uveitis, late-term abortion and acute renal failure. Infection is acquired through exposure to the organism via the mucous membranes or abraded skin. The leptospiral organisms are shed in the urine of infected horses (additionally the placenta, fetal fluids and urine of the mare in abortion cases) and a number of wildlife hosts which can shed *Leptospira spp.* in the urine. *Vaccination is given in the muscle.*



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## **Risk-Based Vaccination Guidelines (cont'd)**

### **Potomac Horse Fever**

The disease is seasonal, occurring between late spring and early fall in temperate areas, with most cases in July, August, and September at the onset of hot weather. If PHF has been confirmed on a farm or in a particular geographic area, it is likely that additional cases will occur in future years. Clinical signs are variable but may include: fever, mild to severe diarrhea, laminitis, mild colic, and decreased abdominal sounds. *Vaccination is given in the muscle.*

### **Strangles**

*Streptococcus equi* is the bacterium which causes the highly contagious disease strangles, also known as "equine distemper" or "shipping fever." Strangles commonly affects young horses (weanlings and yearlings), but horses of any age can be infected. Vaccination is recommended on premises where strangles is a persistent endemic problem or for horses that are expected to be at high risk of exposure. The organism is transmitted by direct contact with infected horses or sub-clinical shedders, or indirectly by contact with: water troughs, hoses, feed bunks, pastures, stalls, trailers, tack, grooming equipment, nose wipe cloths or sponges, attendants' hands and clothing, or insects contaminated with nasal discharge or pus draining from lymph nodes of infected horses. *Streptococcus equi* has demonstrated environmental survivability particularly in water sources and when protected from exposure to direct sunlight and disinfectants, and can be a source of infection for new additions to the herd. *Vaccine is given intranasally.*