

## Vaccinations for the mare and foal

Vaccinations are an important part of equine health care. Vaccination involves the administration of an antigenic substance in order to stimulate immunity to a disease. When creating a vaccination protocol for your farm several factors should be considered. The first consideration is the risk of the horse developing a given disease. This includes the anticipated exposure, environmental factors, geographic factors, age, breed, use, and gender of the horse. Second, one must consider the consequence of the disease. The third consideration is the anticipated effectiveness of the selected vaccine. Fourth, one must consider the potential adverse reactions to the vaccine. The final consideration is the cost of the immunization compared to the potential treatment cost of the disease (which typically favors immunization because the cost of a vaccine is nominal compared to treatment of many of these diseases).

A good vaccination program is an essential part of being a responsible horse owner. Owners must understand however, that good managerial practices directed toward maximizing the health, productivity, and performance of the horse are important along with a good vaccination protocol. Occurrence of infectious disease in populations of horses tends to increase with (1) increased population density of susceptible horses at a facility, such as breeding farms, sales grounds, and boarding facilities, (2) movement of horses on and off the facility property, and (3) environmental and managerial influences such as stress, over-crowding, parasitism, poor nutrition, inadequate sanitation, contaminated water source/ supply, concurrent disease, and inadequate rodent, bird, and insect control. Furthermore, owners must understand that vaccination minimizes the risk of infection but does not prevent disease in all circumstances.

Vaccines can be grouped into two categories; core vaccines and risk based vaccines. Core vaccines include Eastern and Western Equine Encephalomyelitis, West Nile Virus and Tetanus (EWT/WNV); in most areas rabies is also considered a core vaccine. Risk based vaccines in Western Canada include Influenza, Rhinopneumonitis (Herpes) and Strangles

A proper vaccination program for broodmares is essential for the health of the foal. Broodmares require vaccination to aid in the prevention of abortion from EHV-1. They should be vaccinated with an inactive form of Equine Herpes Virus 1 (EHV-1) at 5,7 and 9 months of gestation. In addition, broodmares require vaccination 4-6 weeks prior to foaling. Vaccination should include EWT/WNV, Flu/Rhino (killed) and possibly Strangles (inactive Strep-M protein). This will provide protection for the mare, as well as maximize concentrations of immunoglobulins in the colostrum to be passively transferred to the foal. For successful passive transfer, the mare must be vaccinated 4-6 weeks prior to parturition and then the foal must receive an adequate amount of high quality colostrum within the first 24-48 hours of life. The neonate relies on antibodies passed in the colostrum for protection from infectious diseases until the foal can be vaccinated and respond appropriately. It is important that the foal's immunoglobulin (IgG) levels are checked at 12-24 hours of age. If failure of passive transfer occurs, the foal must immediately receive colostrum or plasma.

Vaccination guidelines for foals will vary depending on the vaccination status of the dam (vaccinated vs unvaccinated). Consultation with your veterinarian is recommended to tailor a vaccination program specific to your farm. Generally, foals should be vaccinated for EWT/WNV beginning at 4-6 months of age. They will require a primary vaccine, a booster 4 weeks later and then a final vaccine at 10-12 months of age. Following this, yearly vaccination is required to maintain adequate protection. Vaccination for Flu/Rhino should be started at 4-6 months of age, with a booster 4 weeks later and then a final vaccine at 10-12 months of age. Following this, vaccination is required every 6-12 months depending on the vaccine used. Vaccination for strangles begins at 4-9 months of age (depending on the dam's vaccination status and the type of vaccine used ie: intranasal vs intramuscular). It is recommended that vaccination for strangles is discussed with your veterinarian so that an appropriate program is set.

While the importance of vaccinations cannot be overstressed, good farm management and hygiene is also required for a successful breeding program. If housed off site, mares should be brought to the foaling location at least one month prior to foaling. This will allow for the production of antibodies to local bacteria. Mares should be foaled in stalls or on clean pasture. The stalls should be scrubbed with phenolic or iodophore compounds to kill bacteria and rotavirus. Dirt or clay barn floors should be treated with lime and lined with clean rubber mats. Stalls should be bedded with straw rather than shavings, as this is less abrasive and less likely to lead to umbilical infections. Daily observation of foals will allow for the early detection of disease.

Preventative medicine combined with good farm management is key to a successful breeding program. Consultation with your local veterinarian to develop an appropriate vaccination program for your farm is highly recommended.