

Don't Forget to Protect Your Horse against Core Equine Diseases

Written by Dr. Mike Ross

In my experience when many of us horse owners think about horse vaccination, we tend to think about respiratory disease vaccines like Flu (influenza), Rhino (rhinopneumonitis or herpesvirus), and Strangles (equine distemper). However, surprisingly enough these respiratory agents are not considered "Core" vaccine components.

The definition of a *core* vaccine is: a vaccine containing components to protect against diseases that are of high consequence and fatality in horses. Moreover, core vaccines are very effective and foster a high degree of protection to the disease as it challenges the horse's immune system readily. There are also human health concerns and possible zoonosis associated with some of these core diseases. The American Association of Equine Practitioners (AAEP) identifies the following core diseases: Tetanus, Sleeping Sickness, West Nile Encephalitis, and Rabies; and are briefly described below.

Tetanus is a disease caused by a bacteria found in the soil. This bacterium, *Clostridium tetani*, is usually introduced to the horse by a puncture wound and can be found all over Western Canada. Once in the body, the bacteria releases a potent neurotoxin which causes intense muscle contraction and spasm. Unfortunately, tetanus is 75% fatal in horses and a huge concern especially when open wounds are present. For instance, we recommend and inject every horse castrated with tetanus antitoxin to ensure protection against this bacteria.

Furthermore, the next core disease more commonly called "sleeping sickness", or Eastern/Western Equine Encephalitis, is caused by a virus which is spread by mosquitoes. Transmission is mainly by mosquitoes, but other bloodsucking insects have transmitted it to horses from wild birds or rodents, which are the viruses' natural reservoirs. Once a horse is bitten by the mosquito, it transmits the virus which travels to the brain. It causes a type of brain infection called encephalitis and can result in fatality rates up to 90%, and 50% when afflicted with Eastern and Western Equine encephalitis, respectively. The exposure risk of this disease and geographical distribution varies from year-to-year depending on distribution of mosquitos and reservoirs.

West Nile Encephalitis is caused by a virus which is fairly new to Canada. West Nile can afflict humans as well as other animal species. It causes a similar type of disease to sleeping sickness and is also transmitted by mosquitoes. However, this disease has rebounded in Alberta recently with a large increase in the number of cases last year. In horses, West Nile has a 33% case fatality and 70% if the horse ever becomes recumbent (goes down). The horses which recover from West Nile are reported to never be the same mentally, or may never reach the same level of athletic coordination.

Finally, Rabies is a well-known disease which affects many mammalian species. It is caused by a virus and spread by an infected [rabid] animal usually via bite wounds as the virus is harbored in saliva. Usually rabid wildlife, including raccoons, skunks, fox, and bats, are the vectors. The virus travels from the bite wounds to nerves where it migrates to the brain resulting in an encephalitis and is 100% fatal. As you may know, humans are at a high risk of obtaining this zoonotic disease so recommendation is vaccination to work towards possible eradication of the virus.

This time of the year is the perfect time to begin to think about vaccination. Vaccination of your horse with a core vaccine now will ensure that your horse immune system is boosted prior to mosquito season, performance season, or regular springtime fun. It is especially important if you are traveling with your horse to southern competitions, or destinations, to have them protected against these potentially fatal diseases. Yet, that being said, a horse all alone out in pasture can get all these diseases and may be at risk as well.

Luckily, there are several vaccines that include parts or all of the above mentioned diseases and recently a new vaccine has been innovated in which protects against all of the above for mentioned core diseases in one needle! If you would like to make an immunization plan to optimize your horses' health, consult your veterinarian or call us at the Dawson Creek Veterinary Clinic!