

Equine Vaccines 2019



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Importance of Vaccinating Horses

Diseases of concern for vaccination
often cause severe or fatal illness
Establishing a large pool of vaccinated
horse helps reduce the chance of
disease exposure for other horses
Several diseases of concern have
potential human health impact
All horses are exposed to core disease
vectors such as soil bacteria,
mosquitos, and wildlife

Components of a Vaccine

Biological Disease Component– The whole bacterial or virus disease entity or a particular component which will trigger the immune response

Adjuvant– The chemical or chemicals which help stimulate an immune response while, hopefully not triggering a vaccine reaction

Stabilizer– The chemical(s) which may be required to keep the biological component(s) and adjuvant active and in the vaccine mix

Antibiotic– May be required in a vaccine mixture to prevent contaminating bacteria from neutralizing the vaccine



Core Equine Vaccinations

Tetanus

Caused by the bacterium *Clostridium tetani*. The bacteria releases a neurotoxin that produces an often fatal neurological disease in horses. The bacteria lives in soil and manure and can survive in the environment for many years. The disease is rare, but horses are particularly susceptible to its devastating effects.

Eastern and Western Encephalomyelitis

Caused by a Alphavirus from the family Togaviridae. The virus causes a neurologic disease which can be 90% fatal for EEE and 50% fatal for WEE. Both diseases are transmitted by mosquitos. Foals are more susceptible than adult horses.

West Nile Virus

Caused by a virus of the genus Flavivirus and family Flaviridae. The virus' action causes brain and spinal cord swelling which can be around 33% fatal or can leave permanent neurological effects in 40% of horses which survive the infection. The virus is transmitted by mosquitos with birds being the intermediate host.

Rabies

Caused by a virus of the Rhabdovirus family. The disease. Generally spread by the bite of an infected animal. The neurologic disease is generally fatal once symptoms appear.

Other Equine Vaccinations

These diseases are not considered as widely spread and are considered more “risk based”.

Influenza

Caused by various strains of viruses of the influenza family and are often identified by numbers or the location where the virus was first appreciated. One of the most common causes of respiratory infection in horses. Signs of which can include nasal discharge, cough, and fever. Though seldom fatal, influenza can often affect a horse for two weeks or more and make them more susceptible to other concerns such as colic or laminitis

Rhinopneumonitis

Caused by Equine Herpes Virus. EHV4 often is responsible for respiratory disease and abortion in pregnant mares as well as weak, compromised foals. In addition to the above, EHV1 can cause a neurologic disease which is often fatal. The vaccine protects against the respiratory disease and abortion and may provide mild protection against the neurologic disease

Strangles

Caused by the bacteria *Streptococcus equi equi*. Spread by direct contact from an infected horse or spread of contaminated discharge, this disease can be endemic in many locations. Young horses are more susceptible than older horses. Signs include fever, lethargy, nasal discharge, and swelling of upper neck lymph nodes– which may burst and leak purulent material.

Potomac Horse Fever

Caused by *Neorickettsia risticii*. Carried by certain species of water flies and snails. Signs include fever, mild colic, diarrhea, varying degrees of laminitis. Disease has been confined to this point to specific areas in the U.S. and Canada (areas of high moisture with moderate temperatures)

Botulism

Caused by bacterium *Clostridium botulinum*. Bacteria produce spores whose toxins produce signs including progressive muscle weakness becoming paralysis effecting swallowing, digestive motility, defecating, and finally respiration. Introduced into the horse via contaminated wounds or eating contaminated food. Vaccine is not available in California.

Why is Sweetwater
Veterinary Clinic Changing
Vaccination Protocols for
2019

State and Federal authorities have become more concerned about the increase in infected rabies vectors (bats) which could result in an increased chance of horses being infected with rabies.

Until recently, giving Rabies vaccine as part of the yearly vaccine set involved giving 3 separate injections. This also appeared to make horses much more susceptible to a vaccine reaction.

Recent changes in vaccine production have allowed us to give all the core vaccines plus Rhinopneumonitis and Influenza in 2 injections which have much lower reaction rates.

What Causes a Vaccination Reaction?

For a vaccine to be effective, the body must respond to the components of the vaccine to produce immunity against future exposure to those diseases.

The cells in the body can respond too vigorously to the vaccine(s) resulting in some negative physical effects to the body. These negative effects can be of great concern to the owners of the affected animal

What are the Signs of a Vaccine Reaction?

Runny Nose and/or a mild sore throat

Elevated Temperature

Lethargy

A sensitive swelling in the area of the vaccine injection site

A sore neck which is sensitive to bending up or down or side to side

Hives

Colic

Pupura (Injectable Strangles)

Anaphylaxis

Vaccine manufacturers are constantly working to make vaccines more effective, easy to give, and less reactive

The goal is to have the majority of the horse population protected from diseases that otherwise could cause serious disease and even death



Questions

Thank You

The Doctors and Staff at Sweetwater Veterinary Clinic

The Librarians and Staff at the Acton/Agua Dulce Library

The Acton Town Council

The County of Los Angeles

Everyone Who Attends Our Talks !!

