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Adult Horse	
Month	Dewormer/Vaccine
February	Zimectrin Gold or Equimax Flu IN or IM, Rhino, PHF#1
April	Quest Plus Gel*
May	PHF#2, EWE/T, WNV, Rhino
August	Zimectrin Gold or Equimax, Rhino
October	Panacur
November	Rabies, Flu/Rhino
December	Eqvalan
<p>Equine herpesvirus type-1 and type-4 can each cause an upper respiratory infection in the horse known as rhinopneumonitis. EHV type-1 can also cause abortion in pregnant mares, the birth of weak or nonviable foals, and in rare cases, it can cause severe neurologic disease (myeloencephalitis) if it attacks the nervous system. Due to recent outbreaks and the increasing severity of the neurologic form of the equine herpesvirus, we are currently recommending vaccination against EHV-1 four times per year. In addition, we plan to incorporate several of the available EHV-1 vaccination products in our protocol with the intent of providing the best immunity possible for our client's horses. Unfortunately, there is conflicting information regarding the efficacy of current vaccines and vaccination protocols advocated for the prevention of the neurologic form of EHV-1. See the back of this form for more details on the specific products we will be using.</p> <p>*Quest Plus Gel is absorbed in the body's fat stores and released slowly over approx. 3 months time. We recommend administering this product to healthy adult horses because of its effectiveness against encysted small strongyles. However, it is a potent dewormer; therefore it is important to dose accurately. We DO NOT recommend the use of Quest Plus Gel in pregnant mares, foals, miniature horses, heavily parasitized, or debilitated horses.</p> <p>Vaccination for Strangles (<i>Streptococcus equi</i> infection) and Botulism is not included in our <u>routine</u> vaccination protocol. However, in select situations, vaccination for these diseases may be warranted. Please talk with one of our veterinarians if you are interested in vaccinating for either of these diseases.</p>	

Broodmares	
Gestational Age	Dewormer/Vaccine
Pre-breeding	Refer to adult protocol*
1st & 2nd month	Avoid vaccination
3rd month	Prodigy or Pneumabort-K
5th month	Prodigy or Pneumabort-K
7th month	Prodigy or Pneumabort-K
8th month	Rotavirus, Botulism
9th month	Prodigy or Pneumabort-K, Rotavirus, Botulism
10th month	Rotavirus, Botulism, EWE/T, PHF, WNV, Flu/Rhino
Post Foaling	Rabies, Refer to Adult protocol**
<p>*Our deworming protocol for pregnant mares is similar to that of the adult horse with the following exceptions: 1) Avoid deworming pregnant mares during their first 3 months of gestation. 2) Deworm with Equimax in February and August instead of Zimectrin Gold as the later is not approved for use in breeding animals 3) We do not recommend vaccination of pregnant mares with Quest Plus Gel. Therefore, in the late spring/early summer months (if your mare is >3 months in-gestation), deworm with Panacur or Eqvalan instead of Quest Plus Gel. 4) We recommend that mares be dewormed with Eqvalan within 24 hours post-foaling to prevent the transmission of <i>Stongyloides westeri</i> (Intestinal Threadworm) to newborn foals via the mare's milk.</p> <p>If you choose to vaccinate for Strangles (<i>Streptococcus equi</i> infection), the inactivated intramuscular vaccine can be administered to pregnant mares in their 10th month of gestation which should help to provide the newborn foal with antibodies against this bacteria in the colostrum.</p>	

Foals	
Age	Dewormer/Vaccine
1 month	Strongid
2 months	Panacur
3 months	Equimax
4 months	Panacur
5 months	Strongid
6 months	Eqvalan, Flu/Rhino, Rabies, EWE/T, PHF, WNV
7 months	Eqvalan, Flu/Rhino, Rabies, EWE/T, PHF, WNV
8 months	Panacur
9 months	Eqvalan
10 months	Strongid
11 months	Zimectrin Gold
12 months	Refer to Adult protocol
<p>This vaccination protocol is recommended for foals that have received good quality colostrum from a well-vaccinated mare. If this is <u>not</u> the case, we need to make adjustments to this protocol in order to provide the best possible immunity for the foal.</p> <p>We <u>do not</u> recommend the use of Quest Plus Gel dewormer in foals.</p>	

Dewormer Key: Eqvalan = Ivermectin, Panacur = Fenbendazole, Zimectrin Gold or Equimax = Ivermectin + Praziquantel, Quest Plus Gel = Moxidectin + Praziquantel

Vaccination Key: Rhino= Equine herpesvirus types-1/4; Anti-abortion= Equine herpesvirus type-1; Flu/Rhino= Equine influenza virus and Equine herpesvirus types-1/4 combined; EWE/T= Eastern & Western Encephalitis and Tetanus; PHF= Potomac Horse Fever; WNV= West Nile Virus

Vaccination Products/Disease Description

Equine herpesvirus (Rhinopneumonitis and Myeloencephalitis): EHV type-1 and type-4 can each cause an upper respiratory infection known as rhinopneumonitis. EHV type-1 can also cause abortion in pregnant mares, the birth of weak or nonviable foals, and in rare cases, severe neurologic disease (myeloencephalitis) if it attacks the nervous system. Clinical signs of EHV myeloencephalitis include incoordination, urinary/bladder dysfunction, and/or hindlimb weakness that may progress to complete paralysis. Unfortunately, there are no vaccines that are labeled for complete protection against the neurologic form of equine herpesvirus.

We offer the following vaccines for protection against equine herpesvirus:

- Rhinomune®** (Pfizer): This is a modified-live intramuscular vaccine that protects against the respiratory form of EHV-1 and may offer some protection against the neurologic form of EHV-1. Following the initial series (2 vaccinations given 3-4 weeks apart), horses can be re-vaccinated 4x/year. Foals can receive their initial series at ≥ 3 months-of-age.
- Prodigy®** (Intervet) and **Pneumabort-K®** (Fort Dodge): These are killed intramuscular vaccines labeled for protection against abortion due to EHV type-1. These vaccines should be administered to pregnant mares in their 3rd, 5th, 7th, and 9th months of gestation.
- Calvenza™ EHV** (Boehringer Ingelheim): This is a killed intramuscular or intranasal vaccine providing protection against equine herpesvirus types 1 and 4.
- Calvenza™ EIV/EHV** (Boehringer Ingelheim): This is a killed intramuscular or intranasal vaccine providing protection against both equine influenza virus and equine herpesvirus types-1 and 4. This vaccine is labeled for use in adult horses, foals ≥ 6 months-of-age, and pregnant mares.

Equine Influenza (Flu): Influenza virus causes highly contagious respiratory disease in the horse. We offer the following vaccines for protection against equine influenza:

- Flu Avert** (Intervet): Modified-live intranasal vaccine. It is not labeled for use in foals and/or pregnant mares.
- Fluvac Innovator®** (Fort Dodge): Killed intramuscular vaccine.
- Calvenza™ EIV/EHV** (Boehringer Ingelheim): This is a killed intramuscular or intranasal vaccine providing protection against both equine influenza virus and equine herpesvirus types-1/4. This vaccine is labeled for use in adult horses, foals ≥ 6 months-of-age, and pregnant mares.

Eastern & Western Encephalomyelitis (EEE/WEE) and Tetanus: Equine encephalomyelitis (Sleeping Sickness) causes neurologic disease in the horse. The viruses that cause these diseases are transmitted by mosquitoes from wild birds or rodents. Tetanus is often a fatal disease caused by a potent neurotoxin produced by the bacteria *Clostridium tetani*. This bacteria is present in the soil and horses typically become infected via puncture wounds or lacerations. We offer the following vaccines for these diseases:

- Encephalomyelitis Vaccine and Tetanus (EWE/T)** (Fort Dodge): This is a killed vaccine that protects against Eastern and Western encephalomyelitis as well as tetanus. Following the primary series (2 vaccinations given 3-4 weeks apart), horses in this area can be re-vaccinated once a year. Foals can receive their initial series at 6 months-of-age. Horses traveling to Florida, Georgia, and/or the eastern shore may require more frequent vaccination (2-4x/year) for encephalomyelitis due to heavy mosquito populations in these areas.
- Tetanus Antitoxin** (Fort Dodge): This vaccine provides immediate protection against tetanus and should only be given to horses or foals who have not been appropriately vaccinated for tetanus and are at immediate risk of infection due to an open wound or puncture.
- Tetanus Toxoid** (Fort Dodge): This is a killed vaccine that provides protection against tetanus only. We may choose to administer this vaccine in conjunction with Tetanus Antitoxin or by itself prior to castrating colts that have not been immunized for tetanus.

West Nile Virus (WNV): West Nile Virus causes fever and neurologic disease in the horse. It is spread by mosquitoes and is typically seen during the late summer and fall months. Fortunately, vaccination in the horse has proven to be safe and extremely effective. Following the primary series (2 vaccinations given 3-4 weeks apart), horses in this area can be re-vaccinated once a year. Foals can receive their initial series at 6 months-of-age. More frequent vaccination (2-4x/year) is recommended in horses traveling to Florida, Georgia, and/or the eastern shore where there is a heavy mosquito population. We offer the following WNV vaccines:

- RecombiTEK® Equine WNV** (Merial): Modified-live canary pox virus intramuscular vaccine. It is not labeled for use in pregnant mares.
- West Nile Innovator** (Fort Dodge): Killed intramuscular vaccine.

Potomac Horse Fever (PHF): Potomac Horse Fever is caused by infection with *Ehlichia risticii* and is prevalent in this area. Horses become infected following ingestion of aquatic insects and/or snails that harbor the organism. Infection results in fever, depression, and anorexia. In severe cases, diarrhea and/or laminitis may develop. Unfortunately, vaccination for PHF may not prevent disease; however, it does appear to decrease the severity of the disease. We offer the killed intramuscular vaccine, **Ehlichia Risticii Bacterin** (Merial). Due to the high prevalence of PHF in this area, we recommend vaccination in the early spring and again in the late spring/early summer months. An additional or third vaccination** may be given to horses that live on endemic farms and/or horses recently introduced to this area.

Rabies: Infection with the rabies virus (Rhabdovirus) causes fatal neurologic disease in horses. We **strongly** recommend that all horses be vaccinated for rabies. We offer the killed intramuscular vaccine, **ImRab®** (Merial). Following the primary series (2 vaccinations given 3-4 weeks apart), horses can be re-vaccinated once a year. Foals can receive their initial series at 6 months-of-age. This vaccine is not labeled for use in pregnant mares; therefore, we recommend that broodmares be vaccinated following foaling and prior to re-breeding.

Rotavirus: Rotavirus causes diarrhea in foals. Pregnant mares should be vaccinated during their 8th, 9th, and 10th month of gestation in order for foals to receive antibody protection via the mare's colostrum. We offer the killed intramuscular vaccine, **Equine Rotavirus Vaccine** (Fort Dodge).

Strangles: Vaccination for Strangles (*Streptococcus equi* infection) is typically recommended in horses or foals that live on heavily populated farms or on farms where Strangles cases have been diagnosed. Following the primary series (2 doses given 3-4 weeks apart), horses can be re-vaccinated once or twice yearly. Foals can receive their initial series at ≥ 6 months-of-age. We offer the following vaccines against Strangles:

- Pinnacle® I.N.** (Fort Dodge): Modified-live intranasal vaccine.
- Streptococcus equi I.M.** (Boehringer Ingelheim): Killed intramuscular vaccine.

Botulism: Botulism is caused by toxins released from the bacteria *Clostridium botulinum*. The modes of infection include absorption of toxin from the GI tract or wounds. Adult horses typically become infected following ingestion of toxin from decaying animal carcasses present in hay or feed. Clinical signs include tremors in foals, severe weakness progressing to paralysis, inability to swallow, and frequently death in adult horses. We offer the killed intramuscular vaccine, **Clostridium Botulinum Type B Toxoid** (Neogen). Following the primary series (3 vaccinations given 3-4 weeks apart), adult horses can be re-vaccinated once a year. Broodmares in their first pregnancy should be vaccinated during their 8th, 9th, and 10th month of gestation. In subsequent pregnancies, these mares can be re-vaccinated once a year. Foals out of well-vaccinated mares, can receive their primary series as early as 2 months-of-age. Foals out of non-vaccinated mares, should receive their primary series at 2 weeks of age.