

In discussing viral respiratory disease in horses, it is important to clear up a common confusion. Although often administered together in the "Rhino/Flu" fall shots, there are actually two major respiratory viruses we are worried about. One of them is Equine Influenza Virus. The other is Equine Herpes virus types 1 and 4, also known as Rhinopneumonitis. Although these viruses share many characteristics, there are several key differences when it comes to controlling outbreaks.

Equine Influenza is the most common cause of viral upper respiratory disease in horses. Onset is usually sudden with only 1 to 5 days between exposure and clinical symptoms occurring. The symptoms include fever, dry cough, and nasal discharge, as well as secondary signs such as anorexia and muscle pain. Healthy adult and vaccinated horses usually have an uneventful recovery, but foals, geriatric, and immune-suppressed animals can become very ill or die from the disease.

Equine Influenza virus can be spread by droplets ie: mucous, saliva, or similar from an infected horse, or by fomites. Fomite is a scientific term for infectious particles such as viruses that are spread from an infected animal to a carrier object, and then from the carrier object to the next animal. Fomite spread can occur when buckets, lead ropes, brushes and other equipment, barn cats and other wandering animals or people have contact with an infected horse and then have contact with a non-infected horse. This means that it is not necessary to have an infected horse on the property to spread the disease. The virus can live up to 48 hours outside the horse, so there is a real risk of transmission by fomites.

Vaccinating is the first step toward protecting your barn. The higher the percentage of vaccinated horses in a given population, the less likely the disease is to spread in that population. Influenza will generally spread very rapidly in an unvaccinated population. In general; horses that are competing or are frequently exposed to new horses should be vaccinated every 4-6 months. The older horse that does not travel much may be fine with an annual vaccination, but other horses should be vaccinated at least biannually. Pregnant mares should be vaccinated with a killed vaccine 6-8 weeks prior to foaling to insure adequate immunity. It is now recommended that foals born to mares vaccinated for influenza not get their first influenza vaccination until they are 9-11 months old. This is because the foal has antibodies from his mother which may interfere with the vaccine. It is best to wait until the antibodies he received from his mother are fading before vaccinating. However, the foal from an unvaccinated mare should be vaccinated early and often. Vaccination plays a big role in preventing influenza outbreaks.

Treatment of horses with influenza is aimed at reducing fever, due to the dangerous side effects of high fevers in horses (laminitis, coagulation issues) and preventing the development of more serious bacterial infections in the lungs. Non-steroidal anti-inflammatory drugs such as Banamine can reduce fever and accompanying discomfort. Sometimes antibiotics will be given to treat or prevent bacterial infections. In addition, rest and plenty of fluids is important for the infected horse. Generally, one week of rest for

every day of fever is a good guideline. Most previously healthy, vaccinated adult horses will recover without any lasting problems.

Rhinopneumonitis is caused by equine Herpes virus types 1 and 4. It is most common in horses less than 3 years old. It is not as likely to result in large outbreaks as Influenza is. The most common sign is nasal discharge. Fever, ocular discharge, lymph node enlargement, and lethargy may also occur. In addition, equine herpes virus infection can cause abortion in pregnant mares. Equine herpes virus type 1 can also cause neurologic disease that can result in signs ranging from incoordination to inability to rise or move.

Equine herpes virus, presents a special sort of challenge when it comes to controlling disease. This is because herpes viruses develop what is called latency. This means that after infecting an animal, the virus can live in certain body tissues and be protected from the horse's immune system. The virus lives undisturbed inside the horse, and at times of stress, the horse may develop signs of infection, or may simply secrete virus that can infect other horses, without getting sick. This characteristic of the herpes virus makes it very difficult to identify potential carrier horses, and very difficult to eradicate the disease from horse populations. Like influenza, it can be spread from horse to horse by droplets, or can be spread by fomites. It may survive up to 35 days outside the horse, so transmission between horses and farms by humans and objects is an important source of transmission.

As with influenza, vaccination is important in preventing outbreaks of Rhinopneumonitis. Vaccination should be done every 4-6 months for horses that are competing or frequently in contact with strange horses. Rhino can affect pregnant mares and cause abortions so vaccination at 5, 7 and 9 months with a Rhinopneumonitis vaccine designed for pregnant mares is necessary for broodmares. Foals should receive their first vaccination for Rhinopneumonitis at 4-5 months of age, with two booster shots at 6-7 and 8-9 months of age. Vaccination is less effective at preventing the neurologic form of the disease.

Treatment for Equine Herpes Virus infection is similar to that for Influenza. However, horses with the neurologic form of the disease often need intensive treatment.

There are other steps you can take to minimize disease risk. First, any new horses or horses that have been away at events should be quarantined for at least 14 days upon arrival to a facility. This means they have no face to face contact with other horses. In addition, try to handle, feed, or groom new horses last, and then wash your hands well to decrease the risk of transfer of the virus. Each horse should have his own bucket, lead rope, halter, etc that are not shared. If this is not possible, items should be disinfected prior to passing between horses. This is especially true of items that have face contact, such as bits. Dilute bleach is an effective disinfectant, but items must be free of dirt, hair etc before being disinfected. General good management practices, such as keeping pregnant mares and mares with young foals separated from other animals, segregating animals by age group, and reducing stress by preventing overcrowding and providing appropriate feed and preventative care will all help reduce the risk of an outbreak. You can talk to your veterinarian for more information about protecting your horses from respiratory disease this winter.