



**American Association
of Equine Practitioners**

Horse Health Education

EQUINE HERPES VIRUS (EHV1 AND EHV4):

What Every Horse Owner Should Know

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HORSE HEALTH EDUCATION: EHV

OVERVIEW



Equine Herpesvirus (EHV-1 and EHV-4) causes the disease known as rhinopneumonitis.



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CLINICAL SIGNS

Equine herpesvirus infection can cause respiratory disease, neurologic disease, and abortion in pregnant mares.



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CLINICAL SIGNS



EHV-1 causes respiratory disease, abortions and neurological disease.

EHV-4 causes respiratory disease and infrequent abortions. Only rarely (one case) has neurological disease occurred due to EHV-4.



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RESPIRATORY DISEASE



Clinical respiratory herpesvirus infections most commonly occur in young horses, usually weanlings and yearlings.

Widespread outbreaks can occur especially when many horses are commingled in confined spaces or horses are placed in stressful environments.



Once a young horse is exposed, the virus can hide in the horse's system and can intermittently shed virus without showing clinical signs.



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RESPIRATORY DISEASE



Clinical signs of respiratory disease include mild fever, coughing and nasal discharge. The discharge is clear, but progression to a yellow thick exudates is common.



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RESPIRATORY DISEASE



Incubation period can be as short as 24 hours, but typically is 4-6 days. In some cases, it can be as long as 10 days.



Outcome is dictated by minimization of stress and rest.



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ABORTION

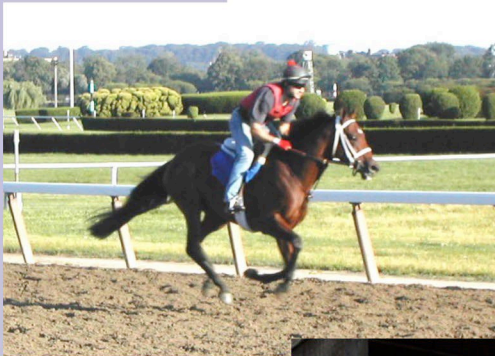


There are usually no warning signs of abortions, which typically occur during the last four months of gestation.



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NEUROLOGICAL DISEASE



The neurological form of this disease is called Equine Herpesvirus Myeloencephalopathy (EHM). EHM can be fatal and is the greatest concern at boarding facilities, race tracks and horse shows.



Some horses may display a fever 24-48 hours prior to onset of EHM.



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NEUROLOGICAL DISEASE



Stress may activate the virus to cause onset of neurologic signs.



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NEUROLOGICAL DISEASE



The clinical signs commonly seen are:

- Hind-end weakness
- Incoordination
- Toe-dragging
- Dog-sitting
- Urinary/fecal incontinence



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HOW IS HERPESVIRUS TRANSMITTED?

- Transmission occurs via respiratory route with infective droplets obtained from coughing and snorting horses. Shedding of the virus in nasal secretions can occur for 14 days.
- Direct contact with virus containing respiratory tract secretions, especially mucus.
- Infection can be obtained from the aborted fetus, fetal tissues and fluids.



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HOW IS HERPESVIRUS TRANSMITTED?



- The virus can survive several weeks on surfaces without disinfection to differentiate it from survival in the horse.
- All horses have the potential to be carriers of the virus whether or not they demonstrate clinical signs.
- The virus is killed by sunlight.



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WHAT ARE THE METHODS TO CONFIRM A HERPESVIRUS INFECTION?

- Detection of the virus from either nasal swab or blood by virus isolation.
- Polymerase chain reactions (PCR) tests can look for the virus in nasal secretions or whole blood buffy coat or placental and fetal tissue.
- Demonstration of rising titer in serum collected two to four weeks apart.



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TREATMENT

EHM is caused by a virus and does not respond to antibiotics.

Supportive care is a critical component of treatment.

Additional medications will depend on the stage and severity of disease in the individual horse.



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TREATMENT

Supportive treatment usually includes anti-inflammatory drugs, fluids to maintain hydration and slinging the horse if unable to stand.

In most cases, horses that remain standing have a good prognosis, although recovery may take weeks or months. Horses that go down and are unable to stand have a poor prognosis.



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VACCINATION



Vaccination for the respiratory form of EHV may not prevent the disease, but it will decrease the frequency and severity of clinical signs and, more importantly, some EHV vaccines have demonstrated that they decrease shedding of the virus to other horses.



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VACCINATION

The AAEP recommends the following vaccination schedule for EHV-1 and EHV-4 in the prevention of respiratory disease:

Foals/weanlings: First dose beginning at 4-5 months.

Second dose: 4-6 weeks later.

Third dose: At 10-12 months of age.

Then at 6 month intervals



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VACCINATION



Yearlings: Every 6 months

Horses in Training: Every 6 months—check with your veterinarian as he or she may recommend a more frequent vaccination schedule in these high risk animals

Also: More frequent vaccination than at 6 months intervals may be required in certain cases as a prerequisite for entry to a facility or an equine event—check with your veterinarian and/or event organizer for specific requirements.



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VACCINATION



Vaccinate all broodmares at the beginning of the 5th, 7th and 9th month of pregnancy. Currently, there are two EHV vaccine products labeled for the prevention of abortion, which are both killed vaccines containing EHV-1.

In addition to the 5, 7 and 9 month schedule, some veterinarians may recommend an additional EHV1 vaccination for broodmares beginning at the 3rd month of pregnancy.



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VACCINATION

There is no vaccination currently available that is labeled to protect against the neurological form of herpesvirus.

Many veterinarians still recommend vaccination as there is data to demonstrate that some vaccines help reduce the duration and degree of viral shedding of equine herpes virus in vaccinated animals.

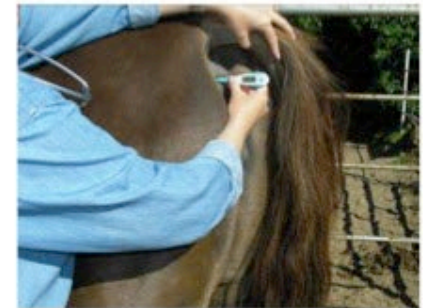


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CONTROLLING AN OUTBREAK



- Isolate all new animals to the farm for a minimum of 21 days.
- Disinfect all areas of the barn and transport vehicle with either bleach (one part bleach to 10 parts water) or phenolic-based disinfectants.
- Take rectal temperatures twice daily and isolate any horse with a fever.





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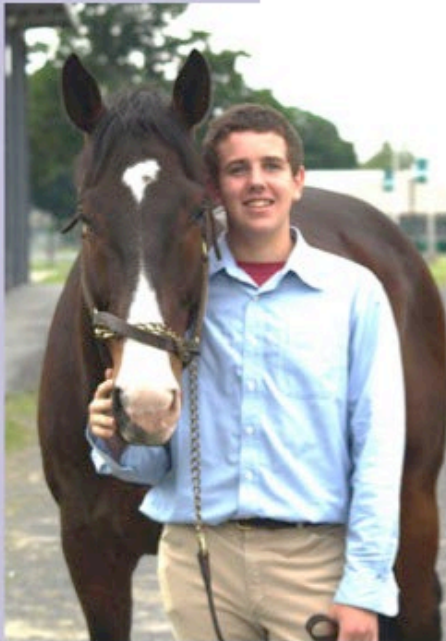
CONTROLLING AN OUTBREAK

- Disinfect after each use any equipment that is shared (ie. bridles, brushes, lead ropes, etc.)
- Keep mares that abort in isolated areas away from the rest of the broodmares.



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PREVENTING AN OUTBREAK



Clinical and exposed horses should not be moved. Consult your veterinarian to determine vaccination and movement requirements for horses which have not been exposed. Some equine venues request proof of vaccination within seven to 90 days of travel. The serial and lot number of the vaccine used for inoculation must also be recorded.





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For the latest information on equine disease outbreaks across the US go to:

<http://www.equinediseasecc.org/>



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Photos courtesy of

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