

Equine Herpes Myeloencephalopathy

Equine Herpes Virus (EHV-1) infection in horses can cause respiratory disease, abortion in mares, neonatal foal death and neurological disease. The virus is not transmissible to humans. The neurological form of the disease is known as Equine Herpes Myeloencephalopathy (EHM). Damage to the blood vessels in the brain and spinal cord associated with EHV-1 infection cause neurological signs to appear. EHM is most often due to the neuropathogenic strain of EHV-1, but may occasionally be caused by the non-neuropathogenic strain of the virus.

EHV-1 is easily spread and typically has an incubation period between 2-10 days. Respiratory shedding of the virus generally occurs for 7-10 days, but may persist longer in infected horses. For this reason, a twenty-one day isolation period of confirmed positive EHM cases is recommended.



Emergence of EHM

In recent years, there has been a marked increase in the number of EHV-1 cases and several outbreaks of EHM at large horse events and facilities. The recent and increasing frequencies of EHM outbreaks support the designation of EHM as an “emerging disease”.

Transmission

Horse-to-horse contact, short distance aerosol transmission and contaminated hands, equipment, tack and feed all have a role in disease transmission. Direct and indirect contacts are most important for transmission since the size of the virus limits capacity for airborne transmission to distances of less than 30 feet.

Horses exposed to EHV-1 and incubating the virus can shed virus via nasal secretions. Horses with severe clinical signs consistent with the neurological form of EHV-1 most often have a large viral load in nasal secretions and present the greatest risk for disease spread.

Clinical Signs

Clinical signs of EHM in horses may include:

- Fever of 102°F or greater
*Fever most often precedes neurologic signs
- nasal discharge
- incoordination
- hindquarter weakness
- recumbency
- lethargy
- urine dribbling
- diminished tail tone.

Consult your veterinarian if your horse exhibits any of these signs.

Treatment

Treatment of EHM with intravenous fluids, anti-inflammatory drugs, anti-viral drugs and other supportive measures may be beneficial. The severity of clinical signs and the period of recumbency influence the prognosis for EHM positive horses.

Diagnosis of EHM

Contact your private veterinarian if your horse develops EHM-compatible clinical signs. Nasal swabs and whole blood collected from the symptomatic horse are essential for detection of horses positive for the virus. Recent advancements in EHV-1 diagnostic testing enable laboratories to differentiate the non-neuropathic and the neuropathic strains of EHV-1. Diagnostics for detection of antibodies to EHV-1 indicate past exposure to EHV-1 and not current infection.

Contact the California Animal Health and Food Safety Laboratory System or the UC Davis Lucy Whittier Molecular Core Facility for additional information on EHM testing in California.

<http://www.cahfs.ucdavis.edu/>

<http://www.vetmed.ucdavis.edu/vme/taqmanservice/>



Vaccination

Currently, there is no USDA licensed EHV-1 vaccine with a label claim for protection against the neurological strain of the EHV-1.

Prevention

Implementation and enforcement of biosecurity measures on equine premises can help prevent the spread of EHV-1. Consistent biosecurity measures must be taken to reduce the risk of disease spread. Key to disease control is the immediate separation and isolation of identified suspect cases. Ideally, a person caring for a sick horse should not also work with healthy horses. If this is impractical, always handle healthy horses first and sick horses last.

People can easily transmit this virus on their hands and clothing. Individuals should wash their hands thoroughly with soap and hot water between contacts with horses to reduce risks of disease spread. Wearing disposable gloves and changing them between horses or use of hand sanitizers between horse contacts are other alternatives. Thorough cleaning and disinfection of footwear between entry into barns and stalls can also help minimize risks of disease spread.

Disinfection

Herpes viruses are susceptible to many disinfectants. A 1:10 dilution of bleach in water is effective against EHV-1. Both alcohol and bleach disinfectants are inactivated by organic matter, such as manure and soil. Therefore, all areas must be thoroughly cleaned of organic matter prior to use of these products. Use soaps or detergents to decrease the organic matter present before applying a disinfectant.

In barn environments, where organic material cannot be completely eliminated, it is advisable to use a disinfectant that retains activity in the presence of organic matter. Phenolics, such as 1 Stoke Environ® or SynPhenol-3®, and accelerated hydrogen peroxide products, such as Virkon®, have this property. Be sure to follow manufacturers recommendations and label instructions for all disinfectants.

California Department of Food and Agriculture

Animal Health Branch

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Additional Resources

CDFA EHV-1 Webpage:

http://cdfa.ca.gov/ahfss/animal_health/equine_herpes_virus.html

USDA EHV-1 Webpage:

<http://www.aphis.usda.gov/vs/nahss/equine/ehv/>

American Assoc. of Equine Practitioners:

http://www.aiep.org/EHV_resourcesowner.htm

UC Davis Center for Equine Health:

http://www.vetmed.ucdavis.edu/ceh/ehv1_general.cfm



Animal Health & Food Safety Services Animal Health Branch

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An Update for California Horse Owners



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