



## Equine Herpesvirus Myeloencephalopathy (EHM)

**Disease Name:** Equine Herpesvirus Myeloencephalopathy

**Disease Type:** This disease is caused by the EHV-1 virus which is common in the horse population. In extremely rare cases, EHV-4 can develop into EHM.

**Transmission:** EHV-1 is spread from horse to horse through contact with nasal discharge or spread as aerosol droplets. Horses can also contract the virus by coming into contact with contaminated surfaces such as stalls, water, feed, tack, and transport vehicles. Humans can spread the virus from horse to horse by contaminated hands and clothing.

**Frequency:** Although EHV-1 and EHV-4 are a relatively common cause of a mild respiratory disease (equine rhinopneumonitis), EHM, the neurologic form, is not common. EHM is most frequently caused by EHV-1 and very seldomly by EHV-4. It is unknown why this virus develops into neurologic disease in some horses.

**Incubation period:** Ranges from 5 to 6 days. Horses can shed the virus during the incubation period.

**Carrier status:** Infected horses are carriers and can shed the virus even when showing no clinical signs. An estimated 40-60% of infected horses can become lifelong carriers of EHV-1.

**Latency:** EHV is a viral disease that most horses have been infected with at some point in their life. It is unknown why this virus produces the neurological form in some horses. Horses that have had EHV-1 may be carriers and the virus may be latent and reoccur under periods of stress such as transport or a change in the horse's environment.

**Severity:** EHM can be life threatening.

### Clinical signs:

- Fever- This virus typically causes a biphasic (two phase) fever. The horse will have fever on day 1 or 2 and again on day 6 or 7. Neurological signs may not present until the second fever. Some horses may not develop a fever.
- Nasal discharge
- Depression
- Incoordination
- Hind limb weakness
- Loss of tail tone

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- Loss of bladder tone- urine dribbling or inability to urinate
- Dog sitting position
- Leaning against a fence or wall to maintain balance
- Recumbency- inability to rise

**Diagnosis:** The diagnosis is made by having a veterinarian collect nasal swabs and whole blood from the horse which are then submitted for laboratory examination. Horses with neurologic signs which test positive for EHV-1 are considered positive for EHM.

**Treatment:** There is no cure for EHM. Supportive care is administered including the use of non-steroidal anti-inflammatory drugs (NSAIDS) such as phenylbutazone (Bute) or flunixin meglumine (Banamine) to reduce fever, inflammation, and pain. Corticosteroids have been used but there is no evidence of benefit. Antiviral drugs such as acyclovir and valacyclovir have been used but their value in horses with EHV infection is the subject of continued investigation.

**Prognosis:** Prognosis for horses that test positive for EHV and then develop neurologic signs of EHM is often poor with fatality as high as 30%. In a percentage of cases, horses with neurologic signs can recover from the infection but may retain neurologic deficits.

**Prevention:** Currently, there is no USDA licensed EHV-1 vaccine which is proven to protect against the neurological disease associated with EHV-1. The best method of protection is always to maintain current EHV vaccinations on all horses on your property and to follow correct biosecurity protocol when bringing new horses onto your premises, when travelling, or during any activity where horses may come together.

**Biosecurity:** EHV-1, and rarely EHV-4, has the potential to cause EHM so biosecurity measures appropriate for both viruses should be taken. EHV-1 is spread via aerosol particles from nasal discharge or from contaminated surfaces including people, clothing, feed and water, implements, and stalls; isolation of affected or exposed horses is critical to preventing spread of the virus. Proper biosecurity measures include extensive cleaning and disinfection of surfaces and equipment that come in contact with affected horses. Individuals treating or coming into contact with infected horses need to follow appropriate disinfection protocols when handling multiple horses (Go To: <http://equinediseasecc.org/biosecurity.aspx>).