

Equine Herpes Virus

Equine herpes virus (EHV) is a common virus occurring in horse populations worldwide. The most common strains are EHV-1 and EHV-4. EHV-1 can cause respiratory diseases, abortions and neurologic disease, while EHV-4 typically causes respiratory disease but can also cause abortions. EHV-1, but not EHV-4, has been identified as a cause of abortion outbreaks and, more recently, outbreaks of neurologic disease.

Respiratory disease caused by EHV is most common in young horses (weanlings and yearlings), while older horses are more likely to transmit the virus without showing clinical signs. EHV-1 infection (neurologic), also called *equine herpesvirus myeloencephalopathy* (EHM), results from widespread damage to blood vessels, including damage to the blood-brain barrier. Signs of respiratory disease may not be present.

Clinical Signs may be:

- Fever - in some cases fever may be the only sign and may go undetected if temperatures are not taken
- Coughing
- Nasal discharge
- Abortions typically occur late in pregnancy and often present no warning signs

Foals may be infected *in utero* and are usually abnormal from birth. Signs include:

- Weakness
- Jaundice
- Difficulty breathing
- Neurologic signs

Affected foals typically die within several days. Older foals that become infected generally show signs of respiratory disease such as nasal discharge. The Neurologic disease EHM typically affects the hind limbs and urinary tract.

Signs include:

- incoordination
- urine retention
- incontinence

Severely affected horses may be unable to rise. "Dog-sitting" may be observed.

The incubation period is typically short (as short as 24 hours) and spans four to six days, but can be longer. EHV abortions can occur from two weeks

to several months following infection. The virus can persist in the horse long term, possibly for life, without causing clinical disease. Re-activation of infections, and subsequent disease and/or shedding of virus can occur in situations of stress.

The virus is transmitted primarily by aerosol and through direct and indirect contact. Shedding by the respiratory route typically lasts for seven to 10 days but can persist longer. A 28-day isolation period is therefore generally recommended after the diagnosis has been established. Abortions result in distribution of infectious virus in the placenta, foetal membranes and foetal fluids. Aborted foetuses are also infectious. Mares that have aborted also shed virus in their respiratory secretions. Indirect transmission is an important route of transmission of the virus. Indirect transmission occurs when infectious materials (nasal secretions, fluids from abortions etc.) are moved between infected and un-infected horses by people or objects. Poor hygiene (such as lack of hand washing) and sharing of equipment are often responsible.

Recovery is generally good for mildly affected horses, but is poor for those that have been severely affected. Horses that recover from the disease may take several weeks to months before neurologic problems go. Some horses may have complications for the rest of their life. Vaccination is available. None of the currently available vaccines state any claim for protection against the neurologic form of EHV infection.



Horse with EHV-1 Neurological