



Equine Parvovirus-Hepatitis Virus (EqPV-H)

Disease Name: Equine Parvovirus-Hepatitis Virus (EqPV-H)

This disease was formerly known as Theiler's disease

Disease Type: Viral hepatitis (liver disease) of horses

Transmission: Two modes of transmission have been identified in horses:

Biologic transmission occurs when healthy horses become infected through the administration of biologic products containing EqPV-H. To date, EqPV-H has been identified in tetanus antitoxin (TAT), botulinum antitoxin, *Streptococcus equi* antiserum, pregnant mare's serum, and equine plasma products.

Non-biologic transmission occurs when healthy horses become infected with EqPV-H without ever having been administered biologic products. While the mechanism for this type of infection is still unknown, an insect-borne mode of transmission is suspected.

Incubation Period: 4 to 13 weeks

Clinical Signs: Horses infected with EqPV-H can develop a wide range of clinical signs, varying from inapparent or very mild illness to fulminant liver failure. It is not currently known why some horses develop no clinical signs while others are severely affected.

Asymptomatic infection: *Most horses infected with EqPV-H will have no clinical signs of liver disease or illness.* Liver enzyme activities on bloodwork may or may not be transiently elevated, but normalize within 1-4 weeks with no long term health effects.

Clinical Hepatitis: *Approximately 2% of horses infected with EqPV-H will develop clinical hepatitis.* Affected horses show signs of liver disease of varying severity (mild to severe), which may include one or more of the following:

- Lethargy
- Anorexia
- Jaundice
- Neurologic signs (altered behavior, head pressing, staggering, blindness)
- Elevated liver enzyme activities on bloodwork
- Elevated blood ammonia and bile acid concentrations
- Discolored urine
- Colic
- Recumbency
- Death (usually within 72 hours)

Carrier Status: Horses infected with EqPV-H can remain asymptotically infected for long periods of time. The percentage of horses that become chronic carriers is unknown, however, carrier horses may serve as reservoirs for infection to others. The mechanism and likelihood of transmission from a chronic carrier to a healthy horse is unknown at this time.



Diagnosis: EqPV-H should be suspected in horses with signs of liver disease and a history of receiving biologic products in the preceding months. A definitive diagnosis of EqPV-H can be achieved using a PCR test on liver biopsies, serum, plasma, or whole blood.

Other Causes of Viral Hepatitis: Another recently discovered virus, equine hepacivirus (EqHV), can be associated with mild or transient liver disease in horses. Whether it causes disease or contributes in a multifactorial manner needs further investigation.

Treatment: There is no specific treatment for EqPV-H infection. Asymptomatic horses do not require any treatment. Treatment of clinically affected horses relies primarily on supportive care and treatment of liver dysfunction. Referral to an intensive care facility may be required for severely ill horses.

Prognosis: The prognosis for horses with no clinical signs (asymptomatic infections) is excellent. The prognosis for horses with signs of liver disease (clinical hepatitis) is guarded to poor, with a mortality rate of 50-90%.

Prevention: There is no vaccine for EqPV-H. At this time, the only means of preventing EqPV-H in horses is to administer autogenous biologics (made from the patient's own blood), or commercial biologics that have been tested and confirmed free of the virus.

Recently, the USDA APHIS Center for Veterinary Biologics (USDA APHIS CVB) has taken measures to ensure that all commercially licensed equine plasma or serum biologic products are tested and negative for EqPV-H. Whenever possible, it is recommended that veterinarians administer USDA APHIS licensed and tested biologic products to prevent the spread of EqPV-H.

More information on licensed veterinary products can be obtained at the [USDA APHIS website for Licensed Veterinary Biologic Products.](#)

Biosecurity: Horses with fulminant hepatitis may be shedding virus and should be isolated from other horses. See [EDCC's isolation and quarantine](#) and [AAEP's Biosecurity Guidelines](#) for instruction regarding isolation of infected horses.

Risk to Humans and Other Animals: None known