



The Disease

Equine Piroplasmosis (EP) is a blood-borne disease that can affect all equids (horses, donkeys, mules, and zebras) and is caused by one of two protozoan parasites: *Theileria equi* or *Babesia caballi*. Humans are rarely infected by the causative organisms of equine piroplasmosis.

As The United States (U.S.) is considered “free” of the organisms that cause EP, EP is considered a foreign animal disease (FAD). Positive cases must be reported to state or federal animal health officials.

Transmission

EP is spread either via ticks or via humans. Natural transmission occurs when a tick consumes a blood meal from an infected horse and transfers the parasite to a naïve horse or to subsequent generations of ticks. Species of ticks capable of transmitting the causative organisms are naturally found in the U.S. Additionally, an infected pregnant mare may pass the organism to her foals in utero.

People can introduce virus to a naïve horse through the use of infected blood or blood products, or through the use of blood contaminated equipment such as needles, syringes, surgical instruments, dental equipment, tattooing equipment, or any other equipment that may have come in contact with infected blood.

Never reuse needles, syringes, or surgical equipment without proper sterilization, which requires use of an autoclave and specialized disinfectants. Consult a veterinarian about proper sterilization techniques.

Clinical Signs

After an incubation period (time before onset of clinical signs) of 5-28 days, clinical signs may include fever, anemia, yellowing of the mucous membranes (jaundice), dark brown or red-tinged urine, collapse and death in severe cases.

A horse that survives the clinical phase of disease continues to carry the parasite in their red blood cells. These persistently infected horses pose a risk for infection to other horses. Stress, such as racing, heavy exercise, or transport, may increase the levels of the parasite present in the blood of the infected horse; thereby, increasing the risk of disease spread.

Diagnosis

The disease is diagnosed by a serologic (blood) test. In the U.S., testing for EP is performed by complement fixation (CF) and enzyme-linked immunoabsorbant assay (ELISA) tests. Tests are used to confirm infection.

In Georgia, a Georgia Department of Agriculture (GDA) Animal Health Division veterinarian will locate the positive animal, quarantine the horse, and obtain a blood sample for confirmatory testing.

A regulatory veterinarian will perform an investigation to identify exposed horses, including:

- Any horse that resides with or near a positive horse.
- Any horse that may have shared equipment such as needles, syringes, dental, tattooing, or surgical equipment with a positive horse.
- Nursing offspring of a positive horse and of exposed horses.

All horses classified as exposed are placed under quarantine and tested for EP. To identify recently infected horses incubating the disease, all exposed horses are retested 30 days after the removal of the EP positive horse. Exposed horses are placed under quarantine until the retest confirms negative EP status.



Equine Piroplasmosis

Treatment

There is no approved vaccine for EP in the U.S., however, a treatment has been recently developed to treat *Theileria equi* infections. Positive horses can be enrolled in a state-federal approved treatment program. Treatment with an antiprotozoal drug, imidocarb, is performed at the owner's expense, and must be performed by a United States Department of Agriculture (USDA) accredited veterinarian under the observation of a state or federal animal health official. The horse is quarantined for the entire length of treatment, which can take months to years.

The management options for a positive horse are enrollment into the USDA Animal Plant Health Inspection Services (APHIS) EP treatment under quarantine, lifetime quarantine, or euthanasia. Quarantine requires horses to be placed in a tick-free, vegetative-free environment. All positive horses are permanently identified by microchip and may be identified with a brand.

Prevention

This is a blood-borne disease. To protect horses from getting this disease, follow these guidelines:

- Always use a sterile needle and syringe for all injections, into a vein, muscle, or skin.
- Disinfect all dental, tattooing, and surgical equipment between horses. Make sure to remove all debris and blood with soap and water before disinfection.
- Only administer commercially licensed blood or blood products.
- Use a sterile needle each time when puncturing a multi-dose medication bottle. Consult a veterinarian to demonstrate how to use sterile techniques when drawing up medications.
- Monitor for the presence of ticks on your horses. If ticks are found, consult a veterinarian as to the best tick-prevention approaches in your area; and
- Contact a veterinarian if a horse is showing signs of fever, jaundice, decreased appetite, or weight loss.

Disinfection

This virus is readily destroyed by most common disinfectants such as bleach or alcohol. Since alcohol and bleach-based disinfectants are inactivated by organic matter, such as manure or soil, surfaces must first be cleaned thoroughly with soap and water before disinfectants are applied. Be sure to follow the manufacturers' recommendations and the label instructions for all disinfectants.

Reportable Disease Alert

Equine Piroplasmosis is a reportable disease (pursuant to **GA R&R 40-13-4-.02** and **Title 9 CFR §161.4(f)**) and must be reported within 24 hours of discovery. If your horse is exhibiting clinical signs consistent with EP or has been exposed, please contact your private practitioner or GDA officials.

**Georgia Department of Agriculture
Animal Health Division
404-656-3667**

**USDA-APHIS-VS
770-761-5420**

