



Equine Infectious Anemia (EIA)

Disease Name: Equine Infectious Anemia, EIA, Swamp Fever, Coggins disease.

Disease Type: Virus.

Transmission: Equine Infectious Anemia is usually spread via mechanical transmission (transfer of the pathogen in the mouth of an insect) of blood from an infected horse by blood-feeding insect such as a horsefly, deerfly, or stable fly, to an uninfected horse. EIA can also be transmitted iatrogenically (human caused through medical procedures) via medical equipment such as needles, syringes, IV tubing, or other equipment contaminated with blood or through transfusion of blood or blood products from an infected horse. Transmission from mare to foal in utero has also been documented and the EIA virus has also been isolated from semen of infected stallions.

Frequency: Rare.

Incubation period: 15 to 45 days.

Carrier status: Horses that have been infected with EIA are lifelong carriers. Horses showing clinical signs of the disease are more of a threat to healthy populations because of higher levels of virus circulating in the blood.

Shedding period: Inapparent carriers harbor the virus in their blood at varying levels for life, though the greatest risk of transmission is present when an infected horse is showing clinical signs.

Latency: The virus can remain latent for the lifespan of the horse. Horses that survive the initial clinical phase of the disease usually become inapparent carriers within a year and then remain a reservoir for the disease the remainder of their lifetime.

Severity: High. EIA can be fatal and all horses infected with the disease become lifelong reservoirs.

Clinical signs:

- Fever
- Depression
- Low platelet count
- Anemia
- Red or purple spots on the mucous membranes
- Edema
- Muscle weakness
- Muscle atrophy

Diagnosis: Equine Infectious Anemia is diagnosed by testing antibody levels in the blood. The most common test used to diagnose EIA is called a Coggins test, which is an agar gel immunodiffusion (AGID) test. ELISA (enzyme-linked immunosorbent assay) tests are also available to detect EIA. Both tests



detect antibodies to EIA virus and are available in many laboratories; the ELISA requires less time to receive results.

Treatment: There is no treatment or cure for Equine Infectious Anemia. Horses confirmed positive can be quarantined for the rest of their life but are usually euthanized.

Prognosis: Poor. EIA can be fatal and, although horses can be subclinical carriers, they harbor the virus for the duration of their lifetime. Horses are usually euthanized if confirmed positive for the disease to prevent ongoing transmission to other horses.

Prevention: There is no vaccine available for Equine Infectious Anemia. Methods of prevention include vector control (insect control) to reduce the possibility of transmission by biting flies and ensuring that needles and other medical equipment contaminated with blood are never shared between horses. Routine EIA testing should be performed to determine the status of the horses in an area and thus prevent transmission of the virus to horses nearby. Many equine events and boarding facilities require proof of a negative Coggins (AGID) or ELISA test within the previous 12 months to enter the facility. States require a negative EIA test for interstate movement and some states have an EIA test required for change of ownership.

Practice vector management on all properties where horses are kept:

- Use insect repellents on horses frequently; re-apply after rain.
- Keep horses indoors or with access to a run-in shed when biting flies are most active and apply insect repellent or use fly sheets, masks, and leggings when horses are turned out.
- Eliminate or minimize standing water.
- Eliminate brush piles, gutters, old tires and litter that are attractive fly breeding sites.
- Deploy fly predators or parasitic wasps to eliminate fly larvae in manure and bedding.
- Use fly baits and traps in and around barns.

Practice good manure management by frequently removing manure from stalls and paddocks; consider composting manure away from areas where horses spend time.

Biosecurity: Infected horses must be euthanized or permanently quarantined with separation from non-infected horses by at least 200 yards to prevent spread of the disease. Infected horses cannot be moved from quarantined premises except by special USDA approval (https://www.aphis.usda.gov/vs/nahss/equine/eia/eia_umr_jan_10_2007.pdf). Practice vector control management on your facility to reduce risk of transmission from insects.