

Equine Infectious Anemia and Coggins Testing



For equine travel between states and for most horse events and gatherings, proof of a negative “Coggins” test is required. It is important to remember the reason why this test is required and what exactly is being tested.

Background

Equine Infectious Anemia (EIA) is caused by a virus that can infect the entire horse family: horses, zebras, donkeys, and other equids. First diagnosed in the US in 1888, EIA has commanded a lot of attention from both veterinarians and the horse industry.

To relate how the EIA virus causes disease in horses, it is important to note that the EIA virus belongs to the same virus family as the Human Immunodeficiency Virus (HIV), which can lead to Acquired Immunodeficiency Virus (AIDS) in humans. The EIA virus weakens the horse’s immune system and causes disease in horses the same way that HIV does in people. Although humans are not at risk for infection with EIA, similarities of EIA to HIV show how serious of an infection it can be in horses and why we still are adamant about preventing the spread and attempting to eradicate this disease from the equine population.

The Coggins test is the common name for the laboratory test that will determine if a horse is infected with the EIA virus. Leroy Coggins, DVM and his research team developed this effective diagnostic test at Cornell University in the 1970’s. Its promotion and adoption by animal health authorities and equine industry leaders around the world, as well as the eventual development of a U.S. government program of EIA disease surveillance and eradication, has helped reduce the spread of the disease and its impact on the horse population. Following the implementation of this national program, each state led its own surveillance and eradication program. South Carolina began aggressive testing of EIA in the early 1990’s to determine the number of infected horses in the state.

With aggressive testing and monitoring for EIA by state and federal agencies and the horse industry, the number of horses testing positive has decreased dramatically in the past 20 years.



A chronic carrier of EIA can appear normal but is a source of infection for other horses, donkeys, and mules.

Transmission

Equine Infectious Anemia is transmitted between horses through exposure to infected blood. EIA infected equines are “reservoirs” and are the only known sources of infection. In the natural environment, blood biting insects such as horseflies and deerflies are the source for the spread of the disease. The disease can also be spread by the reuse of “dirty” (exposed to blood) needles, instruments that are exposed to blood, and even bridle bits.

Horses that are infected and show evidence of the EIA infection have a much higher chance of being the source of infection for healthy horses due to their “virus overload”. However, it is possible for horses to be infected and not show any clinical signs. It is extremely important to remember with these infected animals that although they may not appear sick, they are still a source for infection.

Horsefly vector that is one of the modes of transmission for EIA.



Clinical Signs

The time from when a horse is infected with EIA to it showing clinical signs can be as little as 2 weeks, but may be up to several months. In rare cases, infected horses can survive for many years without showing clinical signs.

Initial infection can be characterized by high fever >104° F, extreme depression, depressed appetite, and a rapid loss in body condition. In cases that the infection does not cause death initially, the horse may have episodes or intervals of sickness divided by periods of normal activity.

Table 1. A list of clinical signs that can be observed with an EIA infection.

- Fever with significant fluctuations and intervals of fever, can be greater than 105 ° F
- Depression
- Decreased appetite
- Fatigue or reduced stamina
- Rapid breathing
- Rapid loss in body condition, weight loss
- Changes in eyes, discharge or sunken in, yellow tint to whites of eyes
- Weakness, difficulty walking
- Pale or yellowish mucous membranes
- Swelling of lower jaw or legs
- Irregular heartbeat or weak pulse
- Colic
- Abortion in mares

Diagnosis and Management

The history and clinical signs are most often the first clue to the diagnosis of an EIA infection. Currently no approved vaccine exists for EIA, and there is no treatment other than supportive/symptomatic once an animal is infected with EIA virus.

If a horse of unknown history presents with suspicious clinical signs, it should be evaluated by a veterinarian and tested immediately. The veterinarian would submit a blood sample to be evaluated by a laboratory test which would determine if the patient is infected with EIA virus. If a positive sample is detected, a second blood draw and sample are resubmitted to confirm the test results.

In the event of a positive EIA horse (or “reactor”) in South Carolina, there are three options. The horse is either: 1) euthanized; 2) identified and sold to slaughter or research; or 3) permanently isolated not less than two hundred yards from other unaffected horses. If the owner of the EIA-positive equine chooses to have the animal

“permanently isolated not less than two hundred yards from other unaffected horses,” the reactor must be permanently identified with a visible freeze brand (or other visible brand at the discretion of the administering accredited veterinarian) on the hip or neck of the reactor horse in a manner as specified by regulation.

In the event of more than one horse is on the property of a suspect and/or positive EIA horse, the premise shall be quarantined. In addition, all horses on the property shall be appropriately identified and individually tested for EIA.

SC EIA Requirements

All horses imported (crossing state lines) into South Carolina or moving within the state to an assembly must have a negative EIA (Coggins) test within the previous 12 months. Foals that are less than six months of age, accompanied by their dam or alone are recommended to have a negative Coggins report within the previous 6 months but are not required by SC Law.

Horses congregating at public or private assemblies must have a proof of a negative Coggins test within the previous 12 months. An “assembly” is defined as the gathering of two or more horses coming together with more than one owner. Assemblies include boarding stables and pastures, sales, shows, exhibitions, fairs, rodeos, racetracks, trail rides, and any other public or private gathering of equines.

In SC, horses that undergo a change of ownership are recommended to have a report of a negative EIA test within the previous 12 months. Purchasing a horse at an auction or sale that has multiple horses that are owned by different individuals at the sale, must have a negative current Coggins report, because the sale is a public or private assembly.

Summary

It has been through the hard work and dedication of the horse industry and government that EIA cases in the U. S. have been reduced. However, there is still a small percentage of positive cases every year.

To prevent the resurgence of EIA cases we must continue to test horses for Equine Infectious Anemia. It is the responsibility of the horse owner to ensure that EIA testing requirements are met. With no available vaccines for EIA, the only protection against EIA is preventing the exposure of non-tested and known infected horses. Please have your horses tested annually and do not allow them to co-mingle with horses of unknown status.