



# The Coggins Test and Equine Infectious Anemia

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Most people that have horses have heard about the Coggins test but don't know much more than the test is required by state law. In fact, many people think the Coggins test identifies Coggins disease; however, the disease is actually named Equine Infectious Anemia (EIA). Equine Infectious Anemia (aka swamp fever) is a disease with no cure and no vaccine. It is a viral disease that attacks the horse's immune system and is very closely related to the HIV virus in humans.

Equine Infectious Anemia is a blood-borne infection that is spread through blood-feeding insects, reusing hypodermic needles and syringes, etc. Most often, the EIA virus is transmitted between horses in close proximity by biting insects, such as mosquitoes, horse flies, stable flies and deer flies. Illinois falls within the "Hot Zone of EIA" on the national map (A complete map of the Hot Zone can be found at [https://www.aphis.usda.gov/vs/nahss/equine/eia/eia\\_info\\_sheet.pdf](https://www.aphis.usda.gov/vs/nahss/equine/eia/eia_info_sheet.pdf)); therefore, it is important for horse owners to have a basic understanding of EIA, the importance of a Coggins test, and the related Illinois state regulation.

When horses are exposed to the EIA virus they may develop severe, acute signs of the disease and die within 2 to 3 weeks. Fortunately, this acute response is rarely seen in natural situations where blood-feeding insects transmit low doses of the virus. Nonetheless, this form of the disease is the most damaging and the most difficult to diagnose because the signs appear rapidly and often only manifest as a fever. In the early stage of the infection, the horse usually tests negative for antibodies to EIA, requiring that blood samples be collected at a subsequent date (generally 10 to 14 days later) to confirm or exclude EIA as a diagnosis. During this period, it is prudent to quarantine the horse (or the farm) if EIA is strongly suspected.

The clinical signs of this acute form of EIA are rather vague; and in mild cases, the initial fever may be short lived (often less than 24 hours). As a result, horse owners and veterinarians may not



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observe this initial response when a horse is infected with EIA virus. These infected horses often recover and continue to move freely in the population. Sadly, the first indication that a horse had been exposed to and infected with EIA virus may well be a positive result on a routine annual test.

If the horse survives this first acute bout it will progress to either a chronic case or become an “inapparent carrier” of the virus. The chronically infected horse develops a recurring clinical form of the disease which includes fever, depression, weight loss, edema of the legs, under the chest and other underbody surfaces, and anemia. The animal may also have an irregular heartbeat and a jugular pulse may be seen. When these symptoms are evident the horse will test positive for antibodies to the EIA virus. The horse with chronic EIA is the classic “swamper” who has lost condition, is lethargic and anorexic.

By far the majority of horses found to be positive on serologic tests to EIA are “inapparent carriers” that show no overt clinical abnormalities as a result of infection. These horses are the most dangerous to other horses as they show no symptoms of being sick and move through the horse population freely. However, their serum contains antibodies against the EIA virus, their blood consistently contains EIA virus, although in concentrations dramatically lower than in horses with active clinical signs of disease, and they survive as reservoirs of the infection for extended periods.

Controlling, preventing, and minimizing the spread of EIA involve identifying infected horses and eliminating their contact with uninfected horses. Identification is accomplished with the Coggins test which is extremely reliable. This test identifies the presence of antibodies in the horse’s blood which fight the EIA virus. If the antibodies are present it means the horse is EIA positive, is a carrier of the EIA virus, and is able to infect nearby stable mates or any other horses it comes into close proximity to.

Illinois state law requires a horse over the age of 12 months to have a negative Coggins within the past year to be able to go to an advertised event including sales, shows, parades, rodeos, public



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auction or to travel across state lines. Plan accordingly prior to a scheduled equine event as you need to allot time for a licensed veterinarian to come to your farm and take a blood sample from your horse, plus the time it takes the Illinois Department of Agriculture to process the blood and run the test which, on average, is about two weeks. In order to be compliance with the Illinois EIA law you must have the official paperwork in hand at the event as proof of negative Coggins. Having the blood sample submitted to the state is not sufficient.

In the case that the Coggins comes back positive on a horse, if the owner does not wish to euthanize the horse, state law requires that the horse be quarantined until death and permanently identified with a freeze brand indicating it is EIA positive. The quarantine requirements stipulate that the positive horse be kept in an insect proof stall at all times and cannot be removed from the enclosure except to be euthanized or shipped to slaughter. For more information visit

<https://www2.illinois.gov/sites/agr/Animals/AnimalHealth/AnimalDiseases/Pages/eia.aspx>