

Equine Infectious Anemia: Frequently Asked Questions aka "Swamp Fever"

July 2015

What is Equine Infectious Anemia (EIA)?

Equine infectious anemia is a viral disease of all equidae (horses, donkeys, mules and zebras). The virus belongs in a family that includes the human immunodeficiency virus (HIV), and other animal immunodeficiency viruses.

Is EIA a regulated disease?

In the United States, EIA is a regulated disease. By law, laboratories must report positive EIA test results to state and federal animal health officials.

Are all equids susceptible to EIA?

All horses and other equids are susceptible to infection with this virus.

Can EIA virus infect humans?

EIA does not infect humans.

What are the signs of infection with EIA in a horse?

Clinical signs can vary widely. Most infected horses are asymptomatic, showing no signs of disease. Acutely infected animals may develop a fever, go off feed or die suddenly. A chronically infected equine may develop non-specific signs such as weight loss, weakness, anemia and swelling of the legs, chest and abdomen.

Where does this virus reside in the horse?

The virus persists in the horse's white blood cells, and in the plasma (non-cellular portion of the blood) during febrile episodes. The amount of virus in the infected animal's blood varies. Stress due to racing, heavy exercise, transport or illness due to other causes may elevate the amount of virus in the blood.

How does the EIA virus spread naturally between horses?

Natural transmission occurs when a deer or horse fly bites and consumes a blood meal from an infected horse and transfers the virus via its mouthparts to another horse. Additionally, pregnant mares may pass the virus to the foal in utero or through the milk. Stallions can infect mares at breeding.

How can people spread EIA virus between horses?

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.

Can this virus survive in the environment?

The virus does not persist in soil or water. The virus is viable (infective) for up to 96 hours on contaminated needles. The virus stays viable in the mouthparts of a biting fly for less than four (4) hours. Thus, horses in close contact with an infected horse are at risk of infection via fly bite.

Is there a treatment for infection with EIA virus?

There is no known treatment for EIA. Infected horses become **lifelong carriers** and pose a risk of infection to other horses.

Is there a vaccine to prevent infection with EIA virus?

There is no approved vaccine in the United States.

How do we diagnose EIA infection in a horse?

A serologic (blood) test confirms the diagnosis of EIA. The two most commonly used serologic tests are the agar gel immunodiffusion (AGID), commonly known as the "Coggins" Test, and the enzyme-linked immunosorbent assay (ELISA). A positive test indicates the presence of EIA specific antibodies. The ELISA test can detect antibodies earlier than the Coggins test. As the ELISA test may produce false positive results, the confirmatory test for EIA is the AGID test.

What disinfectants are effective against the EIA virus?

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.

Can needles and syringes be reused?

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 of needles, syringes and/or surgical equipment.

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What happens if my horse is EIA positive?

Positive EIA tests are reported by the laboratory to the local state or federal animal health official. In California, a California Department of Food and Agriculture (CDFA) Animal Health Branch (AHB) veterinarian will locate the positive reactor animal, obtain a blood sample for confirmatory testing and quarantine the horse.

What are the options for an EIA positive equine?

The management options for an EIA positive horse are:

- Euthanasia
- Lifetime quarantine with permanent isolation at a minimum of 200 yards from all other horses. No movement is permitted, unless under permit to a research facility. Positive horses must be permanently identified by microchip.

What happens to the other horses in my barn if I have an EIA positive horse?

A regulatory veterinarian will perform an investigation to identify exposed horses which includes:

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

All horses classified as exposed are placed under quarantine and tested for EIA. To identify recently infected horses incubating disease, all exposed horses are retested 45- 60 days after the removal of the EIA positive horse.

Exposed horses are placed under quarantine until the retest confirms negative EIA status of the horse.

What is the EIA situation in California horses?

Typically, California detects one to two EIA-positive horses per year. However, since June of 2014, twenty six (26) EIA-positive horses have been identified. All have been racing Quarter horses. Eight (8) of these horses were also found to be positive for infection with *Theileria equi*, the causative agent of equine piroplasmosis. Investigation into the causes of this outbreak are ongoing.

How can I protect my horses from contracting the EIA virus?

- **Use a sterile needle and syringe for all injections or treatments.**
- **Disinfect** dental, tattoo, surgical equipment, lip chains and bits thoroughly between horses. Remove all debris and blood with soap and water before disinfection.
- **Only administer commercially licensed blood or blood products.**
- **Keep open wounds clean and covered if possible.** Avoid sharing of equipment between horses when draining, cleaning or dressing wounds.
- **Use a sterile needle each time when puncturing a multi-dose medication bottle.** Consult a veterinarian to demonstrate how to use sterile technique when drawing up medications.
- **Require proof of a recent negative Coggins test at time of purchase or for new horses entering the premises.** Require an EIA test for horses which have spent time at a racetrack or ranch where EIA-positive horses have been identified.
- **Only participate in races or events that require evidence of a negative Coggins test** for every horse entering the racetrack to prevent disease entry.
- **Separate** horses with fevers, reduced feed intake and/or lethargy from your other horses and contact your veterinarian.
- **Practice good fly control** by regular mucking of stalls, proper disposal of manure away from horse stabling areas and use of fly sprays or natural predators to minimize fly presence.

Where can I get more information about EIA?

Additional information may be obtained by accessing our website:

http://cdfa.ca.gov/ahfss/Animal_Health/Horses_Equine_Health.html

Animal Health and Food Safety Services Animal Health Branch

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|------------------|----------------|
| Headquarters | (916) 900-5002 |
| Redding District | (530) 225-2140 |
| Modesto District | (209) 491-9350 |
| Tulare District | (559) 685-3500 |
| Ontario District | (909) 947-4462 |

http://www.cdfa.ca.gov/ahfss/animal_health/

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