



University of Missouri

College of Veterinary Medicine

[Applying](#) | [Calendars](#) | [Contact](#) | [News & Events](#)

Google™ Custom Search

**INFORMATION FOR:** [Admissions Guide](#) [Current Students](#) [Alumni & Friends](#) [Faculty & Staff](#) [Veterinarians](#)[About the College](#)[Departments](#)[Teaching & Research](#)[Giving to Vet Med](#)[Teaching Hospital](#)[Veterinary Medical
Diagnostic
Laboratory \(VMDL\)](#)[CVM Employment](#)[Zalk Veterinary
Medical Library](#)[CVM Course Materials](#)[MyZou](#)[Home](#)

NEWS & EVENTS

Insects Can Spread EIA from Asymptomatic Horses

By Philip Johnson, BVSc., MS, MRCVS

A number of horses in the United States have recently tested positive for the virus that causes equine infectious anemia. Equine infectious anemia (EIA) is an infectious disease of horses, mules, donkeys and zebras caused by the equine infectious anemia virus (EIAV).

Also known as "Swamp Fever," EIA was one of the first diseases to be recognized as caused by a virus in 1904. The EIAV is endemic throughout the Americas, parts of Europe, the Middle East, Far East, South Africa and Russia. This equine-specific virus is closely related to the HIV-1 virus that causes AIDS in people; both viruses are classified as retroviruses. However, unlike HIV-1 in people, the EIAV does not cause immunodeficiency in infected horses. The disease is transmitted to horses by biting insects that transfer the virus from infected horses to non-infected horses. Biting insects that are important for EIA transmission include horseflies, deerflies and stable flies. This virus can also be transmitted when hypodermic needles are used between different horses or when blood products that were produced in infected horses are administered to equine patients. It should be noted that most modern commercial plasma producers will use donor horses that have been rigorously tested and shown to be negative for EIA.

The clinical outcome of EIAV infection can be quite variable between different horses depending on the general susceptibility of the patient to infectious disease, the number of viruses that were introduced into the patient's blood, and the pathogenicity (virulence) of the viral strain involved. In general, the clinical pattern of an EIAV infection has been categorized into three distinct stages. First, there is a transient acute phase immediately following infection during which there is fever, lethargy and lack of appetite for a few days. The acute phase is followed by a chronic phase that lasts approximately 12 months during which the patient suffers from recurrent and intermittent bouts of malaise, fever, anemia, soft tissue swellings (edema), loss of condition, jaundice, reduced neurological functions and cachexia (wasting). Some horses die during the chronic phase. If the patient survives the chronic phase, it may seem to recover and return to a normal healthy-appearing state. This third recovery phase is known as the inapparent carrier stage during which the patient does not exhibit any clinical symptoms — this final stage may persist for the life of the horse.

As with many infectious diseases, some patients follow a clinical course that does not fall into



these three stages of classification and may have constant fever with unprovoked bleeding problems and die. Other horses develop signs of organ disease as a result of EIA, including problems with the lungs, liver, spleen, kidneys and even the spinal cord.

In light of the fact that many infected horses do not exhibit any clinical signs of infection, the true extent of this infectious disease is often underestimated. The diagnosis of EIA is based on the demonstration of circulating antibodies against the virus in the patient's blood. There are two blood tests for this purpose, and the best known of these is the Coggins test. It should be noted that, following infection by the EIAV, it might take 45 to 60 days for the patient to develop antibodies, so veterinarians may perform more than one test when concerned with diagnosis of EIA. Unfortunately, there does not presently exist a curative treatment or an effective vaccine for this disease.

In North America, horses are routinely tested for EIA, and positive horses are subjected to either euthanasia or lifelong segregation. It is important to re-emphasize that a majority of horses that test positive for EIA are not exhibiting any signs of disease. These asymptomatic horses still represent a source of the virus and risk of infection to other horses. Both the horse industry and the veterinary profession agree that the risk from asymptomatic carriers of EIA is sufficiently severe to warrant their segregation or euthanasia to protect healthy horses. Although there does not presently exist a federally mandated EIA eradication program, many states do require recent certification of negative EIA status, based on the Coggins test. Moreover, negative EIA status is required by many horse boarding farms, horse shows and events, stud farms, and for purposes of international export. Although responsible horse owners typically request an annual Coggins test, which is a simple blood test, greater testing frequency should be considered for horses that travel extensively.

Posted July 10, 2015

[Return to News and Events home](#)

College of Veterinary Medicine
W-203 Veterinary Medicine Building
Columbia, MO 65211
Phone: (573) 882-3554
E-mail: cvmwebmaster@missouri.edu



©2005 Curators of the University of Missouri
[DMCA](#) and other [copyright information](#).
an [equal opportunity/ADA institution](#)

Last Update: July 10, 2015