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Equine Viral Arteritis

Last Modified:

Equine viral arteritis (EVA) is a contagious disease in horses caused by the equine arteritis virus. It is found in horses around the world. This disease is most concerning for breeders, racehorse owners, and show horse owners because it can severely impact breeding and the international movement of horses and semen.

While some horses experience no clinical signs or respiratory disease, the disease can cause pregnant mares to abort. Infected stallions can become carriers and shed

the virus in semen. Mares should be vaccinated prior to breeding to a carrier stallion. Certain States may require approval of the State animal health official before a veterinarian can administer the vaccine. Horses must be isolated for a brief period after receiving the vaccine.

What To Look For

Although many horses will have few or no clinical signs, some horses may experience severe illness. Look for:

- Fever
- Depression
- Lack of appetite
- Respiratory disease, such as nasal discharge or coughing
- Swelling of hind limbs or along the underside of the abdomen (particularly around the genitals)
- Hives (localized or generalized)
- Abortions or stillbirths in pregnant mares
- Decreased fertility in stallions

How To Prevent This Disease

EVA spreads through respiratory secretions (breathing, sneezing) in close contact settings, such as barns. Infected stallions shed the virus in semen and can transmit it to mares during breeding, including via artificial insemination. Horses can also pick up the virus from contaminated objects such as buckets, tack, brushes, shoes, and clothing.

To prevent or reduce the spread of this virus:

- Isolate infected horses and carrier stallions.
- Isolate all new horses and horses returning from other farms, sales, events, or racetracks for 3 to 4 weeks.
- Use good hygiene and biosecurity during the breeding season.
- If possible, segregate pregnant mares from other horses on the farm and maintain mares in small groups until they have foaled.

- Blood-test all new breeding stallions for the presence of EAV antibodies before the start of each breeding season. Have the semen of any antibody-positive, nonvaccinated stallion laboratory-tested to identify any carrier animals.
- Vaccinate all noncarrier breeding stallions at least 4 weeks prior to the start of each breeding season.
- Vaccinate mares at least 3 weeks before breeding with a known infected carrier stallion or with semen from a known carrier.
- Follow all vaccine label instructions when vaccinating stallions and mares, including the recommended isolation period after administering the vaccine to prevent transmission of the vaccine strain of the virus to other horses.
- Isolate mares vaccinated for the first time against EVA from all but known EAV antibody-positive animals for 3 weeks after they have been bred to a carrier stallion because they can spread the virus to other horses.
- Follow strict hygienic practices when breeding or collecting semen from carrier stallions to avoid inadvertently transferring the virus to other animals through indirect contact with virus-contaminated objects.
- Consider vaccinating colts (immature male foals) between 6 and 12 months, especially in breeds where EAV infection is more prevalent such as Standardbreds and various Warmblood breeds. This practice will reduce their risk of becoming carriers later.

How It Is Treated

Treatment typically focuses on rest, supportive care, and measures to reduce swelling and inflammation.

Report Signs of Animal Disease

Producers or owners who suspect an animal disease should contact their veterinarian to evaluate the animal or herd. Find an accredited veterinarian.

Animal health professionals (veterinarians; diagnostic laboratories; public health, zoo, or wildlife personnel; and others) report diagnosed or suspected cases of nationally listed reportable animal diseases to APHIS Area Veterinarians in Charge and to the State animal health official as applicable under State reporting regulations.

Controlling Equine Viral Arteritis

Economic Significance of EVA

EVA can have economic consequences for both the breeding and performance sectors of the horse industry, including:

- Losses due to abortion or disease and death in young foals
- Decreased commercial value of stallions that become persistently infected with the virus
- Reduced demand to breed to carrier stallions because of the added expense and inconvenience involved in vaccinating and isolating mares before and after breeding
- Denied export markets for carrier stallions or virus-positive semen
- Reduced export markets for fillies, mares, colts, and geldings, and noncarrier stallions that test positive for virus antibodies

An EVA outbreak at a racetrack, equestrian event, or horse show can:

- Disrupt training schedules
- Reduce race or competition entries
- Cause the cancellation of races or events

Diagnosing EVA

It's impossible to diagnose EVA based solely on visible clinical signs because they can look like those of other diseases. The only way to accurately diagnose EVA is through laboratory testing of appropriate specimens, including:

- Certain tissues and fluids, such as nasal secretions
- Blood
- Semen
- Placental and fetal fluids and tissues

Contact your veterinarian to collect appropriate samples for testing a horse with suspected clinical signs of EVA or potential exposure to the virus.

To determine whether a stallion is a virus carrier, your veterinarian will first take a blood sample for laboratory testing. Stallions that test positive for virus antibodies

without any history of vaccination against EVA should be considered potential virus carriers. The semen should then be screened for the virus to determine whether the stallion is a carrier.

Standards for Detecting, Controlling, and Preventing EVA

APHIS, with input from the United States Animal Health Association, the American Horse Council, and the American Association of Equine Practitioners, published Equine Viral Arteritis: Uniform Methods and Rules (127.7 KB). This document contains minimum standards for detecting, controlling, and preventing EVA as well as minimum EVA requirements for moving horses within the United States.

Recommended Sources for More Information on EVA

- Factsheet: Equine Viral Arteritis (The Center for Food Safety and Public Health)
- Overview of Equine Viral Arteritis (Merck Manual)
- Article: Equine Viral Arteritis (Equine-Reproduction.com)
- AAEP Risk-Based Vaccination Guidelines: EVA (American Association of Equine Practitioners)
- AAEP Biosecurity Guidelines for Venereal Diseases (American Association of Equine Practitioners)

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