

Equine Viral Arteritis (EVA)

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Equine viral arteritis, also commonly referred to as "EVA" in the horse world, is an infectious viral disease unique to the equine species. EVA can cause a variety of symptoms in horses, including abortions (at any point in gestation), respiratory infections, skin rashes, swollen limbs and swollen genitals, and conjunctivitis. The virus has been found in all breeds of horses and in multiple countries throughout the world with Standardbred horses showing the highest rate of infection.

The disease is spread through horse populations both through the reproductive system and through infectious respiratory secretions. Reproductive transmission from carrier stallions is particularly significant on breeding farms and can occur from natural breeding or artificial insemination. Stallions appear to be the only carriers of the virus because the virus is able to persist in the glands of the stallion's reproductive system. Stallions are able to spread the virus for years and remain a significant source of infection. Mares, geldings, or sexually immature colts do not become carriers for the disease because their immune system efficiently clears the viral infection from their system.

Typically, an infection with the virus will not kill a healthy, adult horse. It can, however, cause multiple mares on a farm to abort and wipe out entire breeding seasons. In the US, horses that test positive for antibodies (proteins in the blood indicating a past or present infection) and semen from EVA-infected horses can be barred from entering foreign countries.

Horse owners should be concerned when a respiratory infection coincides with abortion in a mare. Clinical signs and symptoms of EVA very closely resemble other respiratory diseases, so only diagnostic tests can confirm the disease. The most common method for diagnosing the disease is to look for antibodies in the horse's blood stream. The presence of antibodies does not indicate a currently active infection but does mean that exposure to the virus has occurred in the past. A second blood sample with elevated antibody levels compared to the first sample indicates a current infection. Approximately 30% of stallions that test positive are carriers.

EVA-negative mares should be bred to EVA-negative stallions. If a stallion tests positive for antibodies to the virus, and there is not proof of vaccination prior to testing, the stallion must be tested for the

carrier state by performing virus isolation on semen from two separate samples taken at different times.

A safe and effective vaccine is available to help prevent infection and spread of the disease. Properly vaccinated stallions do not become carriers of the disease, so all colts that are going to become breeding stallion should be vaccinated before 270 days of age. The vaccine is not approved for use in pregnant mares.

Carrier stallions should only be bred to EVA-positive mares (those mares have been exposed to the virus and mounted a proper immune response) or properly vaccinated mares (protected from the virus). When breeding a carrier stallion to an EVA-negative vaccinated mare, both horses should be isolated for at least 24-hours after breeding to prevent mechanical spread of the virus from voided semen. If this is the first time the mare has been bred to an EVA-positive stallion, she should be isolated from other horses for at least 21 days due to possible virus shedding.

If you have any questions regarding the use of the vaccine on your breeding farm, contact your local veterinarian. Properly vaccinating and protecting breeding mares and stallions may help to eliminate the population of carrier stallions in a generation or two.

Photo: Jeff & Diane Buffo - Swisher, IA

