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## EQUINE VIRAL ARTERITIS (EVA)

EVA is a highly contagious disease that can cause a 'flu-like' illness of varying severity and occasionally abortion or even death in horses. It is found in many different parts of the world and is endemic in many continental European horse populations.

### ***What are the symptoms of EVA?***

The signs of EVA are very variable. Common symptoms include fever, depression, loss of appetite, swelling and stiffness of the limbs, inflammation of the conjunctivae ('pink-eye') and the nostril lining. Raised patches (plaques) may appear over the face and body and, in stallions, the scrotum may swell. Abortion may occur in mares during mid to late pregnancy. In outbreaks of EVA in pregnant mares, up to 50% of mares may abort.

### ***How is EVA spread?***

The virus is spread by inhalation of infected respiratory secretion and by venereal transmission during mating. Most stallions spread the infection without showing signs of disease themselves. These are called 'carrier' stallions and are sometimes not detected until mares have become ill. Infected horses can spread the infection in aborted tissues and fluid discharges from nose, eyes, etc. Symptoms are usually seen 3 to 14 days after infection but in many cases may be so slight that they are not detected. Horses who recover from infection are immune to re-infection for life. Mares who have fully recovered from infection are of no risk to other horses but up to one third of infected stallions may become permanent carriers. The virus can live in their accessory sex glands and is shed in their semen to mares during natural mating or during artificial insemination. The virus is not killed by antibiotics that are used in semen extenders and it survives the chilling and freezing/thawing process, so artificial insemination is a very important means of transmission, world-wide.



Depressed horses suffering from  
EVA

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## **Can EVA be treated?**

There is no specific treatment for EVA infection. Most cases require only isolation from other susceptible horses and they recover as from a 'cold'. Where horses are clinically ill, supportive treatment such as fluids, antibiotics and anti-inflammatory drugs can improve the horse's condition, treat secondary bacterial infections and speed recovery. At this time there is no treatment for aborting mares or for carrier stallions.

## **How can EVA be prevented or controlled?**

A blood test will tell whether a horse has been exposed to EVA virus. It looks for specific antibodies and a positive test result means that the horse has either been vaccinated for EVA or previously infected. A second test taken 10 to 14 days later will tell if the infection is active. A significant rise in antibody concentration between these two tests is called seroconversion and means that the horse is actively producing antibodies, the infection has been recent and the horse may be a risk for transmission to others.

If you are importing a stallion or entire male performance horse, you should ask that he be blood tested for EVA prior to importation. On arrival the horse should be kept in isolation from other horses and blood tested again 14 days later. If the blood test is positive this must be reported to DEFRA and it will be necessary to test semen for EVA virus under DEFRA's direction and supervision. This can be done by sending a semen sample to a government laboratory (DEFRA approved) and by test mating with mares not previously infected. A stallion that is shedding EVA in his semen should not be used for natural mating and only semen from proven EVA negative stallions should be used for AI. A positive EVA titre in an unvaccinated stallion must be notified to DEFRA under the terms of the EVA Order 1995, and DEFRA will investigate and impose restriction orders, if appropriate.

If you are sending a mare to a foreign or recently imported stallion, you should ask if he has been tested for EVA and/or vaccinated after having originally been tested negative for EVA. The stallion owner should ask you to have your mare tested negative for EVA before she is covered or she should be proven to have a stable or declining EVA titer by blood test.



**Conjunctivitis (infection of eyelids) in horse with EVA**



**Veterinarian taking a blood sample**

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Many stallions and teasers in the UK are now vaccinated for EVA to reduce the risk of disease. The vaccine is safe for use but its full efficacy for stallions has not yet been proven under conditions of natural infection. It is now available in UK under a full license. There is every reason to believe that the vaccine will give a useful level of immunity and therefore it is recommended that stallions and teasers are immunized to reduce their risk of becoming infected and potential carriers. Stallions and teasers should be blood tested for EVA prior to vaccination so that future positive blood test results can be confirmed to be due to vaccination. He should be vaccinated immediately pending laboratory results or isolated until vaccinated. Blood test results and vaccinations should be entered into stallions' passports.

If you have a sick horse and EVA is suspected, the horse should be isolated from others and no horses should be allowed to enter or leave the premises until a diagnosis is confirmed or ruled out.

If faced with an abortion or signs that might resemble EVA, the affected horse(s) should be isolated. Aborted fetuses should be removed as soon as possible to a laboratory that is experienced in performing equine post mortem examinations, so that EVA and other important contagious causes of abortion can be proven or ruled out. Your veterinarian will arrange this for you.

Infected horses should not be allowed to mix with other horses or be mated for at least three weeks after recovery from EVA infection.

Horses in contact with a confirmed case of EVA should be blood tested on 2 occasions, 2 weeks apart to look for EVA antibodies and evidence of seroconversion.

Prevention is the best form of control. Whenever possible, all horses should be isolated for 3 weeks after arrival on premises so that they can be observed for signs of disease or until the results of tests become available. No EVA positive horse should be mated or allowed to mix with others until it has been determined that they are not infected or (in the case of stallions) acting as a carrier.

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