

Equine Herpes Virus type I (EHV-1)

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EHV-1 may cause abortion, nervous signs and respiratory disease in horses. The clinical signs observed during EHV-1 infections depend to a large degree on which strain of the EHV-1 virus is active and when during a horse's life infection occurs. Infection can occur without significant clinical signs. The virus is highly contagious.

Respiratory disease due to EHV-1 is usually mild and can be encountered independently or with either abortions or neurological disease. EHV-1 is a major cause of equine abortion in Australia, however the neurological form is less common. More detail on clinical signs can be found under [Clinical signs, diagnosis and treatment](#) below.

The horse owner's responsibility

EHV-1 (abortigenic and neurological strains) is a List B notifiable disease in Tasmania. This means that the disease is known to occur here from time to time and there is no contingency plan to eradicate it from the State. However, anyone who suspects that abortions or neurological disease in their horses may be due to EHV-1 must report it to animal health authorities as soon as possible. Your vet may report the event on your behalf. If you know or suspect your horse has been infected with abortigenic or neurological strains of EHV-1 you are also required to inform anyone acquiring that horse from you.

EHV-1 abortion and neurological strains are reportable because some countries that import horses from Australia require Government certification of the horses' own or property of origin's EHV-1 (abortigenic and neurological strains) status.

Clinical signs, diagnosis and treatment

As already mentioned, the clinical signs observed during EHV-1 infections depend to a large degree on which strain of the EHV-1 virus is active and when during a horse's life infection occurs. Infection can occur without significant clinical signs.

EHV-1 abortion typically occurs without any warning; usually in late pregnancy but can be as early as 4 months gestation. The mare rarely shows any signs beforehand. The first, and in most cases the only, sign of EHV-1 is an aborted foetus. As a matter of normal husbandry, mare owners should always have any aborted foetus and its dam examined by their vet without delay as early diagnosis of the cause and subsequent management action may prevent other abortions happening.

Signs of neurological disease due to EHV-1 can range from mild ataxia (ie unsteady walking), a wide-based stance and frequent urination to paralysis requiring euthanasia. While relatively unusual, neurological as well as respiratory signs have been observed during abortion outbreaks in some herds.

Respiratory disease is the usual presentation in newly infected, non-pregnant horses. Respiratory signs vary in their severity. They may include watery nasal discharge, swollen lymph nodes, coughing and loss of appetite and resemble the 'colds' affecting horses due to a range of viruses including other types of equine herpes virus.

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Confirmation of an EHV-1 diagnosis is not always easy because the horse may have been previously infected. While diagnosis requires laboratory testing initial blood tests for EHV-1 often indicate the horse has been exposed to the virus some time in its history but rarely provides a confirmed diagnosis. If samples obtained initially do not provide the answer, follow-up testing may resolve the case or at least eliminate other common causes.

There is no specific treatment for EHV-1 infection but supportive treatment as prescribed by your vet may make your horse more comfortable.

Note that assuming clinical signs in a horse are EHV-1 without veterinary examination of the horse is counter-productive as the disease presentation is not specific to EHV-1. Several exotic and other endemic diseases may present with similar signs. The affected horse (and maybe others on the property) also requires treatment and management appropriate for whatever disease is occurring.

What causes EHV-1

EHV-1 is due to a particular strain of herpes virus. It can be found in (and therefore spread via) aborted fetuses, membranes and fluids, as well as respiratory droplets. Horses typically display clinical disease between 2-10 days after infection. The virus is excreted in respiratory droplets for at least 7-10 days. The disease may take months to spread through a horse herd.

A horse that has had EHV-1 will have a latent (or hidden) infection for the rest of its life. The virus remains dormant until the horse experiences stress that is sufficient to reactivate the virus. As the virus is excreted in low volumes in reactivated cases, they pose a lower but not zero risk to naive horses. Therefore a four week isolation period for known infected horses as well as enhanced biosecurity measures for the property, is used to limit the disease spread.

There are two ways that disease due to EHV-1 can occur on a property:

- a resident animal reactivates a latent infection.
- EHV-1 is introduced with visiting horses or infected fomites (ie horse gear, clothing, bedding etc)

Latent EHV-1 infection is common in Australia's horse population. The EHV-1 risk factor that you can best manage on your property is minimising stress in pregnant mares.

What to do if there is an abortion

If you have breeding mares on your property and there is an abortion, you should take the following action quickly:

- Move the mare that has aborted out of the paddock and to an isolation area, leaving the halter and any other gear with her
- Using gloves, pick up the aborted foetus and place it in a strong plastic bag. Put the bag in the shade or a cold room (but not in a freezer)
- Call your vet and follow his/her instructions for immediate management of the situation

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- Fence off the abortion site and treat the contaminated pasture with disinfectant
- Clean and disinfect hands, boots and anything else that has come into contact with the foetus or the mare
- If other mares have been in contact with the mare that has aborted, keep them in small groups and segregated from other horses until they foal or abort

You should advise the owners of any other horses that have come into contact with yours in the last few days, either directly (horse to horse) or indirectly (ie via people, vehicles or horse gear), so they can take the appropriate action to minimise the risk on their properties.

Formal quarantining of an infected property is not necessary.

Even if your property is affected, there are strategies you can use to minimise disruption to breeding enterprises. Your vet will provide advice for your particular situation.

EHV-1 can survive at the abortion site, in horse hair, horse gear etc for up to 6 weeks if not adequately cleaned and disinfected. Abortion/birth fluids should be thoroughly cleaned away and the area disinfected with a disinfectant containing detergent. Keep other horses away from the abortion site for at least 2 weeks after applying the disinfectant – longer if in doubt about the disinfection process.

After an EHV-1 diagnosis, for instance in an aborted mare, it is recommended that the affected horse be kept isolated for at least 4 weeks. After that, mares can be regarded as dry and bred again. The aborted mare's long term prospects are good – the experience is unlikely to affect future conception and it is rare for such mares to abort again with EHV-1.

Prevention

Some routine biosecurity measures can help minimise the risk of this disease on your property:

- Ensure all neurological and abortion events are investigated by your veterinarian, which may include laboratory testing
- Minimise the risk of stress for pregnant mares (ie overcrowding, poor feed etc) and avoid travel later than 2 months before foaling
- Keep the pregnant mare group separate from other horses
- Keep pregnant mares in small groups of 2-3 to limit the risk should abortion occur
- Keep resident mares separate from visiting mares where possible and attend to residents before visiting mares
- Visiting mares should undergo a quarantine period of 3-4 weeks on arrival
- Keep gear and floats/trucks clean and disinfected between horses and after each journey
- Have isolation facilities on your property
- If you employ staff, ensure they know what to do in the event of an abortion (see above)
- Discuss EHV-1 vaccine with your vet, it may help reduce the risk of abortion in your case
- Keep good records of horse movements, both within your property and on-and-off the property. For further information contact your veterinarian.

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To report signs of EHV-I contact:

Animal Biosecurity & Welfare Branch

GPO Box 44

Hobart TAS 7000

Phone: 03 6165 3777

Email: AnimalDisease.Enquiries@nre.tas.gov.au