

Sensible and simple biosecurity steps for horse owners and competitors attending equine events

Although the UK has seemingly seen more problems with equine herpes virus-1 (EHV-1) infection (including neurological disease in horses in Devon, Somerset, East Anglia and Gloucestershire), EHV-1 is, and always has been, an ever present threat among horses attending and mixing at equine events.

This is because this common virus has the ability to remain in a latent (hidden) form within horses and re-emerge (become active) without warning to cause clinical problems. This is a similar phenomenon seen with herpes simplex virus in humans which periodically re-emerge to cause 'cold sores' in some people. As with herpes simplex virus, the re-emergence of EHV-1 is seemingly variable between individuals and may occur in a variety of stressful situations, including with travelling and mixing of horses.

The following general advice is designed to help horse owners and competitors reduce the risk both to their own horses and importantly to other horses, of acquiring and spreading infections through attending equine events. It should be noted that this advice applies not only to EHV-1 but also to other infections that might be encountered through attending any equine event and should be applied irrespective of whether there is heightened risk of EHV-1 infection in the country at the present time.

Actions to take at home before attending an event

- It is good practice to routinely take the rectal temperature of all horses twice daily and record these in a diary, along with any other abnormal health signs (e.g. coughing, nasal discharge, reduced appetite, swellings etc). It is important that rectal temperatures are taken using appropriate technique, which can be demonstrated on request by attending veterinary surgeons:
 - It should then be obvious when an animal 'spikes' an abnormally increased rectal temperature (usually $\geq 38.5^{\circ}\text{C}/101.3^{\circ}\text{C}$)
 - A horse 'with a temperature' (also referred to as fever or pyrexia) should be promptly isolated away from other animals and a veterinary examination requested
- Veterinary surgeons may not know the precise cause of the fever when they examine the horse but can take samples at that time. These samples can be tested in a laboratory to pinpoint the infectious agent (usually a virus or bacteria) that is responsible:
 - Knowing the infectious agent involved will help the vet to provide the most appropriate advice for treating the horse, controlling the infection and assessing the risk of spread to other horses
- It is an important responsibility not to move horses off premises where infectious disease has been recently diagnosed as it is possible that seemingly healthy animals may be incubating the disease. If these horses are taken to events, they could spread infection to other horses:
 - Even if a specific infection has not been identified, where there is evidence of possible spread through a group of animals, horses from that premises or those that have been recently exposed to other horses with an infection should absolutely not be taken to events.

Actions to be taken whilst attending the event

- Infections such as EHV-1 spread most easily through close direct contact between horses, or through indirect contact arising from sharing of feed/water buckets and tack such as bits/bridles or humans going between horses without applying appropriate hand hygiene measures
- Unlike equine influenza, EHV-1 does not spread readily through the air between horses that are physically separated by more than 5-10m
- With these two considerations in mind, the risk of transmission of EHV-1 whilst at an event can be greatly reduced by horse owners and competitors 'keeping themselves and their horses to themselves' and avoiding direct and indirect contact with others.

Actions to be taken after returning home after the event

- It is good practice to routinely isolate or 'quarantine' horses returning to home premises after attending equine events, where they may have acquired an infection and might act as a source of that infection for resident horses
- Quarantine periods of at least two-three weeks are required for horses returning from equine events in order to allow infections acquired at events to show as clinical disease
- The shorter the quarantine period, and the poorer the biosecurity standards applied, the greater the risk that an infectious horse may be re-introduced and that the infection will transfer to resident horses
- The main features of a 'quarantine' of returning competitors should include:
 - Physical separation from resident animals, ideally at distances of greater than 10-20m in order to reduce possibility of airborne spread of infections such as EHV-1 (although this would probably be insufficient to prevent spread of equine influenza virus). In many cases existing arrangements can be adapted so that part of a premises effectively becomes a quarantine area – e.g. the end of a block of stables with several empty boxes between quarantined and resident horses
 - Use of separate dedicated staff and equipment for quarantined and resident horses to avoid indirect transmission between the groups:
 - If this is not possible, then quarantined horses should always be dealt with after all resident horses to avoid indirect spread from quarantine to resident animals
 - Routine collection and recording of rectal temperatures and clinical signs as outlined above in order to identify signs of infection as early as possible
 - Requests made for veterinary examinations of any horses in quarantine showing clinical signs such as fever, nasal discharge, cough, inco-ordination etc. Ideally laboratory tests should also be undertaken to determine specific infectious causes:
 - Swabs from the nose and throat can be tested for presence of infectious agents using a specialist laboratory method called PCR. Depending when samples are received by specialist laboratories, such as the AHT, results may be available within only a few hours of sample receipt by the laboratory
 - Blood samples taken by veterinary surgeons during the early stages of quarantine or ideally prior to attending the event (first sample), and again near the end of two-three weeks quarantine (second sample) are especially useful for demonstrating significantly rising antibody levels against specific infections. This rise in antibody level indicates an immune response by the horse to an infection acquired around the time of the first sample
 - Event organisers should be notified if an infectious disease is diagnosed in horses returning from an event as this will help heighten awareness and in some circumstances may help prevent further onward transmission from other infected premises.

Actions to be considered by event organisers

- Stabling at events should be cleaned and disinfected between groups of horses, including feed mangers and water drinkers. Fresh and un-used bedding should be provided for new occupants. It is not good practice to have stables occupied by multiple horses without removing bedding and undertaking cleaning and disinfection as the stables can harbour infectious agents and encourage indirect spread of disease from horse to horse
- Communal water troughs should be avoided as these can act as a common source of infection for multiple horses simultaneously following contamination by an infected horse
- Open access between stables that allows direct horse to horse contact should be avoided
- Consider the use of 'health certification' by veterinary surgeons such that horses attending events are 'certified' as coming from premises with either no known recent infectious diseases and/or resident animals without clinical signs that might be due to infectious diseases
- Provision of facilities and personnel to allow simple pre-event entry health inspections to be conducted, with groups of animals (such as those arising from the same home premises and/or those transported together) showing any clinical signs of disease at the pre-event entry inspection being prevented from entering the event. cursory inspection only of animals after entry into event stabling is not ideal and should wherever possible be avoided and replaced with pre-event entry inspection:
 - Alternative arrangements for isolating clinically affected horses or allowing them to immediately return to their home premises, should already be in place before commencing pre-event entry inspections
 - Isolation areas should be appropriately managed with dedicated and experienced staff that are equipped with personal protective equipment (disposable overalls and gloves and waterproof footwear) and cleaning and disinfection materials and clear protocols for their use.

If you are concerned that your horse may have been exposed to EHV-1 or any other infectious disease, please consult your vet for advice.

If your horse is infected or has been exposed, please act responsibly and avoid moving the animal until it has been given the all clear by your vet.