

CODE OF PRACTICE  
FOR EQUINE  
INFECTIOUS  
ANAEMIA

# CODE OF PRACTICE FOR EQUINE INFECTIOUS ANAEMIA

## The Disease

Equine Infectious Anaemia (EIA), sometimes known as Swamp Fever, is caused by the equine infectious anaemia virus (EIAV). The virus occurs worldwide, including in parts of mainland Europe, in Thoroughbred and non-Thoroughbred horse populations.

## Notification Procedures

In the UK, EIA is **notifiable by law** under the Infectious Diseases of Horses Order 1987. Under the Order, anyone who owns, manages, inspects or examines a horse which is affected or is suspected of being affected by the disease must notify the Department for Environment, Food and Rural Affairs (Defra) via the local Field Service office of the Animal & Plant Health Agency (APHA). A list of APHA regional contact telephone numbers appears in Appendix 1 and also on Defra's website at <https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/access-and-opening#field-services>

Under the Order, Defra may declare the premises where disease is suspected to be as an infected place and impose restrictions on horses at those premises. A veterinary enquiry will be carried out under the direction of the local Field Service office of the APHA to determine if EIA is present. The Order also provides Defra with powers to enforce measures for vector control and disinfection.

As there is currently no cure for EIA, any horse testing positive will be subject to compulsory slaughter and disposal under the control of the local Field Service office of the APHA, without compensation. The Equine Infectious Anaemia (Compensation) (England) Order 2006 stipulates compensation to the value of £1 per animal for horses subject to compulsory slaughter for EIA.

## Clinical Signs

The disease may take an acute, chronic or sub-clinical form and clinical signs are extremely variable.

Outward signs of the acute form include fever, depression, increased heart and respiratory rate, haemorrhaging, bloody diarrhoea, loss of co-ordination, poor performance, ataxia, rapid weight loss, skin swelling and jaundice. Acutely infected horses carry high levels of virus in the blood and are potentially infectious to other horses and donkeys.

The chronic form may be characterised by recurring bouts of fever, depression, anaemia, weakness or weight loss, interspersed with periods of normality.

**Any horse displaying severe, unexplained anaemia should be isolated and tested for EIA as soon as possible.**

Sub-clinically infected horses may not show any clinical signs of disease.

## Transmission of Disease

The EIAV is transmitted between horses by transfer of infected blood or blood products. This can occur in the following ways:

- By insect vectors such as biting flies (including horse, deer and stable flies) and (very rarely) mosquitoes.
- By administration of infected blood products (including plasma) and unauthorised blood-based veterinary medicinal products.
- By contaminated veterinary or dental equipment.
- By other equipment that may become contaminated by blood and act as a vector between animals, e.g. twitches and curry combs.
- From mare to foal via the placenta, or, rarely, via virus-contaminated colostrum or milk in newborn foals.

Transmission through semen is uncommon but is a potential risk.

Both clinically and sub-clinically affected horses can be a source of infection for other horses, although animals suffering acute disease or recurring bouts of chronic disease are likely to be the most highly infectious.

## Prevention

There is no vaccine available for EIA. Prevention of EIA is therefore based on the establishment of freedom from infection by blood ("serological") testing.

A blood sample for the EIA test can be collected from the horse at the same time as the blood sample for the EVA test (which should be taken after 1 January and within 28 days before mating).

### **Recommendations for prevention – all horses**

In every year, the safest option is to establish freedom from infection, by means of a blood test, in mares, stallions and teasers before breeding activities commence. This includes all resident horses and horses due to visit the premises, prior to arrival.

Mare owners should check the stallion and/or boarding stud's requirements well in advance of the mare's date of travel. Stallion studs may require pre-mating EIA testing of all visiting mares, whether or not they have recently or ever visited a country where EIA is endemic or has occurred recently. If testing is required, the blood sample should be taken after 1 January and ideally within 28 days of mating.

The same timing and recommendations apply to pre-season testing of stallions (including teasers) in any year.

The relevant breeders' association may have additional testing requirements.

### **Recommendations for prevention – horses intended for travel to countries affected by EIA**

Owners should attempt to ensure, as far as possible, that their horse will not come into direct contact with horses at risk of EIA infection while in a country where EIA is endemic or has occurred recently. This includes horses quarantined for EIA, horses at premises that are restricted or under investigation for EIA and horses that do not have a recent negative EIA blood test result.

### **Recommendations for prevention – horses arriving in or returning to the UK from an affected country**

The level of risk associated with any particular horse will depend on the management of the horse while it was in the affected country. Depending on the particular scenario, the following recommendations apply:

*1. Horses coming from infected premises or premises under quarantine or investigation for EIA, or that have had contact with any horse considered to be a primary contact in an affected country*

**These horses should not be imported and should be prevented from being imported by the affected country's veterinary authorities.**

If, for whatever reason, importation does occur, **in all cases, the safest option is to isolate the horse in a vector-proof stable and to blood test the horse at least 30 days after the last known contact or the date of importation.** The test should be repeated at 60 and 90 days under the direction of the local Field Service office of the APHA.

Horses regarded as primary contacts (those arriving from premises which are infected, quarantined or under investigation for EIA) are at increased risk of disease and should be placed in isolation and **reported immediately to the local Field Service office of the APHA**, who will arrange for a veterinary enquiry to be carried out. The local Field Service office of the APHA will decide on measures to be taken, taking into consideration the risk factors involved. Restrictions may be placed on the premises where the horse is located.

The level of risk for horses regarded as secondary contacts (those which have come into contact with primary contact horse(s)) depends on the degree and nature of the connection with the primary contacts. Each individual case should be considered carefully but all such horses should be closely monitored and, if there is any cause for concern, the horse should be isolated and reported to the local APHA Field Service office.

*2. Other horses arriving from an affected country*

Horses arriving or returning from an affected country that have not visited infected premises or premises under quarantine or investigation, or come into contact with infected horses or primary contacts, have a low risk of infection. The health of the horse should be monitored and veterinary advice sought if there is any cause for concern.

## Diagnosis

Due to the variability and possible absence of outward signs of EIA, clinical diagnosis is not always possible. Laboratory diagnosis, through blood testing, is essential.

The laboratory tests the blood sample for the presence of antibodies against EIAV proteins. Detectable antibodies are usually present in the blood 7-14 days after infection and remain present for the rest of the horse's life. Diagnosis should be by means of the Coggins test (also known as the Agar Gel Immunodiffusion test, AGID). The Coggins test is currently the only test recognised officially for the purpose of international movement of horses.

An ELISA test for EIA has recently been developed. As this test can provide results more quickly and economically than the Coggins test, it is widely used for routine screening in populations where EIA is not suspected, e.g. pre-breeding, pre-sales and pre-sporting events. Greater sensitivity means that the ELISA test can produce occasional false positive results and positive results must therefore be clarified by the Coggins test. The Coggins test should always be used to test horses with clinical signs, to test horses that have been in contact with others who have or are at risk of having EIA and for official export certification. In such cases, samples for EIA (Coggins) blood testing must be sent to the APHA Weybridge (tel: 01932 357335).

## Control of Infection

Control of EIA is primarily by preventing transmission of infection to other horses through insect vector control, avoiding high risk procedures and detection of infected animals and their prompt destruction.

If infection is suspected, or a horse is suspected of having been in-contact with an infected horse:

- Stop all movement of horses on and off the premises.
- Seek veterinary advice.
- Isolate the horse (ideally in a vector-proof stable) and notify the local APHA Field Service office immediately. Isolate any other horses with which the horse has had contact ("in-contact" horses).
- Any directions given by the local APHA Field Service office must be followed, including implementation of vector control.
- Treat the horse(s) as advised by the local APHA Field Service office and the attending veterinary surgeon (see treatment advice below).
- Group all other horses on the premises away from in-contact horses until freedom from infection is confirmed.
- Any non-urgent actions that could pose a risk of transmission of infection between horses on the premises (such as non-essential veterinary treatment or non-essential contact with staff) should be halted. For



essential treatment, the principle of one syringe and one needle for each horse should be strictly followed.

- Veterinary procedures represent a particular risk. Veterinary equipment must therefore be either destroyed after use or appropriately sterilised.
- In addition to the local Field Service office of the APHA, inform:
  - Owners (or persons authorised to act on their behalf) of horses at, or due to arrive at, the premises;
  - Owners (or persons authorised to act on their behalf) of horses which have recently left the premises;
  - The national breeders' association.
- Stables, equipment and vehicles used for horse transport must be cleaned and disinfected.
- Good hygiene must be exercised, including the use of different staff and equipment for each group of horses, where possible. If this is not possible, staff who have handled infected or in-contact horses must disinfect their hands and change clothes before handling other horses. If separate equipment cannot be used for different groups of horses, it must be sterilised or appropriately disinfected before each use.
- The virus can survive in blood, faeces and tissue so all such material must be removed and destroyed promptly and surfaces disinfected.

Horses that have come into contact with an infected horse or a horse which is suspected of being infected must be quarantined for a minimum of 90 days post-exposure. Blood testing must be repeated as directed by the local Field Service office of the APHA until freedom from disease is confirmed.

Any horse testing positive for EIA will be subject to compulsory slaughter and disposal under the Infectious Diseases of Horses Order 1987.

## Treatment

There is currently no effective treatment for EIA.

Any treatment to alleviate the signs of the disease and otherwise support the horse will be determined by the attending veterinary surgeon, until such time as a positive diagnosis is confirmed by Coggins testing and compulsory slaughter is carried out.

## Confirmation of Freedom from Disease

Restrictions on the affected premises and/or the horses in it may only be lifted, and any breeding activities resumed, after authorisation by the local Field Service office of the APHA and approval by the attending veterinary surgeon, who must be satisfied that all in-contact horses have been investigated and found to be negative for EIAV.

Note: If statutory restrictions have been imposed, the requirements of the supervising Defra officials must be met in order that the restrictions can be lifted.

## Export Certification

For official export certification purposes, samples for EIA (Coggins) blood testing must be sent to the APHA Weybridge (tel: 01932 357335).

