



Code of Practice
for
Infectious Disease Control
in
Thoroughbred Racehorses in Training.

Version 1 | March 2023

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Introduction

Purpose of this Code of Practice

1) To promote practices which reduce the risk of infectious disease outbreak and subsequent spread amongst the Irish Thoroughbred horse population in order to protect the racing industry and the horses within it at individual and herd level.

Equine infectious diseases are a risk to the health and welfare of individual Thoroughbred horses and the national herd and can cause significant disruption to the Racing industry by impacting days lost from training and racing, and horse movement if restrictions are required.

The risk is always present and countering it requires constant vigilance and collaboration between licensed trainers, their staff, veterinary surgeons, regulatory bodies including the IHRB, diagnostic laboratories, disease surveillance and reporting systems such as RESPE, and the Department of Agriculture, Food, and the Marine.

2) To provide a reference Code of Practice for Thoroughbreds in racing to assist with high health status assurance and consequent movement between EU members states.

This Code details the background to and specific requirements for a premises to be designated an Authorised Derogation Establishment (ADE) for registered Horse movement between Ireland and a member state without health certification, on the basis that these horses are of a demonstrably high health status. Premises granted ADE status operate under the authority of the IHRB, which is in turn delegated this authority by the Department of Agriculture, Food, and the Marine.

Horses which do not meet the requirements as stipulated within the conditions document are subject to the standard animal health certificate and movement requirements of Horses in Regulation 2020/688 when travelling outside of Ireland.

Limitations to this Code of Practice

This Code of Practice is not intended to cover all aspects of the management of a licensed premises for training racehorses. Nor does it purport to cover in detail all infectious diseases that currently pose or may prove to pose a threat to the equine population in Ireland; this list is likely to expand climate change affects vector transmission. The Code contains broad guidelines, which if followed, will minimise the risk of infectious disease spread between horses within a premises or to horses on other premises and/ or at the racetrack.

[Note on reference to IHRB Rules of Rules of Racing](#)

Any reference to the IHRB Rules of Racing and the Irish National Hunt Steeplechase Regulations will be hereafter abbreviated and referred to as “Rules of Racing”.

Infectious Disease

All individuals within a population of a species, be it horse, human or otherwise, are vulnerable to infectious disease. The extent to which disease affects the individual and population depends on a balance of immunity vs. infection challenge.

Some definitions

Endemic diseases are those which occur regularly within an area such as a country.

Sporadic diseases are those which occur only infrequently or irregularly.

Exotic diseases are those that do not yet occur in Ireland but in other countries within the European Union and further afield. Exotic diseases pose a potential threat to the Irish horse population due to widespread transportation of horses and the changing viability of insect vectors with alterations in climate.

A **vector** is a living organism that transmits an infectious agent from an infected animal to another animal/human; vectors that transmit equine diseases include ticks and mosquitoes.

When describing infectious disease, we often use the term **pathogen**. A pathogen is any organism that causes disease; in horses these are usually bacteria, viruses, or fungi.

Biosecurity is the prevention of disease-causing agents entering or leaving any place where they can pose a risk to animals or humans. This is where we focus our preventative and containment measures.

Horse specific risk factors for consideration

Travel

Horses move more than any other domestic species and the frequency of travel of the Thoroughbred racehorse is particularly high. Travel is usually domestic but may be international. Travel increases exposure of horses to other horses and new environments and is a known stressor and therefore risk factor for development/activation of infectious disease.

Mixing

Having horses in training involves mixing with other horses, for example on the racecourse, at sales, on training grounds. New arrivals, be these recently purchased horses, those returning from a racing engagement, veterinary hospitalisation, "a break" out of training, or indeed any other cause for geographical movement, are a particular risk of introducing disease to a yard.

Age

The immune profile of the horse changes with age and for this reason mixing of age groups and/or mixing of subtypes of horses e.g., contact with and/or shared airspace between racehorses in training and breeding stock are known risk factors.

Exercise and other physiological stressors

Intense exercise is a physiological stressor which can temporarily depress a horse's immune system and subsequent ability to avoid infection. Given that intense exercise in the Thoroughbred is often coupled with travel and mixing with other horses, these factors need to be understood and addressed as far as possible.

Biosecurity Guidelines

Biosecurity management is the practices and procedures that can markedly reduce the risk of infectious disease outbreaks. Biosecurity measures should reduce the likelihood of introduction of a disease to a training establishment, to a racecourse, a region or indeed a country.

Biosecurity is ultimately about reducing the risk of disease and its impact on your training business and the health and welfare of your horses. This in turn helps protect the wider racing industry and population of Thoroughbred horses in training.

Biosecurity measures are often not specific to a particular disease or single infectious agent, rather they are a collection of measures that should be useful for the prevention of most infectious agents of concern, with some additional measures for certain infectious agents.

Spread of disease

To reduce disease spread it is important to understand how diseases can spread between horses, for example:

- Direct contact between horses.
- Aerosol spread via droplets from coughs and sneezes, especially where horses share a common airspace.
- Inhalation of aerosolised pathogens in fine mist or vapour (such as that generated when power hosing) or in dust.
- Contaminated objects such as pitchforks, grooming brushes or tack.
- Contaminated feed or water supply.
- Transfusion of blood products such as whole blood or plasma.
- Vector transmission
 - Insect vectors include ticks, flies, and mosquitoes
 - Mammal vectors include rodents, cats, dogs, bats, and humans.
- Use of medical equipment without appropriate sterilisation between horses e.g., endoscopes and stomach tubes.
- Vehicles, wheelbarrows, boots, or other mobile objects which can carry and distribute pathogens in soil or other organic matter.
- Urine, faeces, blood, or other body fluids (and therefore soiled bedding which may contain any combination of these).

Bearing in mind the above we can split the key elements of biosecurity into 3 broad categories:

I. Management of the Horse Population

The first key aspect is to ascertain the health status of new arrivals and returning horses. The most common way for an equine infectious disease to be spread to horses in training is when a new horse carrying disease arrives at a yard. For many of the diseases we are concerned with, the horse can be shedding the disease before showing any clinical signs. Therefore, the following biosecurity measures are advised:

- **Separate quarantine for housing new arrivals.** While not all premises will have a purpose-built quarantine, a separate airspace to that housing resident horses is paramount. Stables at one end of the barn or block are not adequate as the airspace remains the same.
- **Isolate new arrivals from current residents for at least 10 consecutive days** and only integrate after this time if no signs of disease and or/ confirmed by your veterinary surgeon to have fully recovered from any disease during the quarantine period.
- **Closely monitor the horses** during quarantine so that any horse(s) that become ill can be identified early. Monitoring should include as a minimum: observation of general demeanour, recording twice daily rectal temperatures and paying attention to food and water intake and production of faeces and urine. A guide to normal parameters and some basic observations to check are provided within this Code.
- **Separate quarantine equipment** such as buckets, grooming kit and tack, ideally identified e.g., different coloured buckets and trugs, coloured tags, coloured electrical tape.
- **Separate staff if possible** for the horses in quarantine and a separate group of staff tend to the resident horses. Where this is not feasible quarantine horses should be tended to last and protective clothing worn to enter the quarantine facility. Within quarantine exposed or at-risk horses should be tended to first and any sick horses tended to last.
- **Reduce insect vectors whenever possible**, by using insect screens over doors and windows, insect repellents and regular removal of manure/soiled bedding.
- **Care with dogs** - they can act as vectors for transmission of disease during an outbreak of infectious disease. As such dogs should always be kept out of a quarantine facility and should not be allowed to roam between stables during an outbreak.
- **Horses returning from racing** should be carefully observed and isolated rapidly if there is any concern. Your veterinary surgeon should be consulted immediately in this event so they can employ appropriate diagnostic tests, begin treatment as required and best advise you to be able to limit the effect on the individual, and on your yard.
- The following may guide on what is “normal”. **Your veterinary surgeon should always be contacted with any concerns, even if parameters are within normal limits.**
 - Temperature 36.5 - 38.5 °C.
 - Respiratory (breathing) rate 8-12 breaths per minute **at rest.**
 - Heart rate 32-44 beats per minute **at rest.**
 - Discharge from the eyes and nose is usually abnormal, a small amount of clear, watery discharge from the nose is generally not a cause for concern.
 - The horse should be standing in a relaxed and natural stance, not “tucked up”.
 - Monitor for changes in consistency and or number of droppings.
 - Check that the horse is eating up and drinking.
 - Horse’s general demeanour, behaviour, level of interest - ‘bright, alert, responsive’?
 - Pay particular attention to youngstock as they can change rapidly.

The second key aspect to biosecurity management of the horse population is adherence to vaccine recommendations.

- Trainers should ensure all horses are appropriately vaccinated.
- Please refer to sections on Equine Influenza Virus and Equine Herpes Virus for further information regarding vaccination.

II. Management of Staff and Visitors

a) Staff

Stable staff and work riders are typically the humans that will have the closest and longest contact with your horses on a regular basis.

It's particularly important that staff **understand the principles of biosecurity and the importance of vigilance against infectious disease.**

- Staff must be trained in good hygiene practices, especially effective hand washing, use of hand sanitisers /gels and routine disinfecting of items.
- Staff must be familiar with the concept of quarantine for new arrivals and the close monitoring of both quarantined horses and horses returning from external engagements such as racing fixtures.
- Ideally member(s) of staff should be assigned to care for quarantined horses only (i.e., new arrivals or sick horses) and separate staff look after the healthy resident horses.
- If it is unavoidable that an individual must care for both groups of affected and unaffected horses, then the care of healthy animals should be carried out first, exposed animals next and affected horses last, followed by decontamination.
- Disposable gloves, barrier clothing and disposable boot covers should be used when working with quarantined horses, and after use be disposed of or laundered and disinfected. A disinfectant foot mat and a bin or clinical waste bag for used gloves and foot covers are essential. There is an obligation on the trainer to provide these items.
- The quarantine unit should ideally have a changing area for the staff, so that clothing and footwear worn in the restricted area are not worn elsewhere.
- Staff must be trained in monitoring the general health of horses (e.g., assessment of demeanour, monitoring feed and water intake, taking and recording of temperatures).
- Trainers need to ensure that staff have access to the equipment that they need for basic health monitoring including thermometers, and a simple means of recording information e.g., notebook and pen or digital document.

b) Visitors

Visitors to a licensed premises should have much less contact with your horses compared with stable staff and work riders. Nonetheless visitors need consideration from a biosecurity view, particularly during periods of “high risk” for example during a time of high prevalence of Equine Influenza and/or known cases of infectious disease on your premises.

Staff and visitor parking should be distant from the immediate stabling area to help prevent disease-carrying organisms being spread by shoes or tyres to the stable area.

Visitors should wear clothes and shoes that have not been worn on any other equine premises. If infectious disease is suspected or confirmed, the following measures are strongly advised:

- Non-essential access should be stopped.
- Maintain records of essential visitors to the premises with date, time, name, and purpose of visit recorded.
- Until the premises is declared free from disease, one entrance to the premises should be designated for use and all others temporarily blocked. This will facilitate compliance with disinfectant mats / foot dips as required.
- If individual vehicles for example those belonging to a farrier or veterinary surgeon are needed within close proximity of stables during a period of high risk, tyres can be sprayed with disinfectant and a footbath and shoe covers provided.

III. Management of the Environment

- Manure and bedding can be a source of pathogens. Soiled bedding on wheelbarrow and/or tractor tyres can spread disease if these are not routinely cleaned and disinfected. Soiled bedding from the stables of sick or exposed horses should be placed in enclosed containers e.g., sealed clinical waste bags for incineration and not onto open air muck heaps. Stables of sick horses should be entered and mucked out last.
- Avoid use of blowers if disease suspected or confirmed – they are an effective means of rapidly disseminating infectious material throughout a barn or stable block. Vacuum systems that capture rather than physically move the material are preferable.
- All equipment should be regularly cleaned of organic debris and disinfected, especially if having to be used between horses, such as thermometers.
- Cleaning and disinfection should be carried out in an area with a solid surface and appropriate drain, with minimal through traffic. The area should itself be cleaned and disinfected at the end.
- Cloth items (saddle pads, towels, bandages etc) should be laundered and thoroughly dried between each use. To kill the fungal spores responsible for Ringworm infections, it will be necessary to include a disinfectant during laundering (e.g., Virkon™, Trigene™ or dilute

bleach at a 1 in 40 concentration). Exposure to UV light e.g., simply drying outside on a bright, dry day is also helpful for killing fungal spores.

- Ointments and other topicals should be dispensed from larger containers into smaller containers for individual use. A clean lollipop stick is an ideal alternative to human fingers when it comes to dispensing a small amount of the topical from the container.
- Rodent, bird and insect control should be addressed.
- Feed should never be left uncovered and should be raised off the ground, ideally in a dedicated feed-room.
- Shared water sources are not advised. Hoses used to fill multiple water containers should not be submerged during the filling process.
- Stables, feed pots/ mangers and passageways should be clean, free of standing water, regularly and thoroughly scrubbed with an appropriate disinfectant, and allowed to dry.
- When using disinfectants, always follow the instructions on the label. Select a disinfectant that has documented effectiveness in the presence of 10% organic matter, works in the water hardness of the locale and is safe to use in the environment of horses and humans.
- Take care when using a pressure washer, those set at > 120psi can produce aerosols that have the potential to spread infectious agents suspended in the air.

Transport Biosecurity

- Stressors including intense exercise and transportation can increase the shedding of certain pathogens and re-activate latent (sleeping or inactive) infections in horses. Transportation is therefore a risk factor for spread of disease and particular attention should be paid both to cleanliness of transport and the health status of horses to be transported.
- Vehicles should be cleaned and disinfected frequently and regularly, using approved disinfectants capable of killing bacteria and viruses. A list of DAFM approved disinfectants can be found here: <https://www.gov.ie/en/collection/e1453-disinfectants/>
- Vehicles should be cleaned and disinfected before new horses load, and between loads.
- Appropriate vaccination is expected to reduce the degree of shedding of respiratory viruses. Racehorses in training should only be transported alongside horses with equivalent vaccination status e.g., any companion horses should be vaccinated in line with the Rules of Racing.
- Horses should only travel if they are considered fit to do so by a veterinary surgeon.

- Sick animals with confirmed or suspected infectious disease should not be transported except when they are travelling to obtain veterinary treatment. Under such circumstances mixed loads (sharing transport with other horses) is not appropriate.
- If horses become ill on or shortly after arrival at their destination, veterinary advice should be sought, and the sick horses and any in contacts isolated immediately. The transport operator should be informed at once and should inform other clients with arrivals in the same load.
- Registered horses moving from one Authorised Derogating Establishment to another can only be transported via a Designated Transporter for Derogating Movement.

Infectious Disease Reporting

Notifiable and OIE listed Diseases.

This Code contains information on some equine infectious diseases which are '**Notifiable**' In Ireland. A Notifiable disease is any disease that is required by law to be reported to government authorities. The Notifiable diseases, if suspected or confirmed, **must be notified to a local office of the Department of Agriculture, Food and the Marine** in accordance with Regulations (The Notification and Control of Diseases Affecting Terrestrial Animals Regulations 2016). A full list of Notifiable Diseases in animals in Ireland can be found here: <http://www.animalhealthsurveillance.agriculture.gov.ie/notifiablediseases/>

This Code also contains information on some **OIE listed diseases**. The OIE is the international organisation for animal health. An OIE listed disease is one of international concern, for which Ireland is obliged to submit information such as the presence, absence, or number of cases in the country to the OIE every year. A full list of OIE listed diseases for Ireland can be found: <http://www.animalhealthsurveillance.agriculture.gov.ie/oielisteddiseases/>

Equine Infectious Disease Surveillance and the RESPE system

In order for movement of horses between Ireland and Member States without health certification, a condition on disease surveillance (Condition 3.5) is stipulated as part of the process for those wishing to avail of the derogation. This condition states that the CA (competent authority) or the Authorised Delegated Bodies agree to exchange information on equine disease through use of a surveillance system which shall be the **RESPE system**. This is in addition to disease surveillance and reporting requirements as required by the Animal Health Law Regulation (EU) 2016/429.

RESPE is a surveillance network for European equine diseases based on a network of Sentinel Veterinarians (VS). These VS, practitioners in the field and volunteers, provide daily monitoring of diseases in horses and report to the RESPE any **suspected illnesses** they encounter in the field. In practice, when a VS examines a horse suspected of having a disease monitored by the RESPE, he or she takes the samples corresponding to a clearly established protocol and sends information on this case/horse to the RESPE. The samples are sent to a RESPE partner medical analysis laboratory and if the disease is confirmed, an **anonymous alert** is widely distributed and published on the RESPE website. This allows the entire sector to be informed and to put in place **precautionary measures, if necessary**.

The IHRB strongly support active disease surveillance and reporting in Ireland and the work of the Irish Equine Veterinary Association in this area.

Further information can be found at: <https://respe.net/lassociation/>

Requirements for Authorised Derogation Establishments.

This section specifies the **mandatory** requirements for a premises to be granted the status of an Authorised Derogation Establishment (ADE) for the purpose of registered horse movement between Ireland and a member state without health certification. Those wishing to submit their premises for assessment for suitability as an Authorised Derogation Establishment must comply with these requirements and formally apply to the IHRB for ADE status.

The registered horse is a horse of high health status which is habitually resident on an establishment of low health risk which adheres to the following conditions:

Regular Health Checks

Mandatory properly documented health visits by a registered veterinary surgeon, to each horse under your care, at least twice yearly.

Health visits for the purpose of Vaccine administration are permissible for inclusion.

Recording of Medicines

Under Rule 148 of the Rules of Racing, each Trainer **must** keep a completed Medicines Register and ensure that the use of all medicines is recorded in the Medicines Register in the manner prescribed.

European Legislation **requires** the completion of sections A or B of the Medicinal Treatment pages of the passport in order that a positive indication is given as to whether the animal is intended for slaughter for human consumption or not. If the horse is intended for slaughter for human consumption the Medication Record provided in Section B II) must be completed.

Horse Identification and Traceability

Rule 90 and Regulation 8 of the Rules of Racing set out requirements relating to passports and the identification of horses which **must** be followed by licensed trainers.

- On each receipt of a passport the trainer must immediately check the identity of the horse from the markings therein and any other relevant information and deal with any errors.
- This must be repeated every time the horse and passport are returned to the trainer.
- All horses moved under this derogation must be accompanied by the passport issued in accordance with Commission Implementing Regulation (EU) 2021/963, in which all required vaccines are clearly and correctly documented.
- High health status horses, subject to the control of the Department of Agriculture Food and the Marine (DAFM) or the Irish Horseracing Regulatory Board (IHRB), moved under this derogation, must be accompanied by a DOCOM* issued through the TRACES NT** system. Horses can only move from one Authorised Derogating Establishment to another.

*A DOCOM is a commercial document generated on Traces NT for the purpose of derogated movement

** TRACES NT refers to the European Commission's online certification platform supporting the importation of animals into the European Union, and the intra-EU trade and EU exports of animals.

Vaccination requirements for registered horses

a) Equine Influenza Vaccination

Registered Horses must be vaccinated according to requirements set out by the IHRB. Rules 90 and 91 of the Rules of Racing set out requirements regarding Equine Influenza (EI) vaccination. The current intervals for the EI vaccination course are as follows:

V1 - V2	21-60 days
V2 - V3	120-180 days
BOOSTER	Not more than 6 months apart

b) Equine Herpes Virus Vaccination

While there is currently no requirement under the IHRB Rules of Racing to vaccinate against Equine Herpes virus (EHV), vaccination against EHV is **mandatory** for horses wishing to race in France and **mandatory** for Registered horses wishing to avail of derogation of health certification.

The vaccination protocol for EHV as required by France Galop follows the same vaccination intervals as for Equine Influenza, with the exception that while 6 monthly boosters for herpes virus are strongly advised, 12 monthly boosters are compulsory. The current intervals for the EHV vaccination course are as follows:

V1 - V2	21-60 days
V2 - V3	120-180 days
BOOSTER	Not more than 12 months apart, 6 monthly boosters advised.

c) Further requirements in respect of vaccinations

Vaccinations can only be administered and certified by a registered Veterinary Surgeon.

Under the Rules of Racing **a horse cannot run within 7 days of receiving a vaccination** (i.e., six clear days must elapse between administration and race day).

Vaccine use must be certified in the horse's paper passport as well as uploaded onto the Weatherbys E-passport. These entries must be certified by a veterinary surgeon. Alterations or omissions of batch number, expiry date, practice stamp or signature will invalidate the certification of vaccination.

Biosecurity measures

The Authorised Derogation Establishment must have a designated quarantine/ isolation facility which meets the following criteria:

- The quarantine facility must be remote (at least 100 m) from any other building, barn or stable block housing horses i.e., **must consist of a separate airspace.**
- There must be no routine parking of cars outside the quarantine facility.
- Quarantine must be clearly marked on an ariel view or drawing of the premises.
- The quarantine facility must have a designated area to allow staff to change in and out of protective clothing.
- Handwashing facilities with hot and cold water must be available.
- There must be a foot mat/ foot dip at the entrance to a quarantine facility.
- Equipment used within the quarantine facility must be clearly identifiable as quarantine equipment and must not be used in the main yard. This includes any tack, grooming kits, buckets, trugs, wheelbarrows, brushes, pitchforks, rakes etc.

Quarantine requirements for registered Horses:

- New arrivals must be isolated from current residents for at least 10 consecutive days and only integrated after this time if they are showing no signs of disease and or/ have been confirmed by your Veterinary Surgeon to have fully recovered from any diseases encountered during the quarantine period.
- During the quarantine period staff must closely monitor the horses so that any horse(s) that become ill can be identified at an early stage. Monitoring should include as a minimum: observation of general demeanour, taking and recording twice daily rectal temperatures and paying attention to both food and water intake and production of faeces and urine.
- On an Authorised Derogation Establishment dedicated staff must be assigned to tend solely to the horses in quarantine and a separate group of staff assigned to tend to the resident horses. There should be no cross over between the two groups.

Animal Health Tests

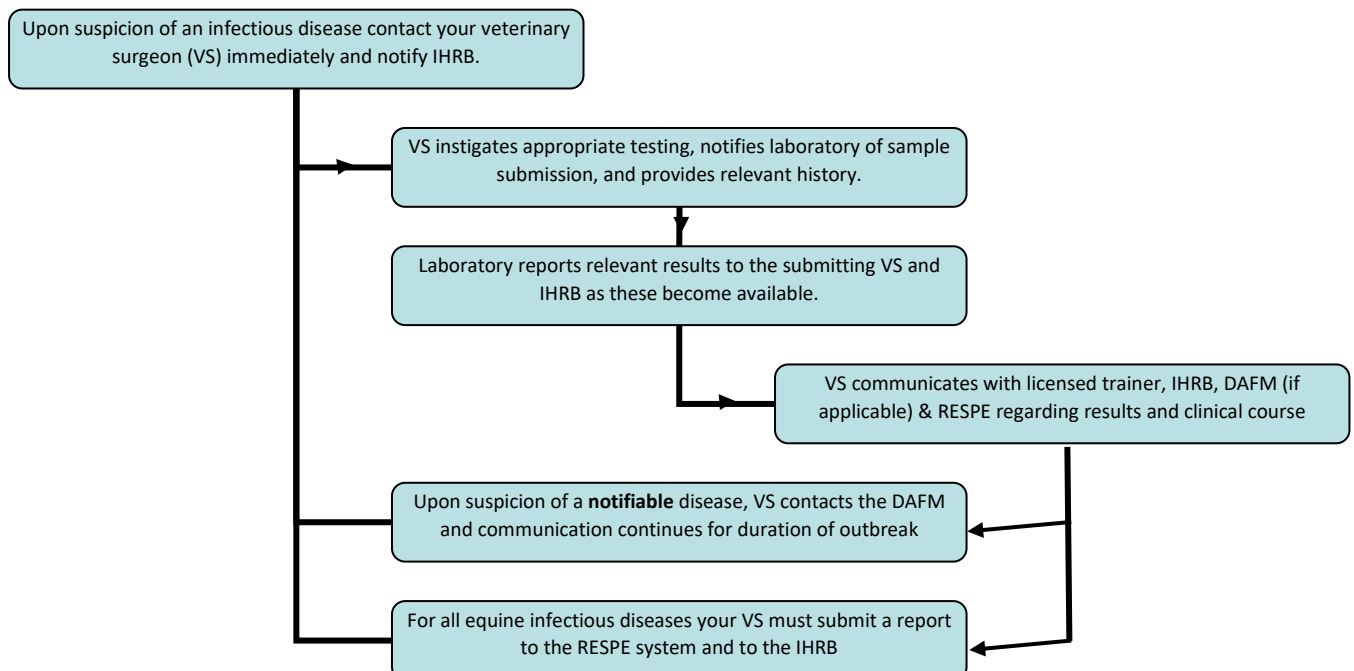
- Any animal resident on a Registered Derogation Establishment that shows any signs of infectious disease must receive prompt veterinary attention and appropriate diagnostic testing must be instigated without unreasonable delay.
- Your veterinary surgeon will lead diagnostic testing and treatment and, in the case of notifiable disease, will liaise with the Department of Agriculture Food and the Marine.
- Signs of potential infectious disease which warrant immediate veterinary attention include any or any combination of the following:
 - Fever (> 38.5C)
 - Inappetence or reduced appetite
 - Dullness or lethargy

- Nasal discharge
- Ocular swelling or discharge
- Swollen lymph nodes in the region of the head/ neck

Actions to take in event of suspected infectious disease in a horse(s) on your establishment

- Seek veterinary advice immediately.
- Quarantine the affected horse and any in contact animals.
- Stop all movement of horses on and off the premises.
- Follow recommended protocols for diagnostic sampling.
- Do not allow horses to exit quarantine until advised it is safe to do so by your veterinary surgeon and, in the case of Notifiable disease, the attending Veterinary Official from the Department of Agriculture Food and the Marine (DAFM).
- Do not allow movement of horses on or off the premises to resume until advised it is safe to do so by your veterinary surgeon and, in the case of Notifiable disease, the attending Veterinary Official from DAFM.

Reporting on Infectious Diseases on an Authorised Derogation Establishment



Travel requirement to avail of derogated equine movement to and from Ireland

- Horses availing of the derogating conditions must travel to and from an Authorised Derogation Establishment. A closed list of Authorised Derogation Establishments shall be maintained on TRACES NT and are the only establishments that can be inserted into the premises or destination on an equine DOCOM.
- “Designated Transporters for Derogating Movement” refer to transporters designated by the Department of Agriculture Food and The Marine or The IHRB as being authorised to carry out movement of Registered Horses under the terms of the derogating conditions. **Only Designated Transporters can be used for the purposes of derogated equine movement.**
- Horses that are showing any signs of infectious disease prior to departure must not avail of derogated travel.
- If horses become ill on or shortly after arrival at their destination, veterinary advice should be sought, and the sick horses and any in contacts isolated immediately. The Designated Transporter and the IHRB should be informed in writing at once.

Note on Natural Breeding

Natural Breeding and breeding activities including foaling of mares **must** not occur on an Authorised Derogating Establishment that is licensed by the IHRB for training of Thoroughbred racehorses. Any dual-purpose establishments will not be approved as an ADE.

Equine Infectious Disease Guides

Ringworm (dermatophytosis)

Ringworm is a common fungal infection of the superficial layers of the skin and hair. While ringworm does not pose a major health risk to horses it is highly contagious i.e., can spread rapidly between horses. Ringworm can also be zoonotic i.e., can be passed from animals to humans. It is important that any staff handling infected horses understand this potential risk.

It can affect horses of all ages but most often horses under three years of age and those that have concurrent infections or a suppressed immune system.

Clinical signs: Lesions can occur anywhere on the body but are predominantly seen in regions in contact with tack or rugs. In the early stages of infection, small tufts of hair appear slightly raised. Close inspection and parting of hairs may reveal a grey cigarette ash like deposit. As the disease progresses, the hair covering the infected areas is killed by the fungus and subsequently falls out, revealing raised, circular lesions, which appear grey and scaly. Hairs remaining at the edge of the lesions often appear rough or damaged. The lesions range in size from 2mm to over 5cm in diameter and can become reddened with trauma. They may begin to “join up” in regions that tend to encounter friction from tack or rugs.

Transmission and spread: Transmission may be direct (horse to horse) or indirect, including but not limited to shared tack, grooming kits, equipment, hands/ clothing or fungal spores harboured in the environment.

Trainers and their staff must be aware of the contagious nature of ringworm and should contact their veterinary surgeon to have any suspect skin condition investigated.

Diagnosis: Samples are generally collected as hair plucks from the periphery of active, non-medicated lesions. Diagnosis may be based on microscopic examination of a skin scraping to look for spores or by fungal culture or, where a rapid diagnosis is required, same day qPCR can be employed in specialist laboratories.

Treatment: Once ringworm has been diagnosed, your Veterinary Surgeon will usually recommend topical treatment of the lesions. The disease is self-limiting which means that almost all horses will recover spontaneously without any treatment; however, this typically takes between one and three months. In the interim, fungal spores from active lesions can spread into the environment where they can persist for a very long time. Therefore, treatment is advised to hasten resolution and limit further spread.

Biosecurity measures specific to ringworm:

- Keep the horse in an isolated stable or field and avoid direct contact with other horses until the infection has cleared.
- Turning out affected horses during good weather may be of benefit as exposure to ultraviolet light can help kill the fungal spores. This must be balanced with the risk of contaminating a turn out area to be used by other horses in the future.

- All staff must wear disposable gloves when handling the horse(s) until the infection has cleared. Hands must be well washed after handling of horses and removal of gloves. Affected horses should be handled/ treated last.
- Horses should be treated on the advice of your veterinary surgeon to limit environmental contamination.
- Do not use grooming equipment, tack etc. from this horse on other horses. The equipment should be regularly cleaned and disinfected with a fungicidal and sporicidal disinfectant such as Virkon™, Trigene™ or a 1 in 40 bleach dilution.
- Fungal spores tend to persist for extended periods (weeks and months) in dark crevices and corners e.g., door frames, fence posts and stable fixtures. Limiting contamination of the environment can be achieved by pressure washing and then using an antifungal disinfectant for washing and/ or fogging.
- Inspect all in-contact horses for signs of ringworm infection.
- Horses showing signs of active infection should not be moved onto other premises or transported alongside unaffected horses.
- Horses with active ringworm **must not** be presented at the racetrack.

Relevant Rule of Racing: Rule 148 v a) of the Rules of Racing states the following:

“A Trainer shall ensure that any Horse declared to run in any Race is not suffering from an active skin disease including, but not limited to, ringworm. If visible evidence of a recent skin disease exists, a Horse will not be permitted to run in any Race unless a veterinary certificate accompanies the Horse to the Race Meeting and is furnished to the IHRB Veterinary Officer on arrival. This certificate must confirm that an examination of the Horse was carried out by a veterinary surgeon within the 3 days prior to the Raceday and that the skin disease is no longer active nor contagious. Once accepted, this certificate will remain valid for subsequent occasions the Horse is declared to run while visible evidence of a skin disease remains.

If a certificate is not furnished as above to the IHRB Veterinary Officer or if the IHRB Veterinary Officer is of the opinion that there is a material negative change to the skin condition since the date of certification, they shall refer the matter to the Stewards who may order that the Horse be withdrawn.

Samples may be taken by the IHRB Veterinary Officer from any Horse where evidence of recent skin disease exists. If a subsequent analysis of these Samples proves positive for the presence of a contagious skin disease, the matter will be referred to the Referrals Committee who may impose a sanction including a fine.”

Equine Influenza

Equine Influenza (EI) is a highly contagious though rarely fatal respiratory disease of horses, donkeys and mules and other equids. The disease is endemic in Ireland and across much of the globe; outbreaks can have a severe impact on the horse industry.

Reporting: While Equine Influenza is not notifiable in Ireland it is OIE listed. Cases should be reported to RESPE.

Clinical Signs:

- High fever
- Harsh dry cough
- Nasal Discharge
- Lethargy

Signs can be particularly severe in young animals. Appropriate convalescence is required before affected horses are returned to training. Your attending veterinary surgeon should be consulted on this matter.

Testing: Should your horses display any signs consistent with EI, your veterinary surgeon should be contacted immediately and will undertake appropriate diagnostic testing. Diagnosis is commonly based on PCR testing for the virus in nasopharyngeal swabs or tracheal/ nasal washes. DAFM fund EI virus testing of samples **from suspect cases** at WOAH accredited testing laboratories including the Irish Equine Centre, under the Equine Influenza Surveillance Plan. WOAH approved procedures for EI sampling can be found here: [*WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*](#).

Transmission and spread: EI is highly contagious and is primarily spread by direct contact with infected animals, which excrete the virus in suspended air droplets via coughs and sneezes. It can also be spread by mechanical transmission of the virus on clothing, equipment, brushes etc. moving between horses.

EI has a short incubation period of between 1 and 3 days. Once introduced into an area with a susceptible population, the disease spreads quickly and can cause explosive outbreaks. Crowding and transportation are factors that favour the spread of EI.

Biosecurity measures specific to Equine Influenza:

Adhering to recommended vaccination protocols remains the cornerstone of defence against EIV. While vaccination will not fully protect against infection with the influenza virus it has two important effects:

- Reduces clinical infection (resulting in illness) in vaccinated horses.
- Reduces subclinical infections in vaccinated horses which while not outwardly ill can act as carriers of the disease, exposing other horses to the virus.

Relevant Rule of Racing:

- Rule 91 of the Rules of Racing sets out requirements regarding Equine Influenza Vaccination.
- The current intervals for Equine Influenza vaccination courses are as follows:

V1 - V2	21- 60 days
V2 - V3	120-180 days
BOOSTER	Not more than 6 months apart

- Boosters **must be** administered no more than six months apart, according to calendar months rather than a fixed number of days. Should a booster vaccination be missed (i.e., not given or given after more than six months has elapsed since last vaccination) the primary vaccination course consisting of V1, V2 and V3 must be restarted.

Another key control strategy is to **reduce the susceptible population of horses**. This means not just vaccinating horses in training that need to be compliant to get to the racetrack. The recommended standard is to **vaccinate all horses** on a premises including youngstock, breeding stock, store horses, ponies etc.

Other sensible biosecurity management steps include the following:

- Isolate/ quarantine new arrivals to your premises for 10 days.
- Take and record temperatures routinely so you can quickly identify when a horse is running a fever.
- Do not share tack such as bits and bridles between horses.
- Do not travel or work horses if you have any concerns about their health (fever, lethargy, cough etc.) and seek veterinary advice without delay.
- Isolate sick horses including those with confirmed EI virus.
 - EI virus can spread via droplets released into the atmosphere by infected animals coughing. The recommendation is that infected animals need to be isolated by at least a 100 m radius to reduce the risk of airborne spread to others. Wind spread is thought to be significant.
 - BEI virus can also live on contaminated surfaces, equipment, and clothing.

Further information on Equine Influenza can be found via the following sources:

<https://www.woah.org/en/disease/equine-influenza-2/>

<https://www.ihrb.ie/equine-influenza>

Equine Herpes Virus

Equine herpes virus (EHV) is a common virus that occurs in horse populations worldwide and is endemic in Ireland. Following first infection with EHV most horses carry the virus as a latent (sleeping) infection that can reactivate throughout life, usually following stress. The two common strains are EHV-1 and EHV-4. EHV-1 causes respiratory disease in young horses, abortion in pregnant mares and neurological disease in horses of all ages. EHV-4 primarily causes respiratory disease. Abortion due to EHV-1 and in-utero infection of foals are not discussed in depth as this Code is specific to Racehorses in Training. Nonetheless it is important to stress that the continual cycling of EHV respiratory disease in young horses and the periodic reactivation of EHV in older horses, maintains the risk of EHV abortion in pregnant mares and EHV neurologic disease in horses of all types (racing, breeding stock or otherwise) and ages. Aborting mares and neurologic cases of EHV can shed very large amounts of virus into the environment, continuing the cycle. While we strongly discourage mixing of breeding and racing operations on the same premises, some information on EHV abortion is included within this Code.

Reporting: EHV is not notifiable in Ireland, but any case of suspected EHV abortion or neurologic disease should be reported to the ITBA. Any veterinary surgeon attending a suspected or confirmed EHV case should report this via RESPE.

At risk groups: Respiratory disease due to EHV is most common in weaned foals and yearlings, often in Autumn and Winter. However, older horses can succumb and are relatively more likely to transmit the virus to others without showing clinical signs of infection. This is why mixing of age groups is not good practice from a biosecurity standpoint.

The most important risk factors for neurologic disease due to EHV-1 include animals greater than 5 years of age and time of year. Autumn, Winter, and Spring have been identified as at-risk seasons. The onset of neurological signs may be sudden, with no prior clinical signs of respiratory disease and usually occurs in the second week following infection.

Pregnant mares are at risk of EHV abortion. Introduction of new horses and changes in management e.g., movement and sudden stabling are known risk factors.

Clinical Signs:

Signs of respiratory disease include:

- Fever
- Occasional cough
- Discharge from the nose

Signs of Neurologic disease (paralytic form of EHV-1) include:

- Incoordination of the limbs
- Urine and or/faecal retention
- Recumbency (inability to stand) in severe cases

Signs of Herpes Virus Abortion include:

- Sudden and unexpected abortion, often 'red-bag' delivery
- The foetus may appear jaundiced (yellow in appearance)

Signs of Herpes Virus in-utero infection of foals include:

- Weakness
- Jaundice
- Respiratory compromise (difficulty breathing)
- Occasional neurologic signs
- Death or euthanasia is usually required within three days.

Transmission of EHV:

- EHV respiratory infections are commonly spread via the respiratory route e.g., via droplets in the air produced from coughs, snorts, and sneezes.
- Mares which abort due to EHV infection shed large amounts of virus into the environment via the foetus, placenta, and associated fluids. This may be inhaled directly by other horses or indirect transmission may occur via contaminated attendants, equipment.
- Older foals with EHV respiratory disease and horses with neurological signs can be highly contagious. These horses can transmit infection to other horses via the respiratory route about or by shedding virus into the environment. The virus persists in the environment for around a month.
- Horses with latent infections can resume shedding following reactivation of the virus. As the virus is common and endemic in Ireland, most adult horses are likely to be carriers. As EHV is most commonly re-activated following periods of stress this is one of the reasons that newly arrived horses should be quarantined. Horses returning from competition or any cause for travel, should be monitored closely and quarantined if possible.

Diagnosis: Any horse suspected to have EHV should be attended to by a veterinary surgeon to have appropriate diagnostic tests performed and treatment instated where applicable.

In the case of respiratory disease blood samples and nasopharyngeal swabs should be taken.

In the case of neurologic disease blood samples and nasopharyngeal swabs should be submitted. In the case of death, the horse should be submitted for post-mortem at an appropriate laboratory/ pathology centre.

Biosecurity measures specific to EHV:

Breeding enterprises and racing enterprises should not be run from the same premises. Notwithstanding this warning, should there be breeding stock on your premises, pregnant mares should be kept separate from all other animals e.g., young stock and non-pregnant horses of all types and should be housed in small groups, outside where possible.

Horses should be grouped according to age for purposes of housing and group turnout.

All new arrivals should be quarantined for 10 days.

In the case of suspected or confirmed EHV disease environmental contamination must be limited. This virus is relatively fragile and is destroyed easily by heat and virucidal disinfectants. Stables, equipment, and vehicles for horse transport should therefore be cleaned and disinfected with an approved disinfectant regularly, including between occupants.

Staff should be made aware of the risks of indirect transmission of EHV (i.e., by people and or their/ equipment) and hand washing stations and hand sanitisers should be made available and used.

Vaccination:

- It is recommended that vaccination against EHV 1 and 4 is employed for all horses on stud farms to reduce the chances of abortion storms.
- This recommendation **does not** currently extend to all horses in training in Ireland, however this remains under review. The risk to your population of horses should be discussed with your attending veterinary surgeon and vaccination against EHV may be recommended. Discussion regarding the merits of vaccination would be particularly pertinent on premises where there is any overlap in terms of presence of breeding stock on a racing yard and /or presence of personnel who are involved in breeding/ foaling.
- Vaccination against EHV is **mandatory for horses wishing to run in France** and is **mandatory for derogation** from the requirement for health certification for registered Horses travelling to or from an EU Member State (MS) and Ireland. These horses must be vaccinated at the current vaccination intervals for Equine Influenza vaccination.

Further information on Equine Herpes Virus can be found at:

https://www.woah.org/fileadmin/Home/eng/Health_standards/tahm/2.05.09_EQUINE_RHINO.pdf

Strangles (*Streptococcus equi*)

Strangles is a bacterial disease of the lymph nodes of the equine upper respiratory tract, caused by the bacterium *Streptococcus equi* (*S. equi*). The disease is endemic within the horse population of Ireland particularly in the sport and leisure horse populations; it is encountered relatively less frequently in Thoroughbreds in training.

Reporting: Strangles is not currently notifiable or OIE listed. As with all infectious diseases of the horse, reporting of suspected or confirmed cases under the RESPE system is strongly recommended.

Clinical Signs may include some or all of the following:

- Fever (may be marked) *
- Lethargy *
- Nasal discharge
- Swollen lymph nodes of the head which may abscess and discharge
- Possible cough, may be associated with eating
- Inappetence or difficulty eating
- Occasional respiratory distress due to swollen lymph nodes occluding the upper airway

* Fever and Lethargy are typically the first signs occurring 3-14 days after exposure and before most horses are contagious.

Transmission of the Disease:

- Direct transmission between horses. In-direct transmission via the hands, clothing and equipment of staff or other personnel is also possible.
- The incubation period is usually about one week. Shedding does not usually begin until a day or 2 after the onset of fever making it possible to isolate new cases before they can transmit infection if appropriate monitoring is in place.
- In affected horses the causative bacteria are shed from draining abscesses and nasal discharges, coughs, and sneezes. Horses may still be infectious for at least 6 weeks after their purulent discharges have dried up and so horses must be tested and confirmed not to be shedding before returning to the resident population.
- Around 10% of horses that have recovered from typical clinical signs of Strangles i.e., they no longer have a nasal discharge or appear ill, will have become persistently infected. These symptomless 'carriers' can intermittently shed the bacteria for years and are an important source of infection to susceptible horses.
- The bacteria can survive in water for 4-6 weeks but is not viable for long in soil or faeces.
- Disease severity is correlated with the dose and frequency of infectious challenge therefore good biosecurity to minimise exposure is paramount.

Testing for disease: Should any horse(s) display signs consistent with Strangles you should contact your veterinary surgeon immediately and isolate the affected animal(s). Your veterinary surgeon will discuss the most appropriate testing approach with you.

Biosecurity measures specific to Strangles:

- Quarantine new arrivals to a yard for a minimum of **three** weeks.
- Due to the increased prevalence of this disease in the non-Thoroughbred horse population, particular caution should be exercised when purchasing or introducing these

animals to your premises e.g., companion horses/ ponies, children's ponies, teaser stallions. Screening of these animals is strongly advised as detailed below.

- A blood sample taken from new arrivals can be used to screen for recently exposed or persistently infected horses. If negative, a second blood sample taken 2 weeks later can identify horses that have since raised a response and may have been incubating the infection. If the second sample is also negative and the horse remains free from clinical disease, then it is considered safe to enter the main yard.
- Horses testing positive via the blood test should be investigated further. Ideally, the guttural pouches should be examined by endoscopy to identify signs of persistent infection and a wash should be taken for testing via qPCR. If tests on these samples are negative, then it is considered safe for the horse to enter the herd. Those that test positive on qPCR or show obvious abnormalities within the guttural pouch on endoscopy should undergo topical treatment. These horses must not join the yard until they no longer test positive on qPCR and any visible abnormalities have fully resolved.
- Do not allow your horse to share drinking water and avoid direct contact with other horses while attending race meetings.

Vaccination:

Recently a new Strangles Vaccine, Strangvac® has been developed which is authorised for use in the European Union. The vaccine is intended for use in horses 8 months and older in areas where *Streptococcus equi* is known to be present and who are at high risk of infection. This would not typically apply to a Thoroughbred training premises however should you have concerns about your horses being at particular risk of Strangles exposure despite good biosecurity measures, you should discuss the potential benefits of vaccination with your Veterinary Surgeon.

Further information on a Strangles vaccine can be found here: <https://www.dechra.ie/equine/vaccines/strangles>

<https://www.ema.europa.eu/en/medicines/veterinary/EPAR/strangvac>

Information on a UK strategy to identify and prevent strangles known as STEPS can be found here: <https://www.dechra.ie/Files/Images/Countries/UK/Premium-pages/Strangles/STEPS-BHS-2021.pdf>

Aimed at veterinary surgeons, the latest ACVIM consensus statement on *Streptococcus Equi* can be found here: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/jvim.15043>

Equine Infectious Anaemia

Equine Infectious Anaemia (EIA), sometimes known as Swamp Fever, is a viral disease which occurs worldwide, including parts of mainland Europe. Within Europe it is endemic in Romania and regularly confirmed in Italy in both Thoroughbreds and non-Thoroughbreds. EIA is currently absent in Ireland. The last known case of EIA in Ireland was in 2007 and occurred following the importation and administration of contaminated blood products.

Reporting: In Ireland, EIA is **notifiable by law** under S.I. No. 130/2016 - Notification and Control of Diseases affecting Terrestrial Animals (No. 2) Regulations 2016. Under these regulations a person who has reasonable grounds to suspect that an animal or animal product is affected, or may be affected with a disease, whether by reason of an examination, test, including a laboratory test or otherwise, shall, without any delay, notify the fact or suspicion to an officer of the Minister at the local office of the Department or in cases where an official control programme is in place, to the persons or authority responsible for that control programme.

As EAI is listed under Part A of the schedule of notifiable disease, **the animal must not be moved for a period of 7 days** unless a license is granted by an Authorised Officer of the DAFM.

EIA is also an OIE listed disease. Additional reporting via the RESPE system is recommended.

Clinical signs: The disease may take an acute, chronic, or sub-clinical form and consequently the clinical signs are extremely variable. Outward signs of the acute form include the following:

- Fever
- Depression
- Increased heart rate
- Increased respiratory (breathing) rate
- Unexplained bleeding
- Bloody diarrhoea
- Weight loss
- In-coordination
- Jaundice (yellow appearance to mucous membranes)
- Oedema (swelling) of the lower limbs

Acutely infected horses carry high levels of virus in the bloodstream and are potentially infectious to other horses.

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

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

All horses, regardless of which form of disease they are experiencing, are infectious to other horses. **Any horse displaying severe, unexplained anaemia (low red blood cell count which manifests as pallor) should be isolated and tested for EIA as soon as possible.**

Transmission: The EIA virus is transmitted between horses by transfer of infected blood or blood products by the following:

- Insect vectors such as biting flies (including horse, deer, and stable flies) and (very rarely) mosquitoes.

- Administration of infected blood products (including plasma) and unauthorised blood-based veterinary medicinal products.
- Contaminated veterinary or dental equipment or any other equipment that may become contaminated by blood and act as a vector between animals, e.g., twitches
- From mare to foal via the placenta, or, rarely, via virus-contaminated colostrum or milk in newborn foals.
- Transfer in semen from an infected stallion is uncommon but possible.

Both clinically (acute or chronic) and sub-clinically affected horses can be a source of infection for other horses.

Diagnosis: Diagnosis involves submission of blood samples for appropriate testing. The laboratory tests the blood sample for the presence of antibodies against EIA virus 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.

Biosecurity measures specific to EIA: 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 and seek Veterinary advice.
- Isolate the horse, ideally in a vector-proof stable, and notify the DAFM local office immediately. Isolate any other horses with which the horse has had contact.
- Any directions given by the DAFM must be followed, including implementation of vector control.
- Treat the horse(s) as advised by the DAFM Authorised Officer and the attending Veterinary Surgeon.
- 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.
- 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.
- The virus can survive in blood, faeces, and tissue so all such material must be removed and destroyed promptly, and surfaces cleaned of organic matter before being disinfected.

Vaccination: There is no vaccine available for EIA. Prevention of EIA is therefore based on the establishment of freedom from infection by blood (“serological”) testing. All breeding stock are subject to EIA testing prior to mating.

Further information on EIA can be found at the following sources:

<http://www.animalhealthsurveillance.agriculture.gov.ie/individualdiseaselistings/equineinfectiousanaemia/>

<https://www.woah.org/en/disease/equine-infectious-anaemia/>

https://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/?id=169&L=1&htmfile=chapitre_eia.htm

<https://codes.hblb.org.uk/index.php/page/95>

Equine Viral Arteritis

Equine Viral Arteritis (EVA) is a viral disease that occurs worldwide in Thoroughbreds and more commonly in non-Thoroughbred Sports horses. Ireland is currently free of EVA, however, the United Kingdom, confirmed cases of EVA in 2019. The risk to Thoroughbred racehorses is increased when they encounter other breeds of horse, especially when travelling abroad to centres where Thoroughbreds and non-Thoroughbreds mix freely.

Reporting: In Ireland, EVA is **notifiable by law** under S.I. No. 130/2016 - Notification and Control of Diseases affecting Terrestrial Animals (No. 2) Regulations 2016. Under these regulations a person who has reasonable grounds to suspect that an animal or animal product is affected, or may be affected with a disease, whether by reason of an examination, test, including a laboratory test or otherwise, shall, without any delay, notify the fact or suspicion to an officer of the Minister at the local office of the Department or in cases where an official control programme is in place, to the persons or authority responsible for that control programme.

As EVA is listed under Part A of the schedule of notifiable disease, **the animal must not be moved for a period of 7 days** unless a license is granted by an Authorised Officer of the DAFM.

EVA is also an OIE listed disease and should be reported via RESPE.

Transmission: EVA spreads in two ways:

- Via the respiratory route (i.e., via droplets from coughing and snorting)
- By the venereal route during covering (or via infected semen with Artificial Insemination, or by contact with aborted foetus or other products of foaling).

Horses, once infected, will have virus circulating for up to 20 days, but about one-third of all sexually mature colts and stallions that become infected will shed infectious virus in their semen for the rest of their lives and subsequently infect susceptible mares at mating. Although most of the outbreaks of EVA will occur in the stud environment, there are crossovers with racing yards, and some of the most serious outbreaks have occurred at racetracks in North America.

Clinical signs: The more common signs include:

- Fever
- Lethargy and depression
- Oedema (swelling) of the lower limbs
- Conjunctivitis (pink eye), excessive tearing and swelling around the eye area
- Nasal Discharge
- Swelling of the scrotum in males and mammary gland in mares.
- Urticaria (a hive-like rash)
- Abortion in pregnant mares

The variety and severity of clinical signs of EVA vary from obvious infection to no signs at all. Even when there are no signs, infection can be transmitted and stallions still 'shed' the virus. These stallions and pose a significant risk of disease transmission if undetected. In pregnant mares, abortion may occur from two months of gestation through to term. EVA may, occasionally, be fatal.

Diagnosis: Laboratories can identify the presence and level of antibodies to the virus in serum and can screen for the virus in a blood sample. Other samples e.g., semen may be required, and the

trainer's veterinary surgeon should check with the laboratory. The serum neutralisation test (SNT) is the gold standard test for EVA and available at the Irish Equine Centre, Johnstown.

Biosecurity measures specific to EVA: In the case of a suspected outbreak notify your DAFM regional Veterinary Office and follow their instructions and those of the attending Veterinary Surgeon. Ensure that all local horse establishments are informed and that other trainers keep their horses away.

- Stop all movement of horses on and off the premises and seek Veterinary advice.
- Your veterinary surgeon will serologically screen all horses in the yard. Results indicating presence of antibodies are referred to as 'seropositive' and are due to three possibilities: active infection, previous infection, or vaccination.
- As a result of this testing maintain the **clinical cases** in isolation with any **seropositive** horses and keep **healthy seronegative in-contacts** of clinical cases in another separate area. Where possible separate staff and equipment should be used for the three different categories.
- Submit samples (blood or semen) for virus isolation from clinical cases.
- Repeat serological testing every 14 days, isolating any further clinical cases in the meantime and reassess the grouping based on the laboratory results.
- Continue testing until the outbreak has subsided.
- Contact all owners and trainers of horses that have left the yard during the period of risk and advise that their animals' clinical and serological status should be immediately tested; all such animals should remain in isolation until the results of the tests are available.
- Infected fillies, mares and geldings should be maintained in isolation for at least one month after they become seropositive, further tests may then be required to demonstrate their freedom from infection.
- If a colt or stallion becomes infected, every effort should be made to determine whether the animal is a semen shedder or not. The virus isolation (VI) test for EAV in semen must be performed using whole ejaculate collected at least 7 days apart. In the event of negative results for both semen samples test mating is performed on seronegative mares.
- Stables and horse transporters should be cleaned and disinfected thoroughly according to the instructions of the veterinary team.

Vaccination: The potential long-term risk that EVA imposes on the racing and breeding industries through permanently shedding stallions is such that it is essential to minimise the spread of this infection should it occur. Your veterinary surgeon will advise over the use of EVA vaccine in prospective breeding stallions whilst they are still in training and after they have blood tested seronegative, in preparation for going on to stallion duties in due course.

Further information on EVA can be found here:

<http://www.animalhealthsurveillance.agriculture.gov.ie/individualdiseaselistings/equineviralarteritis/>

<https://www.woah.org/en/disease/equine-viral-arteritis/>

<http://irishequinecentre.ie/Test/findTest?testName=Equine%20Viral%20Arteritis%20%28EVA%29>

<https://codes.hblb.org.uk/index.php/page/30>

<https://codes.hblb.org.uk/index.php/page/129>

African Horse Sickness

African Horse Sickness (AHS) is an exotic disease caused by a virus transmitted by *Culicoides* midges. AHS is absent in Ireland, has never been reported here and Ireland has OIE free status as a result.

There are 9 strains of AHS, and the severity of disease varies between each. Introduction of this disease to the Irish population of horses would have significant adverse impact - stringent and widespread animal movement restrictions would have a major impact on the racing industry.

Reporting: In Ireland, AHS is **notifiable by law** under S.I. No. 130/2016 - Notification and Control of Diseases affecting Terrestrial Animals (No. 2) Regulations 2016. Under these regulations a person who has reasonable grounds to suspect that an animal or animal product is affected, or may be affected with a disease, whether by reason of an examination, test, including a laboratory test or otherwise, shall, without any delay, notify the fact or suspicion to an officer of the Minister at the local office of the Department or in cases where an official control programme is in place, to the persons or authority responsible for that control programme.

As AHS is listed under Part A of the schedule of notifiable disease, **the animal must not be moved for a period of 7 days** unless a license is granted by an Authorised Officer of the DAFM. Reporting to RESPE is also advised.

Clinical Signs: There are four distinct forms of AHS described including pulmonary, cardiac, mixed and horse sickness fever. Clinical signs include:

- Fever (marked)
- Respiratory distress
- Coughing
- Copious nasal discharge
- Swelling of the head and eyes with conjunctivitis
- Colic
- Sudden death

Transmission:

- AHS cannot be directly transmitted from horse to horse; virus transmission occurs via midges.
- AHS may enter Ireland via infected horses, importation of infected blood products or entry of infected midges.

Control measures:

- Implement standard biosecurity procedures.
- As AHS cannot be directly spread from one horse to another without midges, disease control measures will include keeping horses protected from midges which may be carrying the virus.
- This can be partially achieved using insect repellents; or housing the horses in insect proofed accommodation; and/or eliminating the insect breeding sites such as stagnant water, water troughs and rain butts etc.
- There is no current vaccine for African Horse Sickness licensed for use in the European Union.

Further information on African Horse sickness can be found here: <https://www.woah.org/en/disease/african-horse-sickness/>

<http://www.animalhealthsurveillance.agriculture.gov.ie/individualdiseaselistings/africanhorsesickness/>

West Nile Virus

West Nile Virus (WNV) is an exotic disease never been reported in Ireland. It is a viral infection of birds, horses, and humans, spread by infected mosquitoes. WNV in horses (and other mammals) can cause fever and severe neurological disease (weakness, paralysis, convulsions).

Reporting: In Ireland, WNV is **notifiable by law** under S.I. No. 130/2016 - Notification and Control of Diseases affecting Terrestrial Animals (No. 2) Regulations 2016. Under these regulations a person who has reasonable grounds to suspect that an animal or animal product is affected, or may be affected with a disease, whether by reason of an examination, test, including a laboratory test or otherwise, shall, without any delay, notify the fact or suspicion to an officer of the Minister at the local office of the Department or in cases where an official control programme is in place, to the persons or authority responsible for that control programme.

As WNV is listed under Part A of the schedule of notifiable disease, **the animal must not be moved for a period of 7 days** unless a license is granted by an Authorised Officer of the DAFM.

Clinical Signs: The horse is very susceptible to infection, but most cases are sub-clinical i.e., show no signs. Some cases develop a fever and clinical signs associated with inflammation of the brain (encephalitis). Signs of encephalitis can include incoordination, recumbency (inability to stand), impaired vision, muscle twitching, aimless wandering or circling in the stable. Some horses may be listless and depressed and some show signs of hyper-excitability.

Transmission: transmission is via biting mosquitoes which are infected with the virus.

Biosecurity measures specific to WNV:

- Blood samples should be taken from suspected clinical cases to confirm the cause of the infection whilst providing supportive therapy.
- As the virus can only be spread from one equine host to another by a mosquito vector, disease control and disease prevention involve keeping horses away from the disease carrying mosquito.
- This can be partially achieved using insect repellents, use of insect screens and/ or eliminating mosquito breeding sites such as stagnant water, rain butts etc.
- A vaccine approved for use in the European Union, is available to protect horses against the emerging disease of WNV. It may be prudent to make use of this vaccine and any trainer considering using the vaccine would need to be directed by advice from their Veterinary Surgeon and the DAFM.

Further information on Equilis West Nile® Vaccine can be found here: https://www.ema.europa.eu/en/documents/overview/equilis-west-nile-epar-summary-public_en.pdf

Further information on WNV may be found here:

<http://www.animalhealthsurveillance.agriculture.gov.ie/individualdiseaselistings/westnilefever/>

Equine Piroplasmosis

Equine Piroplasmosis is principally a tick-borne protozoal disease that occurs sporadically in Ireland. The most recent confirmed case was an isolated case in an imported mare and her foal in 2019. As it is endemic in many European countries, the tropics and sub-tropics, there is a considerable risk of the disease being imported and subsequently spread in Ireland. Horses travelling abroad to race usually require a negative blood-test for antibody levels against this disease before being permitted to be exported (e.g., to North America).

Clinical signs: In the more acute form clinical signs include:

- High temperature
- Severe anaemia
- Jaundice
- Haemoglobinuria (red blood pigment in the urine)

This disease can be fatal with a mortality of up to 60%. Racehorses are exposed to the stress of transportation and/ or the exertion of intense exercise are at increased risk of severe disease.

Transmission: The disease is spread by the transfer of infected blood, principally by blood-sucking ticks but also via contaminated equipment. While the species of ticks which carry the protozoa are not thought to be present in Ireland, there is a potential risk of importing ticks on live animals and within organic material such as hay from countries where the disease is endemic.

Testing: Diagnosis is made on PCR and ELISA.

Treatment: Drugs are available to promote a clinical cure, but it is very difficult to prevent the 'carrier' state from developing. These cases may be carriers for life and the drugs are prone to producing adverse side effects and so prevention of disease remains paramount.

Biosecurity/ control measures specific to EP:

- Always use a new sterile needle and syringe for injections, regardless of route of administration. Note: Intra-venous injections should not be performed by lay-persons (Non-veterinarians) in Ireland.
- Clean and disinfect equine dental and surgical equipment between horses
- Pyrethroids are effective in reducing host exposure to ticks.
- Contact your Veterinary Surgeon if your horse is sick and has signs of fever, reduced feed intake or lethargy, particularly following travel to or from an endemic country.
- Examine recently imported horses for tick presence.

Further information on EP can be found here:

<https://aaep.org/horsehealth/faq-regarding-equine-piroplasmosis-ep>

<http://www.animalhealthsurveillance.agriculture.gov.ie/individualdiseaselistings/equinepiroplasmosis/>

<https://www.woah.org/en/disease/equine-piroplasmosis/>

Useful contacts:

Irish Horseracing Regulatory Board Veterinary Department: e-mail equine@ihrb.ie, telephone 045 445 600

Irish Equine Centre: email iec@irishequinecentre.ie, telephone 045 866 266

Department of Agriculture Food and Marine (DAFM): To report a notifiable disease e-mail. ndcc@agriculture.gov.ie or Telephone 01 607 2512 (during office hours) and 01 492 8026 (outside of office hours).

DAFM Head Office

Address: Agriculture House, Kildare Street, D02 WK12

Website: www.gov.ie/agriculture/

Email: info@agriculture.gov.ie

Phone number: [+353 1 607 2000](tel:+35316072000)

DAFM Regional Veterinary Offices (RVOs)

REGIONAL VETERINARY OFFICE - CAVAN/MONAGHAN/TIPPERARY/OFFALY/WESTMEATH/ROSCOMMON

Address: Department of Agriculture, Food and the Marine, Cavan Office, Government Buildings, Farnham Street, Cavan

Phone number: [+353 \(0\) 49 4369798](tel:+3530494369798)

REGIONAL VETERINARY OFFICE - CORK/KERRY

Address: Department of Agriculture, Food and the Marine, 4th Floor, Hibernian House, 80 South Mall, Co Cork

Phone number: [+353 \(0\) 21 4851400](tel:+3530214851400)

REGIONAL VETERINARY OFFICE - DONEGAL

Address: Department of Agriculture, Food and the Marine, Meeting House Street, Raphoe, Co Donegal

Phone number: [+353 \(0\) 74 917 3600](tel:+3530749173600) [+353 \(0\) 74 917 3601](tel:+3530749173601)

REGIONAL VETERINARY OFFICE - KILDARE/DUBLIN/WICKLOW WEST/LAOIS/CLARE/LIMERICK

Address: Department of Agriculture, Food and the Marine, Poplar House, Poplar Square, Naas, Co. Kildare

Phone number: [+353 \(0\) 45 873035](tel:+353045873035)

REGIONAL VETERINARY OFFICE - LEITRIM/ LONGFORD/ SLIGO

Address: Derryhallagh, Drumshanbo , Leitrim

Phone number: [+353 \(0\) 71 968 2000](tel:+353(0)719682000)

REGIONAL VETERINARY OFFICE - MAYO/GALWAY

Address: Department of Agriculture, Food and the Marine, Michael Davitt House, Castlebar, Co. Mayo

Phone number: [+353 \(0\) 94 9035300](tel:+353(0)949035300)

REGIONAL VETERINARY OFFICE - MEATH/LOUTH

Address: Department of Agriculture, Food and the Marine, Government Offices, Athlumney, Kilcarn, Navan, Co. Meath

Phone number: [+353 \(0\) 46 9079030](tel:+353(0)469079030)

REGIONAL VETERINARY OFFICE - WATERFORD/KILKENNY/WEXFORD/CARLOW/EAST WICKLOW

Address: Local Office Administration Unit, Department of Agriculture, Food and the Marine, Old Knockmay Road, Portlaoise , Co. Laois

Phone number: [+353 \(0\) 51 31 2300](tel:+353(0)51312300)