

Summary

Horses as our companions, athletes and breeding stock are exposed to a range of infectious disease risks in their day to day life. Vaccination for important equine diseases not only offers protection for horses but it is a mandatory requirement at some breeding establishments and for participation in many equine sporting events. Industry standards highlight the importance of vaccination in safeguarding the health and welfare of horses, which is at risk when groups of horses gather. All vaccines available in the UK have undergone independent regulatory approval and meet strict quality, safety and efficacy standards. Continued investment in vaccine research and development means that vaccines are available to meet the diverse needs of horses in the UK.

Introduction

When we consider the broad range of activities our horses take part in, it is unsurprising that we need a corresponding range of vaccines to meet the challenges faced by horses at home and when travelling in the UK and abroad. These threats include important viral and bacterial infectious diseases, which not only directly impact their health and welfare but they also disrupt competition and breeding schedules. Vaccination makes a significant positive contribution not only to the health and welfare of individual horses, but also protects the broader equine competition and breeding industries.

Regulation of Equine Vaccines

Veterinary vaccines on the market today represent the end result of years of innovative research and development. When new vaccines are developed they are independently assessed by the regulator - the Veterinary Medicines Directorate (VMD) in the UK or by the European Medicines Agency (EMA). Veterinary vaccines, just like vaccines for people, must meet specified high standards of safety, efficacy and quality before they are authorised for sale and use. As for all medicines, authorised vaccines have been assessed as having greater benefits for the animal population that exceed any risk. All equine vaccines on the UK market are classified as POM-V medicines, which means that

they must be prescribed by a vet. Even after authorisation, all medicines including vaccines are subject to a process of continual improvement whereby their safety and efficacy is monitored – this is called [pharmacovigilance](#).

Vaccines for Equine Infectious Disease

Vaccination plays a major role in controlling endemic infectious diseases which occur in the UK today. They can reduce the risk of disease outbreaks, reduce the spread of disease during an outbreak or reduce the severity of illness in affected animals [1-3]. An important equine vaccine that is recommended for all horses is tetanus. Additionally, in consultation with your vet, vaccination against equine influenza 'flu', equine herpes virus and strangles may also be appropriate. Indeed it is well recognised that outbreaks of highly infectious diseases such as flu, herpes and strangles can have serious consequences for animal welfare, breeding, training and racing activities.

Tetanus is a serious and very often fatal disease in horses. It is caused by a bacterium *Clostridium tetani*, which is found in the soil and can cause a problem when bacteria enter a wound, however minor. The bacteria can then produce a toxin, which affects the nervous system causing a range of clinical signs associated with muscle stiffness including a rocking horse stance, lock jaw and facial changes such as stiff ears and flared nostrils. The condition progresses to muscle spasm, paralysis of the muscles used for breathing and death. As horses can easily suffer from such injuries, in an environment where the bacteria are found, they are at risk of this frequently fatal disease [1]. By far the best approach is prevention through an effective vaccination programme.

Equine influenza or flu as it is more commonly known is a highly contagious viral respiratory disease. An outbreak of flu can spread quickly in unvaccinated horses because it can be spread not only via airborne nasal secretions but also by direct contact and indirect contact via handlers [1]. Vaccination therefore plays a very important role to prevent these outbreaks in the

first instance. Once infected, some horses can develop secondary infections such as pneumonia [1, 2].

In consultation with the vet, there are a range of vaccines that are recommended for horses depending on their individual circumstances and risk factors e.g. breeding stallions/brood mares and those travelling for competition at home and abroad. Vaccines available include those for Equine Herpes Virus (EHV-1, EHV-4), Equine Viral Arteritis (EVA), Equine Rotavirus, *Strep equi equi* (Strangles) and Equine Rotavirus.

Industry codes of practice are available for the most important infectious diseases which can impact greatly on the breeding and racing seasons [4]. Vaccination is recommended for EHV and the codes of practice state that *'the most important ways to prevent EHV infection are good management of breeding stock, good hygiene at all times, especially during breeding activities, and regular vaccination of all equine animals as part of a good biosecurity protocol'* [4]. In the case of EVA, routine vaccination is particularly recommended for stallions and teasers [4].

Equine Vaccination

Vaccination programmes should be tailored to meet the expected disease threats faced by horses. Following veterinary advice, vaccination schedules including primary courses and boosters are followed to meet manufacturers' recommendations for individual products. Importantly for equine athletes, many sporting organisations request passport evidence of vaccinations to enter their stables and compete in events [5].

Vaccination is a safe, practical and cost effective way to help protect the health and welfare of all horses, along with good biosecurity and hygiene measures. When population levels of vaccination are high, there is also an added benefit of community protection known as 'herd immunity' which means the risk of an outbreak in any given area, where a high number of horses are vaccinated, is lowered.

The impact of infectious disease on equine welfare can be considerable. We have a legal and moral responsibility to protect the animals in our care from pain, suffering and disease [6]. When we consider the importance of the equine breeding and sporting sectors it makes good sense to prevent suffering and avoid economic losses when possible.

Conclusions

- Vaccines, together with good biosecurity and hygiene, protect our horses from diseases that can greatly impact their welfare and result in losses to the breeding and sporting sectors.
- Vaccines are a safe, practical and cost effective way to control or mitigate the impact of infectious disease outbreaks.

- Some vaccines are recommended for all horses, whilst others are recommended based on individual risk factors.
- Consultation with your veterinary surgeon is important to decide on the most appropriate vaccines and vaccination schedules for horses in your care.
- Participation in many equine sporting events requires mandatory passport evidence of vaccine status.
- All veterinary vaccines on the UK market meet rigorous safety, efficacy and quality standards though independent regulatory oversight.

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What is NOAH? The National Office of Animal Health Ltd represents the UK animal medicine industry: its aim is to promote the benefits of safe, effective, quality medicines for the health and welfare of all animals. For further information, including more briefing documents on animal medicines topics see www.noah.co.uk and follow @UKNOAH on Twitter.

(For more information on veterinary vaccines and the regulation and safety of veterinary medicines see NOAH briefing documents on Vaccines and Vaccination: an overview, Dog Vaccination, Cat Vaccination, Rabbit Vaccination, Farm Animal Vaccination, Pharmacovigilance and Controls on Veterinary Medicines).

References:

1. British Horse Society (BHS) advice on vaccinations: www.bhs.org.uk/welfare-and-care/horse-health-and-sickness/vaccinations
2. British Equine Veterinary Association (BEVA): www.beva.org.uk/Home/Resources/Resources-for-Owners/Maintaining-A-Healthy-Horse
3. Horserace Betting Levy Board (HBLB), infectious disease programmes: <http://www.hblb.org.uk/page/62>
4. HBLB Codes of Practice: <http://codes.hblb.org.uk/>
5. FEI vaccination requirements: <https://inside.fei.org/fei/horse-health-and-welfare/int-health-requirements/vaccinations>
6. Animal welfare guidance and legislation: www.legislation.gov.uk/ukpga/2006/45/contents www.gov.uk/guidance/animal-welfare