



Development of vaccinations has resulted in there being protection available for an increasing number of infectious diseases in horses. Recently concerns have been raised about potential 'over vaccination' of people and animals and this has led to development of the concept of tailored vaccination protocols. If your horse is not likely to be exposed to a disease there is little point in vaccinating them against it. Your vet will be able to advise you on the most appropriate choice of vaccine for your horse weighing up the benefits of protection against any risk associated with the vaccine.

### What is a vaccination protocol?

An optimal vaccination program:

- Maximizes the number of animals within the population that receive vaccination.
- Ensures that only animals that have a realistic risk of contracting disease are vaccinated.
- Minimizes the total number of vaccinations each animal receives in a lifetime.

There is minimal benefit to be derived from vaccinating an individual with an antigen for which likelihood of exposure is low and where clinical disease is, in any case, mild.

In almost all cases horses should be vaccinated against the major infectious diseases, equine influenza (flu) and tetanus. Vaccinations are given to foals from 3-5 months of age. With the first booster 6 months later and annual boosters thereafter. To achieve full protection, adult horses whose vaccination status is unknown require 2 injections with an approximate 4-6 week interval.

There is continued debate about the appropriate intervals for booster vaccinations in order to maintain immunity against the full range of infectious diseases in all individuals. Current recommendations are for revaccination every 6 months against strangles (except in high risk situations where more frequent vaccinations, every 3 months, may be given) and at intervals of 1-3 years against tetanus (this varies depending on the brand and the disease (for which protection is required)).

### Are vaccines safe?

Vaccination is an essential part of a healthcare program for domestic horses. The ideal strategy maximises the beneficial effects of vaccination whilst minimising risks to the patient. This means ensuring that not only does each individual receive only the most appropriate vaccinations, but that these vaccines are effective. The effectiveness of vaccines can be reduced by poor storage and inappropriate administration techniques but is also determined by the health of the animal being vaccinated. For this reason your vet will perform a full clinical examination before vaccinating your horse so that signs of disease are detected and appropriate action can be taken. Vaccination of an individual already incubating infectious disease is unlikely to be effective. The ability of an animal to mount an adequate response to vaccination can also be affected by poor nutrition, concurrent drug therapy, eg immunosuppressive drugs, and 'stress'.

Remember that even with the strictest attention to correct administration, a small number of individuals may fail to respond to any vaccine.

### What is an adverse event?

An adverse event is defined as "any undesirable occurrence after the use of a vaccine - whether or not the product causes the event". Reactions to vaccines can be divided into 3 groups:

- Acute - occurring within 24-72 hours of vaccination and may be confined to the site of vaccination, eg swelling of site and neck stiffness; alternatively may affect body, eg wheals on the skin. Severe allergic reactions are very rare but most vets will ask to watch the horse closely for around 30 mins after vaccination (particularly if a new vaccination is being given).
- Medium-term - delayed immune response occurring 1-6 weeks after vaccination. These reactions may include suppression or stimulation of the immune response, eg development of joint stiffness or other diseases of the immune system.
- Chronic - often years after initial vaccination.

### Can vaccination harm the immune system?

Many vaccines are able to protect against more than one disease with a single injection. There is increasing concern that the more diseases protected against by a vaccine the greater the risk of adverse



reaction. Suppression of the immune system as a result of vaccination is greater when vaccines with a number of components (multivalent) are used. Some vets now use vaccines protecting against a single disease - however if you choose this route your horse would have to have more individual injections to provide it with complete protection.

### **Why should I vaccinate my horse?**

There is no doubt that vaccines have been the key factor in the control of serious infectious diseases and have played an important part in health improvement. The control of infectious disease in man is a 'population issue' - the Government sets target for vaccinations in children (over 90%), in order to achieve population immunity. The situation in veterinary medicine is different. Horse owners pay to have their horse protected by vaccination - not to protect the general horse population. This means that vaccination policy for horses is based on the worst responders so that all vaccinated horses are continually protected. Vaccination of horses is therefore more akin to the vaccinations we have before travelling abroad to protect our families and ourselves.

Tetanus infection is acquired from environmental contamination so all horses are at risk, other diseases such as equine flu and strangles are very contagious between horses and regular vaccination is especially important in horses living in groups. Many competitions require proof of equine flu vaccination. It is wise to ensure vaccinations are up to date before exposing your horse or pony to any situation where it will mix with large numbers of horses from different environments.

### **Does my horse need a booster?**

Protection afforded by vaccination is not necessarily life-long. The duration of immunity varies depending on the circumstances of the individual animal and the vaccine used. Long-term protection afforded by vaccinations varies according to the manufacturer and the antigens contained. The level of infection in the environment of many of the diseases against which we vaccinate is low. This means that it is unlikely that a vaccinated animal will come into contact with the wild strain virus sufficiently frequently to receive natural boosts to its immunity. Repeated vaccination is necessary to maintain adequate antibody levels in these cases.

**If you want any other information on health issues concerning your horse please contact Hampden Veterinary Hospital on 01296 423666 and we will be happy to advise you.**