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YOUR HENDRA VIRUS VACCINE QUESTIONS ANSWERED

Equivac® HeV is a new vaccine recommended for use in horses that is effective against the deadly Hendra Virus (HeV). The vaccine was launched at the beginning of November 2012 and it is now available nationwide through accredited Veterinarians. Equivac® HeV interrupts the cycle of HeV transmission from the flying fox to the horse and also from the horse to human. Equivac® HeV has great benefits for horse welfare and for human health.

The risk of HeV in horses has to date been managed through increased hygiene and cleaning practices and various recommendations around paddock management. Horse feed and water troughs that are beneath trees should be moved under shelter to avoid possible contamination by flying fox fluids. Restricting horse access under trees where flying foxes are known to roost, stabling at night, and quarantining sick horses is also recommended. Unfortunately, HeV has still claimed the lives of horses despite these sound management practices being adopted. To date there have been about 80 known HeV horse fatalities with more than 30 of these deaths recorded in 2011 and 2012. Equivac® HeV vaccination is now recommended in conjunction with hygiene and paddock management to provide a more robust barrier to the fatal consequences of HeV infection.

Human HeV disease risk is currently managed through increased hand hygiene and minimising contact with horses' blood, nasal discharge and other body fluids at all times. There have been seven confirmed cases of HeV infections in humans, with fatality in four of these people.

Although Veterinarians treating sick horses are at the greatest risk of being exposed to the virus, infection risk also exists for horse owners, their families, and staff that may be in contact with a HeV infected horse. Equivac® HeV vaccination affords humans greater protection against the risk of HeV infection by blocking transmission of HeV from the horse to human.

Equivac® HeV vaccination is the most effective tool that the horse industry has been provided with in the fight against the deadly HeV. The decision to vaccinate requires careful consideration of the risk that HeV poses to your horses and to the people who own and care for them. In order to make an informed decision you also should consider the available information known about Equivac® HeV vaccination. Your Veterinarian is the best person to guide you through the decision making process. Below are some of the most frequently asked questions and answers about Equivac® HeV vaccination of horses.

What is the Equivac® HeV Vaccine?

Equivac® HeV vaccine is a 1ml vaccine that aids in the protection of HeV disease in healthy horses from 4 months of age. Horses will initially be vaccinated with 2 doses, 21 days apart, with the onset of immunity occurring 21 days after the second dose. The vaccine contains a non-infectious protein component of the virus.

How does the vaccine work?

The vaccine stimulates the production of protective antibodies. If the horse is subsequently exposed to HeV, the antibodies will bind the viral particles preventing them from establishing active infection in the horse. The viral particles bound to the antibody are then further eliminated by the immune system.

How effective is the vaccine?

Initial trials have shown complete protection when vaccinated horses were exposed to a lethal dose of HeV. All vaccinated horses were protected from disease and there was no evidence that infection had been established or that virus was shed from these horses. The trials show that the vaccine will be extremely effective in the prevention of HeV disease in horses and in the prevention of HeV transmission from horse to horse and from horse to human.

How does HeV vaccination of horses protect human life?

The only recognised pathway of transmission of HeV to people is from contact with infected horses. Vaccination of horses will therefore provide

protection to people by interrupting HeV transmission from flying foxes to horses, and then to humans. However, widespread uptake of vaccine would be necessary for Equivac® HeV to have a significant impact on human health.

Is the vaccine safe to use?

Yes. Safety studies have been conducted in horses greater than 4 months of age, and these studies showed no significant adverse reactions associated with the use of Equivac® HeV. Minor side effects that have been reported include small injection site reactions (lumps) that are not painful and that persist for only a few days. Field data from approximately 8000 horses vaccinated to date indicates that only 0.2% of doses resulted in minor side effects following administration.

Can the vaccine cause HeV infection?

No. Equivac® HeV is not a live vaccine and it cannot cause clinical disease. Live virus is not used at any stage in the production of the vaccine. Equivac® HeV is known as a “subunit” vaccine, other “subunit” vaccines used in horses include Equivac® Strangles vaccines.

Can other vaccines be given at the same time?

There has been no safety work done looking at concurrent use of Equivac® HeV and Equivac® Tetanus/Strangles. This will be looked at in the future. It is however not expected that concurrent use of different vaccines would reduce the effectiveness of each vaccine component. The concurrent use of different vaccines may increase the chance of vaccine reactions such as minor swelling, pain and fever.

Can I vaccinate my foal?

Yes. Foals can be vaccinated from 4 months of age with 2 doses 21 days apart. Thoroughbred foals to be registered with the ASB must only be microchipped with an ASB assigned microchip.

Is the vaccine safe to use in pregnant broodmares?

There is no safety data available supporting the use of Equivac® HeV in pregnant mares, and consequently there are no associated label recommendations. The safety trials will take some time to complete and the data is not expected until 2014. For this reason, owners and veterinarians may choose to not vaccinate breeding stock.

Many Veterinarians and scientists do not expect that this vaccine will be problematic for use in breeding animals, as other subunit vaccines such as Equivac® Strangles vaccines are safely used in pregnant mares. However, the safety study data will be necessary to verify this prior to a label recommendation in breeding animals.

The decision to vaccinate pregnant mares at this early stage should be made on the balance of risk of HeV infection against the risk of possible vaccine

related side effects on a pregnancy. Pregnant mares are currently being vaccinated in high-risk areas of Qld and any adverse reactions on pregnancy will be notified. This anecdotal information will be provided to Veterinarians. Some owners and Veterinarians may choose to vaccinate brood mares immediately after foaling.

Can vaccination adversely affect a horse's suitability for export?

Yes it can, but only for export to certain regions such as Hong Kong, China, Singapore, Malaysia, Indonesia and the UAE. Currently export to Great Britain, Europe and America would not be compromised by vaccination. Each country of export will have their own specific import quarantine requirements. If a horse is a candidate for export in the short to medium term then the exact requirements should be ascertained through communication with Commonwealth DAFF and through international horse shipping companies prior to administering Equivac® HeV.

Vaccination will result in antibodies that can be detected in a blood test precluding export to certain regions. The CSIRO have developed a test that can distinguish vaccinated from natural HeV antibodies (DIVA), this test is not yet available commercially. Once the DIVA test is available it will solve the export problem. Alternatively it is likely that some regions will implement policy that requires vaccination as a condition of quarantine prior to export.

Can vaccination have an adverse effect on performance?

This is very unlikely given how safe the vaccine is and the reporting of only minor vaccine reactions to date. However, in line with other vaccination recommendations, it is wise to avoid administering Equivac® HeV within 3 days of competition in case transient minor pain develops at the injection site.

How do I know if my horse should be vaccinated?

You should discuss the suitability of vaccination of your horse with your Veterinarian. From a public and equine health point of view, it is strongly recommended that horses are vaccinated against HeV in Qld and NSW where there have been a previous outbreaks. Horse owners in other areas need to take into account the movement of their horse, bat population density, and the interaction of the two species when making an assessment as to whether they should vaccinate.

How is the vaccine administered?

The vaccine may only be administered by an accredited Veterinarian via intramuscular injection into the side of the neck. Two 1ml doses are given at an interval of three weeks.

How many doses are required in the initial course?

A primary then a secondary dose exactly 21 days later are required to complete a course. It is condition of the APVMA permit that the second dose is given exactly 21 days later, without exception. Periodic boosters will then be required.

Why the strict requirement around 21 intervals between the primary and secondary dose?

This is a requirement of permit, and it is based on the clinical trials to date. As more data comes to hand this precise requirement may become softened. Currently there is no flexibility around the 21-day interval between first and second doses. It is essential that when making an appointment for your primary vaccination that you ensure your availability for the second dose, and make this appointment at the same time.

What is the duration of immunity and when do booster doses need to be given?

Booster vaccine doses will need to be administered either 6 monthly or yearly depending on the clinical trial work that is being conducted now. This information will come to hand in February 2013 prior to the earliest requirement for a booster dose.

Does a vaccinated horse need to be microchipped?

Yes. It is a requirement that all vaccinated horses are microchipped. If your horse is already microchipped it will not require a second chip.

How do I get my horse vaccinated?

Equivac® HeV is only available from accredited Veterinarians. There are over 1000 accredited Veterinarians in Australia who have completed training. Contact your local Veterinarian if you are interested in vaccination.

Why is this vaccine available from Vets only?

This is a condition of the Government's regulatory body that registers Veterinary medications (APVMA) that has allowed the vaccine to come to market under a special permit. Only accredited Veterinarians can administer the vaccine. This is to ensure that the vaccine is handled and stored correctly, that only healthy horses are vaccinated, and to ensure that the requirements of the central data registry are upheld.

Is the vaccine likely to become an 'Open Seller' in the future?

No. Due to the public health benefit of this vaccination and the importance of a national registry it is not likely to become a non-Veterinary vaccine in the future.

What is the cost of the vaccine?

Pricing will vary between Veterinarians and will depend on the number of horses and the location. On average the cost of the vaccine is not more than the cost of a shoeing.

Is the vaccine compulsory?

No. At this stage there is no mandatory requirement to vaccinate your horse. It may become compulsory in the future at certain industry levels to ensure the safety of people and the welfare of horses.

How can I prove that my horse is vaccinated?

There are two ways that HeV vaccination status can be verified; firstly following completion of the vaccination course a certificate will be emailed to you. Your horses will also be recorded on a central database with the microchip used to identify the horse. Accredited veterinarians and Government authorities have access to this database can check your horse's microchip number against the database to check vaccination status.

Who can access the vaccination data on the registry?

At the moment only accredited veterinarians and government have access to the registry. It is very likely that read only access would become available to horse industry groups in the future.

Is there a way to differentiate infected animals from those that have been vaccinated?

Vaccinated horses must be microchipped and their details will be entered into a national register system. A vaccination certificate will be provided to the owner. If there is any confusion about the vaccination status of a horse involved in an outbreak of HeV, blood samples can be taken to differentiate naturally infected from vaccinated horses.

Is my horse guaranteed to be protected against HeV infection after vaccination?

As with all vaccinations, protection against HeV cannot be guaranteed by vaccination, however the clinical trial work to date has shown complete protection in vaccinated horses. As with all vaccines the animal's ability to respond can vary and it is often reduced when the animal is stressed or unwell.

Do I still need to be vigilant?

Yes. Vaccination is not a replacement for hand hygiene, minimisation of contact with horse's body fluids and extreme caution when handling sick horses.

Will a human vaccine be produced in the future?

This is unlikely. Fortunately, the vaccination of horses provides human protection. However, widespread uptake of Equivac®c HeV would be necessary for protection of human life.



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