

The Hendra vaccine: your questions answered



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How effective is the Hendra vaccine? Will the vaccine affect my horse's performance? Can I still export my horse if he has been vaccinated? Is the vaccine safe to use on pregnant broodmares and youngstock? How much should it cost?

Tired of wading through the gossip and misinformation? All your Hendra vaccine questions answered here...

With special thanks to
Dr Nathan Anthony BVSc (Hons) MANZCVS

What is Hendra?

Hendra is a very serious disease that was first discovered in September 1994 during an outbreak that resulted in the deaths of thirteen horses and a trainer in the Brisbane suburb of Hendra, Queensland.

To date, there have been seven confirmed cases of Hendra infection in humans, and four people have died after being infected with the Hendra virus, making Hendra one of the deadliest diseases in the world.

Outbreaks of Hendra disease have been reported throughout Queensland and New South Wales as far south as Kempsey. However, in January 2013, Hendra virus was detected in a flying fox in South Australia.

How is Hendra spread?

The Hendra virus occurs naturally in all four mainland species of fruit bats, and can pass to horses when the bats shed the active virus in bodily secretions.

The virus is zoonotic, meaning that it can then pass from the infected horse to humans through contact with infected saliva, blood and mucus.

What are the symptoms?

One of the dangers with Hendra is that symptoms can initially be so vague or mild that cases have been mistaken for other conditions, such as colic and snakebite. By the time you realise you are dealing with a Hendra case, human exposure may have already occurred.

If you have an unvaccinated horse that displays any of the symptoms listed below, always keep your own safety in mind. Contact your vet immediately, and use personal protective equipment including face mask, goggles and gloves when handling any sick horse.

Common clinical signs in horses include any one or combination of the following:

- Acute onset of illness
- Increased body temperature
- Increased heart rate
- Discomfort or weight shifting
- Depression
- Rapid deterioration

How can I reduce the risk of my horse contracting Hendra?

Fruit bats have been known to travel up to 40km from their colony at night to feed, so you might not be aware of bat activity on your property.

Vaccinating your horse with the Hendra vaccine is the single most effective way of preventing your horse from dying from Hendra disease. Talk to your veterinarian now about vaccinating your horse.

The Hendra vaccine (Equivac HeV)

What is the Equivac HeV vaccine?

Equivac HeV vaccine is a 1ml vaccine produced by Zoetis (formerly Pfizer Animal Health) that aids in the prevention of Hendra infection in healthy horses from four months of age.

Horses will initially be vaccinated with two doses, 21 to 42 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 Hendra, 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?

Clinical trials have shown complete protection when vaccinated horses were exposed to a lethal dose of Hendra virus.

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 Hendra disease in horses and in the prevention of Hendra transmission from horse to horse, and from horse to human.

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 Hendra in Queensland and New South Wales, where there have been a number of 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 deciding whether they should vaccinate.

Is my horse guaranteed protection against Hendra if I choose to vaccinate?

As with all vaccinations, protection against Hendra cannot be guaranteed by vaccination, however 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.

Vigilance is still important. Vaccination is not a replacement for hand hygiene, minimisation of contact with the horse's bodily fluids, and extreme caution when handling sick horses.

How much will it cost to vaccinate my horse?

Pricing will vary between veterinarians and will depend on the number of horses being vaccinated, and the location.

On average, the cost of the full course of vaccination is equivalent to the cost of two shoeings.

Administering the vaccine

How is the vaccine administered?

The vaccine is administered via intramuscular injection into the side of the neck.

Two 1ml doses must be given between 21 and 42 days apart to complete the course. This is a legal requirement, and is based on clinical trials to date.

Periodic boosters will then be administered. Currently, these doses will be required at six monthly intervals.

What is the duration of immunity?

The duration of immunity has been proven to be a minimum of six months.

Research is ongoing to assess immunity at twelve months.

Booster injections will need to be given either six monthly or annually depending on the outcome of this research. The decision will be made by the Commonwealth government's regulatory body, APVMA.

Does my horse need to be microchipped?

Yes, it is a requirement that all vaccinated horses are microchipped, to ensure correct identification on the vaccine registry.

If your horse is already microchipped, it will not require a second chip.

Why can't I administer the vaccine myself?

Equivac HeV can only be administered by accredited veterinarians, 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.

This will ensure that the vaccine is handled and stored correctly, that only healthy horses are vaccinated, and that the requirements of the registry are upheld.

Due to the public health implications of this vaccine and the importance of maintaining the registry, Equivac HeV is unlikely to become available to non-veterinarians in the future.

Safety concerns

Is the vaccine safe?

Yes. Equivac HeV is a safe and highly effective tool against Hendra infection.

Safety studies have been conducted in horses greater than 4 months of age, and these studies have shown no significant adverse reactions associated with the use of Equivac HeV.

Minor side effects that have been reported have included small injection site reactions (painless lumps that subside after a few days).

To date, only 0.2% of doses resulted in minor side effects, based on field data from more than 60,000 horses vaccinated.

Can the vaccine cause Hendra 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.

How will vaccinating my horse protect human life?

The only recognised pathway of transmission of Hendra to people is from contact with infected horses.

Vaccination of horses will therefore provide protection to people by interrupting Hendra transmission from flying foxes to horses, and then to humans.

Can vaccination affect my horse's 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 seven days of competition in case mild temporary soreness develops at the injection site.

Is the vaccine safe for use in foals?

Yes. Foals can be vaccinated from 4 months of age with two doses, between 21 and 42 days apart.

Thoroughbred foals to be registered with the Australian Stud Book must only be microchipped with an ASB assigned microchip.

Is the vaccine safe for use in pregnant broodmares?

There is no safety data currently available supporting the use of Equivac HeV in pregnant mares, and consequently there are no associated label recommendations. The decision to vaccinate pregnant mares should be made by weighing the risk of Hendra infection against the risk of possible vaccine related side effects on the pregnancy. It is worth noting that many owners are choosing to vaccinate their pregnant mares, including prominent thoroughbred stud Coolmore, where over 400 mares have been vaccinated.

Export restrictions

At present, vaccinated horses can be exported to most countries, including the major destinations of New Zealand, Hong Kong, the United Kingdom, the European Union, USA and Canada.

However, China, Malaysia, Indonesia, Singapore and the United Arab Emirates have specific limitations regarding Hendra and the importation of horses.

The Australian Government is in discussions with these countries regarding the approval of importation of vaccinated horses.

In the meantime, export of vaccinated horses will be managed on a case by case basis. Dispensation can be requested.

If you are planning to export your horse to any of these countries in the short term, it is imperative that you discuss the issue with your international horse shipping agent PRIOR to administering Equivac HeV.

Is the vaccine compulsory?

The Commonwealth Government has not introduced mandatory Hendra vaccination requirements.

However, individual equestrian associations and industry bodies can introduce mandatory Hendra vaccination within their organisation. For instance, Equestrian NSW have mandated compulsory vaccination at their events, and Racing QLD have announced that they are committed to introducing mandatory vaccination in the near future. Many private riding schools and agistment properties have also made vaccination a compulsory requirement.

Contact your equestrian organisation directly to enquire about their policy on Hendra vaccination.

My horse has been vaccinated. Now what?

How can I prove that my horse has been vaccinated?

There are two ways that your horse's vaccination status can be verified;

1. Following completion of the vaccination course, a certificate will be emailed to you, and
2. Your horse's microchip number will be recorded on the central database.

Who can access the vaccination data on the registry?

Every dose of the Hendra vaccine administered, along with the horse's microchip number, is recorded on a central database that can be accessed by the general public. Only registered veterinarians can update any of the information listed on the database.

Is there a way to tell the difference between vaccinated and unvaccinated horses?

Vaccinated horses must be microchipped and their details entered into the national registry. A vaccination certificate will also be provided to the owner.

If there is any confusion about the vaccination status of a horse involved in a Hendra outbreak, blood samples can be taken to differentiate naturally infected horses from vaccinated horses.

Vaccination is the single most effective way to prevent Hendra infection in you and your horse.

Talk to your veterinarian about vaccination today.



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