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HENDRA VIRUS AND VACCINATION

What is Hendra virus?

Hendra is a deadly viral disease of horses that was first identified in the Brisbane suburb of Hendra in 1994, where a horse trainer died from catching the disease. The virus belongs to the family *Paramyxoviridae*.

How is it thought to be spread?

The reservoir of the virus is fruit bats. This means that the bats are a 'host' for the virus and bats do not become unwell from the disease. So you will not necessarily see dead bats around as a sign of the disease being present. The virus is thought to be shed in body fluids of bats, such as urine and faeces, and regurgitated food, however the birth fluids of bats have also been linked with disease outbreaks. Horses are thought to contract the virus by ingesting urine, faeces or birth fluids of bats, which may occur accidentally if their feed or water is under a tree where bats are roosting. Humans cannot contract the virus directly from bats as far as we know, however there are a lot of other illnesses human can catch from bats, including Lyssavirus which is similar to Rabies and can be fatal. It is best NOT to approach or handle bats unless you are vaccinated against Lyssavirus. Hendra virus can be spread from horse to horse through respiratory secretions (from coughing or sneezing) and can also be spread from horses to humans. The incubation period of the virus is 8-16 days which means it can take 1-2 weeks from when a horse is exposed to the virus before it develops signs of the disease that we can see. The scary part is that horses have been found to 'shed' the virus before they become unwell, which means that they can spread the disease to other horses or humans before they even look sick.

What are the clinical signs?

Initially the clinical signs, or symptoms, appeared to involve the respiratory and/or the neurological systems. Respiratory means that horses would have a runny nose, which may be clear fluid or foamy, have coughing and sneezing and difficulty breathing. Neurological means that the horse would be wobbly and have trouble standing properly and may be lying down and not be able to get up. They may also appear depressed and not respond normally to you. Horses would often have a fever (raised body temperature) but not always. However ANY sick horse could have Hendra virus, as some affected horses have presented with signs of colic (belly pain), caught in a fence or just found dead. What this means is you must take precautions if you have a sick horse. Wear gloves and if you have any doubts wait until you speak to a vet before you handle the horse.

Is Hendra in Victoria?

There have been NO cases of Hendra virus infection in horses or humans in Victoria so far. However there have been MANY cases of infection in horses in NSW and QLD. In fact the most southern case of Hendra was recently reported in NSW. There have been 7 human cases of infection and of these 4 people have died. The number of human cases has reduced dramatically since the introduction of the vaccination and the use of personal protective equipment. **HOWEVER** - there are lots of fruit bats in Victoria. Furthermore, bats in this state have tested positive for the virus. This means that the virus IS in Victoria. At this point there is no reason known as to why cases have only occurred in QLD and NSW and there is no reason known so far as to why a case couldn't occur in Victoria. This means we need to be vigilant, knowledgeable and careful.

Is there any treatment?

There is NO treatment for horses that contract Hendra virus. In fact by law, any horse that tests positive for the Hendra **virus** MUST be put to sleep. The property where the affected horse was located will then be quarantined and any other horses that test positive for the **virus** on that property will also need to be put to sleep.



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Is it dangerous to my family and I? Is my horse at risk?

At this point the risk of horses and humans in Victoria contracting the disease is low. But there is still a risk present and the risks of infection are very serious - fatal for your horse and a long serious illness for people with a greater than 50% chance of dying. It is a much higher risk if there are bats in your area, or if you travel to competitions with your horse. If you travel interstate to QLD or NSW with your horse, or if you travel to competitions where your horses may be mingling with horses from interstate then you and your horse are potentially at risk. The Australian Veterinary Associations policy is that all horses should be vaccinated and Equestrian NSW has recently made vaccination compulsory for ALL horses attending overnight horse events in NSW. Remember that horses can be carrying the virus and spread the virus to other horses without looking sick and while the risk of catching the disease is low, the consequences are extremely severe.

How do I prevent it?

Preventing horse infection will prevent human infections. However if you are handling a sick horse you think may have Hendra, even one that is vaccinated, you should consult a vet about appropriate personal protective equipment (PPE) to wear and do NOT handle the horse until you have done so.

1) Preventing contamination of horse feed and water. Make sure all your horse feed is stored in vermin proof containers. Try to place your horses water troughs and feed buckets away from trees and buildings where bats may roost and clean them out regularly.

2) Vaccination. Zoetis (previously known as Pfizer) has released a vaccination against Hendra virus for horses. The vaccination is currently released on a limited use permit. This means that the drug company wants us to record all horses that are vaccinated in a database, and all vaccinated horses must be microchipped so that they can be identified. The limited use permit means that for now, a registered veterinarian must administer the vaccination. It does NOT mean that the vaccination hasn't undergone extensive trials and tests prior to being released. The vaccination has been rigorously tested for efficacy (how good it is) and safety. Horses that have been vaccinated with the vaccine have been 'challenged' with more than a lethal dose of Hendra virus and none of them have become sick. This means that by vaccinating your horse you are both protecting your horse from becoming unwell and subsequently needing to be put to sleep or dying, and you are protecting all humans handling that horse from catching the disease.

Is the vaccination safe?

Yes. There were no horses in the vaccine trials developed any illness following the vaccinations and there have been no reported major side effects following the vaccines introduction. The only side effects you may see are a sore neck or mild swelling at the injection site, similar to what you might see following a tetanus/strangles vaccination. It is impossible for horses that are vaccinated to catch Hendra virus from the vaccination. This is because the vaccine is what is called a subunit vaccination - it is made out of the G-glycoprotein of the Hendra virus. There are NO live components to the vaccine and there is no whole virus in the vaccine. Horses that are vaccinated develop antibodies which protect them from the virus. All horses that are vaccinated are presented with a certificate of vaccination. Vaccinated horses are able to be differentiated from infected horses as infected horses will have live virus present in their bodies.

How often do I need to vaccinate?

Currently the primary course is composed of two vaccinations - the first followed by the second 21-42 days later. At this point boosters are essential every 6 months, however trials are underway to extend the booster interval to every 12 months and the results of this should be available to us soon.

For more information, call us on (03) 9739 5244