

Questions and Answers: Equine Herpesvirus

Q. What is equine herpesvirus type 1?

A. Equine herpesvirus type 1 (EHV-1) causes a disease of horses called equine rhinopneumonitis. It is found in horses worldwide but does not affect humans. EHV-1 usually causes respiratory symptoms with fever, but it can also cause abortion, nervous system (neurologic) disease, or death.

Q. Are there different types of EHV-1?

A. EHV-1 has several different strains, and new strains can develop from natural mutations. These strains or mutations are thought to cause outbreaks of the disease. The neurologic form of the disease can cause a wide variety of symptoms, including incoordination, weakness or paralysis of the hind limbs and tail, incontinence, and loss of skin sensation. The horse may lie down and not be able to get up. The paralysis can be progressive and in some cases, the animal may die.

Q. How is EHV-1 spread?

A. The virus can spread via contact with an infected animal, through the air, via contaminated equipment, or via a handler's clothing and hands. An infected animal can be latently infected and sporadically shed the virus, or show only mild clinical signs.

Q. Why is there a concern about EHV-1?

A. The neurologic form of disease caused by EHV-1 is emerging worldwide with outbreaks having a higher frequency than has been reported previously. Recent outbreaks may be related to a mutation of the EHV-1 virus that allows it to multiply more efficiently. More horses are dying from this form than would normally be expected, and the disease also demonstrates the ability to affect horses of all breeds, ages, and vaccination status. This new form therefore has the potential to cause high losses in the U.S. horse population.

Q. What is the Federal role in addressing EHV-1 outbreaks?

A. EHV-1 is found throughout the United States and outbreaks are usually handled by the States involved. In some instances, however, shipments of horses may

be divided and shipped to multiple States.

During such outbreaks when animals have crossed State lines, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) steps in to assist with tracing animals. APHIS has worked closely with States and affected owners to help trace the movement of animals from their entry into the United States to their current or last location.

Q. Has APHIS played a role in tracing any recent outbreaks of EHV-1 in the United States?

A. An outbreak of neurologic disease caused by EHV-1 occurred in late 2006 and involved a group of 15 horses shipped from Germany. After arriving in the United States, the horses were shipped to eight States. Five of the horses went to Florida; this resulted in 13 horses total identified as infected, with neurologic signs in 7 cases and 6 associated deaths. Ten Florida premises were quarantined.

One of the horses that arrived from Germany was shipped to California and died shortly after arrival from neurologic disease typical of EHV-1 infection. All horses exposed to this animal were identified.

The remaining nine horses from Germany were shipped to six other States. They were quarantined and observed for signs of EHV-1 infection. No signs were seen.

The Florida outbreak was confirmed as due to EHV-1 when laboratories found neuropathogenic strains of EHV-1 in submitted samples. These findings, together with the observation of clinical signs consistent with the neurologic form of equine rhinopneumonitis, contributed to the diagnosis. Please visit <http://www.aphis.usda.gov/vs/nahss/equine/ehv/index.htm> for updates on this recent EHV outbreak.

Q. What about EHV-1 outbreaks in other parts of the world?

A. Other countries have also seen an increase in the number and severity of reported neurologic EHV-1 outbreaks. In 2005, significant outbreaks occurred in Canada, Ireland, South Africa, Switzerland, and the United Kingdom.

Q. What should horseowners do to protect their animals from EHV-1?

A. Veterinarians and horseowners should continue to quarantine suspect and diagnosed cases. Using strict biosecurity measures in day-to-day procedures, even when disease is not suspected, is very important in

preventing the introduction and spread of infectious diseases. Information on equine biosecurity practices can be found in APHIS' *"Keeping Your Horses Healthy"* brochure, available at http://www.aphis.usda.gov/lpa/pubs/HorseBioSecurity_final.pdf.

Q. Are there EHV-1 vaccine products available?

A. There are currently 35 vaccine products licensed by APHIS' Center for Veterinary Biologics (CVB) that contain EHV. These products are labeled as "Equine Rhinopneumonitis" vaccines. Some contain only EHV, and some have EHV in combination with other vaccines. These products all underwent extensive safety testing before they were licensed. All of them were shown to be effective in a manner that backs up the claim stated on the label. For example, the label may state, "as an aid in the control of respiratory disease due to EHV-1" or "as an aid in the prevention of abortion associated with EHV-1" or "aids in the reduction of shedding." Currently, no licensed product has a label claim for the neurologic form of disease caused by EHV-1.

Q. Have any horses gotten the neurologic form of EHV-1 after being vaccinated for the disease?

A. To date, CVB has not received a report of an adverse reaction involving the appearance of neurologic symptoms following vaccination with a licensed EHV vaccine. The recent outbreaks of neurological EHV appear to be related to a new strain of EHV-1. However, APHIS remains vigilant and ready to respond if such an event is reported. Reporting adverse events is encouraged. Such events may be reported by telephone at (800) 752-6255; online, using the adverse event electronic report form available at the CVB Web site (<http://www.aphis.usda.gov/vs/cvb>); or by fax or mail, using the Web site form and the provided CVB fax number or address.

Q. Should owners get their horses vaccinated?

A. To date, not much is known for certain about how EHV-1 causes neurologic disease. As additional information becomes available, educational outreach to practitioners and horseowners will be extremely important. Decisions about the use of EHV vaccine in individual horses should be made based on your local situation in consultation with your veterinarian. APHIS will continue to work with interested groups such as the United States Animal Health Association, industry organizations, and national and State groups in making further recommendations and plans related to EHV-1.

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