

# Herpesvirus Vaccination

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*Work with your veterinarian to determine the proper vaccination schedule for your horses*



## **Pregnant mare vaccination?**

Pregnant mares should be vaccinated with a monovalent (one virus type) EHV-1 vaccine that's been demonstrated by challenge studies to reduce the risk of abortion. Vaccinate at five, seven, and nine months of pregnancy (see American Association of Equine Practitioners Guidelines for Vaccination at [www.aaep.org/pdfs/AAEP\\_vacc\\_guide.pdf](http://www.aaep.org/pdfs/AAEP_vacc_guide.pdf)). This primarily gives the mare immunity to EHV-1 so she doesn't get infected and abort. Secondly the immunity is passed to her foal through maternal antibodies in colostrum.

There should be no problems with multiple vaccinations at five, seven, and nine months of gestation. More often could cause problems with the immune system since it has a limited capacity for responding to antigens. If you give it too many antigens at the same time or too closely spaced, you can dilute the immune response to each vaccine.

## **Foal EVH vaccinations?**

Vaccinating at three and four months is too early. The foal usually is still covered somewhat by maternal antibodies at that time. If you vaccinate too early, it can depress a foal's immune response to the vaccine, which lasts several months.

The AAEP Guidelines say to begin a young horse's first vaccination for herpesvirus at five months, with two subsequent boosters at three-week intervals. Then booster at three-month intervals if that young horse is exposed to stressful situations such as training or long transport.

## **In the face of illness?**

If your horse is at a facility where a horse becomes sick with herpesvirus, should you

vaccinate again? If your horse is already up on its vaccinations, there's no reason to rebooster in the event that some other horse gets sick with herpesvirus. If the horse is covered by vaccination, another dose is not going to help. If he is not up-to-date or is close to needing the next booster, that is a reason to booster.

## **What if the sick horse has EHV-1?**

This is where there's not much agreement. When a horse that has EHV-1 is in the barn, first identify if the EHV-1 is neuropathogenic or not. That gives you information on handling the outbreak.

If it's not a neurologic strain, then boosting is justified. If it is the neurologic strain, then it's a 50-50 split on opinions. Some say boosting is contraindicated; others recommend everything be boosted.

There is some indication that vaccination of a horse already exposed to the virus can exacerbate the signs of neurologic problems.

## **Youngsters & respiratory disease?**

There are a large number of products that have been developed for herpesvirus respiratory disease, for EHV-1 and EHV-4. Most contain -1 as well as -4. Many of the products also contain flu antigen. There are modified live, killed, and intranasal (modified live). There's no scientifically based reason to recommend any one of these over the others.

## **Is there a neurologic vaccine?**

None of the vaccines available have demonstrated effectiveness in preventing neurologic manifestations. If vaccination is done, however, it is recommended using a monovalent EHV-1 vaccine, not one of

the five-way products, because of antigenic competition.

The dragon left to be slain for EHV-1 researchers is a vaccine for neurologic disease. Researchers at the University of Kentucky's Gluck Equine Research Center are working with that objective in mind.

The vaccine type and route of administration will matter. It is generally held that an inactivated vaccine simply will never elicit a strong enough immune response for such an aggressive disease.

## **What about older horses?**

If they are not reproductively active, the only herpes to worry about is the neurologic strain of EHV-1. During outbreaks, the older horses are more likely to get neurologic disease because their immune systems don't function as well as those of younger horses.

If mixing older horses with other horses, then use a EHV-1 monovalent product like with younger horses.

The immune response in older horses undergoes a continuing, progressive decline that occurs gradually with advancing age. It's very individual. David Horohov, PhD, an immunologist at the Gluck Equine Research Center, has shown that horses over 20 are immunocompromised because of age.

## **Cross-protection for EHV-1 & -4?**

There is some. But if you want the maximum protection possible, you should use a vaccine containing the same virus type that you are most worried about. 🐾

*Editor's note: George Allen, PhD, head of the OIE Herpesvirus Reference Laboratory at the Gluck Equine Research Center, acted as a scientific resource in this article.*

