





## Horse Care Cont'd.

so it's best just to vaccinate," says MacAllister. There are very few diseases that people can get from horses, but this is the major one, and the most deadly. Rabies is the one disease that not only will kill the horse, but also could potentially kill the people who handle it.

In 2008, the American Association of Equine Practitioners (AAEP) added rabies to their list of "core" vaccines that should be given to all horses annually, regardless of their location or use. Current recommendations are to vaccinate foals for rabies at six months of age, followed with a booster at 10 to 12 months, and then an annual vaccination thereafter.

Even if your horses are in a region of the country where rabies is uncommon, it's best to vaccinate. If a horse is sold, or taken to races or to be bred elsewhere in the country, that horse could be at risk if it's not vaccinated for rabies. For instance, a horse in New York who was brought to a veterinary clinic (because it was lame) was purchased from "somewhere out West and had all its shots," but had not been vaccinated against rabies. The new owners and several people at the clinic who handled the horse had to go through post-exposure treatment.

Amy Johnson, DVM, DACVIM (Large Animal Internal Medicine, New Bolton Center in Pennsylvania), has treated two horses for rabies. "In this area, it's raccoon rabies. The last horse I treated was a retired racehorse. Around here, rabies is not one of the common vaccinations for horses at the track," she says.

Racehorses are generally vaccinated against influenza, herpes and some of the other viral diseases but some trainers don't vaccinate for rabies because they feel the risk of exposure is low—with horses in stalls rather than out in a pasture where they might encounter wild animals, dogs or feral cats.

"This horse went to a horse rescue facility, where he was vaccinated for just about everything—including botulism, West Nile, EEE, WEE, tetanus, etc.—except rabies. He was then adopted to a new home with a nice family. They had already vaccinated all their other horses that spring, and were told that the horse had already been vaccinated for everything. They assumed this included rabies," says Johnson.

"It was a lovely farm where he was out in a big pasture. Within a few months, he apparently encountered a raccoon and developed rabies. He was referred to us with a history of having been abnormal for several days. The farmer, his wife, daughter and multiple neighbors had all been tending the sick horse and were all exposed. The horse was only here for a couple of days. We became suspicious that it was rabies, and euthanized the horse to confirm it."

In the interim, between when the horse was at the farm and before it came to New Bolton Center, one of the exposed people went to Africa for a summer program. "It

became an international search to locate her. She had to be air-lifted to a different country in Africa for treatment, because the country where she was staying did not have access to the post-exposure series for rabies," says Johnson. "In our area, the strain that's endemic is raccoon rabies, which is the most common one in the eastern part of the country," says Johnson. In other areas, there are different variants, including skunk, fox and bat rabies. There are numerous strains of rabies, just as there are multiple strains of flu virus.

"Pennsylvania is one of the states with the highest incidence of rabies. We see it in all species, including cows and horses, but especially in cats and dogs. There were also some whitetail deer who had rabies in the last couple years. Rabid horses don't usually bite and puncture the skin, but there is always a risk when coming into contact with saliva. If you get the animal's saliva in your eyes, mucous membranes or cuts, you could get rabies," says Johnson. There is a risk when handling the mouth of any animal that might have rabies, or even having a horse cough or blow its nose in your face, getting droplets in your eyes.

Signs of rabies are not always clear, and people may try to treat the animal for something else. Often the inability to swallow is mistaken for choking, and the horse owner or veterinarian may become exposed when examining the mouth and throat. "The trouble with rabies is that early signs are often quite vague, and in horses these signs may include lameness and/or colic. You might not think of rabies," she explains.

There hasn't been much published on rabies in horses. "The largest retrospective series had only 21 cases, and 10 percent of those horses showed colic as an initial sign. Another 24 percent showed lameness. This might lead a veterinarian off the track, but then the animals always progress to show other signs," she says. The animal becomes increasingly abnormal in its behavior and may become uncoordinated or disoriented.

"They almost always become recumbent—unable to get up—at the end. Once they start showing signs, it may take up to four or five days or longer until they progress to the point where they are euthanized or die. The actual length of time may vary from case to case," says Johnson.

Incubation time (between exposure and the start of symptoms) is also quite variable, depending on location of the bite. An animal bitten on the nose or face, for instance, will usually start showing severe signs of illness much sooner than an animal bitten low on the hind leg. In the latter situation it might be several months between the time of the bite and onset of illness. The virus has to travel farther along the nerves before it gets to the brain.

Some horse owners feel it's not healthy to over-vaccinate their horses, and may not vaccinate them adequately. "Some think they can just check titers to see if the horse has immunity, rather than re-vaccinate for various diseases. This is

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unwise, especially with rabies. There isn't any data to indicate that a certain level of antibody (titer) is truly protective. It's not safe to just check the horse's titer and think it doesn't need to be revaccinated. We know there are cases where horses have been previously vaccinated in previous years and still get rabies from being bitten. So we don't recommend just checking titers," she says. It's better to keep up the annual vaccination program.

"We can only diagnose rabies definitively after the horse is dead. If you have a horse who dies or is euthanized after a short course of unexplained progressive neurologic disease, that horse should be tested for rabies. If you don't

test, you wouldn't know, and humans may have been exposed," says Johnson.

If an unvaccinated horse was known to be bitten by a rabid animal such as a cat, skunk or raccoon, (with the offending animal killed and tested), it is possible to treat that horse (like we treat humans) and not have to euthanize it. "This was looked at in Texas. The laws regarding unvaccinated, exposed animals vary from state to state. You can check your state's public health guidelines to determine what you can do with that horse," she says.

Texas has developed a post-exposure rabies prophylaxis protocol. "A study was published last year in a medical journal, looking at a time period from 2000 to 2009, using 72 horses. They do this post-exposure type of treatment in many different species of animals, especially pets, but in this study they also mentioned 72 horses who had received this prophylaxis and none of them got rabies. It was the same for the dogs and cats who were treated," she says. Thus an animal who was started on this protocol immediately after being bitten could be quarantined and watched rather than having to euthanize it.

"The animal must be immediately vaccinated, isolated for 90 days and boosted with the vaccine again at the third and eighth week during that isolation period. Thus it receives a series of three vaccinations. The study specifically looked at unvaccinated animals," says Johnson.

Rabies has been with us a long time and there is some debate regarding whether it existed here in the wildlife before European settlement, or whether it was brought with colonists to North America. In the American colonies in the late 1600s there were reports of canine rabies and descriptions of outbreaks which sound like rabies. But we don't know if it was brought over with dogs who were incubating the disease (and introduced it to this continent) or whether it was already here.

Even though rabies is one of the oldest diseases spread between animals and humans, the level of misunderstanding and confusion about rabies is still high and there are many misconceptions about it. Animal owners should take no chances—and protect their animals (and themselves) by vaccinating. 🐾

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