

Rabies in Florida's Horses
Amanda M. House, DVM, DACVIM

According to the Journal of the American Veterinary Medical Association's rabies surveillance publication by Blanton *et al*, cases of rabies in horses and mules increased 12.8% from 2005 to 2006. In 2007, 128 animals were killed by the rabies virus in Florida. The vast majority of affected species were wildlife such as raccoons and foxes, but one horse and 14 cats were also lost. In the first half of 2008, 90 fatalities have been reported to the state veterinarian's office. Since 2006, five horses in Florida have died from the rabies virus. Rabies is a rapidly fatal RNA virus in the Rhabdovirus family. There is no available treatment for an infected animal, and infected animals can transmit the fatal disease to people and other animals. These cooler winter days and nights will sometimes bring wild animals into our barns, seeking shelter and food. With those animals comes an increased risk of disease exposure to our horses, dogs, and cats. So what will a horse infected with Rabies look like?

Classically, infection with the rabies virus causes neurologic signs in most species. In infected horses, the signs can vary and include agitation that may be confused with colic, excessive salivation, difficulty swallowing, abnormal behavior, wobbly or paralyzed gaits, seizures, and/or self-mutilation. Sometimes only one or two of the signs will occur in affected cases. Horses typically contract the virus from the bite of a rabid animal. The virus is passed in saliva. Depending on where the horse is bitten, signs of infection can take 2 to 10 weeks to develop. Once clinical signs of disease are apparent, death typically occurs in 3 to 5 days. Fortunately, when compared to many other equine problems, rabies is an uncommon disease in the horse. However, in any areas where rabies is endemic in the wildlife population, horses can be exposed through a bite from infected bats, raccoons, skunks, and other animals.

Since rabies is a zoonotic (contagious to humans) disease, any horse that dies of unexplained or neurologic causes should be tested. Unfortunately, there is no definitive test for rabies in a live animal. Testing must be completed on the brain once the suspected animal has been euthanized. This likely means that there are many more cases of rabies in wildlife and stray animals than the statistics would lead us to believe. Horse owners should take every precaution in handling animals that are behaving abnormally or are suspected of having rabies. The horse should be confined if possible, and exposure to other people and animals should be limited until the veterinarian arrives. Fortunately, petting a horse with rabies will not transmit the virus to a person. Transmission of the virus occurs from direct contact with saliva into an abrasion in the skin, a wound, or mucous membranes.

The good news about rabies is that vaccination is inexpensive and very effective. Vaccination is recommended by the American Association of Equine Practitioners (AAEP) for all horses in areas where rabies is endemic in the wildlife population, which includes most of the eastern seaboard of the United States, including Florida. Intervet, Fort Dodge and Merial all make killed vaccines licensed for use in the horse. EquiRab®,

a rabies vaccine designed specifically for use in horses, was released earlier this year by Intervet. For foals, rabies immunization is a 3 dose series beginning at about 3 months of age (unvaccinated dam) or 6 months of age (vaccinated dam). Correlation between rabies titer and protection is not known in the horse. However, titers are used to predict protection in vaccinated people. Challenge studies demonstrating effectiveness are required for licensing of all rabies vaccines (including those used in horses); however, published results are not available. The studies must indicate that the vaccination is good for 12 months, and a minimum of 80% of vaccinated animals must be resistant to severe challenge with rabies virus. Consult your veterinarian about the vaccination that would be best for your horses.

Rabies vaccines are not licensed for use in pregnant mares; however, only a limited number of vaccines are licensed for use in the pregnant mare (herpesvirus, rotavirus, etc.). Rabies vaccines are frequently given to pregnant mares, but may also be boosted prior to breeding since antibody levels are maintained which provide adequate passive transfer to protect the foal. Vaccinated horses that are exposed to a confirmed rabid animal should be immediately revaccinated and observed for 45 days for clinical signs. Unvaccinated horses exposed to a confirmed rabid animal should be euthanized or isolated under close observation for 6 months. So as we prepare our barns for the Florida hurricane season, remember to vaccinate your horses, and other animals, to protect them against rabies virus.