

# ***Viral Diseases of the Horse - West Nile Virus***

## **West Nile Virus**

West Nile virus (WNV) was first isolated from humans in Uganda in 1937. From there it spread throughout Africa, West Asia, the Middle East, and Europe and finally reached the United States in 1999. In 1999, at least 62 people became seriously ill with the virus, and seven died. Since then, WNV has rapidly spread throughout 27 states and is gradually working westward.

Horses are affected by WNV more than other domestic animals. Many infected horses do not develop illness, but of the 85 confirmed cases that became ill in the 1999-2000 outbreak, 32 (38 percent) died or were euthanized. During the 2001 outbreak, 416 horses from 19 states were diagnosed with the disease, and 24 percent of those horses died or were euthanized. As of September 2002, 3,500 equine cases had been reported in 32 states, and over 1,000 human cases were reported in 30 states and the District of Columbia.

Like Eastern equine encephalitis and Western equine encephalitis, the virus is harbored in birds and spread via mosquitoes to other birds, people, and horses. Most birds do not develop the illness after being infected by a mosquito. The exception is crows and blue jays, which often die. Horses and humans are dead-end hosts and cannot spread the disease. The virus can only be transmitted from infected birds via mosquitoes.

## **Clinical Signs**

1. attacks the brain and spinal cord
2. fever and depression
3. diarrhea
4. overall drowsy appearance and no desire to move
5. muzzle twitching
6. personality changes of self-mutilation, hyperexcitability, irritability, and a refusal of food and water
7. central nervous system (CNS) signs of incoordination, head pressing, circling, paralysis, convulsions, and coma and
8. death.

## **Treatment**

As with all viral infections, antibiotics are not effective, so infected horses are provided intravenous fluids and anti-inflammatory drugs to decrease brain swelling.

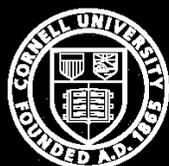
## **Prevention**

A vaccine is available and should be administered in two intramuscular doses three to six weeks apart. Remember that horses vaccinated against Eastern, Western, and Venezuelan equine encephalitis are not protected against WNV.

Other measures can be taken to prevent infected mosquitoes from biting you or your horses:

1. Remove or destroy mosquito breeding areas.
2. Keep horses indoors during peak mosquito activity periods (dusk and dawn).
3. Screen stalls (if possible), or at least install fans over the horses to help deter mosquitoes.
4. Avoid turning on lights inside the stable during the evening or overnight
5. Mosquitoes are attracted to light, so placing incandescent bulbs around the perimeter of the stable will attract mosquitoes away from the horses.
6. Lights can also be used to draw mosquitoes to electric bug zappers.
7. Remove birds, including chickens, living in or close to the stable.

This fact sheet was gleaned from material provided by the eXtension website ([extension.org](http://extension.org)), which came from many sources and is for informational purposes only. It is not intended to be a substitute for personalized professional advice. For specific local information, contact your local county Cooperative Extension office, your veterinarian or other qualified professionals.



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