

West Nile Virus in Horses

West Nile (WN) virus was first isolated from human blood in Uganda in 1937 and first identified in the Western Hemisphere in 1999 as the cause of death in zoo birds and crows in New York City. Also in 1999 it was identified as the cause of encephalitis in 25 horses in two New York counties. In 2000 it spread rapidly to seven northeastern states and in 2001 WN spread more widely in the states and also into Ontario. In 2002, the spread of WN was even more widespread in Canada (five provinces) and the states.

WN can infect many native bird species and is spread by mosquitoes to other birds and mammals including humans and horses. Humans and horses, while susceptible to clinical infections, were previously not known to spread the infection directly to other mammals or birds. However, recent evidence has shown that the virus can be spread from an infected person to a non-infected person via breast milk, blood transfusions and via the womb from mother to baby.

In horses, WN virus affects parts of the brain and spinal cord. Signs may include twitching of the face and neck muscles, along with varying degrees of poor hind limb muscle coordination and weakness. There may also be sleepiness, blindness and a weak tongue. Signs are usually bilateral, with possibly one side being more affected than the other. Common also is the reoccurrence of mild-to-moderate clinical signs 2-3 days after signs had abated. Horses with WN virus seem to stabilize over several days or they may rapidly become recumbent. Approximately one third of horses that show clinical signs will die. If the horse goes down, the mortality rate is much higher. Elderly horses are more likely to show severe clinical signs and die from this disease than younger horses. Since other diseases of the central nervous system (such as rabies) show similar clinical signs, it is important to have your veterinarian examine your horse if he/she is showing signs like the ones described above. WN in horses in Canada is seasonal and peaks in early autumn with no cases during the winter months.

If the disease comes to your area, having your horse vaccinated and avoiding exposure to infected mosquitoes are two ways to lower the risk of getting WN virus. The vaccine is available in Canada through an emergency drug release program. The vaccine appears to be protective in most horses but it must be cautioned that your horse may still come down with the WN virus infection even though he/she may be vaccinated. You should discuss with your veterinarian, the possibility of having your horse vaccinated. To reduce exposure to mosquitoes you could eliminate standing water on the property including turning over wheelbarrows, pails, etc. Horses that are stabled overnight have less risk. You may want to turn the barn lights off in the evenings and nighttime. Fans placed to create air movement over your horse and placing screens on stable doors help reduce exposure to mosquitoes. Use of appropriate insect repellents, especially in the evenings is also advisable.

If you have any further questions about West Nile Virus, please contact your veterinarian.

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