

# WEST NILE VIRUS IN HORSES

by Dr. Laura Harris

West Nile Virus is the fastest growing health threat to horses in the United States today. The virus was first identified in 1999 in New York and has now spread across the continent to every state on the west coast.

West Nile Virus (WNV) is a mosquito borne disease that causes inflammation of the brain and spinal cord. It affects all equine including horses, donkeys, mules, zebras, etc. Once an unvaccinated horse (etc.) displays clinical signs death will occur in 30 to 33% of cases. Signs include but are not limited to: stumbling, vague lameness, muscle weakness and tremors, loss of balance, depression, paresis or paralysis, loss of appetite, confusion, convulsions, and colicky behavior.

Initial treatment is directed at relieving the presenting signs followed by measures such as IV fluids and systemic anti-inflammatory therapy. As with most viral diseases, treatment is nonspecific and designed to provide support to the patient. The only disease specific treatment available for WNV is WNV antiserum which is commercially available, although expensive. Use of this product carries the risks inherent in any antiserum treatment protocol.

The best measures available to minimize or avoid WNV infection and disease in your horses are vaccination and vector (mosquito) control. Vaccination of horses (etc.) can and should begin as early as 2-3 months of age in foals born to unvaccinated mares, and 3-4 months of age in foals from protected mares. All horses (foals and adults) receive a minimum of two initial vaccinations 3 to 6 weeks apart. Following this initial series of vaccinations, twice yearly boosters, each a single dose of vaccine, are given in the spring and fall.

To date, the killed virus vaccine (Innovator by Fort Dodge Animal Health) has proven to be an effective (95-97%) vaccine. It is safe in young and old horses and in pregnant mares. Occasionally, soreness at the injection site, and even less frequently, low grade fevers have been reported. No reactions have been documented that would justify non-vaccination.

In addition to an effective vaccination program, control of mosquitoes is important in curtailing WNV spread. Eliminate standing water, use effective insect repellents on horses and humans, and treat the environment as needed.

With the availability of a safe and effective vaccine product, and with Arizona's dry climate, we can avoid the devastating effects WNV has produced in the eastern and midwestern United States.