



## WEST NILE FEVER

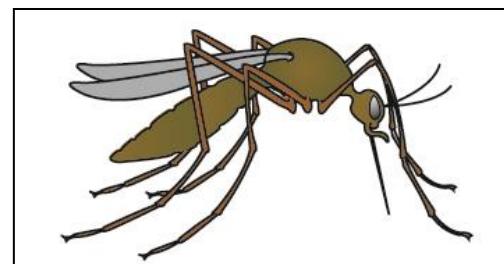
West Nile Fever is a disease caused by the West Nile Virus (WNV) carried by mosquitoes. It causes encephalitis (inflammation of the brain and spinal cord) which can affect humans and horses, among others. Prior to 1999, the virus was found only in Africa, Eastern Europe and Western Asia, but in August 1999 it was identified in the northeastern states of U.S.A. (New York and the New England states), causing fatal illness in a variety of animals, birds and people. Since then it has spread dramatically across USA and Canada.

### ***What are the effects of West Nile Fever?***

Infection with WNV does not always cause signs of clinical abnormality. Many infected animals show no sign of illness or just a mild, short lived fever, although they produce detectable blood antibody levels. In areas where the virus occurs, wild birds, which are commonly infected by mosquitoes, act as a source of replicating virus for mosquitoes to bite and then infect other animals. Horses and humans can be infected by a bite from an infected mosquito, causing encephalitis (inflammation of the brain), sometimes with fatal results. Horses are dead-end hosts: they can contract the disease, but can't spread it. An infected horse is not a danger to others in the barn.

Clinical signs range from a loss of appetite and depression to any one, or combination of the following:

- Elevated body temperature
- Weakness or paralysis of the hind limbs
- Incoordination
- An apparent loss of orientation, resulting in walking in circles or aimless wandering and bumping into walls
- Blindness or excessive excitability
- Coma, collapse and death



## **How is West Nile Fever diagnosed?**

These symptoms are not specific for WNV. Blood and sometimes cerebrospinal fluid (CSF) tests are usually needed to differentiate between different causes of encephalitis and inco-ordination. Diseases to be differentiated include other encephalitis producing viruses (Eastern, Western and Venezuelan encephalitis), protozoal encephalomyelitis (EPM), Wobbler syndrome, traumatic injury, poisoning, bacterial infection and liver disease.

Where a horse is suspected of having West Nile Fever, blood tests can be performed to test for the presence of the virus or antibodies (disease fighting proteins) that the horse has produced in response to the infection.

## **Can West Nile Fever be treated?**

There is no specific treatment for West Nile Fever. Treatment is aimed at symptomatic and supportive care for the encephalitis and the neurological abnormalities that it produces. There is an antiserum available, but it is very expensive and must be given early in the disease to be of any help.

## **How do horses pick up West Nile Fever?**

Horses and people are 'end-stage' hosts and the virus is not transmitted from one to another. Wild birds are the most important environmental source of infection and mosquitoes pick up the virus when they feed on an infected bird. The virus is then transmitted to the next animal or animals that the mosquito bites. This means that the virus can be spread over vast distances in relatively short time by mosquito transmission where there is a wild bird reservoir of infection.

## **How can I prevent my horse from getting West Nile Fever?**

There is a highly effective and safe vaccine. When it was first used in the US, there were rumors of bizarre side effects, terrible behavior changes and even mutations. Years of use and testing have proven the rumors to be untrue. The vaccine must be given initially as a series of two injections followed by an annual booster. The booster is best given in May, just before the start of mosquito season in New Jersey.

Control of the spread of infection in WNV areas depends upon limiting the breeding and spread of infected mosquitoes. Mosquito breeding areas around barns, such as stagnant pools or standing water in trashed jars and buckets should be cleaned up. Insect repellent can be used on your horse and yourself when riding in the woods. There are county and state programs that will spray around your property to control mosquitoes.