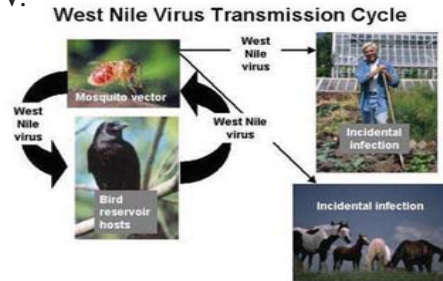


West Nile Virus (WNV) first appeared in the United States in 1999 in New York and has since spread across the United States. It is an arbovirus that is transmitted to susceptible hosts through the bite of an infected mosquito. Mosquitoes obtain the virus following feeding on infected wild birds which are the natural host species for WNV.



Unlike birds, horses and humans are dead end hosts for the virus. The virus can cause meningoencephalitis (inflammation of the brain and spinal cord) with resulting clinical signs in horses such as fever, incoordination, muscle fasciculation, head pressing, hyperexcitability, anorexia, lethargy, recumbency and death.

The number of reported equine cases has continued to decrease since 2002, however in 2003, Colorado was one of the leading states with the number of WNV cases in horses. Although West Nile Virus is no longer an emerging disease in the United States, it remains a serious threat to horses with the reported case fatality rate of between 30-40% depending on the region of the country. Thus, protection against this potentially deadly disease remains warranted.

### Frequently Asked Questions:

#### **Should I vaccinate my Horse for WNV?**

Yes, work with your veterinarian to determine the optimal plan for your horse.

#### **Can I vaccinate my mare if she is in foal?**

Yes, work with your veterinarian to determine the optimal plan for your mare.

#### **Can a horse infected with WNV infect horses in neighboring stalls or infect me?**

No, the virus is spread through the bite of an infected mosquito, not by contact with an ill horse unless you were to participate in an autopsy, then special precautions are warranted.

Current information on West Nile Virus can be obtained at the following web sites;

[www.aphis.usda.gov/vs/nahss/equine/wnv/index.htm](http://www.aphis.usda.gov/vs/nahss/equine/wnv/index.htm)

[www.cdc.gov](http://www.cdc.gov)

[www.mosquito.org](http://www.mosquito.org)

[www.cdphe.state.co.us](http://www.cdphe.state.co.us)

Ann Davidson, DVM, MS, DACVIM

970-297-4471

Bruce Connally, DVM, MS

970-297-4471

[Equine Field Service](#)

Josie Traub - Dargatz, DVM, MS, DACVIM

[Equine Internal Medicine](#)

Jeruesha Nichols, CVT

<http://veterinaryextension.colostate.edu/>

Colorado State University &

Colorado State University Extension

# West Nile Virus and Your Horse



**Colorado  
State**  
University

**Extension**

## Diagnosis and Treatment of WNV

Diagnosis of WNV is made by supporting clinical signs and positive diagnostic tests for WNV on blood or cerebrospinal fluid. Treatment is primarily supportive. Some horses may require hospitalization and assistance with a sling in order to remain standing. Anti-inflammatory drugs and fluids remain as the mainstay of treatment. There are now products available that provide antibodies to WNV and the use of these products in WNV equine cases should be discussed with your veterinarian.



## How to Protect Your Horse from West Nile Virus Infection:

Surveillance data for 2007 from the Colorado Department of Public Health and Environment has illustrated an extremely high population of *Culex* mosquitoes which are responsible for transmitting WNV. Furthermore, infected WNV mosquitoes have been identified in 9 counties in Colorado as of July 2007. Based upon this information and the fact that peak transmission season is in late summer, mosquito mitigation protocols are warranted for yourself as well as your horse. There are several easy steps that can be taken to decrease mosquito exposure to horses.

**There are two important methods for protecting your horse against West Nile Virus infection; reduce exposure to mosquitoes and vaccinate against West Nile Virus.**

### *Reduce Exposure to Mosquitoes*

- Keep horses indoor during the peak times of mosquito activity (dawn and dusk).
- Eliminate areas of standing water on property, dispose of discarded tires, and change birdbath water and water in tanks for horses at least weekly.
- Use fans on horses while stabled.
- Use insect repellants containing permethrin or 35% DEET
- Use incandescent bulbs around the perimeter of the stable.
- Remove any dead birds noted around the property. Be sure to use rubber gloves or a plastic bag turned inside out to pick up the bird. For information on testing of birds for WNV, contact your public health office. For example, in Larimer County, information on bird testing can be found at: <http://www.larimer.org/health.cd/westnile.asp>.



### *Vaccinations for West Nile Virus*

There are currently three licensed vaccine formulations available for use in horses based on efficacy and safety studies for protection against West Nile Virus. It should be noted that the American Association of Equine Practitioners recognizes the WNV vaccine as a core vaccination for all horses regardless of geographic location. Though the WNV vaccine is a commonly used in horses, realize that vaccination is only part of the preventative strategy and methods to reduce mosquito exposure should be employed at the same time. In addition, vaccination against other causes of equine encephalitis (eastern equine encephalitis, western equine encephalitis, and venezuealan equine encephalitis) does not protect your horse against West Nile Virus. The initial WNV vaccination or booster WNV vaccine must be given prior to exposure to WNV and your horse(s) should be vaccinated well in advance of mosquito season. Consult with your veterinarian to determine the best vaccination protocol for your horse(s) depending on previous vaccination history and virus and vector activity.

### *Vaccinations for the Pregnant Mare*

It is important to consult your veterinarian to determine the best method of protection against WNV for your broodmare. Several of the WNV vaccines have been given to pregnant mares without observed adverse outcomes. As a general recommendation, reproductive specialists suggest avoiding vaccines of any kind in the first 40 days of pregnancy.