

Nebraska's Bad Buzz: What You Need to Know about West Nile Virus (9-18-18)

Dr. Jody Green, Nebraska Extension

Fast Facts

- West Nile virus is spread from mosquito bites that feed on infected birds.
- It is NOT spread through touching infected people or birds, but can be spread through blood transfusion, organ donation or mother to baby.
- Symptoms can vary from having no symptoms at all, to flu-like symptoms and fever, to severe neurological damage, to serious fatal illness.
- There are no vaccines or medication to treat people infected with West Nile virus so education and prevention is important.

West Nile virus mosquitoes

West Nile virus is spread by the *Culex* species, which are commonly biters in the Midwest. *Culex* mosquitoes rest on structures and in vegetation during the day and come out biting at dusk and continue after dark into the morning.



Female *Culex* mosquito taking a blood meal. (Photo: Jim Kalisch)

How do you get West Nile virus?

West Nile virus is spread from infected birds to people by mosquito bites. It cannot be transmitted from person to person touching, coughing or sneezing, but it can spread in through blood transfusions, organ donation, and from a mother to baby. The incubation period is usually 2 to 14 days.

What are the symptoms of West Nile virus?

The symptoms of West Nile virus can vary:

- 80% of infected people do not develop any symptoms at all. This means numerous people have it or have had it, but did not even know.
- 20% of infected people develop mild symptoms such as fever, headache, joint pain, fatigue, swollen lymph glands, eye pain, vomiting, diarrhea, loss of appetite, or rash.

This is self-limiting and will resolve itself without treatment and without long-term effects.

- 1 in 150 of infected people develop a severe illness that affects the central nervous system, which includes high fever, paralysis, tremors, muscle weakness, seizures, meningitis, and encephalitis. In severe cases damage can be permanent and sometimes lethal.
- **If you are experiencing any of these symptoms, see your healthcare provider.**

Who is at greatest risk?

People who spend a great deal of time outside, especially after dusk, may will be exposed to more mosquito bites, especially in August and September when mosquitoes are most active. Persons over the age of 50 appear to be at greatest risk of developing severe symptoms, as well as individuals who are immunocompromised. There is no greater risk to children.

What is the treatment for West Nile virus?

Unfortunately, there are no specific treatment like antiviral medication or licensed vaccines for West Nile virus labeled to be used by humans. Treatment is supportive and based on symptoms. In severe cases, hospitalization, pain reduction and nursing care is necessary.

If I have or had West Nile virus will I be immune?

Once a person recovers, immunity to West Nile virus is thought to be lifelong.

What other animals can be affected by West Nile virus?

West Nile virus primarily affects birds of many over 250 species. Crows and jays are known to get sick and die from infection. Horses are another animal that can suffer a variety of symptoms, including encephalitis and death from mosquito bites.

How long has West Nile virus been here?

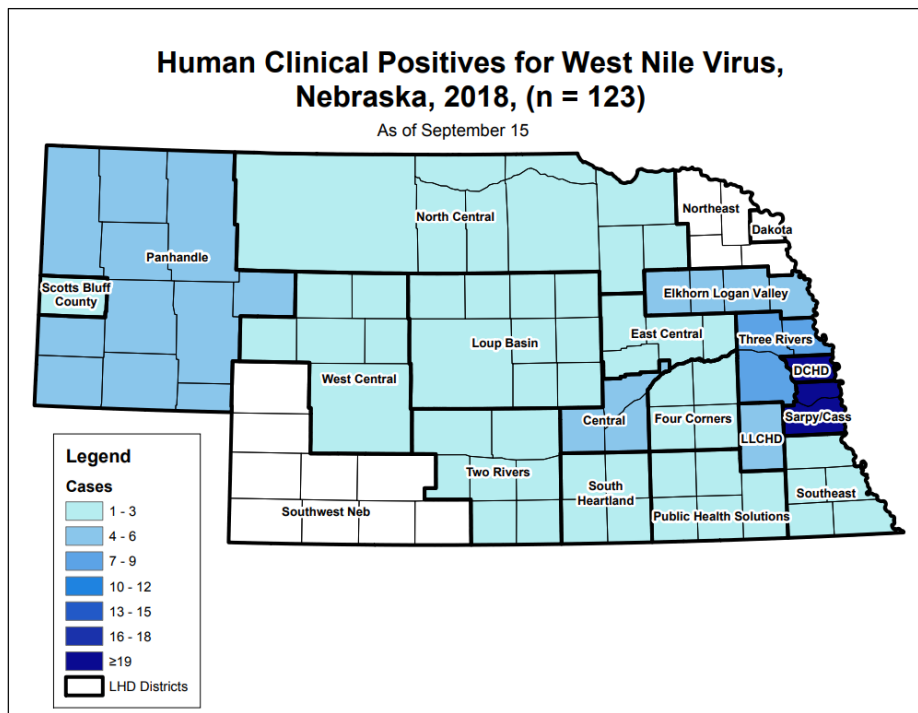
Prior to 1999, West Nile virus was not reported in the United States. Since then it has been reported in all 48 continental states. In 2003 Nebraska recorded at 1,994 cases and 27 deaths, which is the most throughout the years.

How can I protect myself from mosquito bites and West Nile virus?

- Use effective insect repellents (Active ingredients: DEET, Picaridin, Oil of lemon eucalyptus, IR3535). Higher percentages indicate longer lasting protection.
- Wear long sleeves and pants outside, loose fitting is best because mosquitoes can bite through some fabric.
- Dump standing water around your home.
- Fix and repair window and door screens.
- Avoid the outdoors during peak mosquito times such as dawn and dusk.



Active ingredients of effective products (from left to right): Oil of lemon eucalyptus 30%, picaridin 20%, DEET 25%, DEET 15%



Map of the distribution of individuals diagnosed with West Nile virus. There have been 4 deaths reported in Nebraska as of Sept 15, 2018. (Source: Nebraska DHHS.)

Where can I get more information about West Nile virus?

Nebraska Department of Health & Human Services Public Health page:

<http://dhhs.ne.gov/publichealth/Pages/wnv.aspx>

Centers for Disease Control and Prevention: <https://www.cdc.gov/westnile>