



Oklahoma State Department of Health

Communicable Disease Division

Public Health Fact Sheet

West Nile Virus



What is West Nile virus?

West Nile virus is one of a group of viruses called arboviruses that are spread by mosquitoes and may cause illness in birds, animals, and humans. West Nile virus was not known to be present in the United States until the summer of 1999. Previously, West Nile virus was only found in Africa, western Asia, the Middle East, and Eastern Europe.

Where is West Nile virus in the United States?

West Nile virus was first identified as a disease threat in the United States during the summer of 1999 and was limited to the northeastern states through 2000. However, the virus rapidly expanded its geographic range. In 2002, the largest epidemic and epizootic of West Nile ever reported occurred in the U.S. causing illness in over 4,000 people with 284 deaths. West Nile virus activity has now been detected in 44 states and the District of Columbia.

How is it spread?

West Nile virus is primarily spread through the bite of an infected mosquito (usually a *Culex* species). Mosquitoes pick up the virus when they feed on infected birds. The virus must then circulate in the mosquito for a few days before they are capable of transmitting the infection to animals or humans while biting. The virus is found in the salivary gland of the mosquito. During feeding, the virus may be injected into a human or animal where it may multiply and possibly cause disease.

What is the incubation period (i.e. time from exposure to time of disease)?

The incubation period ranges from 3 to 15 days for both human and equine (horse, mule, or donkey) illness.

What are the symptoms in humans?

The majority of persons who are infected with West Nile virus will have a flu-like illness lasting 2-6 days. Common symptoms include headache, fever, and extreme muscle weakness, occasionally accompanied by vomiting or skin rashes. In some cases, the infection will be more severe and cause meningitis, paralysis, or encephalitis (swelling and inflammation of the brain).

Who is at greatest risk?

Individuals are at risk of acquiring West Nile virus infection if they travel to or live in an area where West Nile Virus is known to occur. People whose work and hobbies take them outdoors for extended periods of time are at increased risk of being infected due to the increased exposure to mosquitoes.

Persons over the age of 50 years appear to be at greatest risk of developing severe disease

How is West Nile encephalitis treated?

There is no specific treatment. Severe cases often require hospitalization and intensive supportive care.

What is the state doing to monitor the spread of West Nile virus in Oklahoma?

The Oklahoma State Department of Health (OSDH) established a statewide West Nile virus surveillance and testing program in 2001. West Nile virus was first detected in the state during July 2002. The OSDH is continuing to monitor West Nile Virus through a variety of mechanisms, including dead wild bird reporting and testing in 19 counties, equine case tracking statewide, and mosquito trapping and testing in six communities. The OSDH Laboratory offers West Nile testing for human patients through consultation with their physician.

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