

What is West Nile virus?

West Nile virus is an arthropod-borne virus (arbovirus) most commonly spread by infected mosquitoes. West Nile virus can cause febrile illness, encephalitis (inflammation of the brain) or meningitis (inflammation of the lining of the brain and spinal cord).

West Nile virus transmission has been documented in Europe and the Middle East, Africa, India, parts of Asia and Australia. It was first detected in North America in 1999, and has since spread across the continental United States and Canada.

More than 1,000 human cases of West Nile virus are reported annually in the U.S. The transmission dynamics of West Nile virus are dependent on short-term weather patterns, such as heat, drought or floods, so future outbreaks involving a large number of cases are possible. The number of West Nile virus cases reported in Ohio ranges from 2 to more than 400 each year, averaging 23 cases per year.

How do people get infected with West Nile virus?

Most people get infected with West Nile virus by the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread the virus to humans and other animals.

In a very small number of cases, West Nile has been spread through blood transfusions, organ transplants and from mother to baby during pregnancy, delivery or breastfeeding. Since 2003, all donated blood is screened for West Nile virus in the United States.

Who is at risk for infection with West Nile virus?

Anyone living in an area where West Nile virus is present in mosquitoes can get infected. West Nile virus has been detected in all lower 48 states (not in Hawaii or Alaska). Outbreaks have been occurring every summer since 1999. The risk of infection is highest for people who work outside or participate in outdoor activities because of greater exposure to mosquitoes.

Is there a vaccine available to protect people from West Nile virus?

No. Currently, there is no West Nile virus vaccine available for people. There are vaccines for horses available through veterinarians.

How soon do people get sick after getting bitten by an infected mosquito?

The incubation period is usually 2 to 6 days but ranges 2 to 14 days. This period can be longer in people with certain medical conditions that affect the immune system.

What are the symptoms of a West Nile virus infection?

No symptoms in most people. Most people (70%-80%) who become infected with West Nile virus do not develop any symptoms.

Febrile illness in some people. About 1 in 5 people who are infected will develop a fever with other symptoms such as headache, body aches, joint pains, vomiting, diarrhea or rash. Most people with this type of West Nile virus disease recover completely, but fatigue and weakness can last for weeks or months.

Severe symptoms in a few people. Less than 1% of people who are infected will develop a serious neurologic illness such as encephalitis or meningitis (inflammation of the brain or surrounding tissues). The symptoms of neurologic illness can include headache, high fever,

neck stiffness, disorientation, coma, tremors, seizures or paralysis. Recovery from severe disease may take several weeks or months. Some of the neurologic effects may be permanent. About 10% of people who develop neurologic infection due to West Nile virus will die.

Who is at risk for serious illness if infected with West Nile virus?

Serious illness can occur in people of any age. However, people over 60 years of age are at the greatest risk for severe disease. People with certain medical conditions such as cancer, diabetes, hypertension, kidney disease and people who have received organ transplants are also at greater risk for serious illness.

What should I do if I think a family member might have West Nile virus disease?

Consult a healthcare provider for evaluation and diagnosis.

How is West Nile virus diagnosed?

Diagnosis is based on a combination of clinical signs and symptoms and specialized laboratory tests of blood or spinal fluid. These tests typically detect antibodies that the immune system makes against the viral infection.

What is the treatment for West Nile virus infection?

There are no medications to treat or vaccines to prevent West Nile virus infection. Over-the-counter pain relievers can be used to reduce fever and relieve some symptoms. People with milder symptoms typically recover on their own, although some symptoms may last for several weeks. In more serious cases, patients often need to be hospitalized to receive supportive treatment such as intravenous fluids, pain medications and nursing care.

When do most cases of West Nile virus infection occur?

Most people are infected from June through September.

Where do most cases of West Nile virus infection occur?

West Nile virus disease cases have been reported from all 48 lower states. The only states that have not reported cases are Alaska and Hawaii. Seasonal outbreaks often occur in local areas that can vary from year to year. The weather, number of birds that maintain the virus, numbers of mosquitoes that spread the virus and human behavior are all factors that can influence when and where outbreaks occur.

How do people reduce the chance of getting infected?

The most effective way to avoid West Nile virus infection is to prevent mosquito bites. It only takes one bite from an infected mosquito to transmit disease.

- Use insect repellent registered with the U.S. Environmental Protection Agency (EPA) on exposed skin and/or clothing. The repellent/insecticide permethrin can be used on clothing to protect through several washes. Always follow the directions on the package.
- Wear long sleeves and pants from dusk through dawn when many mosquitoes are most active.
- Install or repair screens on windows and doors. If you have it, use your air conditioning.
- Help reduce the number of mosquitoes around your home. Empty standing water from containers such as flower pots, gutters, buckets, pool covers, pet water dishes, discarded tires and birdbaths.

For more information, please visit these websites:

- ODH West Nile Information: <http://www.odh.ohio.gov/wnv>
- CDC West Nile Information: <http://www.cdc.gov/westnile>
- U.S. Environmental Protection Agency (EPA) Registered Insect Repellents: <https://www.epa.gov/insect-repellents>
- CDC Insect Repellent Use and Safety: <http://www.cdc.gov/westnile/fag/repellent.html>
- U.S. Geological Survey West Nile Virus Human Case Maps: <http://d/seasemaps.usgs.gov/mapviewer/>