

West Nile Virus (WNV)

Last Reviewed: November 2011

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What is West Nile virus?

WNV is a mosquito-borne infection that can cause serious illness, and in some cases, death. Although a person's chances of getting sick are small, there are some simple steps you can take to reduce your risk of being bitten by mosquitoes.

What are the symptoms of WNV?

Most people who are infected with WNV will not show any symptoms. It is estimated that 20 percent of the people who become infected will develop West Nile fever and have mild symptoms, including fever, headache and body aches, and occasionally a skin rash and swollen lymph glands.

The symptoms of severe infection (West Nile encephalitis or meningitis) can include headache, high fever, neck stiffness, muscle weakness, stupor, disorientation, tremors, convulsions, paralysis and coma. It is estimated that one in 150 persons infected with the WNV will develop the more severe form of the disease.

Usually, symptoms occur from 3 to 14 days after being bitten by an infected mosquito. There is no specific treatment for viral infections, other than to treat the symptoms and provide supportive care.

Who is at risk for getting WNV?

All residents of areas where virus activity has been identified are at risk of getting WNV; New York State has a moderate amount of West Nile virus every year. Persons over 50 years of age are at the highest risk for severe disease.

How is WNV transmitted?

WNV is primarily transmitted through the bite of an infected mosquito. Over 43 species of mosquitoes have been infected nationwide. WNV has been transmitted by blood transfusion or organ transplantation in a small number of cases. As a result, U.S. blood collection agencies are screening blood donations for the presence of the virus.

These transfusion- and transplant-related cases make up a small percentage of those infected with WNV. Although persons needing blood transfusions or organ transplants should be aware of the risk of WNV infection, the benefits of receiving needed transfusions or transplants outweigh the potential risk for infection.

Transplacental transmission (pregnant woman to unborn child) and transmission through breast-feeding have also been documented. The number of these cases is small. Pregnant women should consult their health care provider for more information.

Do all mosquitoes transmit disease?

No. Most mosquitoes do not transmit disease. While there are about 70 different species of mosquitoes in New York State, only certain species have been associated with WNV.

Where do mosquitoes live and breed?

Mosquitoes lay their eggs in moist areas, such as standing water. The eggs become larvae that remain in the water until the adults mature and fly off. Weeds, tall grass and shrubbery provide an outdoor home for adult mosquitoes. They can also enter houses through unscreened windows and doors or broken screens. Many mosquitoes will breed in containers that hold water, such as flowerpots or discarded tires.

When are mosquitoes most active?

Some mosquitoes are active between dusk and dawn, when the air is calm. However, others will feed at any time of day. Mosquitoes prefer a warm, moist environment. They are active from early summer until late fall in New York State. In southern states that have a warm year-round climate, mosquitoes that transmit WNV are active year-round. New Yorkers should take measures to protect themselves from mosquito bites when traveling to these states.

Can my pet be infected?

Pets occasionally get WNV from mosquito bites, but very seldom get sick. Horses are more susceptible to serious illness from WNV than are dogs and cats. Natural infection of a pet by contacting or eating an infected dead bird has not been documented.

How can I protect myself and my family?

To reduce the mosquito population around your home and property, reduce or eliminate all standing water:

- Dispose of tin cans, plastic containers, ceramic pots or similar water-holding containers.
- Dispose of used tires. Used tires are a significant mosquito breeding site. Call your local landfill or Department of Public Works to find out how to dispose of them properly.
- Drill holes in the bottoms of recycling containers that are kept outdoors.
- Make sure roof gutters drain properly and clean clogged gutters in the spring and fall.
- Remove leaf debris from yards and gardens.
- Turn over wading pools and wheelbarrows when not in use
- Change the water in birdbaths twice weekly.
- Clean vegetation and debris from edges of ponds.
- Clean and chlorinate swimming pools, outdoor saunas and hot tubs.
- Drain water from pool covers.
- Landscape to eliminate standing water that collects on your property.

Should we stay indoors?

It is not necessary to limit outdoor activities. However, you can and should try to reduce your risk of being bitten by mosquitoes. In addition to reducing standing water in your yard, make sure all windows and doors have screens and that all screens are in good repair. If WNV is found in your area:

- Wear shoes and socks, long pants and a long-sleeved shirt when outdoors for long periods of time, or when mosquitoes are most active.
- Consider using mosquito repellent, according to directions, when it is necessary to be outdoors when mosquitoes are biting.

What is being done in my community to control mosquitoes?

The New York State Department of Health (NYSDOH), along with other state agencies, local health departments, colleges and environmental groups, has prepared a plan to address issues related to WNV in the state and has devised a preventive strategy to minimize the impact. Local communities are implementing various control measures based on geographic location and level of risk. For more information regarding activities in your specific area, contact your local health department or visit the NYSDOH website at http://www.health.ny.gov/diseases/west_nile_virus/.

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