

Mosquito Management
PROGRAM

*West Nile Virus
Human Infection*

State of
CONNECTICUT
January 2019

The State's mosquito monitoring and management program is a collaborative effort involving the Department of Energy and Environmental Protection (DEEP), the Department of Public Health (DPH), The Connecticut Agricultural Experiment Station (CAES), Department of Agriculture (DoAg) and the University of Connecticut Department of Pathobiology and Veterinary Science (UCONN). The program is coordinated by the Department of Energy and Environmental Protection.

Has West Nile virus been found in Connecticut?

Yes, West Nile virus has been found in the state every year since 1999 in multiple species of mosquitoes, horses and wild birds.

Where did West Nile virus come from?

West Nile virus is named after the West Nile district of Uganda where the virus was first isolated in 1937. Outbreaks of the West Nile illness have occurred in Egypt, Asia, Israel, South Africa, and parts of Europe and Australia. Before 1999, West Nile virus had not been found in the United States. The virus may have been brought to the United States by an infected bird that was either imported or migrated from a country where the virus is common.

What is West Nile virus infection?

West Nile virus infection occurs when a person is bitten by an infected mosquito and the virus enters the person's blood, multiplies, and spreads to other parts of the body. Usually, the body's immune system can fight off the virus and stop it from causing illness.

What is West Nile virus illness?

Most people who are infected with West Nile virus have no symptoms or may experience mild illness such as a fever and headache before fully recovering. In some individuals, particularly persons over 50 years of age, West Nile virus can cause serious illness, including encephalitis (inflammation of the brain) or meningitis (inflammation of the membranes covering the brain and spinal cord). Symptoms range from a slight fever, headache, rash, swollen lymph nodes and conjunctivitis (inflammation of the membrane that lines the inner surface of the eyelid and the exposed surface of the eyeball) to the rapid onset of a severe headache, high fever, stiff neck, disorientation, muscle weakness, and coma. West Nile virus infection can lead to death in 3 to 15 percent of persons with severe forms of the illness.

How do people get West Nile virus?

West Nile virus is spread to humans by the bite of infected mosquitoes (primarily the *Culex* species). A mosquito is infected by biting a bird that carries the virus. West Nile virus is not spread by person-to-person contact, and there is no evidence of the virus spreading to people by handling live or dead birds.

Have there been any human cases of West Nile virus illness in Connecticut?

Yes, a total of 157 human cases of West Nile virus have been diagnosed in Connecticut residents, including four fatalities.

Who is at risk of contracting West Nile virus infection?

Persons who are at highest risk for serious illness are persons over 50 years of age. Healthy children and adults are at very low risk for developing severe disease after infection.

If bitten by an infected mosquito, will I get sick?

If bitten by an infected mosquito, your chances of developing severe disease are less than 1 in 100.

How long does it take to get sick if bitten by an infected mosquito?

Being bitten by an infected mosquito will not necessarily make you sick since most people who are infected with West Nile virus have no symptoms or experience mild illness. When illness occurs, it usually happens 5 to 15 days after being bitten by an infected mosquito.

If bitten, should I be tested?

No. Most mosquitoes are not infected with the West Nile virus. Illnesses related to mosquito bites are rare. However, you should see a doctor immediately if you develop symptoms such as high fever, confusion, muscle weakness, or severe headaches. Patients with mild symptoms are likely to recover completely, and do not require any specific medication or laboratory testing.

Is there a treatment for West Nile virus illness?

Although there is no specific treatment, the symptoms and complications of the illness can be treated. Most people who get this illness recover from it, although symptoms may last for months, especially in persons who have had encephalitis.

Is there a vaccine for West Nile virus infection?

No vaccine for West Nile virus infection is currently available for human use although a veterinary vaccine exists for horses.

If I live in an area where West Nile virus has been reported and I am bitten by a mosquito, am I likely to get sick?

No. Even in areas where mosquitoes do carry the virus, very few — much less than 1% — are infected. The chance that one mosquito bite will be from an infected mosquito is very small. If West Nile virus is present in Connecticut, the greatest risk of transmission to people is in late summer.

How can I lower my risk to West Nile virus?

You should try to reduce the risk of being bitten by mosquitoes. If West Nile virus is found in your area, you should:

- Minimize time spent outdoors around dusk and dawn when mosquitoes are most active.
- Be sure door and window screens are tight fitting and in good repair.
- Wear shoes, socks, long pants, and a long-sleeved shirt when outdoors for long periods of time, or when mosquitoes are most active. Clothing should be light colored and made of tightly woven materials that keep mosquitoes away from the skin.
- Use mosquito netting when sleeping outdoors or in an unscreened structure and to protect small babies when outdoors.
- Consider the use of mosquito repellent, according to label instructions, when it is necessary to be outdoors.

Should I stay indoors if West Nile virus is confirmed in my town?

It is not necessary to limit outdoor activities. However, you can and should try to reduce your risk of being bitten by mosquitoes by reducing standing water in your yard and taking personal precautions to prevent mosquito bites.

What is being done in my community to control mosquitoes?

The State of Connecticut has prepared a plan to address the return of West Nile virus 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.

What else can I do to reduce the risk of West Nile virus?

In addition to reducing potential mosquito breeding sites on your own property, you can encourage your neighbors, local businesses and municipal agencies to do so as well. You can also work with local service, labor, religious and fraternal organizations to promote community-wide cleanup drives. For more information on how you can help, contact your local health department.

How can I get more information on West Nile virus infection?

Contact your local health department or visit the Mosquito Management Website at www.ct.gov/mosquito. For specific questions on human infections, contact the Connecticut Department of Public Health at (860) 509-7994.

Mosquito Management Program Information:

Department of Energy and Environmental Protection

Website - www.ct.gov/deep

(860) 424-3011 - *Technical questions regarding mosquitoes, mosquito control measures.*

The Connecticut Agricultural Experiment Station

Website - www.ct.gov/caes

(203) 974-8500 - *Mosquito trapping and testing.*

Department of Public Health

Website - portal.ct.gov/dph

(860) 509-7994 - *WNV infections in people and wild birds.*

(860) 509-7742 - *Effects of pesticides on people.*

Department of Agriculture

Website - www.ct.gov/doag

(860) 713-2505 - *WNV infections in domestic animals, including livestock, poultry, and pets.*

University of Connecticut Department of Pathobiology and Veterinary Science

Website - www.patho.uconn.edu/

(860) 486-3738 - *Necropsy, tissue sample prep and testing for WNV infections in domestic animals, including livestock, poultry, horses, and pets. Necropsy and tissue prep for wild birds.*

This brochure was written by the Connecticut Department of Public Health, the Department of Agriculture and the Department of Energy and Environmental Protection for the Mosquito Management Program.