

HOT TOPICS



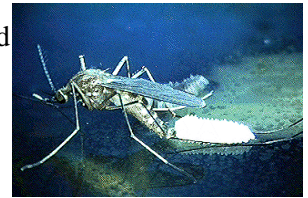
The Facts on West Nile Virus

West Nile Virus (WNV) has been found in birds, horses, humans and small mammals in Africa, Eastern Europe, Western Asia, and the Middle East. WNV was discovered in the West Nile district of Uganda in 1937, but was not identified in the Western Hemisphere until 1999 when bird and human infections were detected in the New York City area. WNV then spread rapidly along bird migration routes to the South and West. The virus arrived in Florida in 2001 with 12 human cases confirmed between July and November. As of August 2002, WNV has been identified in 38 states and the District of Columbia. For updated maps of WNV distribution in the United States (U.S.), access http://cindi.usgs.gov/hazard/event/west_nile/west_nile.html.

What are WN encephalitis and WNV? "Encephalitis" means inflammation of the brain. Many types of viruses, bacteria, and other agents may cause encephalitis. WNV is a single-stranded RNA flavivirus that is similar to the virus that causes St. Louis encephalitis.

Who is at risk for WNV infection? All residents and visitors to areas where WNV activity has been identified are at risk of being infected with WNV. Elderly persons and others with immune deficiency have the highest risk of death.

How is WNV spread? Infected mosquitoes spread WNV while biting birds, animals or humans to take blood. Transmission from person to person or from a bird or an animal to a person has not been reported.



Culex mosquito laying eggs

What are the symptoms of WNV infection? Fortunately, 80% of persons infected with WNV never have symptoms and require no treatment. However, 1 of every 5 persons infected (20%) develops signs and symptoms of the illness. The most common symptoms are sudden onset of fever, weakness, nausea, vomiting, headache, skin rash and swollen lymph glands, but most of these require only symptomatic treatment.

About 1 of every 150 persons (67 per 10,000 infections) develops severe illness. Encephalitis, meningitis or flaccid paralysis may occur, mostly among those 50 years of age or older. About 1 of every 4 persons with severe infection (17 per 10,000) requires admission to an intensive care unit and 1 of every 10 requires assisted breathing (7 per 10,000). Case fatality rates in the severely ill range from 11% to 14% (7 to 9 per 10,000) and are highest in elderly persons and others with immune deficiency.

When do symptoms appear? The incubation period (time from infection to onset of disease symptoms) for WN infection may be as few as 3 days to as many as 14 days after a bite from an infected mosquito.

How is WN encephalitis diagnosed? A physician will take a medical history first to assess a person's risk for WNV infection. People who live in or traveled to areas where WNV activity has been identified are at risk for WN encephalitis. The physician will test samples of spinal fluid and blood for WNV. For assistance with confirming the diagnosis, physicians may visit http://www.doh.state.fl.us/disease_ctrl/epi/htopics/arbo/3.htm or call the Tampa Branch Laboratory of the Florida Department of Health at (813) 974-6220 or (813) 974-8000.

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What is the treatment for WN encephalitis? As with most viral infections, there is no effective treatment for WN encephalitis. Severe infections require hospitalization for supportive treatment (intravenous fluids, airway management, respiratory assistance) and prevention of other infections such as pneumonia.

Is there a vaccine for WNV? A vaccine is available to protect horses, but not humans. Potential vaccines are being tested for safety and effectiveness.

If a person gets a mosquito bite, what are the chances of getting sick? Results from serological surveys indicate that most infections are mild. Eighty percent (80%) of those immune to WNV had no symptoms. The chances anyone will become severely ill from a mosquito bite are extremely small. If the biting mosquito is infected with WNV, less than 1% of people who get bitten and become infected will get severely ill.

Do all mosquitoes carry WNV? WNV has been isolated from more than 40 mosquito species, primarily *Culex* mosquitoes. *Aedes* and *Anopheles* mosquitoes and some ticks also may carry WNV. The virus is present in saliva and salivary glands. Mosquitoes become infected when they feed on blood from infected birds. Even in areas where mosquitoes do carry the virus, very few mosquitoes - much less than 1% - are infected.

What animals can become infected with WNV? Most of the infections have been identified in birds, especially crows and jays. WNV infection also has been identified in bats, cats, chipmunks, dogs, horses, humans, rabbits, raccoons, skunks and squirrels.

Can a person become infected with WNV from birds? There is no evidence that a person can get WNV from birds. However, persons should avoid barehanded contact when handling any dead animals. Wear rubber gloves or a plastic bag over the hands and place the dead bird in a plastic bag. Either dispose of it in trash, or bury the carcass, or submit the dead bird to the Florida Department of Health for testing.

Where and how does a person send a dead bird for WNV testing? If it's a fresh carcass (dead less than 24 hours) and there is no obvious cause of death, please report the dead bird to the Florida Fish & Wildlife Conservation Commission at <http://wld.fwc.state.fl.us/bird/>. Those without Internet access may report a dead bird to (561) 625-5122, or notify the Broward County Health Department at (954) 467-4806. The protocol for shipping a dead bird is online at http://www.doh.state.fl.us/disease_ctrl/epi/htopics/arbo/10.htm.

How can WNV be prevented?

- ✓ Stay indoors at dawn, dusk, and in the early evening when mosquito activity is heavy.
- ✓ Wear long-sleeved shirts and long pants whenever you are outdoors.
- ✓ Spray clothing with repellents containing permethrin or DEET (N,N-diethyl-meta-toluamide). Concentrations of DEET higher than 30% provide no additional protection. Adults may apply insect repellent sparingly to exposed skin.
- ✓ The American Academy of Pediatrics (<http://www.aap.org/pubserv/insect.htm>) recommends that products containing no more than 10% DEET should be used sparingly on infants and young children because the chemical can be absorbed through the skin and cause harm.
- ✓ Whenever an insecticide or insect repellent is used, be sure to read and follow the manufacturer's DIRECTIONS FOR USE, as printed on the product. (Note: Vitamin B and "ultrasonic" devices are NOT effective in preventing mosquito bites.)
- ✓ Repair any gaps or cracks in window screens to keep mosquitoes out of the house.
- ✓ Empty all sources of standing water to keep mosquitoes from breeding.

For more information about WNV, visit http://www.doh.state.fl.us/disease_ctrl/epi/htopics/arbo/index.htm, call the Florida Department of Health hotline at 1-888-880-5782, or call the CDC hotline at 1-888-246-2675.

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