Questions and Answers about West Nile Virus (WNV)

Q. What is the West Nile virus (WNV)?

A. WNV is a virus that was first discovered in Uganda in the 1930's. It is very similar to another virus that is present in the United States, St. Louis Encephalitis virus.

Q. What are the symptoms of West Nile infection?

A. Most people with WNV infection have no symptoms. Some people have mild symptoms including fever, headache, and body aches, and occasionally skin rash and swollen lymph glands. In a few people (less than 1%), more severe infection such as encephalitis (an infection of the central nervous system) occurs, which may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis and, rarely, death.

Q. Who is at risk for getting West Nile encephalitis?

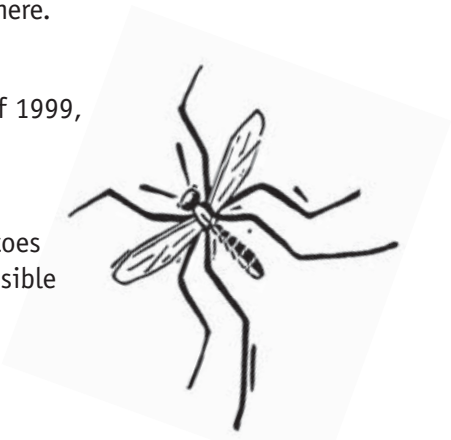
A. All residents of areas where WNV is circulating are at risk of getting WNV infection. Persons who spend a lot of time outdoors are more likely to be bitten by an infected mosquito. Persons over 50 years of age and those with weakened immune systems have the highest risk of severe disease if bitten by an infected mosquito.

Q. Where did West Nile virus come from?

A. WNV has been commonly found in humans and birds and other vertebrates in Africa, Eastern Europe, West Asia, and the Middle East, but until 1999 had not been documented in the Western Hemisphere.

Q. How long has West Nile virus been in the U.S.?

A. Scientists believe the virus has been in the eastern U.S. since the early summer of 1999, possibly longer.



Q. Is the disease seasonal in its occurrence?

A. Since the disease is spread by mosquitoes, it occurs during seasons when mosquitoes are active, typically late spring through early fall. In very warm climates, it is possible that WNV could be transmitted year round.

Transmission of West Nile Virus

Q. How do people get West Nile encephalitis?

A. Most commonly, people become infected by the bite of a mosquito infected with WNV. A very small number of people have become infected from blood transfusions, organ transplants, breastfeeding, pregnancy (mother-to-child), and work exposure (animal handling or laboratory).

Q. What is the basic transmission cycle?

A. Mosquitoes become infected when they feed on infected birds, which have the virus in their blood. Infected mosquitoes can then transmit WNV to humans and animals while biting to take a blood meal. During blood feeding, the virus may be injected by the mosquito into the animal or human, where it may multiply and possibly cause illness.

Q. What's the incubation period in humans (time from infection to onset of symptoms) for West Nile encephalitis?

A. Usually 3 to 15 days.

Q. If I live in an area where birds or mosquitoes with WNV have been reported and a mosquito bites me, am I likely to get sick?

A. No. Even in areas where the virus is circulating, very few mosquitoes are infected with the virus. Even if the mosquito is infected, less than 1% of people who get bitten will become infected and of those infected people, less than 1% get severe symptoms. Thus, the chance you will become severely ill from any single mosquito bite is extremely small.

Q. Can you get West Nile encephalitis from another person?

A. WNV is NOT transmitted from person-to-person through casual contact. However, WNV has been transmitted to a small number of people through transfusions, transplants, pregnancy (mother-to-child) and breastfeeding.

Q. Can you get West Nile virus directly from birds?

A. Birds are not a source of WNV for humans in the natural transmission cycle; however, people should avoid handling *any* dead animals with bare hands. Use gloves and double plastic bags to handle any dead bird.

Q. How does West Nile virus actually cause severe illness and death in humans?

A. After entering the human body (for example through a mosquito bite), WNV can multiply in the person's blood system and cross the blood-brain barrier to reach the brain. The virus can cause inflammation of brain tissue and interfere with normal central nervous system functioning.

Q. What proportion of people with severe illness due to West Nile virus die?

A. Less than 1% of persons infected with West Nile virus will develop severe illness. Among those who have developed a severe illness with WNV, between 3% and 15% have died. Most of the deaths have occurred among the elderly.

Prevention of West Nile Virus

Q. Is there a vaccine against West Nile encephalitis?

A. No, but several companies are working towards developing a human vaccine. There is a vaccine available for horses, but its effectiveness is not fully known at the present time.

Q. What can be done to prevent outbreaks of West Nile virus?

A. Everyone has a role to play in eliminating standing water in which mosquitoes may breed. Weekly inspection of your yard or patio for anything that can hold water and neighborhood clean-up days can help free your neighborhood of empty containers and other areas of standing water. Once virus activity is detected in the area, residents should increase their efforts to reduce contact with mosquitoes.

Q. What else can I do to reduce my risk of becoming infected with West Nile virus?

A.

- Stay indoors at dawn, dusk, and in the early evening.
- Wear long-sleeved shirts and long pants whenever you are outdoors.
- Apply insect repellent sparingly to exposed skin. An effective repellent will contain DEET *(N,N-diethyl-meta-toluamide also known as N,N-diethyl-3-methylbenzamide)*. The protection time increases with the concentration of DEET, up to a concentration of 50%. A repellent containing 30% DEET is effective in adults. Recently, the American Association of Pediatrics stated that the same concentration can be used on children 2 months of age and older when used according to the directions on the product label *(see* www.aap.org/family/wnv-jun03.htm*)*. Repellents may irritate the eyes and mouth, so avoid applying repellent to the hands of children. **Whenever you use an insecticide or insect repellent, be sure to read and follow the manufacturer's DIRECTIONS FOR USE, as printed on the product.** For more information from CDC, go to **www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm**
- Install or repair window and door screens so that mosquitoes cannot get indoors.

West Nile Virus and Birds

Q. Do birds infected with West Nile virus die or become ill?

A. Some bird species, especially those in the crow family, have experienced large die-offs when WNV has appeared. Many species of birds in the U.S. have tested positive for WNV. Most of these birds were identified with the help of the public through dead bird reporting.

Q. How can I report a sighting of dead bird(s) in my area?

A. As part of their West Nile virus surveillance efforts, the Orange County Vector Control District is selectively testing birds that may have been dead for less than 24 hours. To contact a Vector Control representative, call (714) 971-2421. The State of California has also established a toll-free telephone number for the public to report birds that have been dead for less than 24 hours. That number is 1-877-WNV-BIRD.

For more information on West Nile Virus, check these helpful websites:

- The Centers for Disease Control and Prevention WNV page **www.cdc.gov/ncidod/dvbid/westnile**
- The State of California's WNV web site **www.westnile.ca.gov**