West Nile Virus and Birds

Q. What should I do if I find a dead bird?
A. Report any crows, ravens, magpies and jays that have been dead for less than 24 hours. A visual guide to bird identification can be found at: http://westnile.ca.gov/bird_report_id.htm.
CDHS has established a toll free line: 877-WNV-BIRD for public reporting and disposal instructions. Birds can also be reported by visiting the WNV Web site at http://vector.ucdavis.edu/cfm/deadbird.cfm
If you need to pick up a dead bird, or local authorities tell you to simply dispose of it, avoid barehanded contact with any dead animals, and use gloves or an inverted plastic bag to place the bird carcass in a garbage bag.

Overview

Q: What are West Nile virus, West Nile fever, and West Nile encephalitis?
A. "West Nile Virus is a flavivirus commonly found in Africa, West Asia, and the Middle East. It is closely related to the St. Louis encephalitis virus found in the United States. This virus can infect humans, birds, mosquitoes, horses and some other mammals.
"West Nile fever is a case of mild disease in people, characterized by flu-like symptoms. West Nile fever typically lasts only a few days and does not appear to cause any long-term health effects.
More severe disease due to a person being infected with this virus can be "West Nile encephalitis," West Nile meningitis or West Nile meningoencephalitis." Encephalitis refers to an inflammation of the brain, meningitis is an inflammation of the membrane around the brain and the spinal cord, and meningoencephalitis refers to inflammation of the brain and the membrane surrounding it.
Q. Where did West Nile virus come from?
A. West Nile virus 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 previously been documented in the Western Hemisphere. It is not known from where the U.S. virus originated, but it is most closely related genetically to strains found in the Middle East.

Transmission

Q. How do people get infected with West Nile virus (WNV)?
A. The main route of human infection with West Nile virus is through the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds, which may circulate the virus in their blood for a few days. The virus eventually gets into the mosquito's salivary glands. During later blood meals (when mosquitoes bite), the virus may be injected into humans and animals, where it can multiply and possibly cause illness.
Additional routes of human infection became apparent during the 2002 West Nile epidemic. It is important to note that these other methods of transmission represent a very small proportion of cases. Investigations have identified WNV transmission through transplanted organs and through blood transfusions. Additionally, there is one reported case of transplacental (mother-to-child) WNV transmission and one reported case of transmission of WNV through breast-milk.
Q. If I live in an area where birds or mosquitoes with West Nile virus 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 and become infected will get severely ill. The chances you will become severely ill from any one mosquito bite are extremely small.
Q. Can you get West Nile encephalitis from another person?
A. No. West Nile encephalitis is NOT transmitted from person-to-person. For example, you cannot get

West Nile virus from touching or kissing a person who has the disease, or from a health care worker who has treated someone with the disease.
Q. Is a woman's pregnancy at risk if she gets infected with West Nile virus?
A. There is one documented case of transplacental (mother-to-child) transmission of WNV in a human. Although the newborn in this case was infected with WNV at birth and had severe medical problems, it is unknown whether the WNV infection itself caused these problems or whether they were coincidental. More research will be needed to improve our understanding of the relationship - if any - between WNV infection and adverse birth outcomes.
Nevertheless, pregnant women should take precautions to reduce their risk for WNV and other arboviral infections by avoiding mosquitoes, using protective clothing, and using repellents containing DEET. When WNV transmission is occurring in an area, pregnant women who become ill should see their health care provider, and those whose illness is consistent with acute WNV infection, should undergo appropriate diagnostic testing.
Q. Can you get West Nile virus directly from birds?
A. There is no evidence that a person can get the virus from handling live or dead infected birds. However, persons should avoid barehanded contact when handling any dead animals and use gloves or double plastic bags to place the carcass in a garbage can.
Q. Can you get infected with West Nile virus by caring for an infected horse?
A. West Nile virus is transmitted by infectious mosquitoes. There is no documented evidence of person-to-person or animal-to-person transmission of West Nile virus. Normal veterinary infection control precautions should be followed when caring for a horse suspected to have this or any viral infection.

Symptoms of West Nile Virus

Q. What are the symptoms of West Nile virus infection?
A. Most people who are infected with the West Nile virus will not have any type of illness. It is estimated that 20% of the people who become infected will develop West Nile fever: mild symptoms, including fever, headache, and body aches, occasionally with a skin rash on the trunk of the body and swollen lymph glands.
The symptoms of severe infection (West Nile encephalitis or meningitis) include headache, high fever, neck stiffness, stupor, disorientation, coma, convulsions, tremors, muscle weakness, and paralysis. It is estimated that 1 in 150 persons infected with the West Nile virus will develop a more severe form of disease.
Q. What is the incubation period in humans (i.e., time from infection to onset of disease symptoms) for West Nile encephalitis?
A. Usually 3 to 14 days.
Q. How long do symptoms last?
A. Symptoms of mild disease will generally last a few days. Symptoms of severe disease may last several weeks, although neurological effects may be permanent.

Prevention

Q. What can I do to reduce my risk of becoming infected with West Nile virus?
A. Here are preventive measures that you and your family can take:
Protect yourself from mosquito bites:

- Apply insect repellent sparingly to exposed skin. The more DEET a repellent contains the longer time it can protect you from mosquito bites. A higher percentage of DEET in a repellent does not mean that your protection is better—just that it will last longer. DEET concentrations higher than 50% do not increase the length of protection. Choose a repellent that provides

protection for the length of time that you will be outdoors.

- 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.
- Spray clothing with repellents containing permethrin or DEET since mosquitoes may bite through thin clothing. Do not apply repellents containing permethrin directly to exposed skin. If you spray your clothing, there is no need to spray repellent containing DEET on the skin under your clothing.
- When possible, wear long-sleeved shirts and long pants whenever you are outdoors.
- Place mosquito netting over infant carriers when you are outdoors with infants.
- Consider staying indoors at dawn, dusk, and in the early evening, which are peak mosquito biting times.
- Install or repair window and door screens so that mosquitoes cannot get indoors.
- Help reduce the number of mosquitoes in areas outdoors where you work or play, by draining sources of standing water. In this way, you reduce the number of places mosquitoes can lay their eggs and breed.
- At least once or twice a week, empty water from flower pots, pet food and water dishes, birdbaths, swimming pool covers, buckets, barrels, and cans.
- Check for clogged rain gutters and clean them out.
- Remove discarded tires, and other items that could collect water.
- Be sure to check for containers or trash in places that may be hard to see, such as under bushes or under your home.
- Note: Vitamin B and "ultrasonic" devices are NOT effective in preventing mosquito bites.

Q. Is there a vaccine against West Nile encephalitis?
A. No, but several companies are working towards developing a vaccine.

Insect Repellent Use and Safety

Q. Is DEET safe?
A. Yes, products containing DEET are very safe when used according to the directions. Because DEET is so widely used, a great deal of testing has been done. When manufacturers seek registration with the U.S. Environmental Protection Agency (EPA) for products such as DEET, laboratory testing regarding both short-term and long-term health effects must be carried out. Over the long history of DEET use, very few confirmed incidents of toxic reactions to DEET have occurred when the product is used properly.
Q. Is DEET safe for pregnant or nursing women?
A. There are no reported adverse events following use of repellents containing DEET in pregnant or breastfeeding women.

Testing and Treating West Nile Encephalitis in Humans

Q. I think I have symptoms of West Nile virus. What should I do?
A. Contact your health care provider if you have concerns about your health. If you or your family members develop symptoms such as high fever, confusion, muscle weakness, and severe headaches, you should see your doctor immediately.
Q. How do health care providers test for West Nile virus?
A. Your physician will first take a medical history to assess your risk for West Nile virus. People who live in or traveled to areas where West Nile virus activity has been identified are at risk of getting West

Nile encephalitis; persons older than 50 years of age have the highest risk of severe disease. If you are determined to be at high risk and have symptoms of West Nile encephalitis, your provider will draw a blood sample and send it to a commercial or public health laboratory for confirmation.

Q. How is West Nile encephalitis treated?

A. There is no specific treatment for West Nile virus infection. In more severe cases, intensive supportive therapy is indicated, often involving hospitalization, intravenous fluids, airway management, respiratory support (ventilator), prevention of secondary infections (pneumonia, urinary tract, etc.), and good nursing care.