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West Nile Virus Fact Sheet, April 2004

West Nile Virus and Older Adults

What is West Nile Virus?

West Nile is a mosquito-borne virus that can cause encephalitis (inflammation of the brain) or meningitis (inflammation of the lining of the brain and spinal cord).

How is West Nile Virus spread?

West Nile Virus is spread to humans by the bite of an infected mosquito. A mosquito becomes infected by biting a bird that carries the virus. After 10-14 days, the mosquitoes can transmit the virus to humans and animals while biting to take blood. Once the virus is in someone's bloodstream, it multiplies and may cause illness. You or your child cannot get West Nile Virus from a person who has the disease. West Nile Virus is not spread by person-to-person contact such as touching, kissing, or caring for someone who is infected.

Are older adults more at risk for West Nile viral disease?

Yes. While the chance of anyone becoming infected with West Nile Virus is very low, *people age 50 or older are at a greater risk of becoming seriously ill from WNV*. Elderly individuals or people with weakened immune systems are more likely to develop severe diseases, such as encephalitis or meningitis, if they become infected. *For this reason, preventing mosquito bites in older adults is very important.*

What are the symptoms of West Nile viral infection?

Most people who are infected with West Nile Virus either have no symptoms or experience mild illness such as a fever, headache and body aches before fully recovering. Some persons may also develop a mild rash or swollen lymph glands. In some individuals, particularly the elderly, West Nile Virus can cause serious disease that affects brain tissue. At its most serious, it can cause permanent neurological damage and can be fatal. Symptoms of encephalitis (inflammation of the brain) include the rapid onset of severe headache, high fever, stiff neck, confusion, loss of consciousness (coma), or muscle weakness, and may be fatal. Seek medical attention immediately if you experience any of these more severe symptoms.

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. Most people who are infected with West Nile Virus have no symptoms or experience only mild illness. If illness were to occur, it would occur within 3 to 15 days of being bitten by an infected mosquito.

What should I do if I think I have West Nile encephalitis?

If you develop signs of encephalitis, with fever, muscle weakness, and confusion, you should seek medical care immediately.

I've gotten a mosquito bite. Should I be tested for West Nile Virus?

No. Illnesses related to mosquito bites are still uncommon. However, you should see a doctor immediately if you develop symptoms such as high fever, confusion, muscle weakness, severe headaches, stiff neck, or if your eyes become sensitive to light. Patients with mild symptoms should recover completely, and do not require any specific medication or laboratory testing.

How is West Nile encephalitis treated?

There is no specific treatment for West Nile encephalitis since antibiotics are not effective against the virus. Hospitalization is usually necessary for supportive care, which may include intravenous (IV) fluids and nutrition, airway management, ventilatory support (ventilator) if needed, prevention of secondary infections (pneumonia, urinary tract, etc.), and good nursing care.

Is there a vaccine against West Nile Virus?

No. A vaccine for West Nile Virus in humans does not exist.

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

Evidence indicates that the chance of human infection and illness resulting from West Nile Virus is very low. People older than 50, especially the elderly, are those most likely to get seriously ill if they become infected, and should, therefore, take the greatest care to prevent exposure to mosquito bites.

What can I do to reduce my risk of becoming infected with West Nile Virus?

From April to October, when mosquitoes are most active, take the following precautions:

- If outside from dusk to dawn when mosquitoes are most active or during the day in an area where there are weeds, tall grass, or bushes, people should wear protective clothing, such as: long pants, loose-fitting, long-sleeved shirts, and socks, and consider the use of an insect repellent containing DEET.
- Products with a low concentration of DEET may be appropriate for situations where exposure to mosquitoes is minimal. Higher concentrations of DEET may be useful in highly infested areas or with species that are more difficult to repel. *However, the American Academy of Pediatrics recommends that repellents used on children should not contain more than 10% DEET. Concentrations of up to 30% DEET have been shown to be acceptable for adults.* Where appropriate, consider using non-chemical ways to deter biting insects such as protective clothing (as outlined above), window and door screens, and wearable netting when camping.
 - *Use DEET according to manufacturer's directions on the label.*
 - *Store DEET out of reach of children.*
 - *Do not use DEET repellent on children under 2 years of age or during pregnancy.*
 - *Use caution when using repellents containing DEET on children.*
 - *Do not apply DEET directly on to children. Apply to your own hands and then put it on the child.*
 - *Do not apply on hands or near eyes and mouth of young children.*
 - *Do not allow children to apply repellents themselves.*
 - *Wash all treated skin and clothing with soap and water after returning indoors.*
 - *Never use repellents over cuts, wounds, or irritated skin.*

- *Depending on the concentration of DEET in a product, it can be effective for approximately 3-6 hours. Avoid prolonged or excessive use of DEET. Use sparingly to cover exposed skin and clothing.*
- *Do not apply to skin covered by clothing.*

What can I do around my home to help reduce exposure to mosquitoes?

Mosquitoes lay their eggs in standing or slow-moving (such as streams or creeks) water. Weeds, tall grass, and bushes provide an outdoor home for mosquitoes. They can enter homes through unscreened windows or doors, or broken screens.

- Make sure that doors and windows have tight-fitting screens. Repair or replace all screens that have tears or holes.
- Remove all discarded tires from your property.
- Dispose of tin cans, plastic containers, ceramic pots, or similar water-holding containers.
- Make sure roof gutters drain properly. Clean clogged gutters in the spring and fall.
- Clean and chlorinate swimming pools, outdoor saunas and hot tubs. If not in use, keep empty and covered.
- Drain water from pool covers.
- Change the water in bird baths and horse troughs every 3 to 4 days.
- Turn over plastic wading pools and wheelbarrows when not in use.
- Limit mosquito breeding sites by eliminating any standing water that collects on your property. Empty water from flower pots, clogged drain gutters, wading pools, patio furniture covers, discarded tires, pails, buckets, and other similar items that can collect water.
- Cut tall weeds and grass to remove mosquito hiding and resting areas.
- Repair and maintain window and door screens to keep mosquitoes out of buildings.
- Remind or help neighbors to eliminate breeding sites on their properties.

What is the Livingston County doing to address the problem of West Nile Virus?

The Livingston County Department of Public Health has developed a West Nile Virus Action Plan for 2003.

The key to our action plan is an emphasis on prevention and surveillance. Resources will be devoted to a county-wide effort to prevent mosquito breeding, improve disease surveillance capabilities and conduct a public education campaign. Our objective is to prevent disease caused by mosquitoes through public education, targeting strong personal protective measures, and early and aggressive source reduction. In addition, information on mosquito control alternatives will be made available to local municipalities to assist them in deciding on the best approach for their jurisdiction. The main components of the 2003 West Nile Virus Action Plan include: public education and community outreach, disease surveillance in animals, mosquito surveillance, human surveillance and provider education, larval mosquito control and adult mosquito control.

For more information about West Nile Virus, call the Livingston County Department of Public Health at 517.546.9858, Monday-Friday during business hours, or check our website at www.lchd.org.

This fact sheet includes materials provided through the courtesy of the New York City Department of Health & Mental Hygiene and the Washtenaw County Environmental Health Department.