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ENVIRONMENTAL HEALTH DIVISION**

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West Nile Virus Fact Sheet, April 2004

West Nile Virus and Children

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 children or infants at greater risk of becoming infected with West Nile Virus?

Children, including infants, are not at greater risk than other individuals for becoming infected with West Nile Virus. Anyone can become infected with the virus if bitten by an infected mosquito, but children will need an adult's help in taking precautions against mosquito bites. Parents and care givers should take the following precautions to help protect children from getting mosquito bites.

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.*** 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.

If my child is bitten by a mosquito, should he or she be tested for West Nile Virus?

Children who are bitten by a mosquito do not need to be tested for WNV. Most mosquitoes are not infected with the West Nile Virus. Even in areas where mosquitoes may be found that carry the virus, very few mosquitoes – less than 2% – are infected. However, seek medical attention immediately if the child develops symptoms as a high fever, confusion, muscle weakness, severe headaches, stiff neck, or if his or her eyes become sensitive to light.

If my child is bitten by an infected mosquito, will he or she get sick?

Most people, including children, who are bitten by mosquitoes carrying West Nile Virus will experience no symptoms or very mild illnesses.

Should I seek medical attention if I think that my child has become infected with West Nile Virus?

Even though the chances are slight that your child could become infected with West Nile Virus, parents or caregivers should contact a doctor immediately if a child develops symptoms such as high fever with confusion, muscle weakness, severe headaches, stiff neck, or if his or her eyes become sensitive to light.

Is my child at risk for becoming infected with West Nile Virus while attending school?

No. The mosquitoes that most commonly carry West Nile Virus are generally more active during evening, nighttime and dawn hours, so children who attend school during the daytime are at minimal risk for exposure. However, mosquitoes may be active during the day in areas where there are weeds, tall grass or bushes. So, if a child will be in or near such areas, it is recommended that she or he wear protective clothing (as described above) and that you consider the use of a mosquito repellent with DEET (according to the manufacturer's directions) on your child.

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 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, WNV 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 or your child experience any of these more severe symptoms.

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.

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.