



**LIVINGSTON COUNTY DEPARTMENT OF PUBLIC HEALTH  
ENVIRONMENTAL HEALTH DIVISION**

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*West Nile Virus Fact Sheet, April 2004*

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## **General Information on West Nile Virus**

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### **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.

### **What is the risk of illness in humans?**

The risk of getting West Nile encephalitis is limited to people who are in areas where WNV is present. The chances you will become seriously ill from any one mosquito bite are extremely small. While the chance of anyone becoming infected with West Nile Virus is very low, risk is higher for people who are over 50 years of age or in persons with a compromised immune system. Elderly individuals or people with weakened immune systems are more likely to develop severe diseases, such as encephalitis or meningitis, if they become infected.

### **Where did West Nile Virus come from?**

Outbreaks of West Nile Virus have occurred in Africa, Egypt, Israel, Asia, Romania, Russia and France. Before 1999, however, West Nile Virus had never before been found in the Americas. The most likely explanation for its appearance here is that the virus was introduced by an infected bird that was imported or an infected person returning from a country where the virus is common.

### **Can you get West Nile Virus directly from birds?**

There is currently no evidence that West Nile Virus can be spread directly from birds to people. However, dead birds can carry a variety of diseases and, therefore, should never be handled with bare hands. Use gloves to carefully place dead birds in double-plastic bags and then place in the outdoor trash.

### **Besides mosquitoes, can you get West Nile Virus directly from other insects or ticks?**

Infected mosquitoes are the primary source of West Nile Virus. There is no evidence to suggest that ticks or other insects transmit West Nile Virus.

### **Can West Nile Virus infect other animals?**

Although the vast majority of infections have been identified in birds (crows, blue jays and ravens), the Centers for Disease Control have received reports of WNV in horses, dogs, cats, bats, chipmunks, skunks, squirrels, domestic rabbits and raccoons. There is NO evidence that WNV can be transmitted from animals to humans. Visit the USGS National Wildlife Health Center website at <http://www.nwhc.usgs.gov> for more information on West Nile Virus in other animals.

### **What are the symptoms of West Nile Virus?**

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.

### **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. There is a vaccine for horses. Owners of horses are encouraged to have their horse vaccinated for WNV.

### **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.

### **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.

### **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.

### **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.

### **Should I report dead birds to the Health Department?**

The Livingston County Department of Public Health encourages residents to report all dead bird sightings within the county, especially crows, blue jays and ravens. This will assist us in our efforts to monitor possible WNV activity. However, while every report is important to our monitoring efforts, we will be collecting only a sample of the dead birds and not every dead bird reported. We are encouraging individuals to bring the dead birds in to the Livingston County Health Department when requested to do so.

While there is currently no evidence that West Nile Virus can be spread directly from birds to people, dead birds can carry other diseases and, therefore, should never be handled with bare hands. Use gloves to carefully place dead birds in double-plastic bags and then place in the outdoor trash.

### **How do I report a dead bird?**

LCDPH encourages the reporting of all dead bird sightings. Any individual may report a dead bird by one of the following means:

- Call the Livingston County Department of Public Health directly at **517.546.9858**.
- Use the State of Michigan's **Web-Based Reporting System** at [www.michigan.gov/westnilevirus](http://www.michigan.gov/westnilevirus).

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](http://www.lchd.org).

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