

## West Nile Virus: Elderly at Risk

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West Nile virus (WNV) is a mosquito transmitted disease that can infect humans, birds, horses and other mammals. In most humans, WNV infection can cause a mild flu-like illness, or may cause no symptoms at all. However in some cases, particularly among the elderly, it can cause serious neurological diseases like encephalitis or meningitis. West Nile virus first appeared Nebraska during the summer of 2002 and has now spread across the continental United States.

West Nile virus is predominantly spread to humans by the bite of an infected mosquito. In Nebraska, the mosquito that most commonly transmits WNV is the *Culex tarsalis* mosquito. This mosquito is widely

distributed west of the Mississippi River. It is found throughout Nebraska, but more prevalent in western Nebraska. Larvae of *Culex* mosquitoes develop in standing water, especially in rural locations, but adult mosquitoes will fly several miles in search of a blood meal.

Female *c. tarsalis* mosquitoes feed mainly on nesting birds, but will attack humans and domesticated animals, especially after the nesting season. Most people have become infected in summer or in early fall. These mosquitoes are most active at dusk, and will enter buildings in search of a blood meal.

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**Using an insect repellent containing DEET is the most important action seniors can take to reduce the chances of getting bit by a mosquito infected with West Nile Virus. Repellents come in aerosols, pump sprays and even moistened towelettes. Read and follow label directions.**

In 2002, the first documented case of WNV transmission through blood transfusion was reported. Donated blood is now tested to ensure a safe blood supply. West Nile virus is NOT spread by casual contact such as touching, kissing, or caring for someone who is infected.

Persons older than 50, particularly those over 65, have the highest risk of severe disease, such as encephalitis and meningitis. In 2003, there were 29 deaths from WNV in Nebraska; 27 of those persons were more than 65 years old.

### *Symptoms*

Most people who are infected with WNV either have no symptoms or experience mild illness such as fever, headache and body aches before fully recovering. Some persons may develop a mild rash or swollen lymph glands. In some individuals, particularly the elderly, West Nile virus can cause encephalitis (inflammation of the brain), meningitis (inflammation of the membrane around the brain and spinal cord), and acute flaccid paralysis (a polio-like syndrome in which muscles become very weak or paralyzed). Symptoms may include: headache, high fever, stiff neck, confusion, coma, tremors, convulsions, and muscle weakness or paralysis. At its most serious, WNV can cause permanent neurological damage and death.

If illness does occur, symptoms generally appear within 3 to 15 days of being bitten by an infected mosquito.

### *Medical Care*

Currently, there is no human vaccine to protect the public against WNV, although several companies are working toward developing one.

There is no specific therapy for WNV. Most people who become infected will get better on their own. In more severe cases, intensive supportive therapy is indicated, which may include hospitalization, intravenous/IV fluids and nutrition, airway management, ventilatory support (ventilator) if needed, prevention of secondary infections and proper nursing care.

People are urged to contact their health care provider if they have concerns about their health. If symptoms such as high fever, confusion, muscle weakness, and severe headaches occur, people should see their doctor immediately.

### *Reduce Exposure to Mosquitoes*

Evidence indicates that the chance of human infection and illness resulting from WNV is quite low. Those at greatest risk of the serious complications of WNV are those over age 50, particularly those over age 65, and they should take the greatest care to

prevent exposure to mosquitoes. People over age 50 should take the following precautions from June through October, when mosquitoes are most active:

- Wear long pants and long-sleeved shirts, particularly between dusk and dawn when mosquitoes are active.
- Avoid shaded, bushy areas where mosquitoes rest.
- Limit outdoor activity, especially at dusk when *Culex tarsalis* mosquitoes are most active.
- Use an insect repellent containing DEET when spending time outdoors. *This is probably the most important action seniors can take to reduce the chances of getting bitten by an infected mosquito.*

**The Centers for Disease Control and Prevention found the elderly — who are more susceptible to adverse effects from WNV — are less likely to use a mosquito repellent so educating this group about the importance of using a repellent is key to preventing deaths from WNV.**

Right now DEET, diethyltoluamide, is the most effective insect repellent on the market today. DEET is not a brand name, but the active ingredient DEET or diethyltoluamide should be listed on the product label. Repellents come in aerosols, pump sprays and even moistened towelettes. After returning inside, wash with soap and water to remove DEET from skin. It is very important to read and follow label directions when using repellents.

### *Eliminate Mosquito Breeding*

Homeowners are encouraged to eliminate mosquito breeding sites to reduce mosquito populations. Mosquitoes lay eggs in standing or slow moving water. In residential areas, standing water can accumulate in unused tires, cans, unused pools and pool covers and other receptacles that collect water. Dump water from containers after it rains to eliminate these breeding areas. Mosquitoes will also enter homes through broken screens and open windows and doors. Keep mosquitoes out of the house by fixing broken screens.

Because of the high risk to senior citizens, persons over 65 should take extra precautions to prevent mosquito bites. Seniors needn't become reclusive during the summer, but should routinely use an effective insect repellent when spending time outdoors, especially at dusk.

**Using an insect repellent containing DEET is the single most important action that will prevent mosquito bites.**