

## **WNV Frequently Asked Questions**

### **When does West Nile virus happen?**

West Nile virus infections occur in the summer and fall in Idaho, when mosquitoes are active. WNV does not occur in northern states when it is too cool for mosquitoes to survive. In southern states with warmer climates and mosquitoes present year-round, the risk of infection may still be present in the winter months so protect yourself when you travel.

### **What are the [symptoms](#) and treatment?**

Although anyone encountering a West Nile virus-positive mosquito has a chance of being infected, most infections do not lead to illness. In other words, 80% of infections are thought to be asymptomatic. The remaining 20% of infections may lead to illness ranging from mild to severe. Although healthy children and adults have a very low risk of getting sick, it is possible that anyone of any age could develop West Nile fever or the more serious form, West Nile virus neuroinvasive disease.

If an illness does arise, the most common form is called West Nile fever which may include a fever, headache, body aches, a rash and swollen glands. The symptoms of West Nile fever may last for days or linger for weeks to months. Serious illness infecting the brain or spinal cord can occur in some individuals, and although anyone can experience the more severe form of the disease, it tends to occur in people over the age of 50 or those with other underlying medical conditions or weakened immune systems. The severe symptoms may include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks or more, and neurological effects may be permanent. Usually, symptoms occur from 5 to 15 days after the bite of an infected mosquito. There is no specific treatment for infection, but hospitalization and treatment of symptoms may improve the chances of recovery for severe infections. There is no vaccine available for humans.

### **How is the virus transmitted?**

WNV is transmitted by the bite of an infected mosquito. West Nile virus is maintained in nature in a silent [transmission cycle](#) between certain mosquitoes and certain wild birds. Some infected migratory birds, while appearing healthy, can carry the virus into a new area. Local mosquitoes may proceed to transmit virus from these birds to other birds, animals or people by their bite. Some infected mosquitoes can survive over the winter; therefore, WNV will likely reappear in the same place year after year due to local transmission. It does not appear that you can get an infection directly from a person or an infected animal under normal circumstances. Some infections have occurred in people receiving blood from infected donors; however, since 2003 the U.S. blood supply has been routinely screened for WNV, significantly reducing the risk of acquiring an infection through a blood transfusion.

## Do all mosquitoes transmit West Nile virus?

**NO.** Most mosquito species do **NOT** transmit WNV. However, plenty of mosquito species that are capable of transmitting the virus are found in Idaho. Therefore, it is best to take precautions to avoid all mosquito bites.

Several other mosquito-borne viruses capable of causing illness in people and animals are also found in western states, including Idaho. They include Western equine encephalomyelitis virus (WEE) and St. Louis encephalitis virus (SLE). These diseases are very rare but are also a good reason to avoid being bitten by a mosquito.

## How can I protect my family and myself?

Since mosquitoes are the primary source of infection, a simple way to reduce your risk of being bitten is to reduce the mosquito population around your home and to practice some simple personal precautions to reduce your chance of being bitten by a mosquito:

**1. Reducing the Mosquito Population:** Mosquitoes lay their eggs in moist areas and prefer standing water. The eggs become larva that remain in the water until the adults mature and fly off, typically within 1 week. Weeds, tall grass and shrubbery provide an outdoor home for adult mosquitoes to complete the life-cycle and breed again. They also can enter houses through unscreened windows and doors or broken screens. Many mosquitoes will deposit eggs in containers that hold water, such as buckets, discarded tires, or birdbaths.

- Dispose of cans, plastic containers, ceramic pots or similar water-holding containers that do not drain well.
- Drill holes in the bottoms of containers that are kept outdoors that cannot be removed.
- Remove all discarded tires on your property. Used tires are significant mosquito breeding sites.
- Make sure roof gutters drain properly, and clean clogged gutters in the spring and fall.
- Remove leaf debris that accumulates.
- Turn over plastic wading pools and wheelbarrows when not in use.
- Change the water in birdbaths weekly
- Clean vegetation and debris from edges of ponds.
- Clean and chlorinate swimming pools, outdoor saunas and hot tubs.
- Drain water from pool covers.
- Use landscaping to eliminate standing water that collects on your property.

*Source: Penn State University*

## 2. Personal Protection

⌚ Mosquitoes tend to be most active at dusk and dawn, but can bite at any time of the day. Wearing shoes, socks, long pants and a long-sleeved shirt outdoors during these times may reduce your risk of receiving a bite.

⌚ The proper use of mosquito repellents, according to manufacturers' directions, will reduce your risk of infection (special consideration must be

taken for repellent use in children). Several products are available containing DEET, Picaridin or oil of lemon eucalyptus. Spraying clothing with insect repellents containing permethrin or **DEET**, may reduce mosquito bites through thin clothing.

🕒 To reduce the number of mosquitoes in the home, make sure all windows and doors have screens and that all screens are in good repair.

## **What animals can be infected with the West Nile Virus?**

### **Birds**

The American crow and magpies, so far, have been the most visibly affected birds in the United States. Typically, these birds appear to show signs of illness in a community days to weeks before any human cases have occurred. Because of this, reports of their death may be good indicators that the virus has moved into a community. Birds tend to die singly or in small groups; they typically do **NOT** die in large numbers from West Nile virus. Since 1999, more than 50 percent of West Nile virus-positive dead crows evaluated along the east coast did have signs of trauma. It is thought this is because of their inability to fly correctly as the disease progresses. Jays, ravens and raptors also are susceptible to West Nile virus; therefore, they may prove good indicators of the virus in Idaho, as well. Other birds may become infected, but the birds listed above are highly visible indicators that virus is in the community. The Idaho Department of Fish and Game is the state agency to contact regarding dead wild birds.

### **Horses**

Horses can become seriously ill if infected. Horses vaccinated against eastern equine encephalitis (EEE), western equine encephalitis (WEE), and Venezuelan equine encephalitis (VEE) are not protected against West Nile virus. There are two highly effective vaccines available for WNV use in horses. Contact your equine veterinarian for more information about the vaccine.

The most common sign of WNV in horses is weakness, usually in the hindquarters, including a widened stance, stumbling, leaning to one side and toe-dragging. In extreme cases, paralysis may follow. Fever is sometimes evident, as is depression and fearfulness. Approximately 35 percent of unvaccinated horses suffering from West Nile viral encephalitis may die.

Caring for a horse suspected of having WNV infection has never led to an infection in a human. Normal veterinary infection control precautions should be followed when caring for a horse suspected of having this or any other viral infection. There also is no evidence WNV can be transmitted horse-to-horse.

### **Other Animals**

West Nile virus has been confirmed in some dogs and cats. However, it has been extremely rare, even in the most affected areas of New York City, and does **NOT** appear to be a serious risk to those species. There is no vaccine for dogs or cats.

Other species of wildlife -- although rarely affected -- include alligators, bats, chipmunks, skunks, squirrels and rabbits.

## **Are outdoor enthusiasts or hunters at higher risk?**

Outdoor activities may put people at higher risk of WNV infection because there is an increased chance of mosquito bites. Infections usually peak in late summer and early autumn, and decline when mosquito numbers are reduced by cold weather. If you are outdoors, you should take precautions against mosquito bites. It is important to apply mosquito repellent, according to manufacturers labeling, when participating in any outdoor activity. Wearing light-colored clothing with long sleeves and long pants helps prevent mosquito bites. Window screens on campers and boats should be kept "bug-tight", as should netting on tents and similar outdoor gear. Keeping a campsite neat and orderly and eliminating any potential mosquito breeding sites is always recommended. Electric "bug zappers" do not help, since these devices attract more mosquitoes than they kill.

**For hunters**, proper cooking kills WNV, so there is no danger in eating wild game. The Centers for Disease Control and Prevention (CDC) does recommend that when handling any dead animal, it is a good idea to wear gloves to prevent blood exposure to bare hands. For more information, you may also visit the Idaho Fish and Game web site [here](#).