

Answers to Common Questions

Q. How do people get the West Nile virus (WNV)?

A. After being bitten by a mosquito that is infected with WNV.

Q. Can you get the WNV from a person?

A. No. Normally, WNV can only be contracted through the bite of an infected mosquito.

Q. Can you get WNV from birds?

A. There is no evidence that a person can get the virus from handling live or dead infected birds. WNV can only be contracted through the bite of an infected mosquito.

Q. What happens if you're infected with the WNV?

A. Most people show no symptoms or have mild symptoms of disease. Mild symptoms include fever, headache, and body aches, often with skin rash and swollen lymph glands. More severe cases experience headache, high fever, stiff neck, disorientation, coma, tremors, paralysis, and death.

Q. How fatal is this disease?

A. About 6% of the symptomatic cases result in death. Fatalities are more likely in people over the age of 50.

Q. What is the treatment?

A. There is no known cure for WN fever. However, the symptoms can be lessened through proper medical attention.

Q. How common is WNV?

A. In 2002, there were over 3,800 confirmed cases of WN fever in the U.S. with over 200 confirmed deaths. It is not known how common WNV is or will become in the U.S.; however, in Europe WNV has caused sporadic human cases or outbreaks occurring at regular intervals.

Local Preparations

The Vector-Borne Diseases Program already concentrates its mosquito abatement efforts on species that can transmit WNV. Larval mosquitoes that are known to spread this virus as adults breed in large numbers in areas of standing water and wetlands in the County. Staff control larvae in these areas by aerial and ground application of an insect growth regulator that is safe to humans and animals. Over 20 years of continuous, consistent larval suppression has reduced the numbers of biting adult mosquitoes that breed in these areas.



Female mosquitoes transmit WNV when taking a blood meal.

For several years the Program staff have conducted active surveillance for WNV in cooperation with state and federal agencies. Testing will continue so that the virus can be promptly identified and mosquito control can be focused to prevent human cases of WNV in Washoe County.

Personal Precautions

It's important to reduce exposure to mosquito bites to prevent possible transmission of mosquito-borne infections. You can protect yourself by wearing protective clothing such as long-sleeved shirts and pants and using a repellent that contains DEET. (For use with young children, check with a physician.)

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West Nile Virus



District Health Department
**Vector-Borne Diseases
Program**



What is West Nile Virus?

West Nile virus (WNV) is a mosquito-borne virus that can cause illness in humans. WNV had only been found in Africa, Europe, and Asia prior to 1999 when it first appeared in the United States in New York City. Studies have shown that normally only a small percentage of humans infected with the virus will show symptoms of disease. The disease resulting from WNV infection is called "West Nile fever" or "West Nile encephalitis."

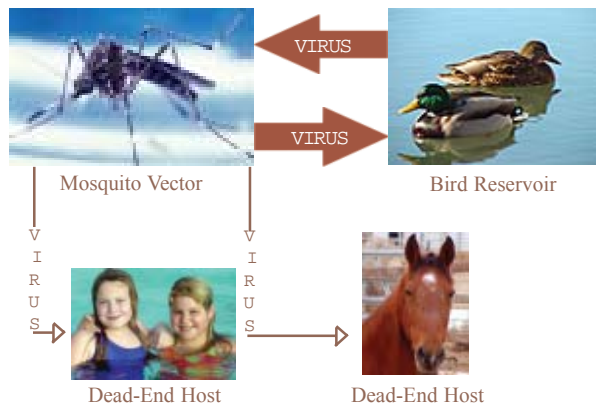
Vectors of WNV

WNV is transmitted primarily through the bite of an infected mosquito. In the United States, the common house mosquito (*Culex pipiens*) is considered to be the principal vector species that is capable of transmitting the virus between birds and humans. This species breeds in large numbers in urban areas of Reno and Sparks in the foul water of storm drain catch basins.

WNV Transmission Cycle

WNV cycles in nature through mosquitoes and birds. Initially, the virus is believed to pass between wetland bird species and mosquitoes. Occasionally, the virus is transmitted to urban bird species. When mosquitoes that feed on both birds and humans circulate the virus, human cases of WN fever may begin to appear.

West Nile Virus Transmission Cycle



Vertebrate Hosts

Wild birds are the principal reservoirs of WNV. The virus has been identified in well over a hundred wild bird species. Birds are able to maintain a long-term infection. Consequently, migratory birds are considered to be instrumental in transporting the virus to new areas. This would help explain the rapid movement of WNV westward since the summer of 1999.



Migrating birds like this Canada Goose may spread WNV.

WNV has been isolated from a number of mammalian species including cattle, horses, dogs, and cats. Most infected mammals are not capable of passing WNV to uninfected mosquitoes during a blood meal.

WNV in Humans

When people become infected with WNV, they generally show no signs of illness or disease. In some individuals however an influenza-like illness will follow. In humans the virus has an incubation period of 3 to 10 days. Symptoms can appear suddenly and may include: high fever, headache, backache, fatigue, and nausea.

There is no vaccine or treatment for persons infected with WNV. Most people recover from an infection completely within two weeks. Fatal cases are more prevalent in people above 50 years of age. Humans infected with WNV are unable to directly pass the virus to uninfected mosquitoes or to other humans and are considered a dead-end host. However, it appears that in rare cases blood transfusions and tissue transplants may offer a route of infection for humans.

WNV in Birds

Most birds do not show symptoms of WNV infection. Instead they serve as natural reservoirs for the virus and are able to pass it to feeding mosquitoes. However some avian species appear to be susceptible to the virus, displaying varying degrees of infection. Chickens, ducks, gulls, and pigeons show signs of illness ranging from encephalitis to death. High mortality rates are seen in crows, ravens, magpies and jays.



Ravens are particularly susceptible to WNV.

WNV in Horses



WNV is fatal in about 40% of unvaccinated horses.

Horses infected with WNV may demonstrate encephalitis with a moderate to high fatality rate. Symptoms include fever, staggering gait, weakness, and paralysis. Studies have shown that even though horses sometimes have high levels of virus circulating in their blood, they are unable to pass the infection to feeding mosquitoes. A vaccine is available to protect horses from WNV infection.

Based on a publication by Monmouth County Mosquito Extermination Commission, Monmouth County, NJ
Photo of raven by Jack Spencer