

What is West Nile Virus?

West Nile virus causes serious illness in humans, horses and birds bitten by infected mosquitoes. Disease has rarely been reported in cats, dogs and other mammals; most mammals are not susceptible even if bitten by an infected mosquito.

West Nile virus has been described in Africa, Europe, the Middle East, Asia and most recently, North America. It first appeared in the United States in 1999, when New York experienced an outbreak affecting 62 people which resulted in 7 deaths. Since then, it has spread rapidly across North America, affecting almost the entire continent.

Nearly 1,000 human cases of West Nile virus are reported annually in the U.S. This is down from the 2003 high of nearly 10,000 cases. Ohio was hit hardest in 2002 with 441 cases, 31 of which were fatalities. As in the rest of the U.S., the number of cases has declined since 2003, and now averages approximately 20 per year. The transmission dynamics of WNV are dependent on short-term weather patterns, such as heat, drought or floods, so future outbreaks involving a large number of cases are possible.

How is West Nile virus spread?

This virus is spread by the bite of a West Nile virus-infected mosquito. Mosquitoes get infected with West Nile virus by feeding on infected birds. Infected mammals do not pass the virus to mosquitoes because there are not enough viruses circulating in their blood. West Nile virus can not be spread directly from one person to another. However, it can be spread through blood transfusions from infected persons. Since, 2003, all donated blood is screened for West Nile virus in the U.S.

Can anyone get West Nile virus?

Yes, anyone can get infected with West Nile virus. More severe infections are seen in the elderly and those with a weakened immune system.

What are the symptoms of a West Nile virus infection?

Approximately 80% of people infected with West Nile virus do not become ill. Most of those who develop symptoms have a mild infection known as West Nile fever, which presents with fever, headache, eye pain, muscle aches, joint pain, a rash on the trunk and swollen lymph nodes. Severe cases involving the central nervous system are called neuroinvasive West Nile virus. This occurs in an estimated 1 in 150 cases. The symptoms may include extreme muscle weakness, inflammation of the brain (encephalitis), confusion, paralysis and coma. In rare cases, the infection may be fatal, particularly in the elderly and people with other medical conditions.

How long after exposure before symptoms appear?

Symptoms usually occur 5 to 15 days after an infected mosquito bites.

How is West Nile virus diagnosed?

Specific antibodies can be detected in blood or spinal fluid. Tests for the actual virus also exist, but these results may take weeks.

Does past infection with this virus make a person immune?

Yes. Prior infection with West Nile virus can provide lifelong immunity to the virus.

What is the treatment for West Nile virus infection?

There is no specific treatment for WNV. Antibiotics are not effective against viruses, and no effective anti-viral drugs have been discovered. Patient care centers on the treatment of symptoms and complications.

Is there a vaccine for West Nile virus?

There is not currently a vaccine available for humans, but they are currently under development. There are vaccines for horses available through veterinarians.

How can I prevent West Nile Virus?

Prevent mosquito bites. It only takes one bite from an infected mosquito to transmit disease.

Avoid mosquito bites.

- Avoid areas where mosquitoes are active.
- Avoid outdoor activities during the peak mosquito biting times of dawn, dusk and early evening.
- When outdoors, apply mosquito repellent as directed to clothing and exposed skin.
- Reapply mosquito repellent as needed, especially if swimming or sweating.
- Clothing will help protect you from mosquito bites. If weather permits, wear long pants, long sleeves and/or socks.
- Install or repair window and door screens to keep mosquitoes outside.

Eliminate mosquito breeding sites.

- At least once or twice a week, empty water from flower pots, pet food and water dishes, birdbaths, swimming pool covers, buckets, barrels and cans.
- Check for clogged rain gutters and clean them out.
- Remove discarded tires and other items that could collect water.
- Be sure to check for containers or trash in places that may be hard to see, such as under bushes or under your home.

For more information, please visit these Web sites:

CDC West Nile Page <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

CDC insect repellent use and safety
http://www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm

West Nile Facts http://www.cdc.gov/ncidod/dvbid/westnile/wnv_factsheet.htm