

West Nile Virus

West Nile virus is widely distributed throughout the world and first appeared in the United States in 1999. The virus is typically carried from infected birds (the host animal) to humans and other mammals through mosquito bites.

SYMPTOMS OF WEST NILE VIRUS INFECTION

About 80% of people infected with the virus have no symptoms. Those who do usually start to feel sick 3 to 14 days after being bitten by an infected mosquito. Most people who get sick develop **West Nile fever**. Symptoms include fever, headache, fatigue, body aches, muscle pain, joint pain, and chills. More than half of sick people report a rash. Symptoms usually last for 3 to 6 days but some people have been sick for weeks. A few people (approximately 1 in 150 infected persons) develop severe disease with serious symptoms. The virus invades the nervous system, causing **encephalitis** (inflammation of the brain) or **meningitis** (inflammation of the tissues surrounding the brain and spinal cord). Symptoms of severe disease include headache, fever, stiff neck, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis. Severe disease may last for weeks and cause permanent injury or, in some cases, death.

DIAGNOSIS

Tests for West Nile virus may include blood work, computed tomography (CT) or magnetic resonance imaging (MRI) scans of the head, and **lumbar puncture** (spinal tap) for **cerebrospinal fluid** (the natural fluid that bathes the brain and spinal cord).

PUBLIC HEALTH CONSIDERATIONS

Spread of the disease is effectively managed by mosquito control. Very small amounts of pesticides are applied via ground and aerial spraying. These applications have been shown to result in negligible pesticide exposure and no adverse health effects to the public.

PREVENTION

- Use insect repellent.
- Many mosquitoes are active between dusk and dawn. Use insect repellent and wear long sleeves and pants at these times or consider staying indoors during these hours.
- Eliminate mosquito breeding areas—anywhere with standing water, such as flowerpots or buckets.
- Make sure your windows have screens that are in good condition.
- You cannot get West Nile virus by casual contact such as touching an infected person.

TREATMENT

There is currently no specific treatment for West Nile virus infection. Since it is caused by a virus, not bacterium, antibiotics do not help. Most treatment is aimed at supporting the body's functions until the infection is cleared. You should see your doctor if you have symptoms. If your symptoms are severe, seek care in an emergency department.

FOR YOUR INFORMATION

- National Institutes of Health
www.ncbi.nlm.nih.gov/pubmedhealth/PMH0004457/
www.nlm.nih.gov/medlineplus/westnilevirus.html
- Centers for Disease Control and Prevention
www.cdc.gov/westnile/
- Cornell University Department of Entomology
entomology.cornell.edu/extension/medent/westnilefs.cfm

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Sources: National Institutes of Health, Centers for Disease Control and Prevention, Cornell University Department of Entomology

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