

West Nile Virus

What is West Nile virus?

West Nile virus (WNV) is a virus carried by mosquitoes. Most people infected with the virus either don't have symptoms or have only a mild illness. Less than 1 in 100 people who are infected with the virus develop serious illness. Serious forms of illness caused by WNV include encephalitis (inflammation of the brain) or meningitis (inflammation of the membranes that cover the brain and spinal cord).

How does it occur?

Wild and domestic birds, mainly crows, carry the West Nile virus. Mosquitoes become carriers of the virus when they bite infected birds. Humans can get the virus when they are bitten by infected mosquitoes. There are no known cases of a human getting WNV from an infected bird, only from the bite of an infected mosquito.

West Nile virus may be spread from person to person by breast-feeding, blood transfusions, and organ transplants. The infection is not spread by normal person-to-person contact like touching, kissing, or caring for someone who is infected.

The risk of West Nile virus is seasonal and begins in spring. The peak time for infection is mid- to late August. The risk of severe infection is greatest for people who are over 70 years old or who have a weakened immune system.

What are the symptoms?

About 4 out of 5 infected people have no symptoms. When symptoms do occur, they are usually mild and last a few days. Common symptoms of WNV infection include:

- fever
- headache
- muscle aches
- backache
- skin rash
- swollen lymph glands

The infection usually doesn't involve the brain. However, some infected people develop encephalitis or meningitis. Symptoms of these illnesses are:

- tremors
- stiff neck
- severe headache
- paralysis
- muscle weakness
- disorientation

- convulsions
- coma.

Some people develop a polioliike syndrome with sudden, painless weakness and paralysis. Symptoms usually appear 2 to 15 days after you were bitten by an infected mosquito.

How is it diagnosed?

Your health care provider will ask about your symptoms and examine you. Tests you may have are:

- blood tests
- spinal tap (lumbar puncture), a procedure in which a needle is inserted between two bones of your spine to take a sample of fluid for lab tests
- electroencephalogram (EEG), a test that measures the electrical activity of your brain (brain waves)
- computerized tomography (CT) or magnetic resonance imaging (MRI) scans.

How is it treated?

There is no specific treatment for the West Nile virus. If you have a serious infection, you may need to stay at the hospital. You may be given intravenous (IV) fluids and pain relievers. For severe or life-threatening infection, you may need treatment in an intensive care unit.

How long will the effects last?

Most people infected with WNV do not get seriously ill, and they recover fully. Symptoms of the more serious infections may last for weeks. Damage to the brain or other parts of the nervous system may be permanent.

If you get West Nile virus, you will be immune to future infection by the virus, but your immunity might decrease over time.

How can I take care of myself?

Rest and take acetaminophen (Tylenol) or an anti-inflammatory medicine such as ibuprofen if you are having fever, headache, or muscle aches.

Contact your health care provider if:

- Your temperature is 102 F (39 C) or higher
- Your symptoms are getting worse
- You have a severe headache
- You are having memory problems or feeling confused
- You are having weakness or paralysis (inability to move) of any part of your body

If you are older and live alone, you may need someone to be checking on you often to make sure your symptoms are not getting worse in ways you may not realize, such as confusion and coma.

How can I help prevent West Nile virus infection?

- Take precautions to avoid exposure to mosquitoes
- Stay indoors at dawn, dusk, and in the early evening, when you are most likely to get mosquito bites
- Wear long-sleeved shirts and long pants whenever you are outdoors
- Spray clothes with repellents that contain DEET because mosquitoes may bite through thin clothing. If you spray your clothing, you do not need to spray repellent on the skin under your clothing
- Use an insect repellent on skin that is not covered by clothing. It should contain 20% to 30% DEET. Apply the repellent sparingly and avoid concentrations higher than 30% DEET. (Use a repellent with no more than 10% DEET on children.) Be sure to follow the manufacturer's directions for use of the repellent
- Install or repair window and door screens so it is harder for mosquitoes to get indoors
- Mosquitos lay eggs in water. To reduce mosquito breeding, drain standing water. Routinely empty water from flowerpots, pet bowls, clogged rain gutters, swimming pool covers, buckets, barrels, cans, and other items that collect water.

Note: Vitamin B and ultrasonic devices DO NOT help prevent mosquito bites.

A vaccine is available to protect horses from West Nile virus. No vaccine is available for humans yet, but several companies are working to develop a human vaccine.