

**QUICK LINKS****West Nile Virus—TRAVELER INFORMATION**

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## Traveler Information

**WEST NILE VIRUS****INTRODUCTION**

West Nile virus (WNV) belongs to a virus family that includes dengue, yellow fever, Japanese encephalitis, St. Louis encephalitis, Murray Valley encephalitis, and tick-borne encephalitis. WNV is the second most common of these viruses infecting humans, after dengue. Since 2009, there have been 30,000 cases of WNV infection in the United States, up from 720 cases in 2009.

The severity of WNV infection varies. Most persons infected with the virus do not have any symptoms, while about 20% develop a mild illness known as West Nile fever. A very small percentage of infected persons become severely ill, and of these, about 5-10% die.

**TRANSMISSION**

Mosquitoes become infected by feeding on infected migrating birds; they transmit the virus to humans (and other animals) when feeding. Although there is no evidence that the virus is transmitted by handling infected birds, dead birds should not be touched. Rarely, people can become infected through organ transplants, blood transfusions, breastfeeding, and during pregnancy from mother to baby.

**AREAS OF RISK**

WNV occurs in Africa, the Middle East, Europe, southwestern Asia, western Russia, Australia, and the Americas.

**RISK FACTORS**

Travelers are at risk for acquiring the disease through mosquito bites, especially when outdoors at dawn or dusk in an area of risk.

In tropical climates, the disease can be transmitted year-round. In the U.S. and other temperate Northern Hemisphere climates, WNV is transmitted from June to November, peaking between late August and early September.

Persons older than 50 years of age have the highest risk of severe disease; however, severe neurological disease can occur in all ages.

**SYMPTOMS**

The incubation period for WNV ranges from 2 to 14 days, with symptoms of mild disease generally lasting 3-6 days. Most WNV infections are mild or clinically unapparent.

**Mild Infection** (West Nile fever)

- Symptoms occur suddenly, and include fever, headache, fatigue, muscle pain, nausea, and vomiting. Occasionally, skin rash (on the trunk), eye pain, and enlarged lymph nodes occur.

**Severe Infection** (West Nile meningitis, encephalitis, and acute flaccid paralysis)

- Symptoms of West Nile meningitis include high fever, headache, and neck stiffness.
- Symptoms of West Nile encephalitis include headache, fever, and altered consciousness, which may be mild (lethargy) or may progress to confusion or coma. Neurologic symptoms can occur.

- West Nile acute flaccid paralysis is characterized by acute onset of limb weakness or paralysis, which can occur in the absence of fever, headache, or other common symptoms. Involvement of respiratory muscles can occur.

## PREVENTION

The best way to avoid infection is to prevent mosquito bites, especially in late afternoon, evening, and nighttime. Apply DEET or picaridin-containing repellents. Be especially vigilant in applying repellent at dusk and dawn, when the mosquitoes that transmit WNV are most active. Also see *Insect Precautions*.

To reduce the number of mosquito breeding sites, drain any standing water such as in clogged rain gutters, birdbaths, old tires, etc. Fogging or mass spraying is of temporary and limited benefit.

There is no vaccine for West Nile virus.

## NEED FOR MEDICAL ASSISTANCE

Travelers with high fever, confusion, muscle weakness, and severe headaches should contact a doctor immediately. The doctor should be informed of recent travel or immunizations.

Treatment is supportive, often involving hospitalization, IV fluids, respiratory support, and prevention of secondary infections.

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