West Nile Virus is a virus most commonly spread by infected mosquitoes, (i.e., *Culex pipiens* and other species). West Nile virus can cause febrile illness (i.e., having or showing symptoms of a fever), encephalitis (inflammation of the brain) or meningitis (inflammation of the lining of the brain and spinal cord). Transmission has been documented in Europe and the Middle East, Africa, India, parts of Asia, and Australia.

It was first detected in North America in 1999, and has since spread across the continental United States and Canada.

### What are the symptoms?

- **70% to 80%** of people who become infected with West Nile virus do not develop any symptoms.

- One in five people develop a fever with other symptoms (e.g., headache, body aches, joint pains, vomiting, diarrhea, or rash). Full recovery is expected although fatigue and weakness can last for weeks or months.

- Less than **1%** develop serious neurologic illness such as encephalitis or meningitis. Symptoms can include headache, high fever, neck stiffness, disorientation, coma, tremors, seizures, or paralysis. Recovery may take several weeks or months though some neurologic effects may be permanent. About **10%** of people who develop neurologic infection due to West Nile virus will die.

- Severe illness can occur in anyone, but people over age sixty (60) or who have medical conditions such as cancer, diabetes, kidney disease or who have received an organ transplant are at the greatest risk.

### What causes WNV infection and is it contagious?

Infection is caused by the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can transmit the virus to humans and other animals.

In rare cases, the virus is known to be transmitted through blood transfusions, organ transplants, and from mother-to-baby during pregnancy, delivery, or breast-feeding.

NOTE: The incubation period of the infection is between two (2) and six (6) days with a range of up to fourteen days (14). The latency period may be longer in people with medical conditions that compromise the immune system.

NOTE: West Nile virus is **NOT** transmitted via casual contact with WNV-infected individuals OR, by consuming infected birds or animals.
**WHO IS AT RISK?**

Anyone living in an area where West Nile virus is present can get infected. The risk of infection is highest for people who work outside or participate in outdoor activities.

For USC, this includes:

- USC researchers that work with infected mosquitoes and/or in domestic and international areas where infected mosquitoes exist
- Student, staff, and/or faculty that work outdoors
- Student, staff, and/or faculty engaged in outdoor activities (e.g., recreational sports, community outreach, or volunteer work) where West Nile virus is present
- USC medical professionals that handle blood from WNV-infected patients. NOTE: “The Acute Communicable Disease Control Program (ACDC) [County of Los Angeles Public Health] recommends that medical providers order WNV testing for all patients with aseptic meningitis, encephalitis, or acute flaccid paralysis during the WNV season, late spring through November in California.”

**ARE THERE TREATMENT OPTIONS FOR WEST NILE VIRUS?**

There are no medications to treat or vaccines to prevent WNV infection. Over-the-counter medication is available to reduce fever and relieve symptoms and may be used. In more severe cases, hospitalization and supportive treatment are needed to enable recovery.

**HOW IS WNV CONTROLLED?**

WNV is controlled through active surveillance and removal/abatement of dead birds and mosquito proliferation.

Mosquito abatement is managed through the Greater Los Angeles Vector Control District. Los Angeles residents may report problems/request service at the Service Request Form web page or phone (562) 944-9656.

USC campus employees and students are strongly encouraged to notify Facilities Management Services (FMS) whenever they encounter dead birds, standing water, and/or mosquito proliferation on campus. Employees/students at off-site USC locations in California may report dead birds at 1- 877-WNV-BIRD or 1-877-968-2473.


**REFERENCES**

County of Los Angeles Public Health

- West Nile Virus and Other Arboviral Diseases: 2017 Los Angeles County Epidemiology Final May 1, 2018
- Frequently Asked Questions (FAQ) West Nile Virus (WNV)
- “It’s Not Just a Bite” Campaign

CDC: [West Nile virus web page](http://publichealth.lacounty.gov/acd/WNVHealthcare.htm)