

# HealthAlert West Nile Virus

**T**he Los Angeles County Department of Public Health has issued a health warning regarding the spread of West Nile virus (WNV). During 2017, LA County cases climbed to 233 with sixteen (16) deaths reported. The Centers for Disease Control and Prevention (CDC) reported 1,757 cases with 104 deaths nationally as of November 7, 2017.\*

## WHAT IS WEST NILE VIRUS?

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.



*Culex pipiens*

Source: Vectorie

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.

\* Refer to CDC table [West Nile Virus Disease Cases and Presumptive Viremic Blood Donors by State – United States, 2017](#) for up-to-date data.

## WHAT I NEED TO KNOW...

- Notify FMS Customer Resource Center (213) 740-6883 UPC; (323) 442-8005 HSC when:
  - Dead birds, standing water, and/or mosquito proliferation are observed.
  - Building doors/screens are in disrepair.
- For outdoor activities in WNV areas:
  - Use EPA-approved insect repellents.
  - Wear long sleeve shirts, and pants and other protective clothing.
- Contact [biosafety@usc.edu](mailto:biosafety@usc.edu) or (323) 442-2000 for more information.

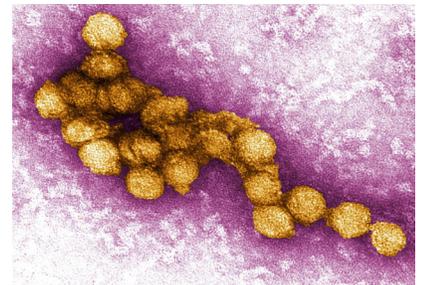
## WHAT CAUSES WNV INFECTION AND IS IT CONTAGIOUS?

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 that West Nile virus is **NOT** transmitted via casual contact with WNV-infected individuals OR, by consuming infected birds or animals.



Source: Pixnio

## 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)<sup>1</sup> [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.

Off-site personnel may locate the Mosquito Abatement District at <http://westnile.ca.gov/ziplocator.php>.

<sup>1</sup> <http://publichealth.lacounty.gov/acd/WNVHealthcare.htm>

USC employees/students at USC locations out of state may contact their local control district.

## HOW DO YOU PREVENT WNV?

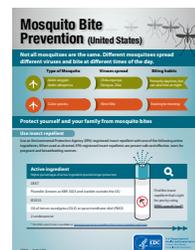
The Los Angeles County Department of Public Health recommends the following:

- **Avoid getting mosquito bites.** The mosquitoes that spread WNV are most active during evening to early morning hours (dusk to dawn). If you are outdoors during those times, use Environmental Protection Agency (EPA) approved insect repellents and cover up: wear long sleeve shirts, and pants and other protective clothing.
- **Keep mosquitoes out of your home.** Make sure your door and window screens are in good condition.
- **Get rid of places where mosquitoes lay their eggs.** Every 2-3 days, dump and drain water from potted plants, pet water bowls, bird baths, and other places where water collects.



## HOW DO YOU USE MOSQUITO REPELLENTS?

- **Choose an EPA-approved repellent** that contains an active ingredient of DEET, picaridin, IR3535, or other EPA-approved ingredients.
- **Re-apply as needed;** follow product instructions. NOTE: Repellents with a higher percentage of the active ingredient typically last longer.
- **Apply sunscreen first.** When using both sunscreen and repellent, apply sunscreen first.
- **Wear permethrin-treated clothing** if you are in mosquito-infested areas frequently.



## REFERENCES

County of Los Angeles Public Health

- *West Nile Virus and Other Arboviral Diseases: 2017 Los Angeles County [Epidemiology Report # 14 November 2, 2017](#)*
- [Frequently Asked Questions \(FAQ\) West Nile Virus \(WNV\)](#)
- ["It's Not Just a Bite" Campaign](#)

CDC: [West Nile virus web page](#)