



Hawaii State Department of Health
Disease Investigation Branch
Oahu 586-4586, Maui 984-8213, Hilo 933-0912,
Kona 322-4877, Kauai 241-3563

West Nile Virus Disease

What is West Nile virus disease?

West Nile virus (WNV) disease is a viral illness spread by mosquitoes. It mainly affects birds, but humans, horses, cattle, reptiles and other animals can also become ill. It was first discovered in Africa in 1937, and first appeared in the US in 1999 in New York. It quickly spread westward across the continental US and by 2004, all states had detected WNV with the exception of Alaska and Hawaii.

How do you get it?

WNV is transmitted to people primarily through the bite of an infected mosquito, mainly *Culex* mosquitoes. *Culex* mosquitoes tend to bite in the morning and evening and are not known to spread Zika, dengue, or chikungunya viruses. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread WNV to humans and other animals when they bite. It is also very rarely spread through blood transfusion, organ transplants and through breastfeeding. WNV is not spread through casual contact such as touching or kissing a person with the virus.

What are the symptoms of WNV?

Approximately 80% of people who are infected with WNV do not develop any symptoms, but there is no way to know in advance if you will develop an illness or not.

Up to 20% of infected people will display symptoms including fever, headache, body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach and back.

Less than 1% of infected people will develop severe neurological illnesses, such as encephalitis or meningitis (inflammation of the brain or surrounding tissue). Severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. Neurological effects may be permanent. WNV can be fatal.

When do symptoms start?

Symptoms usually begin between 2 and 14 days after being bitten by an infected mosquito, typically 2-6 days. The incubation period could be as long as 21 days in people with certain medical conditions that affect the immune system.

What is the treatment?

There is no vaccine or specific treatments for WNV disease. In mild cases of illness, the fever and aches will go away by themselves. Bed rest and medications for reducing fever and pain are usually all that are necessary. Severe cases may require hospitalization for supportive care.

What is the risk of getting sick from WNV?

While persons of any age can be infected with WNV, persons over the age of 50 are at higher risk for severe disease and death due to WNV infection. The more bites one has from infected mosquitoes, the higher their chances are of becoming ill. The risk of getting WNV through medical procedures is very small. All donated blood is tested for WNV before it is given to patients.

How can you keep from getting it?

The best way to prevent West Nile virus disease is to avoid mosquito bites.

- Use insect repellents when you go outdoors
- Wear long sleeves and pants during dawn and dusk
- Repair or install screens on windows and doors.
- Use air conditioning, if you have it.
- Remove mosquito sources from around your home.

For more information, see the CDC's website at <http://www.cdc.gov/westnile/index.html>