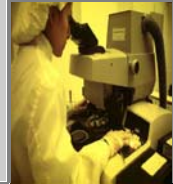


Center for Diagnostic Sciences BULLETIN



September 2004

Issue #7

This bulletin focuses on West Nile Virus (WNV). We thank Dr. Joyce Galligan and Dr. Rhonda Everett for their contribution to this issue. As always, we invite your comments, questions, and suggested topics for future bulletins. Please forward your comments to wwhitfie@usc.edu.

What is West Nile Virus?

The West Nile Virus (WNV) is a potentially serious illness. Experts believe WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall. It is carried by infected mosquitoes that can bite and infect humans and potentially make them sick.

Is the WNV a new disease?

WNV was first isolated from an adult woman in the West Nile District of Uganda in 1937. Since then, Africa, Asia and Japan have reported cases. The first case in the United States was reported in 1999 in New York. Ever since this first case, the WNV has moved westward every summer. Last year, California saw its first cases of the disease.

9,862 cases in the United States were reported to the Centers for Disease Control and Prevention (CDC) in 2003.

What are the signs and symptoms?

WNV may affect the central nervous system. For those infected with the virus symptoms will range from very serious (about 1 in 150 people) to no symptoms at all (approximately 80% of people).

Symptoms typically occur 3 to 15 days after being infected.

Severe symptoms may include:

Coma	Convulsions
Disorientation	High Fever
Headache	Muscle Weakness
Stupor	Vision Loss
Tremors	Numbness/Paralysis

These severe symptoms can last up to several weeks and cause neurological effects that may be permanent or even death.

Some of the milder symptoms include:

Fever	Headache
Nausea	Body Aches
Vomiting	Skin Rash
Swollen Lymph Glands	

These symptoms can last from a few days up to several weeks. Most WNV infections are mild and often clinically unapparent.

How does the virus cause severe illness in an individual?

Once a person is infected, the virus may multiply in the person's blood system and cross the blood brain barrier to reach the brain. Once there, the virus can interfere with normal functioning of the central nervous system (CNS) and cause inflammation of brain tissue (encephalitis) with sometimes fatal results.

How Is West Nile Virus Spread?

The most common way WNV is spread is by infected mosquitoes. Mosquitoes become WNV carriers when they feed on birds infected with the disease. Mosquitoes can then pass the virus on to humans and other animals when they bite.

Although the number of cases reported is small, there are other ways WNV can be spread. Other means of spreading the virus are through blood transfusions, organ transplants, and mother-to-child (breast feeding and/or during pregnancy from mother to baby).

Are blood banks testing donated blood?

Yes, the blood banks have been testing donated blood since June 2003.

According to the Los Angeles American Red Cross, 1/1000 units have been testing positive for WNV. All infected donated blood units are taken out of circulation and not used for transfusions.

To intensify efforts to keep all donated blood safe; all prospective donors are screened by asking if they have had a fever or headache recently. Remember, over 80% of individuals do not even know they have WNV.

The Red Cross will notify an individual if the donated blood has tested "positive" for the virus.

NOTE: WNV is **not** spread through casual contact such as touching or kissing a person infected with the virus.

Who Is At Risk of Getting Sick from West Nile Virus?

Everyone is at risk for the infection. Those who are over the age of 50 or have a weak immune system from another illness are at a higher risk of developing serious symptoms of WNV. Special care should be taken to avoid being bitten by mosquitoes.

Is a vaccine available for WNV?

At this time, no vaccine for humans is available. Researchers are working on discovering a human vaccine.

A vaccine is available for horses.

What should I do if I think I have the WNV?

If you think you have WNV you may choose to seek medical attention, although milder versions of the infection tend to resolve on their own.

There is no specific treatment for WNV. In milder cases, symptoms such as fever and headaches usually pass on their own. In more severe cases, people usually need to go to the hospital where they can receive supportive treatment that may include intravenous fluids, help with breathing, and nursing care.

Is there other information I should know about the virus?

The more time you spend outdoors, the greater your chances are of being bitten by an infected mosquito, the greater your risk of becoming sick. When you are outdoors, use insect repellents containing DEET (N,N-diethyl-meta-toluamide).

The American Academy of Pediatric Physicians recommends using a 10% DEET insect repellent for children. If you have any concern about applying DEET to your child, consult with your pediatrician.

- Make sure you have good screens on your windows and doors to keep mosquitoes out.
- Get rid of mosquito breeding sites by emptying standing water from flowerpots, wading pools, birdbaths etc.
- Wear long sleeves and pants during the hours when mosquitoes are most active (dusk and dawn).
- If you come upon a dead bird, don't handle the body with your bare hands. Contact the Los Angeles Department of Public Health by calling 1-877-747-2243.

What are the current statistics on WNV in California and Los Angeles?

To date, close to 500 cases WNV cases have been reported in the state, killing 14 people.

As of September 10, 2004, 176 WNV cases have been reported in Los Angeles County, 7 of which have resulted in death.

The virus has been detected in 56 of California's 58 counties. The counties with the most infections are listed below.

<u>County</u>	<u># of cases</u>	<u># of deaths</u>
Los Angeles	176	7
San Bernardino	165	4
Riverside	81	2

Additional information on the virus can be obtained by visiting the following web sites:

www.cdc.gov

<http://lapublichealth.org>

Also did you know?

