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## West Nile Virus

### **What is West Nile virus?**

West Nile virus was first discovered in the U.S. in 1999 in the New York City area of Queens. West Nile virus is a virus that lives in some birds and may be transmitted to people or other animals by mosquitoes. Most healthy people do not get sick. The virus can also cause a broad variety of symptoms including encephalitis (inflammation of the brain) or meningitis (inflammation of the lining of the brain and spinal cord); encephalitis and meningitis can also be caused by head injury, bacterial infections, or more commonly other viral infections.

### **How do people get the virus?**

West Nile virus is spread to humans by the bite of an infected mosquito. When a mosquito bites an infected bird, the mosquito can become infected. West Nile virus is not spread by person-to-person contact such as touching, kissing, or caring for someone who is infected.

### **Can you get West Nile virus from an infected bird?**

Human cases have not been traced to direct contact with birds. Although West Nile virus has not been shown to spread directly from birds to people, you should not touch dead birds, or any other dead animals with your bare hands. The possibility exists for virus from an infected bird to pass through a cut or opening in the skin. Use gloves to carefully place dead birds in a double plastic bag.

### **What should I do if I see a dead bird?**

The Local Animal Control Officers, Health Officers, and the Department of Health and Human Services are taking reports of dead bird sightings within New Hampshire. While the Department of Health and Human Services is interested in collecting information about all dead birds as part of their efforts to understand West Nile virus, not all birds will be tested. Crows and bluejays are of particular

Hampshire residents to report all dead bird sightings to assist the department's monitoring efforts. If you do not receive a phone call from your Animal Control Officer, Health Officer, or the Department of Health and Human Services to arrange pick up or delivery of the dead bird within 24 hours of making the report or by the next business day, please double bag any birds before disposing of them. The preferred means of disposal is burial at least 6 inches below ground. Dead birds should not be handled with bare hands.

### **Besides mosquitoes, can you get West Nile virus directly from other insects or ticks?**

Infected mosquitoes are the primary source for West Nile virus transmission to humans. There is presently no information that suggests ticks transmit West Nile virus to humans.

### **Do birds infected with the virus die or get ill?**

West Nile virus has been identified in more than 160 wild and domestic bird species. Birds of the Corvidae family, such as crows, blue jays, and ravens, have a high level of virus (viremia) and a high mortality rate once infected and therefore are excellent sources of information about West Nile virus. They show signs of illness before dying. Other species, such as chickens or exotic species at zoos, can get the infection but usually do not die because of it.

### **Can other animals get sick?**

Yes, a number of mammals have been found to test positive including dogs, bats, squirrels, raccoons, chickens, ducks, geese, turkeys, and many species of wild and domestic birds. Birds are the natural host and reservoir of West Nile virus. Although other animals are susceptible to West Nile virus infection, there is currently no evidence that animals other than birds develop a high enough viral load to transmit

the infection to a mosquito. A list of animal species in which West Nile virus infection has been detected has continually increased since 1999.

### **Where did West Nile virus come from?**

Outbreaks of the West Nile virus have occurred before in Egypt, Asia, Israel, South Africa, and parts of Europe and Australia. Before 1999, the West Nile virus had never before been found in the western hemisphere including the United States. Likely explanations for the introduction of the virus are that an imported infected bird or an infected mosquito entered the U.S. from a country where the virus is common.

### **Where has the virus been found in the United States?**

Nationally, there was a dramatic increase in West Nile virus activity in 2002. All but three states in the continental United States have reported evidence of the virus in their surveillance activities. In 2002, there were 4,156 human cases of West Nile virus in the U.S. and 284 human deaths have been attributed to the virus. West Nile has been isolated from 26 species of animals, in addition to humans, birds, mosquitoes, and horses.

### **How is West Nile virus and West Nile encephalitis treated?**

There are no specific therapies. In more severe cases, intensive supportive therapy is indicated, i.e., hospitalization, intravenous (IV) fluids and nutrition, airway management, a ventilator if needed, prevention of secondary infections, and nursing care.

### **Is there a vaccine against West Nile virus?**

No. Several drug manufacturers have applied to work on a vaccine, but an approved vaccine for humans is years away.

### **How long does it take to get sick if I am bitten by an infected mosquito?**

Being bitten by an infected mosquito will not necessarily make you sick. Most people who are bitten by a mosquito that is infected with West Nile virus have no symptoms or experience mild illness. If illness were to occur, it would be within 3 to 15 days of being bitten by an infected mosquito. Symptoms people may have, however, are fever, chills, and muscle aches. People with mild symptoms should recover completely and do not

require any specific medications or laboratory testing.

### **Who is at risk of getting seriously ill?**

Persons older than 50 are most at risk of getting West Nile encephalitis, which is a swelling of the brain due to the virus. Some people may develop meningitis, which is a swelling of the lining of the brain and spinal cord. You should consult a doctor immediately if you develop symptoms such as a high fever, confusion, muscle weakness, severe headaches, stiff neck, or if your eyes become sensitive to light.

### **What can I do to reduce my risk of becoming infected with West Nile virus?**

From June to October, when mosquitoes are most active, take the following precautions:

- Wear protective clothing such as long pants, long sleeves, and socks while outside during evening, nighttime, and dawn hours, when mosquitoes are most active and likely to bite.
- If outside during evening, nighttime, or dawn hours, consider the use of an insect repellent containing DEET (N,N-diethyl-meta-toluamide; concentrations of DEET should be 10% or less for children and no more than 30% for adults.
- Remove standing water around your home, which allows mosquitoes to breed, in such places as flower pots, pool covers, old tires, etc.
- Make sure the screens on your home fit properly and do not have any holes.

**For more information about West Nile virus, call the New Hampshire Department of Health and Human Services West Nile Virus Information Line at 1-866-273-NILE (6453) or visit our website at [www.dhhs.nh.gov](http://www.dhhs.nh.gov) or the Centers for Disease Control and Prevention website at [www.cdc.gov](http://www.cdc.gov) . For questions about West Nile virus illness, contact the DHHS Bureau of Communicable Disease Control at 1-800-852-3345 x4496 or 603-271-4496.**