West Nile

The first reported case of West Nile in the United States was in New York in 1999. The first-ever reported case of West Nile was in the West Nile District of Uganda in 1937. Since that time, the virus has become one of the most widely spread viruses known to man.

After arriving in the United States, the number of cases reported has dramatically increased. In the year 2000, only 21 human cases were reported. By 2002 there were more than 4,000 cases. In 2005, 42 states reported cases of human West Nile virus illness, 85 of which were fatal cases. In 2006 there were 170 deaths attributed to this virus.

West Nile virus is carried by mosquitoes. During feeding, the mosquito injects virus-rich saliva into the host. The main hosts are birds, which serve as incubators for the virus. Within the bird's body, the virus will reproduce and high levels of the virus can become present in the bird's blood. Another mosquito will then take the blood from the infected bird and will pass the virus on to either another bird or to another animal such as a human.

Birds seem to be the necessary link in the transmission of the virus. Though the majority of birds that are infected do not act any differently, a large number of dead birds can signify a high amount of West Nile activity and can predict a high risk of human infection for the following one or two weeks. Over the winter, the virus can remain in hibernating female mosquitoes and be transmitted again in the warmer months.

Approximately 80 percent of all human cases of West Nile infection go unnoticed. Around 20 percent of the infections cause only West Nile Fever—a fever that will go away on its own. Less than one percent of all cases will cause a major illness, such as an infection of the brain or nerves resulting in severe symptoms or paralysis.

The symptoms of infection come 2-14 days after the infection and commonly are fever, headache, fatigue, weakness, muscle pain and difficulty concentrating. Some people also have vomiting, diarrhea or a rash. When the illness is only West Nile Fever, it usually lasts only around one week. With a more severe illness, the fatigue and weakness can be present for a month or longer.

Treatment for West Nile infection is mostly supportive—specific therapies to treat the symptoms that the person experiences, such as medication for the fever and pain and rest. The best treatment is prevention.

The most effective and best studied insect repellent is DEET. This substance has proven very safe after 40 years of worldwide use. Plant-based repellents are generally less effective than DEET-based products. Ultrasonic devices, outdoor bug "zappers" and bat houses are not effective against mosquitoes. Other forms of prevention are community spraying for mosquitoes and water treatments that stop mosquito reproduction.

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