

How to Prevent Mosquito-Borne Encephalitis

- Don't let water accumulate in containers such as tires, barrels, cans, buckets, clogged rain gutters and wading pools.
- Flush birdbaths and wading pools at least once a week.
- Repair malfunctioning septic systems that are discharging to the surface.
- Make sure homes are well screened.
- Alert public health authorities to potential breeding sites in your area.
- Avoid contact with mosquitoes, especially at dusk and dawn.
- Wear long-sleeved shirts and pants when you are outdoors especially in mosquito-prone areas.
- Spray clothing and exposed skin, if necessary, with repellent containing DEET. Health authorities recommend that parents avoid using formulations with concentrations greater than 15 percent DEET on small children.
- Notify public health authorities of dead or dying crows, blue jays or hawks. The Indiana State Department of Health tests these birds for West Nile virus.

References and more information:

www.cdc.gov click on health topics A-Z, then on the diseases of interest

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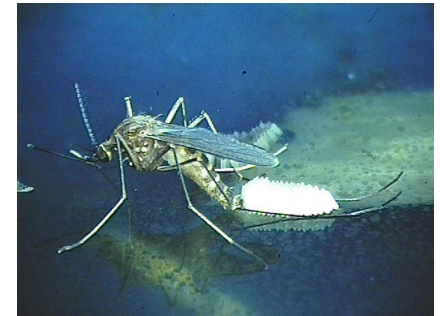
Elkhart County Health Department

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MOSQUITOES CAN CARRY SERIOUS DISEASES



INCLUDING:

- Eastern Equine Encephalitis
- St. Louis Encephalitis
- La Crosse Encephalitis
- West Nile Virus

**Environmental Health Services
Elkhart County Health Department**

*"Improving the Lives, Health and Environment
of our Community"*

- Eastern Equine Encephalitis, St. Louis Encephalitis, La Crosse Encephalitis and West Nile Virus are all encephalitic diseases caused by viruses.
- Encephalitis is a disease of the brain. It is also known as brain fever or sleeping sickness in humans.

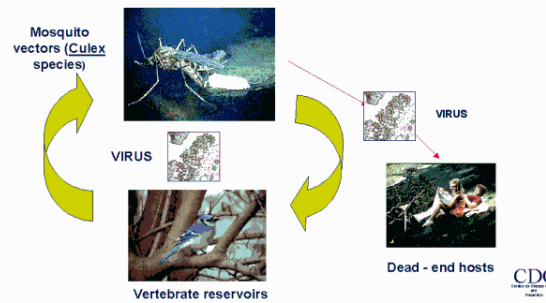


- Mosquito-borne encephalitis is transferred from wild and domestic birds and small mammals to mosquitoes. The virus is then transmitted to humans by a bite from an infected mosquito.
- Mosquito-borne encephalitis is not transferable person-to-person.

Eastern Equine Encephalitis virus (EEE) is maintained in nature by mosquitoes and birds in swampy habitats. Mosquitoes may acquire the virus from the bird reservoir and transmit it to humans, horses and other hosts. Symptoms occur between 4 and 10 days after exposure, and include sudden onset of fever, muscles aches, and severe headache. Many individuals will progress to more severe symptoms including seizures and coma, with a mortality rate of approximately 33%. There is no specific treatment. Those who survive may suffer permanent brain damage or other neurological effects.

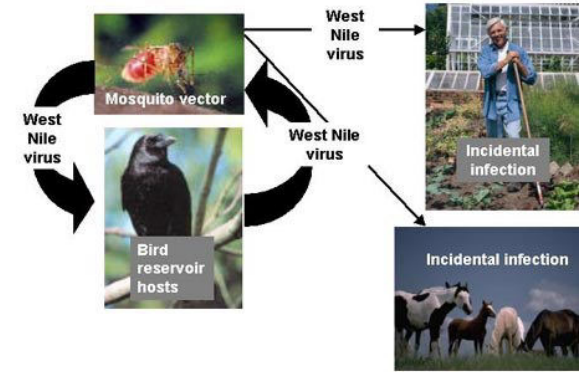
St. Louis Encephalitis (SLE) is the most common mosquito-borne human pathogen in the US. However, over 99% of SLE infections do not produce any overt symptoms, which can range from headache and fever to meningoencephalitis. The case-fatality rate is 5-15%, with the elderly at highest risk for severe disease and death. The infection is usually milder in children than adults, but children have a higher rate of developing encephalitis. There is no specific treatment. Periodic epidemics of SLE have occurred in the Midwest and Southeastern US, with the most recent outbreaks in Indiana occurring in the early 1980s and mid-1970s.

St. Louis Encephalitis Virus Transmission Cycle



La Crosse Encephalitis (LAC) was first discovered in La Crosse, Wisconsin in 1963. Most cases occur in the upper Midwestern states, including Indiana, and most cases occur in children under 16 years of age. Transmitted by the daytime-biting treehole mosquito the virus naturally cycles between hosts, such as chipmunks and tree squirrels, in forest habitats. Symptoms usually develop within 5-15 days after exposure, and include fever, headache, nausea, vomiting and lethargy. Severe disease occurs most commonly in those under 16 years old and is characterized by seizures, coma, and neurological conditions. Death results in fewer than 1% of cases. Adults seldom experience more than a headache. There is no specific treatment.

West Nile Virus Transmission Cycle



West Nile Virus was first detected in Indiana in August 2001. By the end of 2002, all 92 Indiana counties had reported probable animal and/or human cases. Most people who have been infected with the virus have no symptoms or mild symptoms, including fever, headache, body aches, and occasionally a skin rash and swollen lymph glands. More severe infection (encephalitis) is less common and may be marked by headache, high fever, stiff neck, stupor, disorientation, coma, convulsions, and muscle weakness. Death may occur in about 1% of those severely ill. Symptoms occur 3 to 15 days after the bite of an infected mosquito, and there is no specific therapy. The risk of acquiring West Nile encephalitis is limited to persons in areas where virus activity occurs and is higher in persons 50 years of age and older. West Nile encephalitis is transmitted by several species of mosquitoes.