

Fact Sheet

Encephalitis (St. Louis)



What is St Louis Encephalitis?

St. Louis encephalitis virus (SLEV) is a member of the family *Flaviviridae*, genus *Flavivirus*. Other medically important flaviviruses found in the Americas include West Nile virus and Powassan virus. St. Louis encephalitis is a rare disease that is caused by infected mosquitos. St. Louis encephalitis (SLEV) is one of a group of mosquito-transmitted viruses that can cause inflammation of the brain (encepalitis)

How is it Spread?

St. Louis encephalitis virus (SLEV) is transmitted by the bite of an infected *Culex* species mosquito. SLEV is not transmitted directly from person to person.

Signs and Symptoms



Less than 1% of St. Louis encephalitis virus (SLEV) infections are clinically apparent and the vast majority of infections remain undiagnosed. The incubation period for SLEV disease (the time from infected mosquito bite to onset of illness) ranges from 5 to 15 days. Onset of illness is usually abrupt, with fever, headache, dizziness, nausea, and malaise. Signs and symptoms intensify over a period of several days to a week. Some people spontaneously recover after this period; others develop signs of central nervous system infections, including stiff neck, confusion, disorientation, dizziness, tremors and unsteadiness. Coma can develop in severe cases. The disease is generally milder in children than in older adults. About 40% of children and young adults with SLEV disease develop only fever and headache or aseptic meningitis; almost 90% of elderly persons with SLEV disease develop encephalitis. The overall case-fatality ratio is 5 to 15%. The risk of fatal disease also increases with age.

Diagnosis

Preliminary diagnosis is often based on the person's clinical features, places and dates of travel (if patient is from a non-endemic country or area), activities, and epidemiologic history of the location where infection occurred.

Laboratory diagnosis of SLEV is generally accomplished by testing of serum or cerebrospinal fluid (CSF).

Treatment

No vaccine against SLEV infection or specific antiviral treatment for clinical SLEV infections is available. People with suspected SLE should be evaluated by a healthcare provider, appropriate serologic and other diagnostic tests ordered, and supportive treatment provided.

Prevention

There is no vaccine against St. Louis Encephalitis virus (SLEV). Reducing exposure to mosquitoes is the best defense against infection with SLEV and other mosquito-borne viruses. There are several approaches that can be used to prevent and control mosquito-borne diseases.

Use repellent: When outdoors, use insect repellent containing DEET, picaridin, IR3535 or oil of lemon eucalyptus on exposed skin as well as on clothing (mosquitoes will bite through thin cloth).

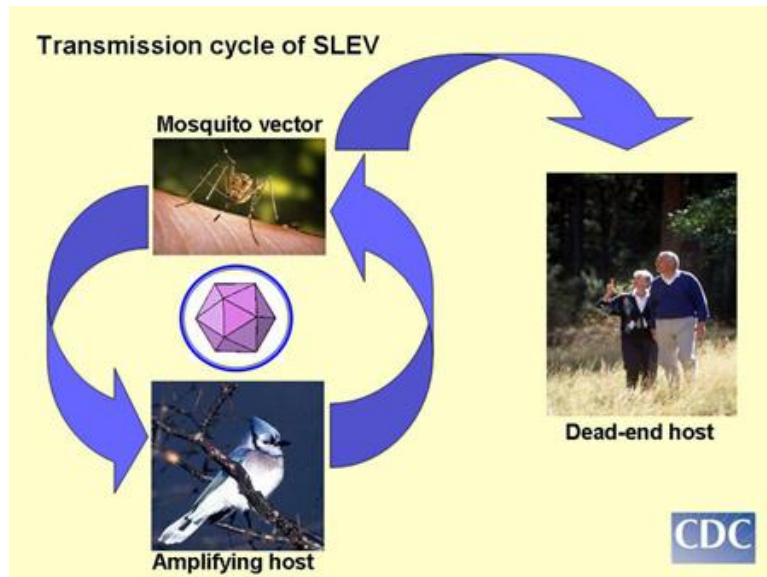
Permethrin is a repellent/insecticide that can be applied to clothing and will provide excellent protection through multiple washes (always follow the directions on the package!)

Wear protective clothing: Wear long sleeves, pants and socks when weather permits.

Avoid peak biting hours: Avoid outdoor activity or use protective measures when mosquitoes are active (*Culex* mosquitoes are most active between dusk and dawn).

Install and repair screens: Have secure, intact screens on windows and doors to keep mosquitoes out.

Keep mosquitoes from laying eggs: Mosquitoes can lay eggs even in small amounts of standing water. Get rid of mosquito breeding sites by emptying standing water from flower pots, buckets, barrels, and tires. Change the water in pet dishes and replace the water in bird baths weekly. Drill holes in tire swings so water drains out. Empty children's wading pools and store on their side after use.



For more sources of information on this topic visit:

ST. CLAIR COUNTY HEALTH DEPARTMENT www.scchealth.co

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES www.michigan.gov/mdhhs

CENTERS FOR DISEASE CONTROL AND PREVENTION www.cdc.gov