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What is St. Louis encephalitis?

St. Louis encephalitis is a rare disease that is related to the West Nile virus and is transmitted by infected mosquitoes. The St. Louis encephalitis virus (SLEV) is one of a group of mosquito-transmitted viruses that can cause inflammation of the brain (encephalitis).

Who gets St. Louis encephalitis?

Anyone bitten by a mosquito in an area where the virus is circulating can become infected with SLEV. The risk is highest for persons who engage in outdoor work and recreational activities and those living in low-income areas or who sit outside at night during the mosquito season and fail to wear repellents or protective clothing. Elderly persons are at increased risk of suffering a severe disease if they are infected.

How is St. Louis encephalitis spread?

Mosquitoes (primarily the *Culex* species) become infected by feeding on birds infected with SLEV. Infected mosquitoes then transmit the virus to humans and animals during their feeding process. SLEV grows in both infected birds and mosquitoes, but does not make either one sick.

What are the symptoms of St. Louis Encephalitis?

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 patients 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 infected with SLEV disease develop encephalitis. The overall case-fatality ratio is 5-15%. The risk of fatal disease increases with patient age.

How soon after exposure do symptoms appear?

It takes 5 to 15 days after the bite of an infected mosquito to develop symptoms of SLEV disease.

How is St. Louis encephalitis diagnosed?

Diagnosis is based on tests of blood or spinal fluid. These tests typically look for antibodies that the body makes against the viral infection.

What is the treatment for St. Louis encephalitis?

There is no specific treatment for SLEV disease. Antibiotics are not effective against viruses. Severe illnesses are treated by supportive therapy which may include hospitalization, respiratory support, intravenous (IV) fluids, and prevention of other infections.

How can St. Louis encephalitis be prevented?

Prevent mosquito bites. There is no vaccine or preventive drug for SLEV.

- Use insect repellent containing DEET, picaridin, IR3535 or oil of lemon eucalyptus on exposed skin and/or clothing. The repellent/insecticide permethrin can be used on clothing to protect through several washes. Always follow the directions on the package.
- Wear long sleeves and pants when weather permits.
- Have secure, intact screens on windows and doors to keep mosquitoes out of the house.
- Eliminate mosquito breeding sites by emptying standing water from flower pots, buckets, barrels, and other containers. Drill holes in tire swings so water drains out. Empty children's wading pools and store on their side after use.

How can I get more information about St. Louis encephalitis?

- If you have concerns about St. Louis encephalitis, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at the [VDH Local Health Districts page](#).
- Visit the Centers for Disease Control and Prevention website at [the CDC page on St. Louis encephalitis](#).

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