

## BACKGROUND

Saint Louis encephalitis (SLE) is a viral disease spread to people by the bite of an infected mosquito. SLE is a rare, but serious viral infection that is closely related to West Nile Virus.

## WHO DOES THE ISSUE IMPACT?

All residents of and visitors to areas where SLEV activity has been identified are at risk of SLE infection, particularly persons who engage in outdoor work and recreational activities. The risk of humans getting SLE in Pennsylvania is highest from late July through September when mosquitoes are most abundant. SLE has historically been reported most frequently in the central and eastern United States.

## COMPLICATIONS

Less than 1% of SLE infections are clinically apparent and most infections remain undiagnosed. Severe complications are rare but include coma and even death. The risk of these complications increases with age.

## SIGNS AND SYMPTOMS

Many persons infected with SLE virus have no apparent illness. People with mild illness often have only a headache and fever. More severe infection is marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions (especially in infants) and spastic (but rarely flaccid) paralysis. The mortality rate from SLE ranges from 5 to 30%, with higher rates among older adults (≥65 years).

## CAUSES AND TRANSMISSION

SLE is a mosquito-borne virus that infects bird populations and is then spread from bird to bird by mosquitoes. These infected mosquitoes can also bite humans. While humans and domestic mammals can acquire SLE infection, they are considered dead-end hosts since they do not have the ability to spread the disease.

## TESTS AND DIAGNOSIS

A definitive diagnosis of SLE disease requires that specimens are collected for laboratory diagnosis. Blood or spinal fluid can be sent to a laboratory and examined for genetic evidence of the virus, to isolate the virus in culture, or to test for the body's immune response to the infection (antibody testing).

## TREATMENTS

No vaccine or specific antiviral treatment for SLE is available. Health care providers treat the symptoms of infection by lowering the patient's fever and easing the pressure on their brain. Aspirin should be avoided. Hospitalization is often necessary.

## WHAT CAN YOU DO?

To prevent SLE:

- Use EPA approved insect repellent
- Wear long-sleeved shirts and long pants to cover your skin
- Treat your clothing and gear with an insecticide
- Take steps to control mosquitoes indoors and outdoors by:
  - Maintaining good screens on windows and doors to keep infected mosquitoes out.

- Regularly emptying any outside containers, or drill drainage holes in their bottoms.
- Turning over plastic wading pools and wheelbarrows when not in use.
- Cleaning clogged roof gutters that may allow the pooling of rain water.
- Not allowing water to stagnate in bird baths or ornamental ponds.
- Cleaning and chlorinating swimming pools and removing standing water from pool covers.
- Using landscaping to eliminate standing water that routinely collects on your property.
- Removing discarded tires from your property as they make an excellent larva habitat.
- Using *Bacillus thuringiensis israelensis* (Bti) or *Bacillus sphaericus* (Bsp) tablets for standing water that can't be eliminated; available at any lawn and garden store. The bacteria will infect and kill any mosquito larvae present, but the water will remain safe for people, pets, aquatic life and plants.

If you or a family member might have SLE:

- Talk with your health care provider immediately

## RESOURCES FOR MORE INFORMATION

PA DOH Vectorborne Disease webpage: [Vectorborne Diseases](#)

CDC SLE website: <https://www.cdc.gov/sle/index.html>

*This fact sheet provides general information. Please contact your physician for specific clinical information.*

**If you have any questions, contact us at 1-877-PA-HEALTH.**

