

What is La Crosse Encephalitis?

La Crosse encephalitis is a disease that is caused by a virus transmitted by infected mosquitoes. The La Crosse encephalitis virus (LACV) is one of a group of mosquito-transmitted viruses that can cause inflammation of the brain (encephalitis). In the United States, an average of 63 LACV disease cases are reported each year.

Who gets La Crosse Encephalitis?

Humans can become infected with LACV from the bite of an infected mosquito. However, humans rarely, if ever, develop high enough concentrations of LACV in their bloodstreams to infect feeding mosquitoes. Humans are therefore considered “dead-end” or incidental hosts for LACV. An infection from LACV can cause illness in any person, but persons age 5 to 15 years are more susceptible to suffering a severe neurological illness from LACV than older people.

How is La Crosse Encephalitis spread?

LACV is usually transmitted by the bite of an infected treehole mosquito (*Aedes triseriatus*), but LACV can also be transmitted by other container-breeding mosquito species such as the Asian bush mosquito (*Aedes japonicus*), Asian tiger mosquito (*Aedes albopictus*) or the inland floodwater mosquito (*Aedes vexans*). LACV is not transmitted directly from person to person. The treehole and other “container-breeding” mosquito species are aggressive daytime-biting mosquitoes, especially in or near infested woods. These mosquito species can lay their eggs in bodies of water accumulated in treeholes, but also lay eggs in most man-made water holding containers, such as discarded tires or unused buckets, neglected wading pools, etc. LACV can be passed from female treehole mosquitoes to the eggs they lay and the virus can survive in dormant eggs through the winter and develop into infected, flying mosquitoes in the spring.

What are the symptoms of La Crosse Encephalitis?

Most persons infected with LACV have no apparent illness. In those who become ill, initial symptoms include fever, headache, nausea, vomiting, and tiredness. Severe disease involving encephalitis occurs most commonly in children under age 16 and is often accompanied by seizures. Coma and paralysis occur in some cases and long-term learning disabilities may occur in children who survive a severe illness.

How soon after exposure do symptoms appear?

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

How is La Crosse 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 La Crosse Encephalitis?

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

How can La Crosse Encephalitis be prevented?

Prevention of mosquito bites is the best protection against LACV.

- 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.
- Eliminate mosquito breeding sites around the home 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.
- LACV can survive the winter in the mosquito eggs that will hatch into infected mosquitoes in the spring. Cleaning potential breeding sites such as old tires or buckets can reduce the number of infected eggs developing into infected mosquitoes. As the various *Aedes* mosquito species that transmit LACV will also lay their eggs in treeholes, one can reduce mosquitoes by filling treeholes in and around your yard with sand.

How can I get more information about La Crosse Encephalitis?

- If you have concerns about La Crosse Encephalitis, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at <https://www.vdh.virginia.gov/local-health-districts/>.
- Visit the Centers for Disease Control and Prevention website at <https://www.cdc.gov/lac/>.

October 2018