

La Crosse Encephalitis

What is La Crosse encephalitis?

La Crosse encephalitis is a viral illness that is transmitted to people through the bite of an infected mosquito. The virus is a bunyavirus within the California serogroup and is closely related to Jamestown Canyon virus. Researchers in La Crosse, Wisconsin first detected the virus in 1964.

How serious is La Crosse encephalitis?

Most people infected with this virus will have either no symptoms or a mild flu-like illness. Symptoms usually show up suddenly within 1-2 weeks of being bitten by an infected mosquito. A small percentage of people, especially children, may develop encephalitis (inflammation of the brain). Less than 1% of encephalitis cases are fatal. Most patients fully recover although some patients have long-term nervous system problems such as seizures or cognitive abnormalities.

Most severe cases start with headache, fever, nausea, or weakness. The illness may rapidly progress into disorientation, seizures, and coma.

There is no treatment for the illness other than supportive care. Hospitalization may be necessary for severe cases.

Who is at risk for La Crosse encephalitis?

Severe cases occur primarily in children. The average age of reported cases in Minnesota is 6 years old. In Minnesota,

cases of La Crosse encephalitis have been found in the southeastern region of the state, including the Twin Cities and surrounding counties. Children who live or play in and near wooded areas of these regions are at highest risk.

What kind of mosquito spreads La Crosse encephalitis?

In Minnesota, we have approximately 50 species of mosquitoes but not all mosquitoes feed on people. The primary vector of La Crosse encephalitis is the eastern treehole mosquito (*Aedes triseriatus*).

The treehole mosquito is found almost exclusively in wooded or shady areas, and usually does not fly more than 200 yards from the area where it developed. It feeds during the day, unlike many pest mosquitoes that feed mostly at dusk and dawn.

Treehole mosquitoes reproduce in water holding tree holes (pockets of rainwater that collect between the main trunks of trees with two or more trunks). They also reproduce in waste tires, buckets, and any other container that can hold rainwater.

The female treehole mosquito can pass La Crosse virus on to her eggs. In this way, the virus is maintained in the same areas year after year. If large numbers of water-holding containers are present in an area where La Crosse virus is also present, there may be high numbers of infected mosquitoes by late summer. The highest risk of La Crosse encephalitis in Minnesota

is typically from mid-July through mid-September.

What can people do to prevent La Crosse encephalitis?

The best way to prevent La Crosse encephalitis is to remove mosquito breeding habitat from your property:

- Fill water-holding tree holes with dirt or sand.
- Recycle old tires or store them where they cannot collect rainwater.
- Empty standing water from around your home at least once a week to prevent mosquitoes from using containers as breeding sites.
 - Buckets, flower pots/saucers, pet bowls, birdbaths, kiddie pools, etc.
- Check gutters and remove leaves frequently to ensure proper drainage.
- Tighten up loose tarps/covers so water does not pool.
- Tightly cover or screen water storage containers (e.g., rain barrels).

To prevent La Crosse encephalitis and other mosquito-borne illnesses in Minnesota, protect yourself and your family from mosquito bites:

- Use repellents containing DEET according to label directions – up to 30% DEET is safe and effective for adults and children over two months of age. Other effective repellents include picaridin, IR3535, and oil of lemon eucalyptus. Only use products that are registered by the Environmental Protection Agency.

- Pre-treat clothing and gear with permethrin-based products.
- Wear loose-fitting, long sleeved shirts and pants.
- Keep mosquitoes out of your home by maintaining screens on windows and doors.

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