LaCrosse Encephalitis

What is LaCrosse encephalitis?

LaCrosse 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.

How serious is LaCrosse 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). Approximately 1-3% of these encephalitis cases are fatal, and another 15% of patients have long-term nervous system problems.

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

There is no treatment for the illness other than supportive care until the illness is over.

Who is at risk for LaCrosse encephalitis?

Severe cases occur primarily in children (average case age is 6 years old).

In Minnesota, cases of LaCrosse encephalitis have been found in the southeastern region of the state. An average of four to five cases are reported each year in Minnesota.

Most people are exposed to infected mosquitoes in wooded habitat, as the mosquito that spreads the virus is found in hardwood forests.

What kind of mosquito spreads LaCrosse encephalitis?

In Minnesota we have approximately 50 species of mosquitoes. Not all mosquitoes feed on people, and the primary vector of LaCrosse encephalitis is the Eastern Tree Hole mosquito (Aedes triseriatus).

The Tree Hole mosquito is found almost exclusively in wooded or shaded areas, and usually does not fly more than 200 yards from the area where it was produced. It feeds during the day, unlike many of our pest mosquitoes that feed mostly at dusk and dawn.
Tree Hole 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, cans, and any other container that can hold rainwater.

The female Tree Hole mosquito can pass LaCrosse encephalitis virus into 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 LaCrosse virus is also present, there may be significant numbers of infected mosquitoes by late summer. The highest risk of LaCrosse encephalitis is typically from mid-July through early September.

What can people do to prevent LaCrosse encephalitis?

If children play in or near wooded areas during the day, they should:
- Wear long-sleeved shirts and long pants (light-colored clothing works best).
- Use repellents containing DEET according to label directions – less than 30% DEET is sufficient for adults and children. Other effective repellents include picaridin, IR3535, and oil of lemon eucalyptus.

Remove standing water from your property:
- Change the water in bird baths at least once a week to prevent mosquito breeding.
- Recycle old tires or store them where they can’t collect rainwater. If these aren’t options for you then cover them with a tight tarp or store them in direct sunlight.
- Check gutters and clean out leaves frequently to make sure they aren’t plugged.
- Fill water-holding tree holes with dirt or sand to prevent further mosquito breeding.

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