



**Public Health**  
Prevent. Promote. Protect.

Public Health – Muskegon County

# Eastern Equine Encephalitis Fact Sheet

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## What is Eastern equine encephalitis (EEE)?

EEE is a rare disease that is caused by a virus spread by infected mosquitoes. EEE virus (EEEV) is one of a group of mosquito-transmitted viruses that can cause inflammation of the brain (encephalitis). In the United States, approximately 5-10 EEE human cases are reported annually.

## How do people get infected with EEEV?

EEEV is transmitted through the bite of an infected mosquito. Disease transmission does not occur directly from person to person.

## Where and when have most cases of EEE occurred?

Most cases of EEE have been reported from Atlantic and Gulf Coast states. Cases have also been reported from the Great Lakes region. EEE cases occur primarily from late spring through early fall, but in subtropical endemic areas (e.g., the Gulf States), rare cases can occur in winter.

## Who is at risk for infection with EEEV?

Anyone in an area where the virus is circulating can get infected with EEEV. The risk is highest for people who live in or visit woodland habitats, and people who work outside or participate in outdoor recreational activities, because of greater exposure to potentially infected mosquitoes.

## How soon do people get sick after getting bitten by an infected mosquito?

It takes 4 to 10 days after the bite of an infected mosquito to develop symptoms of EEE.

## What are the symptoms of EEEV disease?

Severe cases of EEEV infection (EEE, involving encephalitis, an inflammation of the brain) begin with the sudden onset of headache, high fever, chills, and vomiting. The illness may then progress into disorientation, seizures, and coma. Approximately a third of patients who develop EEE die, and many of those who survive have mild to severe brain damage.

## How is EEE 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 EEE?

There is no specific treatment for EEE. 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, IV fluids, and prevention of other infections.

## How can people reduce the chance of getting infected with EEEV?

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

- 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 by emptying standing water from flower pots, buckets, barrels, and other containers. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.

## What should I do if I think a family member might have EEE?

Consult your healthcare provider for proper diagnosis.

## For more information on EEE:

Centers for Disease Control and Prevention (CDC)  
[www.cdc.gov/EasternEquineEncephalitis/index.html](http://www.cdc.gov/EasternEquineEncephalitis/index.html)

## CDC Public Information

24 Hours 1-800-232-4636  
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