

# Eastern Equine Encephalitis (EEE Virus)

## What is Eastern Equine Encephalitis?

Eastern equine encephalitis (EEE) is a rare and potentially fatal virus spread to humans through the bite of an infected mosquito.

## How is it Spread?

EEE virus is a fairly uncommon virus that is spread by mosquitos and mostly found in states in the eastern half of the U.S. The natural host or reservoir for EEE virus in the environment are birds. Mosquitos that take blood meals from infected birds get the infection and then can pass the virus on to humans. Humans are considered 'accidental hosts'. EEE virus is not spread from person to person or from infected birds or horses to humans.

## Signs and Symptoms

EEE virus can result in one of two types of illness, systemic or encephalitic (EEE). Systemic infection has an abrupt onset and is characterized by chills, fever, and joint and muscle pain. The illness lasts 1 to 2 weeks and recovery is complete when there is no central nervous system involvement. In infants, the encephalitic form is characterized by abrupt onset; in older children and adults, encephalitis is manifested after a few days of systemic illness. Signs and symptoms in encephalitic patients are:

- Fever
- Headache
- Irritability and restlessness
- Drowsiness
- Anorexia
- Vomiting and diarrhea
- Cyanosis, convulsions and coma

## Diagnosis

Preliminary diagnosis is often based on the person's clinical features, places and dates of travel (if patient is from a non-endemic country or area), activities, and epidemiologic history of the location where infection occurred.

Laboratory diagnosis of arboviral infections is generally accomplished by testing of serum or cerebrospinal fluid (CSF) to detect virus-specific IgM and neutralizing antibodies.

## Treatment

No human vaccine against EEE virus infection or specific antiviral treatment for clinical EEE virus infections is available. Patients with suspected EEE should be evaluated by a healthcare provider, appropriate serologic and other diagnostic tests ordered, and supportive treatment provided.

## Prevention

The most effective way to prevent infection from Eastern Equine Encephalitis virus is to prevent mosquito bites.



**For more sources of information on this topic visit:**

ST. CLAIR COUNTY HEALTH DEPARTMENT [www.scchealth.co](http://www.scchealth.co)

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES [www.michigan.gov/mdhhs](http://www.michigan.gov/mdhhs)

CENTERS FOR DISEASE CONTROL AND PREVENTION [www.cdc.gov](http://www.cdc.gov)