

**Alabama Department of Public Health  
Alabama Emergency Response Technology (ALERT)  
Health Alert Network (HAN)  
August 21, 2023**

**Eastern Equine Encephalitis confirmed in Alabama Residents. Consider Mosquito-borne Diseases in Patients with Exposure to Mosquito Bites.**

**Current Situation**

The Alabama Department of Public Health (ADPH), Infectious Diseases & Outbreaks Division (ID&O) is investigating two Eastern equine encephalitis (EEE) virus disease cases from Baldwin County. EEE virus is spread to people by the bite of an infected mosquito. Only a few cases are reported in the United States each year and most cases occur in eastern or Gulf Coast states. Although rare, EEE is very serious. Approximately 30% of people with EEE die and many survivors have ongoing neurologic problems.

EEE virus disease should be considered in any person with a febrile or acute neurologic illness who has had recent exposure to mosquitoes, organ transplantation, or potentially blood transfusion, especially during the summer months in areas where virus activity has been reported.

Other arboviruses such as West Nile, La Crosse, St. Louis encephalitis, and Powassan viruses (in addition to other more common causes of encephalitis and aseptic meningitis like herpes simplex virus and enteroviruses) should also be considered in the differential etiology of suspected EEE illness.

**Report**

EEE virus disease is reportable in Alabama. To report to public health, please go to <https://epiweb.adph.state.al.us/redcap/surveys/?s=H37ENP8ADD> and complete a Communicable Disease REPORT card. Reporting can assist public health to recognize areas of concern and implement control measures to reduce future infections.

**Clinical Diagnosis and Testing**

The incubation period for EEE virus disease typically ranges from 4 to 10 days, but can be as long as several weeks in immunocompromised people.

Most persons infected with the EEE virus have no apparent illness. Symptomatic persons typically develop a systemic febrile illness that can progress in <5% of individuals to meningitis or encephalitis. Signs and symptoms in patients with neuroinvasive disease include headache, confusion, focal neurologic deficits, meningismus, seizures, or coma. EEE neuroinvasive disease

is estimated to have a 30% case fatality rate and results in neurologic sequelae (such as seizure disorders, hemiplegia, and cognitive dysfunction) in more than 50% of survivors.

EEE virus is difficult to isolate from clinical samples; almost all isolates (and PCR positive samples) have come from brain tissue or cerebral spinal fluid (CSF). Serologic testing remains the primary method for diagnosing EEE virus infection. Combined with a consistent clinical presentation in an endemic area, a rapid and accurate diagnosis of acute EEE virus disease can be made by the detection of EEE virus-specific IgM antibody in serum or CSF. EEE virus IgM testing is available at CDC and some state health departments. A positive EEE virus IgM test result should be confirmed by neutralizing antibody testing at a state public health laboratory or CDC. To submit specimens for testing, please contact the ADPH Bureau of Clinical Laboratories at 334-290-6130.

### **Resources**

- For more information about EEE virus, see <https://www.cdc.gov/easternequineencephalitis/healthcare-providers/index.html>