

# Eastern Equine Encephalitis (EEE)



## INFORMATION ABOUT EEE

### **What is Eastern Equine Encephalitis (EEE)?**

EEE is a rare, but serious disease that is caused by a virus and spread by infected mosquitoes. Mosquitoes become infected when they bite infected birds. Mosquitoes then spread the virus to humans or other mammals, like horses or deer. The disease cannot be spread between mammals, such as from horse to horse or horse to humans. Not all mosquitoes carry the EEE virus, and only about 4-5% of human infections result in EEE illness. In the U.S., approximately 5-10 EEE cases in humans is reported annually. This year, a total of 8 human cases have been confirmed in Michigan.

### **How many total cases of EEE are there in Michigan?**

As of September 26, 2019, there have been 8 human cases of EEE in 6 counties (Kalamazoo, Berrien, Barry, Cass, Calhoun and Van Buren). Of the 8 cases, 3 resulted in death. EEE has also been identified in a total of 27 animals: 15 horses, 11 deer and one dog. These animal cases have been identified in 12 counties (Barry, Berrien, Calhoun, Cass, Genesee, Jackson, Kalamazoo, Kent, Lapeer, Montcalm, Newaygo, St. Joseph and Van Buren).

### **Who is at-risk for infection?**

Anyone can get sick, but the risk is highest for those who live in or visit woodland habitats, those who work outside or those who participate in outdoor recreational activities. Those who are over the age of 50 and under the age of 15 are also at an increased risk.

### **What are the symptoms?**

Symptoms usually occur within 4-10 days after being bitten by an infected mosquito. Symptoms include the sudden onset of headache, high fever, chills and vomiting, which can progress to encephalitis (inflammation of the brain). Approximately a third of patients who develop EEE die, and many of those who survive have mild to severe brain damage. If you have been bitten by a mosquito and develop these symptoms, contact your doctor.

### **How can I protect myself from EEE?**

- Apply insect repellent that contains DEET, or other Environmental Protection Agency-approved product to exposed skin, following the manufacturer's directions.
- Wear a long-sleeved shirt and long pants when outdoors.
- Spray insect repellent on clothing. Permethrin works well.
- Fix tears in window and door screens to help keep mosquitoes outside.
- Empty water from mosquito breeding sites, such as buckets, unused kiddie pools and old tires.
- Consider limiting time outdoors from dusk to dawn when mosquitoes are most active.

### **Can my pet get EEE?**

EEE is rare in dogs and cats, but horses are very susceptible to the illness. Approximately 90 percent of horses that show signs of EEE die. A vaccine is available for horses. You can protect your pets from EEE by keeping them inside as much as possible between dusk and dawn, when mosquitoes are most active. There are some topical products that can be applied to dogs to protect them from mosquitoes. If you have questions, contact your veterinarian.

### **Can I get sick from eating deer meat if it is infected with EEE?**

Mammals are called “dead-end hosts,” which means they are not able to spread the disease. Therefore, there is no danger of getting EEE from an infected deer. However, if an animal appears ill, you should not consume the meat in case it is sick with another illness.

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For updated information on EEE in Michigan, including case counts, visit  
[www.Michigan.gov/EEE](http://www.Michigan.gov/EEE)

For general health information related to EEE, visit [www.cdc.gov/EEE](http://www.cdc.gov/EEE)

**You may also call Mid-Michigan District Health Department at 989-831-3668.**

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