

Mission:

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



Rick Scott
Governor

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Surgeon General and Secretary

Vision: To be the **Healthiest State** in the Nation

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Marion County Mosquito-borne Illness Advisory

Marion County is currently under a mosquito-borne illness advisory due to the number of horses in the county that have tested positive for eastern equine encephalitis (EEE) virus. The risk of disease transmission from mosquitoes to humans through mosquito bites is currently increased.

Residents should take preventative efforts to avoid being bitten by mosquitoes and should protect their animals by vaccinating for EEE as applicable. EEE is a reportable animal disease. If you suspect your animal has EEE, consult your veterinarian. Animals suspected or confirmed with EEE must be reported to the Florida Department of Agriculture and Consumer Services, Division of Animal Industry. For more about the EEE virus or how to report, visit www.freshfromflorida.com/Divisions-Offices/Animal-Industry.

What is EEE?

EEE is a rare disease that is spread to horses and humans by infected mosquitoes. It is among the most serious of a group of mosquito-borne virus diseases that can affect the central nervous system and cause severe complications and even death. Similar diseases are western equine encephalitis, St. Louis encephalitis, and LaCrosse encephalitis.

What causes EEE?

EEE is an arbovirus. Arboviruses are a large group of viruses that are spread by certain invertebrate animals (arthropods), most commonly blood-sucking insects. In the United States, arboviruses are spread mainly by infected mosquitoes. Birds are the source of infection for mosquitoes, which can then sometimes transmit the infection to horses, other animals and, in rare cases, people.

Where is EEE found?

EEE is found in North America, Central and South America and the Caribbean. In the United States, most cases have been reported from the eastern seaboard states, the Gulf Coast and some inland Midwestern areas.

How do people get EEE?

The EEE virus has a complex life cycle involving birds and a specific type of mosquito, *Culiseta melanura*, that lives in marshes and swamps. These mosquitoes feed only on birds; they do not feed on humans and other mammals. In rare cases, however, the virus can escape from its marsh habitat in other mosquitoes that feed on both birds and mammals (including horses and humans). These mosquitoes can transmit the virus to animals and people. After infection, the virus invades the central nervous system, including the spinal cord and brain. In addition to horses, other animals such as ratites (emus and ostriches) and camelids (alpacas and llamas) can also be impacted by EEE infection. Emus in particular are highly vulnerable to infection and exposure to body fluids (particularly feces, saliva, and blood) from infected birds can lead to additional birds and people to become sick.

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What are the signs and symptoms of EEE?

Infection can cause a range of illnesses. Most people have no symptoms; others get only a mild flu-like illness with fever, headache and sore throat. For people with infection of the central nervous system, a sudden fever and severe headache can be followed quickly by seizures and coma. About half of these patients die from the disease. Of those who survive, many suffer permanent brain damage and require lifetime institutional care.

How soon after exposure do symptoms appear?

Symptoms usually appear four to 10 days after the bite of an infected mosquito.

How is EEE diagnosed?

Diagnosis is based on tests of blood or spinal fluid.

Who is at risk for EEE?

Anyone can get EEE, but some people are at increased risk due to bites of infected mosquitoes: people living in or visiting areas where the disease is common and people who work outside or participate in outdoor recreational activities in areas where the disease is common. EEE occurs mainly in young children and in persons older than age 55. People involved with the care of emus with EEE virus infection can also be exposed by direct contact with infected birds or their bodily fluids or feces.

What complications can result from EEE?

The disease is fatal to about half of those who develop severe symptoms. Of those who survive, many suffer permanent brain damage. It's 80 to 90 percent fatal in horses in emus.

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. Patient care centers on treatment of symptoms/complications.

How common is EEE?

EEE is a rare disease. Fewer than five human cases are reported in most years. Although small outbreaks of human disease have occurred in the United States, epidemics in horses can be common during the summer and fall.

Is EEE an emerging infectious disease?

Yes. EEE virus was first isolated in the United States in 1933. The risk of exposure has been increasing as people move into previously undeveloped areas where the virus lives. Deaths in horses are a sign of increased spread of the virus in a community.

How can EEE be prevented?

A vaccine is available for horses, but not for humans. A vaccine has also been used off-label for ratites (ostriches and emus) and camelids (alpacas and llamas). The best defense against these viruses is prevention. The best preventive measure for residents living in areas infested with mosquitoes is to eliminate the places where the mosquito lays her eggs, primarily artificial containers that hold water. For individuals in contact with sick emus, consult with your veterinarian right away and limit contact with the birds. Anyone working with emus that might be infected with EEE should always use proper personal protective equipment. This includes wearing disposable or washable outerwear, shoe covers, gloves, face shield, and an N95 fit-tested respirator. Please contact the Florida Department of Health in Marion County (352-789-1515) and ask for Epidemiology for any questions related to emus and EEE exposure risks.