



Eastern Equine Encephalitis¹

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What is Eastern Equine Encephalitis?

Eastern equine encephalitis (EEE) is a virus disease transmitted to horses and humans by mosquitoes. Birds are the source of infection for mosquitoes. The virus is found along the east coast from New England to Florida, the Gulf Coast, and some midwestern areas. The principal vector in avian populations is the mosquito *Culiseta melanura*. This mosquito does not feed on humans or horses, but in rare cases the virus can escape from its marsh habitat in other mosquitoes that feed on both birds and mammals (including horses and humans) and then transmit the virus to mammals, including people. Horses and humans are "dead end" hosts, meaning that they do not develop enough virus in their blood to transmit the virus (therefore sick horses or humans can't transmit the disease to mosquitoes, only birds can).

Symptoms and Prevention

Symptoms develop from four to ten days after infection. In horses, they include include unsteadiness, erratic behavior and a marked loss of coordination. There is no effective treatment and seizures resulting in death usually occur within 48-72 hours. Most people that are infected with the virus

have no symptoms; others get only a mild flu-like illness with fever, headache, and sore throat. When serious infection of the central nervous system occurs, a sudden fever and severe headache can be followed quickly by seizures and coma which often result in death or permanent brain damage.



Figure 1. There is a vaccine for horses, but not for humans. Credits:

A vaccine is available for horses, but not for humans (see Figure 1). Prevention includes effective mosquito control, and avoidance of mosquito bites by wearing protecting clothing and using repellents containing DEET, particularly between dusk and dawn. There have been more than 150 confirmed cases of eastern equine encephalitis in the United States since 1964.

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Further Information

For updates on the current situation on West Nile and other mosquito-borne diseases in Florida, visit the Florida Medical Entomology Laboratory's Website (<ftp://fme1/ifax.ufl.edu>). At this site, the Encephalitis Information System (EIS, <http://eis.ifax.ufl.edu>) can be accessed to view current health alerts. Additionally, information is provided to assist readers in understanding the real risk of exposure to the mosquito-borne viruses in Florida.