



# Eastern Equine Encephalitis

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## Why in News?

[Mosquito-borne illnesses](#) continue to pose a significant threat across various parts of the world, and one of the latest additions to this concern is the **emergence of the Eastern equine encephalitis (EEE) virus in the United States.**

- This rare virus has recently been reported in **Alabama and New York**, with serious implications for public health.

## What is Eastern Equine Encephalitis?

- **About:**
  - **Eastern Equine Encephalitis (EEE)** is a viral disease that causes **inflammation of the brain (encephalitis)**. It spreads to **people and animals** by the bite of an infected mosquito.
    - **EEE** was first identified in **horses in Massachusetts, United States**, in 1831.
- **Causes:** EEE is caused by the **Eastern Equine Encephalitis Virus (EEEV)**, which belongs to the **genus Alphavirus** and the family **Togaviridae**.
  - EEE virus has a single-stranded, positive-sense RNA genome.
  - EEEV is primarily transmitted through the bite of infected mosquitoes, particularly species belonging to the **Culiseta melanura group**.
    - These **mosquitoes feed on both birds (reservoir hosts) and mammals**, including **humans and horses** (dead-end hosts).
    - The virus **does not spread between humans** or from animals like horses to humans.
- **Symptoms:** The symptoms associated with EEE can range from mild to severe, often progressing rapidly:
  - The virus typically begins with high fever, headache, chills, and nausea.
  - As the infection advances, more serious symptoms may develop, including **seizures, disorientation, and even coma.**
- **Effects:**
  - Roughly **33% of individuals who are infected do not survive**, typically passing away between 2 to 10 days after the symptoms first appear.
  - Survivors of the virus **might experience long-lasting neurological issues**, with a greater likelihood of occurrence in individuals above 50 and under 15 years of age.
- **Treatment:**
  - Currently, there are **no vaccines available to directly treat Eastern equine encephalitis.**
  - To mitigate the risk of infection, individuals are advised to take several precautionary steps, including **avoiding mosquito bites by using repellents and wearing protective clothing.**

**UPSC Civil Services Examination, Previous Year Question (PYQ)**

**Q. Consider the following statements: (2017)**

1. In tropical regions, Zika virus disease is transmitted by the same mosquito that transmits dengue.
2. Sexual transmission of Zika virus disease is possible.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans: c**

PDF Reference URL: <https://www.drishtias.com/printpdf/eastern-equine-encephalitis>

