

# Eastern Equine Encephalitis

## CLINICAL SIGNS, DIAGNOSIS, AND PREVENTION

Eastern Equine Encephalitis (EEE), **also known as Sleeping Sickness**, is a viral disease of horses that involves transmission between birds or rodents and mosquitoes. This virus is most commonly seen in horses in the southeastern US with several hundred cases reported each year. Most horses that develop disease are young and unvaccinated, but certainly vaccinated horses can also develop disease. Up to 90 percent of horses infected with EEE die. Humans are also at risk for disease with approximately 10 fatal human cases per year reported in the United States.

Indigenous birds carry and amplify the virus, but do not show any clinical signs. Mosquitoes are then infected after feeding on the birds and transmit the virus to horses (*or other mammals*). Horses and humans can develop disease but do not pass the disease onto any other animal or person and will not have enough of the virus in their bloodstream to infect mosquitoes. Other mammals that can get this disease include cattle, alpacas, swine, llamas, dogs, and cats. The **incubation period in horses is 3-7 days following the bite of an infected mosquito**.

You should **contact your veterinarian immediately if you notice any of the below clinical signs in your horse**. Neurologic horses can become extremely dangerous to be around and caution should be taken while attempting to care for these animals. Treatment is supportive care. Intravenous fluids will likely be needed for dehydration. Anti-inflammatory medications can be administered to reduce swelling of the brain. Unfortunately, the prognosis for EEE in horses is very poor, with up to 90% of infected horses dying of the disease. Once a neurologic horse loses the ability to stand on its own, the prognosis becomes poor for survival.

### CLINICAL SIGNS

**In horses** (*usually progressive*):

- Biphasic fever (*day 2 and day 6*)
- Stiffness
- Hypersensitivity to touch
- Aggression
- Excitability
- Head pressing
- Wandering
- Constant chewing
- Recumbency and death

**In humans:**

- Fever
- Headache
- Body aches
- Disorientation
- Seizures
- Paralysis
- Coma and death in severe cases

### DIAGNOSIS

- Clinical signs
- Blood test for antibodies against virus
- Postmortem findings

### PREVENTION

**Vaccination:**

- EEE is considered a core vaccination for all horses
- Annually or more frequently in warm climates (*twice yearly in TN*)

**Mosquito control:**

- Eliminate mosquito breeding sites (*mosquitoes can breed in any puddle that lasts for more than 4 days*)
  - » Eliminate stagnant water sources
  - » Dispose of cans, plastic containers, buckets, pots or any other unwanted water holding containers on the property
  - » Eliminate discarded tires – popular mosquito breeding site!
  - » Drill holes in the bottom of recycling containers kept outdoors
  - » Clean clogged roof gutters
  - » Turn over plastic wading pools when not in use
  - » Turn over wheelbarrows
  - » Eliminate bird baths
  - » Empty and refill outdoor buckets and water troughs every few days
  - » Aerate ornamental pools or stock them with fish
  - » Clean and chlorinate swimming pools
- Reduce exposure to adult mosquitoes with insect control
- Avoid turn out during dusk and dawn which is peak feeding time for mosquitoes
- Turn fans on in barns for stalled animals or open barn windows to create a breeze