



Western Equine Encephalitis (WEE)

Disease Name: Western Equine Encephalitis, Western Equine Encephalomyelitis or WEE

Disease Type: Viral

Transmission: Vector borne. This virus is transmitted by mosquitoes or other biting insects. Birds act as reservoirs for the virus. After mosquitoes bite infected birds, they can transmit the virus when they bite a horse. A horse affected with WEE is not contagious and poses no risk to other horses, humans or birds.

Frequency: Low

Incubation period: 2 days to 3 weeks

Carrier status: Infected horses cannot transmit the disease to other horses. The virus can only be transmitted to a horse via an insect vector.

Shedding period: Infected horses do not shed the virus nor do they act as a source of virus to insect vectors.

Latency: Infected horses pose no risk of infection to other horses.

Severity: Medium. Mortality rate in horses infected with WEE is 20-40%

Clinical signs and symptoms:

- Depression and anorexia without fever when initially infected
- Moderate to high fever 102.5-104.5°F (39.17-40.28°C)
- Lack of appetite
- Lethargy/drowsiness
- Neurologic signs- Onset of neurologic disease is frequently sudden and progressive
 - Periods of hyperexcitability, apprehension and/or drowsiness
 - Fine tremors and fasciculations of the face and neck muscles
 - Cranial nerve paralysis-- facial paralysis and weakness of the tongue are very common
 - Head tilt, droopy lip, muzzle deviation
 - Weakness, ataxia, and incoordination in one or all limbs
 - Complete paralysis of one or more limbs
 - Convulsions
 - Recumbency (inability to stand)
 - Death

Diagnoses: Diagnosis is made by a veterinarian by measuring antibody titers in serum (a component of whole blood), using an ELISA (enzyme-linked immunosorbent assay) or, less commonly, with PCR on CSF (cerebrospinal fluid).

Treatment: There is no cure for Western Equine Encephalitis. Supportive care is administered in horses which show clinical signs.



Prognosis: Fair. Mortality rate is 20-40% of infected horses. WEE affects horses less severely than EEE. Horses that survive infection can have long-term deficits, though it is rare in horses infected with WEE.

Prevention: Keep all horses up to date on vaccinations. Initial vaccination is followed in 3 to 6 weeks with a booster; yearly revaccination is recommended. More frequent boosters (i.e. twice yearly) are recommended in areas with year-round mosquito seasons and in endemic areas. Practice vector management on all properties where horses are kept:

- Use insect repellents frequently; re-apply after rain.
- Keep horses in at night when possible and apply insect repellent.
- Eliminate or minimize standing water.
- Stock tanks or ponds with mosquito-feeding fish.
- Eliminate brush piles, gutters, old tires and litter.
- Remove all equipment in which standing water can collect.

Biosecurity: There are no recommended biosecurity protocols nor do restrictions need to be placed on affected or recovered animals as they pose no risk of infection to other horses. Practice vector control management on your facility to reduce risk of transmission from insects.