Encephalitis
Eastern, Western & Venezuelan

The Eastern, Western and Venezuelan encephalitis virus's are clinically similar and are characterized by signs of CNS dysfunction and moderate to high mortality. Arboviruses are the most common cause of equine encephalitis and are transmitted by mosquitoes or other blood feeding insects and infect a variety of vertebrate hosts, sometimes including humans, and may cause serious disease. Most pathogenic arboviruses use a mosquito to bird or rodent cycle.

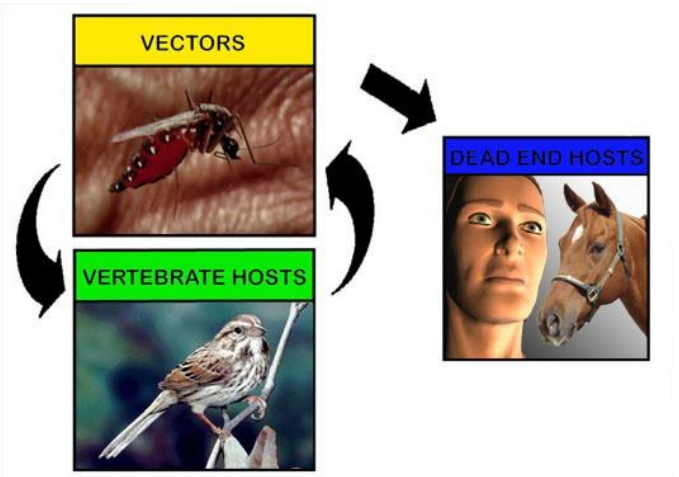
The most pathogenic viruses for horses are alphaviruses of the family Togaviridae. These species include Eastern, Western and Venezuelan viruses.

Eastern Equine Encephalitis EEE
The principal means of transmission and spread of Eastern Equine Encephalitis is a mosquito-vertebrate-mosquito cycle. The identification of all specific vectors in epidemics is difficult because no single species is consistently associated with the transmission of the virus to horses.

In subtropical areas transmission occurs throughout the year with a peak in summer. In more temperate regions, there is a distinct transmission season. The virus is not detected until midsummer and can remain active until the first heavy frost. The mechanism of viral persistence during the winter in temperate areas, where transmission is not continuous, remains unknown.

It is possible that sporadic epizootics result from adult mosquitoes surviving periods of inactivity, long distance movement of infected vectors by wind currents occurs, or migration of infected hosts (birds), and subsequent climactic conditions favourable to mosquito proliferation. In South America, serologic studies suggest that forest-dwelling rodents and marsupials are the vertebrate hosts. EEE is readily recovered from sentinel mice and hamsters.

The most common means of transmission. Horses and people are "incidental" hosts for the virus.



Western Equine Encephalitis WEE
This virus is transmitted by mosquito vectors that breed in sunlit marshes and in pools of irrigation water in pastures and also by ticks.

Venezuelan Equine Encephalitis
No single vector has been associated with transmission of the epizootic VEE virus—many mosquitoes and other blood sucking insects have been the source of infection.

The clinical signs are similar for all these viruses. Initially, horses are quiet and depressed with clinical neurologic signs generally occurring 5 days after infection. Any and all signs are attributable to the area of the brain that has been damaged. The damage to the brain may be one sided or limited to specific areas, so symptoms may not be evenly distributed.

Clinical signs include:

- Changed voice
- Impaired vision
- Aimless wandering
- Head pressing
- Circling
- Inability to swallow
- Irregular wobbly gait
- Weakness and paralysis
- Convulsions

Most deaths occur within 2-3 days after onset of clinical signs.

Head Pressing is a classic neurological symptom for Encephalitis

Staggering with an irregular wobbly gait