

# Western Equine Encephalomyelitis/Eastern Equine Encephalomyelitis – “Sleeping Sickness” in Horses

## Disease Fact Sheet

### **SPECIES/AGES AFFECTED**

The virus causing “sleeping sickness” can infect horses, birds and humans. It can affect any age of these species although old, young and otherwise immune compromised individuals may be at more risk. Encephalomyelitis refers to an inflammation of the brain and spinal cord.

### **RISK OF INFECTION/EXPOSURE**

The virus is carried by the *Culex tarsalis* mosquito (same species of mosquito that carries West Nile virus) and is found in Manitoba mosquito populations every year. It cycles between birds and mosquitos, with horses and humans being “dead-end” hosts – that is to say they don’t serve as a source of infection. The risk of exposure is high in horse populations and occasional outbreaks have occurred in Western Canada.

### **METHOD OF TRANSMISSION**

Horses are infected by being bitten by an infected mosquito.

### **PREVENTION/VACCINATION**

Vaccines are readily available at your veterinary clinic. These vaccines are very effective at preventing the disease and are usually found in combination with tetanus and other diseases. Foals should be vaccinated at 3 months, 4 months and 6 months of age then given annual boosters. Horses over 1 year of age with unknown vaccination history should receive one vaccination with a booster one month later. Annual boosters should be given.

*Reducing exposure:* Reducing exposure to mosquitoes is very difficult in a Manitoba summer! However, fly sprays, fly sheets or stabling horses at night may help reduce exposure to mosquitoes. Reduction of mosquito breeding sites on your property should also be instituted – prevent areas of standing water in low lying areas, in old tires and containers, etc.

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### **TRANSMISSIBLE TO PEOPLE**

This virus can infect people, but horses infected by the virus don't act as a source of infection for people. People should reduce their exposure to mosquitoes to reduce their chance of infection.

### **CLINICAL SIGNS**

Early on, high fever (38.3 to 41.1 degrees Celsius), lack of appetite, walking stiffly, appearing “sleepy”, laying down a lot more than usual. The horse may also be in coordinated when walking. In later stages, more progressive nervous signs such as aggression, excitability, muscle twitching, and paralysis may be seen.

### **DIAGNOSIS**

Your veterinarian will use clinical examination signs, vaccination history and, likely, blood tests to make a diagnosis.

### **CONSEQUENCES OF ILLNESS**

The number of animals that will die or be permanently debilitated by the disease varies widely depending on the immune status of the horse, nursing care and the strain of virus. Horses infected with eastern equine encephalitis (uncommon in Manitoba) will suffer more serious clinical signs and die more often. The estimated mortality rate for western equine encephalitis (more common in Manitoba) given in one reference was between 19 and 50 percent, with a small number of the survivors experiencing permanent neurological damage.

### **TREATMENTS**

Supportive treatments with anti-inflammatory drugs, fluids, possibly drugs to treat seizures, and good nursing care are all that can be done. There is no specific treatment for the virus causing these encephalitis diseases.