



# Veterinary Update

**Animal Health and Welfare Branch/Office of the Chief Veterinarian for  
Ontario  
Ontario Ministry of Agriculture, Food and Rural Affairs**

## **EQUINE HEALTH ADVISORY**

**August 11,**

### **Eastern Equine Encephalitis Confirmed in Eastern Ontario**

On August 9, 2014, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) was notified of a confirmed case of Eastern Equine Encephalitis (EEE) in a horse in the United Counties of Stormont, Dundas and Glengarry.

The 12-year old unvaccinated gelding with no travel history was euthanized following the sudden onset and progression of fever and neurological signs. The horse presented with signs of nystagmus and strabismus (abnormal eye position and movement) along with ataxia (wobbly gait) and eventual recumbency. A post-mortem examination was performed at the Animal Health Laboratory in Kemptville, Ontario and EEE was confirmed by testing of brain tissue.

Veterinarians in Ontario should consider EEE as a differential diagnosis in horses exhibiting neurological signs and can identify positive cases through appropriate testing. IgM antibodies for EEE can be detected in serum from horses with neurological signs. Signs of EEE (including circling, head-pressing, ataxia and depression) can mimic a variety of encephalitides including rabies, West Nile virus, botulism, hepatic encephalopathy, equine protozoal myeloencephalitis, and equine herpes myeloencephalopathy. Most equine cases of EEE in Ontario occur between August and September, although cases can occur in October if environmental conditions permit the survival of the mosquito vector species.

Effective equine vaccines for EEE are available and veterinarians should ensure that vaccinations are up-to-date for their clients' animals. Once clinical infection develops, treatment options are limited to supportive care. The mortality rate in unvaccinated horses is high.

EEE virus (EEEV) affects mainly equine species in eastern North America, but can occasionally cause severe disease in humans, including permanent brain damage or death. EEEV has also caused fatal infections in pheasants, quail, captive whooping cranes, emus and dogs.

EEEV has been present in the Ontario horse population since 1938. In 2011, Ontario had four EEE cases as well as an outbreak of EEE in pheasants. In 2013, there was one confirmed case in Simcoe County. Equine neurological cases are posted on the OMAFRA website at: <http://www.omafra.gov.on.ca/english/livestock/horses/westnile.htm>

Ontario's local public health units are conducting mosquito surveillance for both WNV and EEEV. Birds are the natural hosts for both viruses, which are transmitted to horses and humans by mosquitoes which have bitten an infected bird. The mosquito species considered the main vector for transmission of EEEV has been identified throughout the province in low numbers in 2014. None of the mosquitoes, however, have tested positive for EEEV to date. More information is available at: <http://www.publichealthontario.ca/en/ServicesAndTools/SurveillanceServices/Pages/Vector-Borne-Disease-Surveillance-Reports.aspx>

Positive equine cases of EEE in Ontario will be followed up by the local public health unit to determine whether the exposure of the horse was local or travel-related. The public health unit will also ensure that the risk of human exposure to mosquitoes in the area, which may potentially be carrying EEEV, is minimized. Depending on the time of year, the owners of properties on which a positive equine EEE case is diagnosed may be asked to allow public health mosquito traps to be placed around their property for surveillance purposes. A similar response will occur in the case of a positive equine WNV case.

Questions with respect to veterinary public health issues or responses in Ontario should be directed to:

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## **Resources**

<http://www.omafra.gov.on.ca/english/livestock/vet/facts/13-003.htm>

[http://www.publichealthontario.ca/en/eRepository/Eastern Equine Encephalitis Virus Report\\_2014.pdf](http://www.publichealthontario.ca/en/eRepository/Eastern_Equine_Encephalitis_Virus_Report_2014.pdf)

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