

Potomac Horse Fever and Wyoming - Key Facts

- Cause: *Neorickettsia risticii* (formally *Ehrlichia risticii*)
- Clinical signs: acute onset fever, depression, diarrhea and laminitis
- Lesions: acute colitis. The organism is difficult or impossible to see microscopically in tissue sections
- Case fatality: Generally low; 5 – 30%.
- Seasonality in Wyoming: July – September.
- Location: South-west and north-west Wyoming (laboratory-confirmed).
- Life cycle and transmission: Not completely elucidated. *N. risticii* infects freshwater snails, their virgulate cercariae, and aquatic insect larvae including caddis flies (family *Leptoceridae*). Horses are infected by drinking water containing *N. risticii*.
- Vaccination: At least four killed vaccine products are available commercially.
- Laboratory confirmation: Submit feces and EDTA blood for polymerase chain reaction (PCR) detection of specific *N. risticii* sequences. If dead, submit fresh and fixed large bowel, and feces.
- If you suspect you have a case: Please contact Dr. Ken Mills. His laboratory has primers to the agent based on the 16S rRNA gene. If we receive enough requests, we will offer the test. At present we send samples out for confirmation.
- Relationship to equine granulocytic ehrlichiosis (EGE): This is caused by *E. equi*, which infects neutrophils and eosinophils, causes subclinical to mild fever, depression and limb edema, and is tick-transmitted. EGE occurs in California and the upper Midwest. We do not recognize it in Wyoming at this time.
- Additional information: see excellent review by Dr. Rikihisa, who has done much of the basic research of this group of organisms, in *Equine Internal Medicine*, eds. Reed and Bayly, pp. 112 – 123, WB Saunders, 1998.

Donal O'Toole
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