



Will you know when you see it?

Potomac Horse Fever

What: Potomac Horse Fever is a bacterial disease affecting horses and donkeys that causes fever, diarrhea, and laminitis. It most commonly occurs during the late summer months coinciding with the appearance of the freshwater insects and their larvae that harbor the disease.

Who: Any equid may be affected but those under 1 year of age do not generally show significant clinical signs.

When: July, August, September are the most prevalent months, but cases have been diagnosed in early spring and late fall.

Where: Although endemic in south-central PA and the Potomac valley, Potomac Horse Fever has been recognized throughout the US and Canada.

Signs of Potomac Horse Fever

The three hallmarks of Potomac Horse Fever are fever, diarrhea, and laminitis. A horse suffering from Potomac Horse Fever may present with all of these signs concurrently or only one or two.

Early signs

- Loss of Appetite
- Lethargy or Malaise
- Fever (rectal temperature above 102F)
- Loose manure

Additional Signs

- Colic
- Severe Diarrhea
- Lameness (caused by laminitis/founder)
- Abortion
- Swelling of Limbs

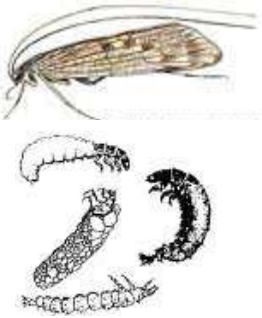
Clinical signs will vary for every individual, but typically *the first clue to trouble is loss of appetite and general lethargy or malaise.* Closer examination at this time often reveals an elevated temperature. Loose manure or diarrhea may be present early in the course of disease, develop later, or not be seen at all. It is also important to note that once profuse diarrhea has started a horse may appear to have a normal or low rectal temperature. This does not mean treatment won't be needed. Fluid losses caused by this disease can be severe and may require supportive intravenous fluid therapy.

The absence of diarrhea does not negate the seriousness of the disease. Potomac Horse Fever can cause life threatening laminitis even if diarrhea is not present. *Early signs of laminitis include mild to severe lameness usually in both front feet but any one foot or combination of feet can be affected. Increased heat and digital pulses may be felt in the affected feet. Affected horses are often reluctant to move, may appear to stand hunched, constantly shift weight from one foot to the other, or may lay down more than usual.*



Laminitis can be a life threatening complication of Potomac Horse Fever.

Cause: Potomac Horse Fever is caused by *Neorickettsia risticii* an obligate intracellular bacteria which has an affinity for a type of white blood cells called (monocytes) and other tissues especially cells of the large intestine. The bacteria attack the cells of the large intestine resulting in colitis (inflammation of the colon). The colitis causes diarrhea and endotoxemia. Laminitis seen in Potomac Horse Fever cases is secondary to endotoxemia.



Transmission: *Neorickettsia risticii* is carried by freshwater snails, insect larvae and adult insects such as mayflies, caddisflies, dragonflies, and stoneflies. Although not entirely clear, it is believed that transmission occurs when a horse ingests infected larvae or insects while grazing or drinking. Freshwater lakes and streams may be sources of the insect reservoirs, but barn water buckets and pasture troughs can also be involved in transmission especially in the vicinity of outdoor lights which may attract higher numbers of insects.

Is it Contagious to Other Horses: **No.** Potomac Horse Fever is not contagious horse to horse, but more than one horse may be affected on the same farm because of the conditions that favor insect development and survival of the organism. *It should be noted, however, that conditions which appear similar to Potomac Horse Fever such as Salmonella and Clostridial diarrheas can be highly contagious. For this reason any horse with fever and/or diarrhea should be considered contagious until proven otherwise.*

Detection: If Potomac Horse Fever is suspected, treatment should be started immediately. Blood and sometimes fecal samples can be taken for PCR (polymerase chain reaction) assays or for serology. Treatment should not be delayed since these tests will usually require 48 hours to process.



Treatment: GOOD NEWS. *If detected and treated early many horses respond quickly to antibiotic therapy* (usually tetracycline or doxycycline). The prognosis often depends on the severity of clinical signs when treatment is started. Concurrent laminitis and diarrhea will require additional therapy including supportive care dependent on the severity of these conditions.

Prevention: A vaccination for Potomac Horse Fever is available, but is not 100% effective at preventing disease.

The vaccine can be given to foals and adult horses over 5-6 months of age. Initially 2 vaccinations are required 4 weeks apart. The vaccination can then be given annually or biannually thereafter. To maximize protection, immunization should be timed for late spring/early summer

Early detection and treatment is key to recovery and survival.

