

Elk Hoof Disease Fact Sheet



What is elk hoof disease?

Elk hoof disease is a bacterial-associated syndrome causing severe lameness in elk. The condition initially appeared in southwestern Washington elk herds between the late 1990's and early 2000s. A dramatic rise in reports of limping elk in 2007-2008 prompted a scientific investigation into the underlying cause. In 2014 treponeme bacteria were identified by multiple diagnostic laboratory institutions as a consistent organism associated with the deep tissue destruction resulting in deformed, overgrown, broken or sloughed hooves. These lesions appear to be painful and cause limping or lameness when walking. Elk that show these signs do not necessarily have elk hoof disease, as there are many other potential diseases or injuries that could cause similar abnormalities to elk hooves.

What causes the disease?

Scientists are still working to understand this disease better. The emergence of the disease is likely due to multiple factors related to the environment, overall health of the elk, and the presence of an infectious organism. Independent laboratories from the US and abroad have detected bacteria in the genus *Treponema* causing damage in the affected hooves.



Treponeme bacteria. Evans et al. 2011.

Are herbicides sprayed by timber companies responsible?

Herbicides have not been shown to cause elk hoof disease. These herbicide treatments have been used by timber companies in many areas across the PNW where we do not observe signs of this disease in elk.

How does it spread?

The mechanism of spread or transmission is still unknown but it is believed that this type of bacteria can be maintained and/ or transferred in moist soil via the hooves of elk and/ or other animals such as sheep and cows.

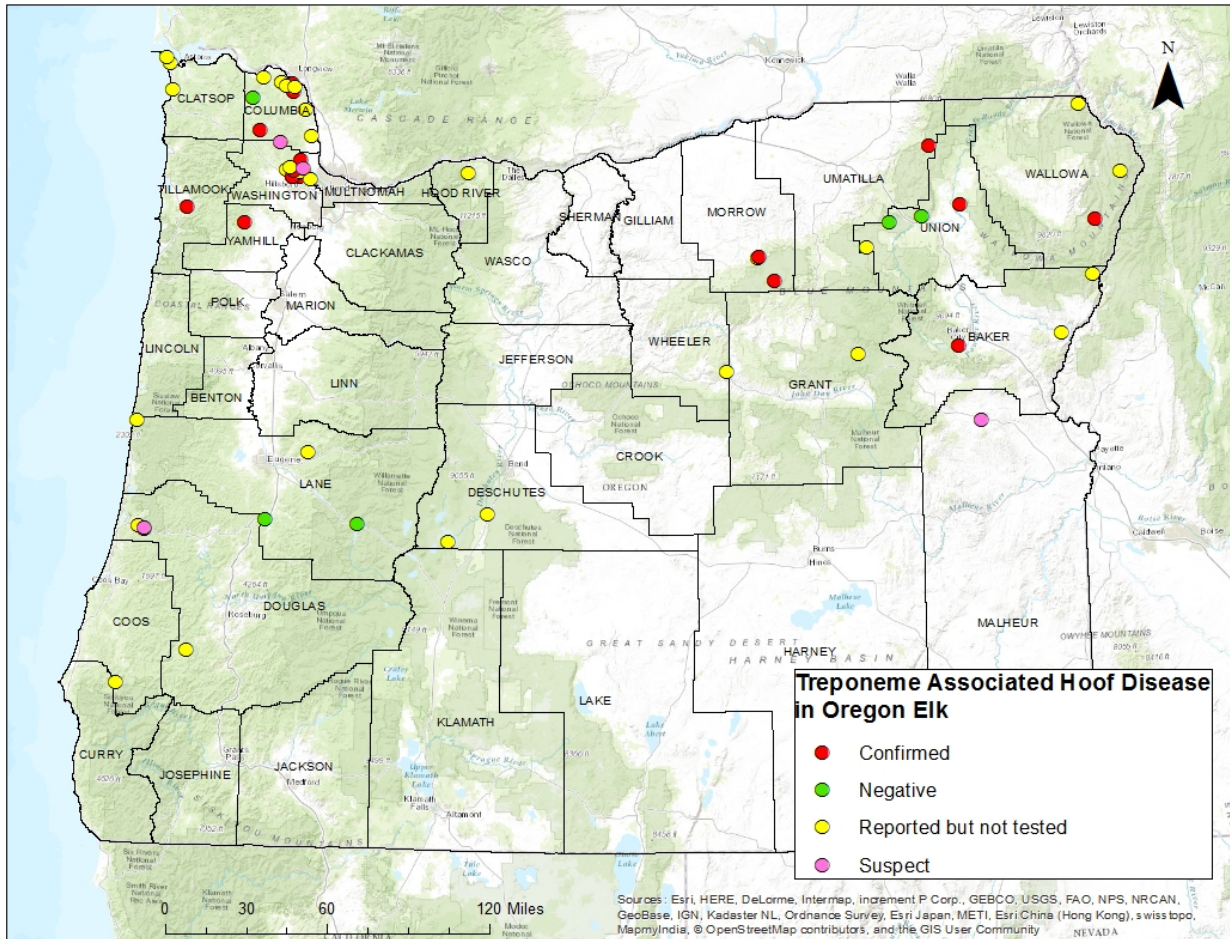
Is this disease affecting a specific age class or sex?

No. Elk hoof disease appears to be affecting all ages and both sexes of elk.

Where is hoof disease being seen?

The disease is currently widespread in southwest Washington, and at least two cases have been confirmed in northwest Washington. The disease has become more prevalent and widespread since the winter of 2007-2008. In

Oregon, several hunter-harvested elk with suspicious hoof abnormalities and reports of limping elk have been reported from around the state. The first confirmed case came from Washington County in January of 2014 and initially clustered in the northwest corner of the state, near the affected SW Washington region. Since then confirmed cases of TAHD have been identified in Roosevelt elk from Columbia, Multnomah, Tillamook, Washington, and Yamhill Counties. Isolated cases have also shown up in Rocky Mountain elk east of the Cascades in Morrow, Umatilla, Baker, Union, Malheur, and Wallowa County (see map below). ODFW is requesting the public to report observations of lame or hunter-harvested elk with hoof deformities on the ODFW elk hoof disease reporting form, http://www.dfw.state.or.us/wildlife/health_program/elk hoof disease/.



How common is this disease?

In Washington, herds have been observed with 20-90% of the animals showing lameness. To date there have been 18 animals confirmed to have the bacteria and visible lesions associated with TAHD with and over 60 reports of limping elk across Oregon. Active surveillance is currently being conducted to determine the extent of infection in potentially affected herds.

Are other animals susceptible? Will my livestock be affected?

Cattle and sheep have been diagnosed with hoof diseases associated with Treponemes. These diseases are known as bovine digital dermatitis (DD) and contagious ovine digital dermatitis (CODD). DD is one of the leading causes of lameness in dairy cattle in the US but CODD has only been documented in sheep in the United Kingdom and Ireland. Other wildlife, notably ungulates, do not appear to be developing similar hoof lesions in areas where TAHD is common. Transmission of the disease between elk, sheep and cattle is not apparent and there have been no reports of an increase in hoof disease in domestic livestock.

Will hoof disease affect the meat of the elk I harvest?

No. There is also no evidence to suggest this disease poses a risk to human health. Examination of muscle tissue shows that the disease in the hooves does not extend to the meat or organs of the animal. However, chronically lame elk may be in poor body condition and appear thin.

Is the disease treatable?

Treatment of any disease in free-living wildlife is generally not practical. In livestock, hoof diseases are often treated with antibiotics and foot baths and managed by keeping their pens clean.

How can I report an elk I've seen or harvested that looks like it has hoof disease?

Please visit our online site for reporting elk hoof disease:

http://www.dfw.state.or.us/wildlife/health_program/elk_hoof_disease/ (found at www.odfw.com under Hunting) or call our toll free number at 1-866-968-2600.

If you harvest an affected elk please remove and save all hooves (lower limbs). Try to place each hoof in a separate plastic bag and label the bag (i.e. front left). Place samples in a cool area, take digital photos of the affected hooves, and contact the Wildlife Health Lab by phone or email to arrange collection of the diseased hoof.

What if I have additional questions?

You can contact our Wildlife Health team via e-mail at wildlife.health@state.or.us or you can call our wildlife health toll free number (1-866-968-2600).

