



## LISTERIOSIS in Sheep and Goats

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### What is listeriosis and what causes it?

Listeriosis is a common disease in sheep and goats. Listeriosis is caused by the bacteria *Listeria monocytogenes*. The disease may present in multiple forms. First is an encephalitis (infection of the brain) that shows as neurologic disease. However, *Listeria* may also cause uterine infections or septicemia, presenting as abortions or general illness.

*Listeria* species can grow in a wide range of temperatures and is extremely resistant to cold temperatures. In fact, unlike other bacteria, temperatures below freezing may not kill the bacteria, but instead promote its growth. Thus, although it can occur throughout the year, listeriosis is more commonly seen in the winter and spring months. Generally peaking in the months of January-April in Kentucky.

Once ingested the bacteria is absorbed through the small intestines and travels through the blood stream to localize in the brain stem, uterus or less commonly the eye or udder. From the time the animal is exposed until it begins showing symptoms may be up to 3 weeks. This makes determining the actual source more difficult.

### Where does *Listeria* come from?

In general listeria is considered ubiquitous, meaning that it may be present

in many environmental sources such as contaminated water, decaying plant material, soil or feces.

Two common routes of transmission of *Listeria* are:

1. The most common route of transmission, especially in cattle, is from decaying vegetation. This may be in the form of round bales of hay that have begun to rot, silage that was not properly fermented, and feed bunks/bins that are not cleaned regularly.
2. A more common source of *Listeria* in goats is fecal-oral transmission from other animals (goats, wildlife or birds). Healthy animals may have *Listeria* in their gastrointestinal (GI) tract. These animals are often referred to as carriers. As they do not show any symptoms, by passing the bacteria in their feces, they can be a source of infection for other animals.

### What are the symptoms of *Listeria*?

Neurologic listeriosis has a much faster progression in small ruminants than it does in cattle. In severe cases, death may occur 24-48 hours after the initial symptoms. At first, animals are depressed and possibly off-balance when walking. The next symptom is generally a unilateral facial paralysis (drooping of one side of the face). As it continues to progress, animals



often lose the ability to swallow and begin walking in circles or falling to the affected side. Listeriosis is commonly referred to as 'circling disease'. As the disease and ataxia progresses, the animal becomes unable to stand, and if treatment is not successful, die within the next 24 hours.

### How do I prevent Listeriosis?

Supply high-quality hay and grain. Feed should be stored properly and not fed if wet or decaying. Discard any feed sources that are decaying. Square bales are usually preferred for goats since they are fed more frequently and less waste if left to rot. Also, whenever possible, keep hay protected from the weather by a cover over the hay feeder or feeding inside a shelter.

Wet grain that is spoiling in the edges of troughs may also be a source of *Listeria* therefore it is best to clean troughs daily. Make sure feed and water troughs are free of feces from birds. Similarly, if feed or water troughs contain fecal material, they should be cleaned thoroughly.

Stress, mineral deficiencies, and malnutrition may weaken the animals' immune system. This may increase incidence of *Listeria*. The weather itself may be a stressor in the winter months, so providing quality feed sources are essential in herd health.

### Is it treatable?

If listeriosis is caught early, it may be treated with antibiotics and anti-inflammatory drugs. If you have an animal that you suspect has listeriosis, have your veterinarian examine and recommend treatment options. Once an animal is recumbent (unable to stand), the prognosis is very poor.

### Zoonotic Potential

When discussing listeria, it is important to note the zoonotic potential, which means

that it may be transmitted to humans as well. A common source may be dairy products from goats. Listeria is killed by heat, so pasteurizing milk is always recommended. Also make sure meat is cooked thoroughly and sanitation while cooking is a must.

If you suspect an animal has listeria, where gloves and wash hands thoroughly after handling animal. When handling fetuses or tissue from does having abortions, gloves should always be worn.

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