

TETANUS

A.K.A. LOCKJAW

Tetanus (lockjaw) is a sporadic life-threatening neurological disease caused by a neurotoxin produced by the bacterium *Clostridium tetani*. The neurotoxin enters through a wound, affects the nervous system, and leads to muscle stiffness, spasms, and potentially death in sheep and goats, especially lambs/kids. *C. tetani* is a ubiquitous organism found commonly in soil, feces, and the gut of animals. There is considerable variability in susceptibility to tetanus between species, with sheep, goats, horses, (and people) being more at risk than cattle, dogs, and cats. Birds are immune.

Risk factors

- Deep puncture wounds
- Favorable wound conditions
- Anaerobic conditions
- Certain management practices, e.g., use of elastrator bands
- Presence of horses on farm, i.e., high prevalence of bacteria in soil.

Differential diagnosis

- Botulism
- Hypocalcemia
- Lead poisoning
- Meningitis
- Polio
- Rabies
- Scrapie
- White muscle disease

Treatment

- Early intervention
- Wound cleansing
- Antitoxin administration
- Antibiotics (Rx)
- Muscle relaxants (Rx)
- Supportive care
- Seldom successful

Clinical signs

- Muscle stiffness and spasms
- Abnormal posture
- Difficulty swallowing and chewing
- Lockjaw
- Drooling
- Collapse, death

The time between infection and disease can be very short (2-3 days) or quite long (4 weeks or more).

Prevention

- Effective vaccination
- Good hygiene
- Aseptic techniques
- Proper wound management



Tetanus is largely preventable with effective vaccination. Combination vaccines for clostridial diseases, e.g., CDT and Covexin®-8, include tetanus. Ewes/does should be vaccinated in late pregnancy to maximize the immunity the offspring receive via the colostrum. Lambs/kids should receive their first clostridial vaccination at 6 to 8 weeks of age. The antitoxin can be given to provide immediate short-term immunity or to treat clinical disease.

