

CLIENT EDUCATION HANDOUT

OPTIONAL
LOGO

Customer Name, Street Address, City, State, Zip code

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Caseous lymphadenitis (CL or CLA)

Overview

- Caseous lymphadenitis (CL) is a prevalent and contagious disease caused by the bacteria, *Corynebacterium pseudotuberculosis*.
- Infection results in abscesses of internal and external lymph nodes and sometimes organs such as the lung and liver.
- The bacteria invade via wounds, unbroken or abraded skin, or mucous membranes.
- Infection occurs via contact with contaminated water, feed, soil, or housing.
- Infection also occurs by contact with infected animals with draining abscesses, or animals with lung abscesses that are coughing.
- Clinical signs are usually mild; however, the disease is important at a herd level since it can cause chronic wasting, sudden death, premature culling, carcass condemnation and restriction of movement of animals.

Species and Animal Groups Affected

- This disease occurs commonly in sheep and goats, and is occasionally observed in llamas and alpacas.
- Adult animals are usually affected, but the disease has been observed in animals as young as six weeks of age.

Signs

- Animals usually remain bright with a good appetite and no fever.
- External abscesses are initially round, cool, and firm, and become soft and dark over time with hair loss over the center of the lesion.
- Abscesses contain thick, cream colored to slightly green, odorless material.
- Abscesses in animals in the USA occur most commonly under or behind the jaw and in front of the shoulder, but can occur in other locations.
- Animals with internal abscesses may show weight loss and occasionally coughing

Causes and Risk Factors

- *C. pseudotuberculosis* is a resilient bacterium that can survive for days to months in the environment, including in the soil. Cool, moist conditions improve its survival.
- Gathering animals together can allow transmission by coughing from animals with lung abscesses, or via skin contamination when abscesses are nicked during shearing.
- Shearers can bring the disease to unaffected flocks if they do not clean equipment or clothing between flocks.
- Draining abscesses can contaminate feed, water, and feeders, and are an important source of infection. "Keyhole" type feeders can be particularly problematic for spreading the disease due to contact with draining abscesses in the head and neck.

- Fighting between rams or bucks can also transmit infection.

Treatment

- Response to therapy is variable and typically is not recommended; the abscess environment severely reduces the effectiveness of antibiotics.
- Animals that have exhibited infection should generally be considered infected for life; months or years may pass between abscess events in an individual.
- If soft abscesses are to be opened and drained, all material from the abscess should be caught in a container to prevent environmental contamination. The wound can then be cleaned twice daily with weak iodine until scabbed and dry.
- In cases of chronic and/or repeated abscess development, strongly consider culling to reduce the risk of transmission to other animals.

Expected Course and Prognosis

- Most infected animals experience mild signs of disease.

Management Considerations

- Animals with abscesses should be isolated until they are healed. Isolation facilities should have the following features:
 - No shared water or feed source with other animals
 - Ideally, separate air space
 - Pen dedicated to housing only animals with abscesses
- A control program requires a multifaceted approach
 - **Reduce environmental contamination with the bacteria:**
 - Palpate external lymph nodes whenever animals are handled to promptly identify and isolate infected animals
 - Disinfect shearing equipment
 - Wash hands after working with infected animals
 - Use feeders that reduce contact with the head and neck
 - Cull all affected animals if economics allow, or cull repeat offenders.
 - **Reduce risk of transmission to uninfected animals:**
 - Rear young stock away from adults.
 - Shear young sheep first and older and infected sheep last.
 - Milk affected does last and disinfect parlor afterward.
 - Purchase breeding stock from flocks with known health status.
 - Shearers should wear clean clothing (including footwear) that has not been worn to another flock without laundering. Ideally, producers should purchase their own shearing equipment.
 - Treat all shearing wounds immediately with iodine or other topical disinfectant.
 - **Improve the immune status of uninfected animals:**
 - Commercial vaccines are available for sheep but can cause adverse reactions in goats.
 - A conditionally licensed vaccine (must be approved by the state animal health board for use in that state) is available in some regions for use in

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Blackwell's 5-Minute Veterinary Consult: Ruminant 2nd Ed.

healthy, non-pregnant and non-lactating goats three months of age or older.

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- *Blackwell's Five-Minute Veterinary Consult: Ruminants, Second Edition*, Christopher C.L. Chase, Kaitlyn A. Lutz, Erica C. McKenzie and Ahmed Tibary © 2017 John Wiley & Sons, Inc.