

Pneumonia in Sheep and Goats

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Pneumonia is an infection of the lung tissue with multiple causes. It is an important medical problem of sheep and goats of all ages. In younger animals, various bacteria, viruses and parasites of the upper and lower respiratory tract are often involved in the development of pneumonia. In adults, these same disease – causing agents can create pneumonia. In sheep, a systemic virus known as Ovine Progressive Pneumonia virus (OPPV) can play an important role. In goats, a similar systemic virus, the Caprine Arthritis and Encephalitis Virus (CAEV), can cause pneumonia. The word “systemic” means that OPPV and CAEV are viruses that can affect multiple organs, including the lungs. These viruses can also affect the brain, udder and the joints. In certain climates, parasites (worms) can travel from the gastrointestinal tract to the lungs, causing pneumonia.

What conditions increase the risk of pneumonia?

Below is a list of some of the conditions that can predispose sheep and goats to pneumonia.

All ages

- Overcrowded barns with poor ventilation
- Poor sanitation – urine and feces can release gases that harm the respiratory tract, and wet bedding can cause the animals to become chilled.
- Excessive dust
- Wide variation in environmental temperature (for example, cold nights followed by warm days)
- High humidity
- Stress: Transport, birthing, heavy milk production, weaning, and fighting other diseases are examples of stresses that can make sheep and goats more susceptible to pneumonia.

Young animals

- Failure to ingest adequate amounts of first milk (colostrum)
- Bottle feeding – if the nipple orifice on the bottle is cut too large, the milk in the bottle may flow into the lamb or kid’s mouth too quickly, causing it to run down the windpipe into the lungs.

Adults

- Infection with the OPP or CAE virus

Is pneumonia contagious?

Whether or not pneumonia is contagious – meaning capable of spreading from animal to animal – depends on the causative bacteria and / or viruses involved. Most viral diseases of the respiratory tract, including the OPP and CAE viruses, are contagious, and can spread among sheep and goats. Certain bacteria can be transmitted from animal to animal in respiratory secretions, but many of these bacteria reside in low numbers in the mouth and nose of normal, healthy animals. When one or more of the causative conditions listed above occur, these

normal bacteria can increase in number rapidly and invade the lungs to cause pneumonia. Therefore, pneumonia can be viewed as both a contagious disease and a disease that can arise from the animal's own bacteria; the latter scenario is considered common when causative conditions are present.

What are the signs of pneumonia?

- The earliest sign of pneumonia is dullness – the affected animal is less active and alert than normal
- Fever – the rectal temperature is best measured early in the morning, when the animal's body temperature is least likely to be affected by daily activity and warm daytime temperatures. A rectal temperature that is greater than 103 – 103.5 degrees F (39.4 – 39.7 degrees C) may be indicative of pneumonia .
- Coughing
- Thick, whitish nasal discharge
- Rapid or labored breathing (note: it is normal for these animals to breath rapidly during warm weather)
- Falling behind from the flock or herd

How is pneumonia treated, and can it be prevented?

- There are no medicines available for treatment of viral infections in sheep or goats. Your veterinarian may recommend that certain antibiotics be administered to the affected animal to either 1) treat an existing bacterial pneumonia, or 2) to prevent bacteria from causing pneumonia as a complication to a viral infection. Consult your veterinarian to discuss which antibiotic might best suit your animal's needs. Always read the label on these medications and follow the directions carefully.
- Prevention requires a clear understanding of the role of the causative conditions in development of this disease. Inspect the animal's environment for any of the conditions listed above that might cause pneumonia, and correct these. Make sure that the animal has dry bedding, good feed, clean water, and fresh air.
- Consult with your veterinarian to determine if parasites might be the cause of pneumonia in your animals. Pneumonia caused by parasites will not be completely cured by antibiotics, although some improvement might be seen with antibiotic treatment (because the bacteria may infect the tissues damaged by the parasites).
- Infection with the OPP or CAE viruses results in a life-long infection that the animal's immune system cannot cure. However, infected animals can survive if they are well cared for. Your veterinarian can test the blood of your animals to determine if they have been infected with these viruses, and can discuss the options for controlling these diseases.