

NYSCHAP SMALL RUMINANT MODULE

Mastitis in ewes and does

Causes of Mastitis

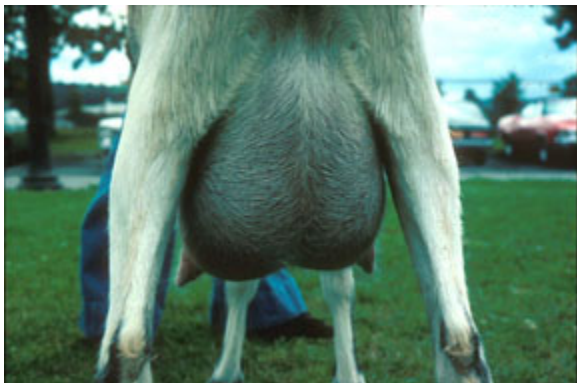
Mastitis is one of the more common health problems affecting sheep and goats. Severe cases can result in death of the ewe or doe, but more often it takes its toll in the form of treatment costs, premature culling, and decreased milk production or reduced performance of lambs and kids.

Mastitis is an inflammation of the mammary gland (udder). It can be caused by physical injury, bacteria or viruses. The bacteria that are known to cause mastitis in cows, sheep and goats include *Streptococcus* sp., *Staphylococcus* sp., *Mannheimia* sp., *Mycoplasma* sp., *Pseudomonas* sp., and coliforms, such as *E. coli*.

Retroviruses such as caprine arthritis encephalitis virus (CAE) and ovine progressive pneumonia (OPP) can also cause mastitis in goats and sheep, respectively.

Signs of Mastitis

Signs of mastitis vary depending on how long the udder has been inflamed. A doe or ewe with acute, or recently developed, mastitis may have a fever, be off feed, and have one half of her udder swollen, warm, and painful. If the mastitis is not treated or not detected, the udder may develop abscesses and scar tissue. In these chronic cases, the animal will no longer appear ill, but can become a chronic poor doer. Because the udder with a retroviral interstitial mastitis will feel firm to the touch, this is often referred to as “hard udder” in goats and “hard bag” in sheep.



A goat with “hard udder” caused by the CAE virus

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In severe cases the blood supply to half of the udder is impaired and it will appear blue and cold. This form of mastitis is sometimes called "blue bag"; there may also be a reddish watery secretion with gas from the teats. Ewes and does affected with this gangrenous mastitis become feverish, go off feed and become depressed. They may hold a rear foot up, as if they are lame, and refuse to allow their lambs or kids to nurse. These animals should be culled or treated at once.



A sheep with gangrenous mastitis, or "blue bag"

Ewes and does with subclinical mastitis usually appear quite healthy, but there may be a reduction in their milk production and eventual development of scar tissue in their udders.

Treatment of Mastitis

Ewes and does that show signs of mastitis should be separated from the rest of the flock, milked thoroughly, and treated with antibiotics. It may be necessary to bottle feed their nursing lambs or kids to prevent the hungry offspring from cross suckling on other lactating animals, thereby spreading the infection. Treatment usually involves intramammary infusions of antibiotics and systemic antibiotics, as well as supportive care such as pain medication, intravenous fluids, and hand feeding. It is helpful to collect milk samples from affected animals to determine the bacteria involved and the correct medication to use. Treatment should be continued for several days until the clinical signs have gone away.

Prevention of Mastitis

Animals prone to mastitis and their daughters should be culled, as there is a genetic component to susceptibility to mastitis. Examine the udders of ewes and does after weaning and before breeding, and cull animals with hard lumps in the udder or lost teats. This will maximize the production of the herd. Goats that carry *Staphylococcus aureus* and *Mycoplasma* sp. bacterial mastitis can infect other animals and should be



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culled as well. Isolate new or returning dairy animals from the rest of the herd for at least 2 weeks and culture their milk.

Good milking techniques are very important for controlling and preventing mastitis. Wash hands before milking, and wear nitrile gloves. It is important to milk dry udders only but if washing is necessary, use a new paper towel for each animal and wash the teats only, not the whole udder. Examine and discard the first stream of milk. Always milk last animals with mastitis or teat lesions, such as from soremouth, to avoid spreading disease to other animals. Teat dip after every milking with a chlorhexidine or iodine teat tip. If machine milking, maintain an appropriate vacuum and pulsator rate and change inflations according to the recommendations of the manufacturer. Good management and sanitation outside the milking parlor are also important. Bedding in drop pens, mixing pens and lambing jugs should be clean and dry. There should be good drainage around the barn and lots. Animals should not be overcrowded; allow 10-20 square feet per animal. The incidence of mastitis is greater in closely confined flocks. Remove sharp objects that might cause teat injuries, disbud all dairy goats, trim feet, and examine and treat teat wounds on a regular basis.

Preventing respiratory disease in lambs may help to prevent mastitis, as *Mannheimia haemolytica*, the bacteria that causes baby lamb pneumonia, is a potential cause of ewe mastitis. Soremouth (orf) is another contributing factor, as lambs with mouth lesions can infect their dams and any other ewe they may nurse. As the CAE and OPP viruses can contribute to mastitis, eliminating these viruses from the herd will also decrease the incidence of mastitis.

Weaning lambs from ewes whose milk production has not declined sufficiently puts severe stress on the udder; therefore proper management at weaning is also necessary to prevent mastitis. Before weaning, it is advisable to restrict the feed (eliminate grain, change to low quality forage) for 1 to 2 days to rapidly decrease milk production. Delaying weaning until after milk production has decreased sufficiently will lessen the occurrence of mastitis.

Precocious Udder and Witch's Milk

Goats that have never gotten pregnant or kidded can produce milk, especially in the spring; this is often referred to as "precocious udder" or "inappropriate lactation." Young doelings occasionally also produce milk due to hormonal stimulation in utero; this is called "witch's milk." Bucks can also develop an udder and produce milk, and they will be susceptible to mastitis.

In all of these circumstances, refrain from milking these animals unless the udder is leaking, uneven, or painful. Doing so can open teat canals and allow harmful bacteria to enter the mammary glands. If the animal is painful or off feed, obtain a milk culture to guide therapy. Do not permit kids to nurse from other kids.



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From Maryland Sheep and Goat website

References and further reading

[Ewes that don't milk - Ohio Sheep Team](#)

[Mastitis - Ask-a-Vet Sheep \(Pipestone Vet Clinic\)](#)

[\[PDF\] Mastitis in dairy goats - University of Florida](#)

[\[PDF\] Mastitis in ewes - Alberta Sheep](#)

[Mastitis in the ewe - University of Missouri](#)

[\[PDF\] Mastitis in sheep - Moredun \(UK\)](#)

[Mastitis in sheep - Western Australia](#)

[\[PDF\] Mastitis in sheep: overview of recent literature - University of Guelph](#)

[\[PDF\] The mastitis problem - Langston University](#)