



Show Wethers & Urinary Calculi

(stones)

⇒**WATER, SALT & CALCIUM** are **IMPERATIVE!**⇐

Due to the tremendous demand placed on these goats to grow rapidly on a highly concentrated ration, coupled with low roughage to keep them 'tight' & thus competitive in the show ring, urinary calculi is a common sequelae. Realize that this way of raising goats is in opposition to the way they are created, and, therefore, several points need to be understood if they are to survive this challenge!

The Problem:

Grains (concentrates) are high in phosphorous. The necessary balance in a goat ration of calcium to phosphorous (Ca:P) is 2 – 2.5 : 1. Notice that more than twice as much calcium is needed than phosphorous. When goats are fed high concentrates and little to no hay, browse or other forms of calcium, the resulting imbalance can lead to the formation of stones in the urinary tract, followed by blockage. This blockage or inability to urinate can cause rupture of the bladder within 24-48 hours and death 3-5 days later.

Prevention:

WATER: becomes even more important as it aids in flushing the urinary tract of the particles that lead to calculi development. Keep it available at all times and change at least daily to encourage consumption.

SALT free choice: is *essential* in increasing water consumption and therefore keeping the urinary tract flushed of calculi beginning to form. LOOSE SALT should be available at all times, and kept stirred or changed as needed to keep it loose (especially important in Texas humidity). They cannot consume enough salt to provide this benefit with a salt brick.

MINERAL SUPPLEMENTATION: using a **high calcium/low phosphorous** loose mineral can help keep the Ca:P ratio in the desired **2:1 – 2.5:1** proportion. The Sweetlix mineral supplement label on a following page has this desired ratio. If a mineral supplement designed for goats in the proper Ca:P ratio is not available, a cattle mineral with high calcium, low phosphorous, low side of copper (low for cattle) and lower magnesium can be offered. This is usually a summer pasture –type supplement.

ALFALFA: is another excellent way to increase the **calcium** in the diet. It can be offered in the form of good quality alfalfa hay or convenient bagged pellets available at feed dealers.

FEED: learn to read feed tags! The calcium & phosphorous are listed. When an ingredient amount is listed as a range, most feed manufacturers formulate their rations based on the average. If in doubt, call and talk with the nutritionist at the feed company. Most list their contact information on the tag or make it available on the internet, with a little research. Notice that the SureFed N-Timidator has the desirable Ca:P ratio of 2.5:1.

AMMONIUM CHLORIDE: is a urine acidifier that helps dissolve “stones” that develop in the urinary tract. It is usually included in any ration formulated with a show goat in mind. Make sure your ration includes this ingredient.

ROUGHAGE: Normally, phosphorus is recycled through saliva and excreted via feces in ruminants. High grain, low roughage diets decrease the formation of saliva and therefore increase the amount of phosphorus excreted in the urine.

CASTRATION: Early castration is reputed to predispose wethers to urinary blockage by limiting the size of the urethra. We allow them to grow, then band them between 1-2 months of age to help reduce this tendency. (*NOTE: We no longer surgically castrate our wethers, a method which we prefer for this reason, because many buyers did not appreciate the presence of the empty scrotum!*)

The Symptoms:

- ▶ restlessness
- ▶ anxiety
- ▶ urine dribbling, may be bloody
- ▶ distention and rupture of the urethra
- ▶ loss of appetite
- ▶ humped-up appearance
- ▶ edema under their belly
- ▶ kick at their belly
- ▶ straining to urinate.
- ▶ increased vocalization
- ▶ tail twitching.

Treatment:

How to You Treat It?

Treatment of urinary calculi depends upon the location of the obstruction and could be as simple as snipping off the urethral process to allow calculi at the end of the penis to dislodge.

Tranquilizers and antispasmodics may help to naturally dislodge some calculi. In more advanced cases, surgical intervention may be necessary to save valuable animals or pets. Veterinary advice should be sought in this case.

© 2006-2007 Snowden Family Farm.

Use for other than strictly educational, non-profit purposes by permission only. All publications must be copied in their entirety and contain Snowden Family Farm's contact information, this copyright notice, and the disclaimer below.

All information contained in this publication is for informational purposes only, is presented only as common thought in the goat and veterinarian communities, and is not a recommendation by Snowden Family Farm or anyone associated with it. The reader assumes all risk and liability for the use of any techniques, systems, etc. All trademarks, brand names, and trade names are the property of their respective owners, and are included only for demonstrational purposes. Snowden Family Farm does not endorse any product or company.