

## Health and Disease Issues

### Urinary Calculi

Also known as water belly, urolithiasis or bladder stones.

Urinary calculi is a common disease of male sheep caused by the formation of small stones (calculi) in the urinary tract that block urine flow and may lead to the rupture of the bladder or urethra. The main cause is thought to be an imbalance of Ca to P

#### **Predisposing Factors:**

- Feeding concentrates high in phosphorus without calcium supplementation
- Silicates, present in either grasses or grain
- Reduced water intake (cold weather, inadequate supply, etc)
- Alkaline water (pH greater than 8.5)
- Inadequate fibre intake.

Several factors contribute to the development of urinary calculi, most relating to a low Ca:P ratio. This ratio should be approximately 2:1.

#### **Signs and Symptoms:**

Symptoms may vary from mild to severe depending on the degree of urinary tract obstruction.

- An arched back and the lamb may appear to 'kick' at its belly
- Dull and disinterested in feed or water
- Slow urine flow with straining and tail twitching.

#### **Control and Prevention:**

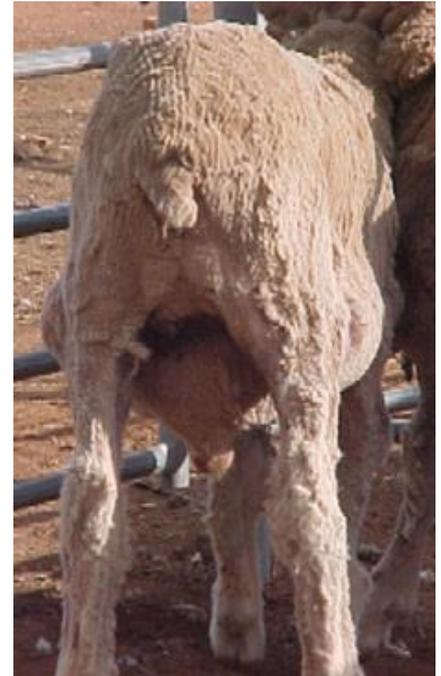
Veterinary advice must be sought to treat affected animals. The most important preventive measure is to ensure a correct calcium-phosphorus ratio.

Preventative measures include:

- Provision of good quality water
- Inclusion of 1 to 1.5% (w/w) feed grade limestone within the ration
- Addition of between 1 to 5% of sodium chloride to ration to increase water intake
- Ensure a balanced mineral intake
- Addition of between 0.5 to 1% (w/w) of acid salts such as ammonium chloride to acidify the urine and help prevent the formation of calculi.

#### **Treatment:**

In a feedlot or containment area situation treatment is seldom practical and rarely successful.



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