Introduction  
  
The rumen microflora can only handle gradual changes in forage:grain ratio. If the proportion, absolute  
amount or type of grain changes too quickly, then lactic acidosis will develop. Feeding order (i.e. grain  
before forage) also can cause lactic acidosis. The type of rumen bacteria change to gram positive from  
gram negative and lactic acid is produced. This lowers the pH of the rumen. Once below 5.5, protozoa  
and bacteria start to die. The acid gets absorbed into the body creating general acidosis. If the pH is low  
enough, the rumen gets "burned" and, if the goat survives, it often gets secondary rumen and liver  
infections from bacteria or fungi. Fibre (e.g. hay or silage) is important in the diet as well as it stimulates  
the goat to chew, thus producing alkaline saliva which serves to buffer the rumen. Diets with little fibre or  
chopped too finely are more at risk of lactic acidosis.  
  
Clinical Picture:  
  
Simple indigestion may be the first indication of a feeding problem. The goat backs off her feed, usually  
only for one feeding. If longer than 24 hrs then something else is wrong. Chronic feeding problems will  
manifest as variable appetite, depressed milk fat and chronic laminitis. Acute laminitis shows up as  
painful feet. What is more common is the chronic form in which the toes grow abnormally fast with  
"rings". The quality of the horn is poor and flaky. Goats may be lame and prone to foot abscesses. Milk  
fat is depressed because fibre is necessary for the rumen flora to produce the correct volatile fatty acid to  
make milk fat (acetate). With more severe lactic acidosis, the protozoa die, the rumen becomes static  
and the goat becomes depressed and dehydrated. The rumen is fluid filled and "sloshy". Diarrhea smells  
acidic and is yellow in colour. In very severe cases, there is no diarrhea because of total gut stasis. The  
goat may appear "drunk" and ataxic. She will go down and will look very similar to milk fever, i.e. cold  
with dilated pupils. Rumen examination (pH and examination of flora) need to be done to confirm a  
diagnosis.  
  
Treatment:  
  
In severe cases, treatment is heroic and may involve a rumenotomy in which the rumen is surgically  
emptied out. Supportive therapy includes iv fluids, rumen transfaunation (rumen juice from a healthy  
animal), alkalinizing solutions for the rumen (only done with caution), antibiotics and nursing care.  
  
  
Prevention:  
  
Rations should be formulated and balanced correctly for the correct production group. Forage should be  
fed before grain and the daily amount divided into at least 3 separate feedings. A total mixed ration (TMR)  
helps keep the rumen flora happy by not overwhelming them with carbohydrate at any one time. Feed  
changes all need to be made gradually over several days so the flora have time to adapt. For small  
holders with a few goats, grain security is an important issue.  
  
  
Dr. Paula I. Menzies, Ruminant Health Management Group  
Ontario Veterinary College, University of Guelph