



## RUMEN OVERLOAD

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The ingestion of large amounts of highly fermentable feeds causes an acute disease due to the excessive production of lactic acid in the rumen.

The sudden ingestion of large amounts of carbohydrate-rich feed, such as grain, is the most common cause of the disease.

It is also seen with ingestion of apples, bread, brewers grain and sugar beet.

Lupin grain is low in starch and rarely causes problems.

The ingestion of excessive quantities of highly fermentable feeds by the ruminant is followed within 2 - 6 hours by a marked change in the bacterial population of the rumen. One particular bacterium (*Streptococcus bovis*) increases in numbers and produces large amounts of lactic acid. This drops the pH of the rumen to below 5 so that a very acid environment exists.

At this point many of the essential microbes of the rumen are killed.

The condition is most commonly seen when ruminants are suddenly given access to high levels of grain, such as at the start of concentrate feeding. It can also be seen when stock that have been used to these high levels are not fed for 24 - 48 hrs and are hungry.

When introducing grains, start slowly to avoid rumen overload. A rate of 0.1Kg/head/day to start is considered to be safe provided enough trough space is available.

The cause of the problem is the production of lactic acid in the rumen caused by the fermentation of the carbohydrates. This causes the rumen to stop its natural movement that mixes the contents to aid digestion; there is rapid absorption of the lactic acid into the blood stream with a fall in the blood pH.

Depending on the amount of carbohydrate eaten, and therefore the amount of lactic acid produced a number of clinical signs are seen.

### Clinical Signs

Degree of Illness	Mental State & Muscle Strength	State of Rumen	Treatment
Peracute	Severe Depression	Swollen	Surgery
	Unable to Stand		IV Fluids
	Pupils Dilated		Destroy
Acute	Depressed	Moderate	Destroy/Surgery
	Ataxic		IV Fluids
			Feed Hay
Subacute	Fairly Bright	Mild/None	Oral
	Able to walk		Feed Hay
	Pupils Normal		24 / 48 Hours
Mild	Bright & Alert	None	Feed Hay