

# Effects of Exogenous Injections of Cholecystokinin-8 and Gastrin- I on Gastroduodenal Motility and Feed Intake in Sheep

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## Summary

The effects of exogenous injections of gastrointestinal hormones, CCK-8 and Gastrin- I , on feed intake and gastroduo-denal motility in conscious sheep were studied in this experiment.

In each sheep initiation of the suppression of feeding behavior was recognized within 1 to 2 min after intravenous injections of all doses of CCK-8 and Gastrin- I . Single bolus injections of CCK-8 and Gastrin- I caused suppression of feeding behavior in the first 1-2 min after injection.

The magnitude of inhibition of feeding were dose related over the range of doses tested. The suppression of feed intake relative to the saline control in the first 10 min after injection were ranged from 47 to 67%. The apparent compensatory increase in feed intake for the decrease at the initial period were observed in the 10-40 min feeding period, however, the total amount of feed intake in 4 hours decreased either by injection of CCK-8 or Gastrin- I .

Abomasal EMG activity was disappeared within 1-2 min after the injections of both CCK-8 and Gastrin- I ,and the inhibitory effects lasted 21-22 min and 32-33 min, respectively. The duration of inhibition was longer in high dose injection, and the abomasal motility was suppressed in a dose-dependent manner, whereas suppression of the ruminal motility by CCK-8 and Gastrin- I injections were not in a dose-related manner. After disappearance of inhibitory effect, the abomasal motility abruptly increased by nearly 1.5-fold compared with that of the saline control and then began to gradually decreased to the control level.

The results of these experiments indicate that the gastrointesitinal motilities in sheep show regional differences in its response to exogenous CCK-8 and Gastrin- I