

In no instance was the blood pressure affected. The results were entirely negative, as with the controls. Koessler and Hanke⁴ obtained similar negative results with normal dogs.

Of the 10 animals which had been in tetany, 9 showed no gross changes in the gastro-intestinal tract. The tenth showed a few slightly hyperemic areas in the duodenal mucosa. Microscopic examination was not made. The discrepancy between these findings and those cited above may be due to (1) the fact that our animals were killed under anesthesia before the tetany had run its full course, or (2) to the diet we gave, which was of milk and white bread.

The experiments show, however, that repeated and severe attacks of tetany may occur in the absence of any demonstrable change in permeability of the intestinal mucosa, at least toward histamine. It is still possible, of course, that the absorption of other substances may be affected.

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Action of Insulin on the Gastric Motility of Man.

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Using the triple balloon technique it has been demonstrated that:

1. Subcutaneous injection of insulin in amounts of 12-20 units usually produces in normal human subjects fasting 11-44 hours an increase in gastric motility.

2. The essential features of this response are (a) an increase in gastric tone, (b) type A contractions, (c) a very prolonged hunger period.

3. The gastric hypermotility induced by insulin is not inhibited by smoking, mild nausea, unpleasant emotions, body discomfort, sight or thought of food, extraneous disturbances, swallowing or the presence of indifferent substances or food in the mouth or in the stomach.

4. The gastric motility is inhibited by introduction of dextrose or cane sugar into the duodenum, and also by the subcutaneous injection of atropine or epinephrine.

⁴ Koessler, K. K., and Hanke, M. T., *J. Biol. Chem.*, 1924, lix, 889.

5. "Insulin sensations," especially hunger, parallel rather closely the degree of gastric activity.

6. Under the experimental conditions described antiperistaltic movements in the stomach were not associated with sensations of nausea.

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Motor and Secretory Activity of the Stomach During Acute and Chronic Obstructive Jaundice in Dogs.

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This work was done in an attempt to segregate the possible rôle of impaired gastric functions in jaundice.

The effect of acute and chronic obstructive jaundice on the hunger contractions of the empty stomach were studied by the balloon method 18 hours after a standard meal. The effects on the secretory functions of the stomach were studied by means of Pavlov pouch dogs. In some animals 100 gm. of hamburger was the test meal, in others 1 mg. of histamine, injected subcutaneously, was the stimulus.

Acute jaundice was produced by intravenous injection of $\frac{1}{8}$ to $\frac{1}{2}$ cc. of bile per kilo of body weight. These experiments were controlled by injection of 0.9% NaCl solution, which had no effect.

Similar studies were made on chronic obstructive jaundice after appropriate control studies. Obstructive jaundice was produced by double ligation and section of the common bile duct.

Summary: 1. Intravenous injection of $\frac{1}{8}$ to $\frac{1}{2}$ cc. of bladder bile per kilo of body weight in dogs causes an immediate but temporary inhibition of gastric motility (hunger), and greatly diminishes the gastric secretion following a test meal. The inhibitory effect upon gastric secretion is more prolonged than upon gastric motility.

2. Chronic obstructive jaundice is followed by a decrease of the motor activity of the empty stomach, a decreased rate of gastric juice secretion, and an increased acidity of the gastric juice.