

Effect of hyperosmotic solutions on duodenal motility: a mechanism of resistance or of propulsion to the luminal flow? Efecto de soluciones hiperosmóticas en la motilidad duodenal: un mecanismo de resistencia o de propulsión al flujo luminal?

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Infusion of hyperosmotic solutions into the duodenum lead to increased motility. To investigate the mechanism of this effect, 9 healthy volunteers received small infusions of hypertonic (1250 mOsm/kg) NaCl or glucose. Intestinal motility was registered using manometric system with multiple lumens 3 cm apart. Nineteen glucose infusions did not modify intestinal motility. Of 43 NaCl infusions, motility was increased in 24, 7 of them with a typical migratory complex, phase III. In 17 cases, non propagated contractions increasing in a cephalo-caudal direction were noted. The latter may be related to delayed gastric emptying associated to hyperosmotic loads.