



FACULTAD DE CIENCIAS EXACTAS NATURALES Y AGRIMENSURA

CARRERA DE BIOQUÍMICA
FISIOLOGÍA HUMANA

FISIOLOGIA DEL APARATO DIGESTIVO 8

*Bioq. Claudia Patricia Serrano
Especialista en Hematología
Especialista en Docencia y Gestión Universitaria
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Función endocrina del Intestino

TABLE 21-1 The Digestive Hormones

"Amine Precursor Uptake Descarboxilase"
"Captación y Descarboxilación de los
Precursors de grupos Amino".

HORMONAS DEL SISTEMA APUD			EFFECTS ON ENDOCRINE SECRETION	EFFECTS ON EXOCRINE SECRETION
	SECRETED BY	TARGET(S)		
Gastrin	G cells in stomach antrum	ECL cells; parietal cells	None	Stimulates gastric acid
Cholecystokinin (CCK)	Endocrine cells of small intestine; neurons of brain and gut	Gallbladder, pancreas, gastric smooth muscle	None	Stimulates pancreatic enzyme secretion; potentiates bicarbonate secretion; inhibits acid secretion
Secretin	Endocrine cells in small intestine	Pancreas, stomach	None	Stimulates bicarbonate secretion; inhibits gastric acid and gastrin
Gastric inhibitory peptide (GIP)	Endocrine cells in small intestine	Beta cells of endocrine pancreas	Stimulates insulin release (feedforward mechanism)	Inhibits acid secretion
Motilin	Endocrine cells in small intestine	Smooth muscle of antrum and duodenum	None	None
Glucagon-like peptide 1	Endocrine cells in small intestine	Endocrine pancreas	Stimulates insulin release; inhibits glucagon release	Possibly inhibits acid secretion

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	EFFECTS ON MOTILITY	OTHER EFFECTS	STIMULUS FOR RELEASE	RELEASE INHIBITED BY	OTHER INFORMATION
Gastrin	None	Enhanced mucosal cell growth	Peptides and amino acids in lumen; gastrin releasing peptide and ACh in nervous reflexes	pH < 1.5; somatostatin	—
Cholecystokinin (CCK)	Stimulates gallbladder contraction for bile release; inhibits gastric emptying; promotes intestinal motility	Stimulates satiety	Fatty acids and some amino acids	Somatostatin	Some effects may be due to CCK as a neuropeptide rather than as a hormone
Secretin	Inhibits gastric emptying	None	Acid in small intestine	Somatostatin	—
Gastric inhibitory peptide (GIP)	None	Satiety and lipid metabolism(?)	Glucose, fatty acids, and amino acids in small intestine	NA	Acid inhibition questionable at physiological concentrations
Motilin	Stimulates migrating motor complex	Action in brain(?)	Fasting: periodic release every 1.5–2 hours by neural stimulus	NA	Changes associated with both constipation and diarrhea, but relationship is unclear
Glucagon-like peptide 1	Slows gastric emptying	Satiety	Mixed meal that includes carbohydrates or fats in the lumen	NA	Related to but not identical to pancreatic glucagon; acts in concert with GIP

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Gracias

