

# INNATE INTELLIGENCE

## SMALL INTESTINE – Duodenum

**Normal Function** – Receives chyme from the stomach and mixes it with digestive secretions from the liver (via the gallbladder if the patient still has theirs) and pancreas.

**Innate Stimulus** – When chyme drips onto the mucosal lining of the duodenum, it stimulates the production of two hormones: cholecystokinin and secretin.

**Innate Response** – These hormones stimulate the gallbladder and pancreas to produce their individual digestive secretions, bile and pancreatic enzyme mix. It is their actions that allow the duodenum to initiate nutrient absorption, especially iron and calcium

**Liquified foods (chyme)** drip through the pyloric valve onto the mucosal lining of the Duodenum (hormone production)



**Cholecystokinin (CCK):** Released by I cells in response to fat and protein in the duodenum. Stimulates pancreatic enzyme secretion and gallbladder contraction.

**Secretin:** Released by S cells in response to acid and fatty acids in the duodenum. Stimulates the pancreas to produce and secrete bicarbonate-rich fluid, which helps neutralize stomach acid as well as the digestive enzymes lipase, amylase, and proteases.

<https://www.ncbi.nlm.nih.gov/books/NBK537284>

SYMPTOMS OF ENERGY DEFICIENCY	
STRESS RESPONSE	ORGAN EXHAUSTION
Increases nutrient requirements	Deficient nutrients available
Inhibited digestive secretions	Inadequate digestive secretions
FREQUENT SYMPTOMS	
Abdominal pain, bloating, gas, diarrhea, and fatty, foul-smelling stools.	Other symptoms can include unexplained weight loss and fatigue.
NUTRITIONAL CONSIDERATIONS	
Improve Digestion and Absorption	
Focus on incorporating bitter foods, warming spices, and foods with natural digestive enzymes into the diet. Warming spices like ginger and turmeric, and bitter foods like artichoke and bitter greens stimulate bile flow. Fruits like pineapple and papaya, and avocados are known for their natural digestive enzyme content.	
CLINICAL CONSIDERATIONS	
Involuntary muscle contractions	
Sympathetic Nerve Supply	T5-T9
The duodenum receives sympathetic nerve supply primarily through the celiac plexus, with preganglionic fibers originating from thoracic spinal segments T5 through T9.	

Supplementing nutrients to counter symptoms is little more than educated guesswork. Symptoms are Innate's signal that a system, organ, or tissue is unable to produce adequate energy to meet its responsibilities for maintaining homeostasis and normal physiological function. Carbohydrates, protein, lipids, vitamins, and minerals are building blocks used in producing energy. They must be put to work. They are not workers.

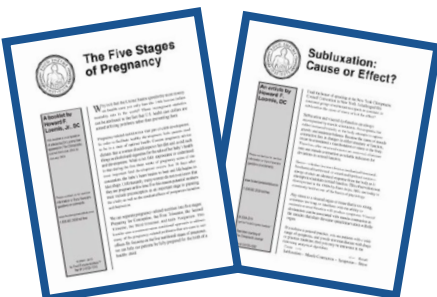
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