## Healing Chronic Cases Assessment 2 GI Hormones and Nervous System

One piece we are attempting to achieve in biofeedback is harmony. What I have noticed is that the more we laser focus on the aspects that need harmonize them, as we identify them through the testing process, the better our results will be. To that end, the hormones and nervous regulation of the digestion is a very important one. You can learn a great deal and you can profoundly help the person to better regulate the most important part of the body (the digestion). When these regulators are out of balance, it follows that proper digestion may be out of balance. These hormones could get out of balance because of some emotional stress, nutritional deficiency, structural issue or toxicity. Use these in your harmonizing protocols for the digestive sessions you are doing or any session that you are working on clearing chronic issues.

**Cholecystokinin** - Gallbladder motility and delivery of bile to the duodenum. Increased gastric and intestinal mobility. Increases gastric acid secretion. Increases gallbladder contraction. Increases the secretion of pancreatic enzymes and bicarb. Increases gastric emptying.

**Secretin** - Secreted in the duodenum. Buffers the effect of gastric-acid infused chyme (digestive contents). Stimulated by stomach acid. Increases gallbladder contraction. Increases pancreatic enzymes. Increases gastrin and gastric emptying. Consider that if this did not work, the person might get an ulcer in the duodenum. All these regulators must function well in order for digestion to be complete, to avoid leaky gut and to maintain the health of the body.

**Somatostatin** - Produced in the D Cells of the pancreatic islet cells. Also produced in the gastric duodenal mucosa. Stimulates gastric acid and inhibits vagal nerve function. Inhibits gastric secretion and inhibits growth hormone.

Motilin - Controls the migrating motor complex (the peristaltic waves)

Gastrin - Increases gastric hydrochloric acid release.

**Melatonin** - Muscosal antioxidant, enhances immunity, regenerates epithelium, increases mucosal blood flow, decreases gastric acid.

Serotonin - Accelerates gastric emptying.

Histamine - Related to allergic reactions, increases acid secretion and intestinal secretions.

**Pancreatic polypeptide** - Stimulated by meals containing protein. This increases gastric acid secretion and intestinal secretions in order to digest proteins.

**Gastric Inhibitory Protein** - Gastric mucosal nerves via vagus nerve input. Neurotransmitter for vagal fibers innervation G cells.

**Ghrehlin** - Ghrelin is released during periods of fasting. Secreted by the hypothalamus, pituitary, kidney.

**Gastrin releasing peptide** - secreted by gastric mucosal nerves. Having protein in the stomach causes release. Increases gastric secretions.

**Enkephalins** - Increases smooth muscle tone, mediates sphincter contractions

Vasoactive Intestinal Peptide - relaxes GI smooth muscle, vasodilates the splanchnics, increases pancreatic secretion, increases intestinal secretion.