Glossary

Amylase

An enzyme found in saliva that breaks down starches into simple sugars.

Autonomic nervous system

The part of the nervous system that regulates unconscious actions. It has two branches: the parasympathetic and the sympathetic.

Parasympathetic branch

Otherwise known as the “feed and breed system,” it controls resting functions and prepares the body to take in parts of its environment such as food.

Sympathetic branch

Otherwise known as the “fight or flight system,” it controls automatic responses to stimuli and prepares the body to combat the outside world, as needed for physical defense.

Cephalic phase

The stage of digestion happening just before food is eaten, where the brain activates the gastrointestinal tract through the parasympathetic nervous system.

Cholecystokinin (CCK)

A hormone released by the duodenum that stimulates the pancreas to release digestive enzymes.

Duodenum

The first part of the small intestine. Releases three hormones, secretin, CCK, and GIP, that are integral to the digestion process.

Esophageal sphincter

Circular muscle at the top of the stomach that controls the passage of food between the esophagus and stomach.

Gastric dumping

The process through which the stomach empties digested food into the duodenum. If done too quickly, it can lead to duodenal ulcers.

Gastric inhibitory polypeptide (GIP)

A hormone secreted by the duodenum that inhibits production of gastrin in the stomach, thereby "shutting off" the acid and helping to make the contents of the stomach safe to empty into the small intestine. GIP also has insulin-like effects, increasing the uptake of glucose by muscle tissue.

Gastrin

A hormone released in response to the stretching of the stomach that stimulates stomach cells to produce acid.

Ghrelin

A hormone released in response to low blood glucose levels and inhibited in response to rising blood glucose levels, related to the feeling of hunger.

Glucose

A simple sugar created by the digestion of carbohydrates

Insoluble fiber

A type of dietary fiber that adds bulk to the stool and helps food pass more quickly through the stomach and intestines.

Insulin

A hormone produced by the pancreas that regulates blood glucose levels.

Lipase

An enzyme that breaks down fats so that the body can absorb them.

Mucoproteins

Coat the lining of the stomach during digestion to prevent damage from acids.

Pancreas

Organ stimulated by the duodenum; the *endocrine* part regulates glucose by secreting insulin; the *exocrine* part releases secretin into the stomach to neutralize its acidity.

Pepsinogen

An inactive protease enzyme released as the stomach is stretched. Becomes pepsin when mixed with stomach acid, which breaks proteins into amino acids.

Peristalsis

A series of muscle contractions that move food through the gastrointestinal tract.

Proteases

Enzymes that break down proteins in the stomach.

Saliva

Mucousy liquid secreted in the mouth and esophagus containing two enzymes, lipase and amylase, that are helpful for digestion; has antibacterial properties.

Secretin

A hormone released by the duodenum that activates the pancreas to neutralize stomach acid, protecting the small intestine from getting burned.

Soluble fiber

A type of dietary fiber that thickens when combined with the water in the stomach, slowing digestion and softening stool.