



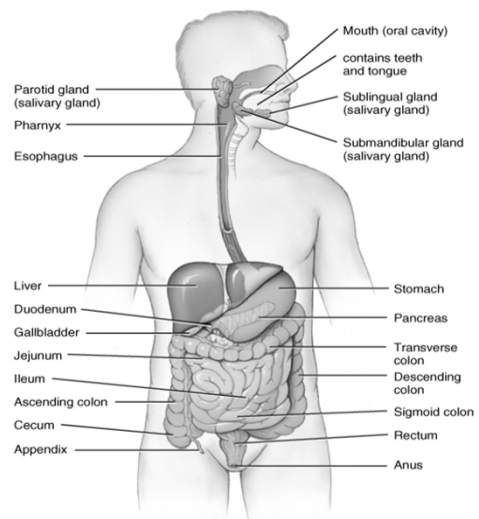
Functional Physiology, Dysfunctions, and Assessments of the G.I. and Gallbladder – a 3-part Webinar Series

*The Functional Diagnosis Webinars With
DR. DICKEN WEATHERBY
Creator of the Blood Chemistry Software*

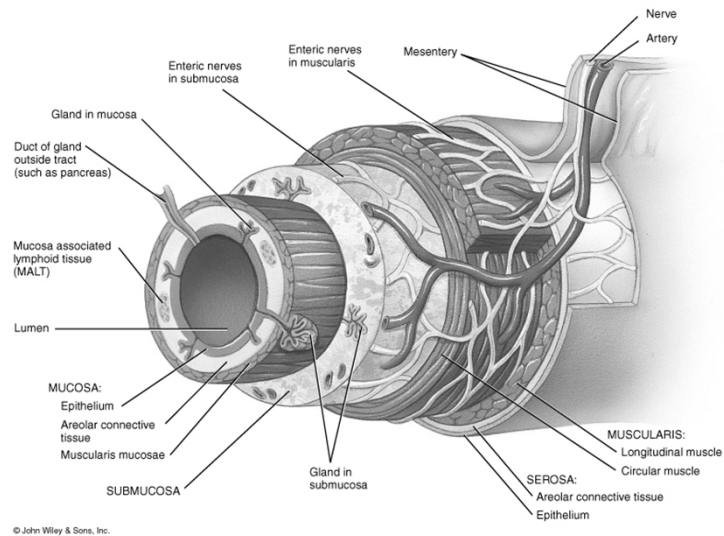
Functional Physiology of the G.I. & Biliary System Digestion, Absorption, and Excretion

Digestion

Organs of the Digestive System and Related Structures



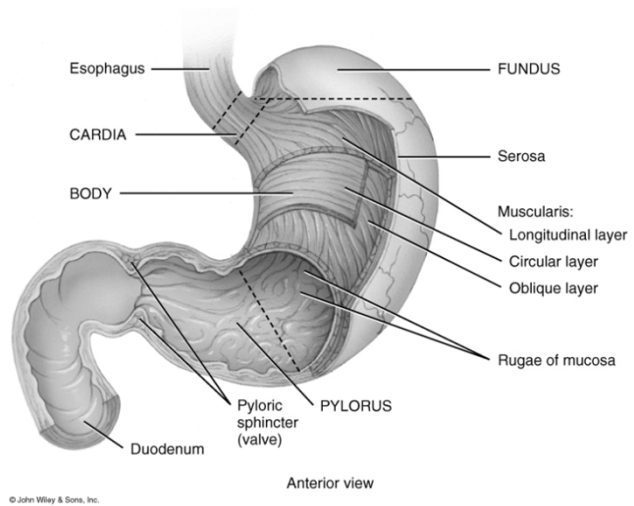
Layers of G.I.



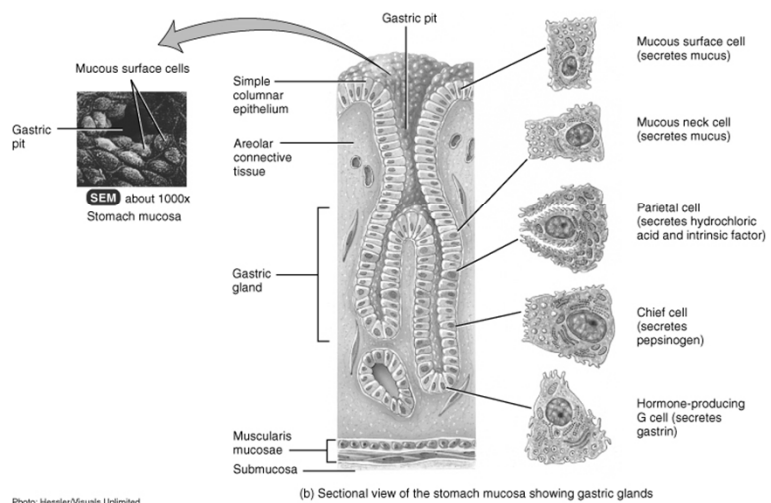
G.I. Terminology

- **Digestion** – breakdown of macronutrients
- **Absorption** – movement of digested particles across intestinal mucosa
- **Transportation/Assimilation** – assimilated into blood stream and distributed around the body
- **Utilization** – movement from blood into the cell

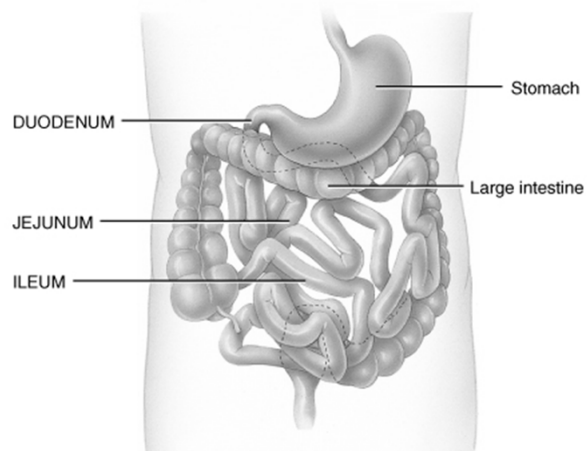
External and Interior Anatomy of the Stomach



Histology of the Stomach



The Small Intestine- Digestion Continues



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Anterior view

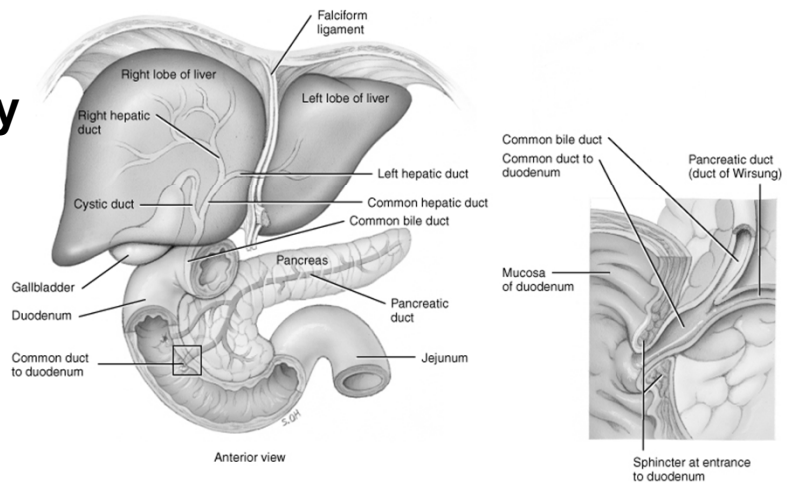
Pancreatic Enzyme Secretion

- Proteolytic Enzymes
- Carbohydrate digestion
- Fat digestion

Regulation of Pancreatic Secretions

- Secretin
- Bicarbonate
- Cholecystokinin

The Hepato-Biliary System – Fat Emulsification & Digestion



Functions of Bile

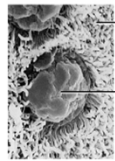
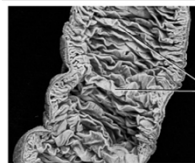
- 1.** Fat digestion and emulsification
- 2.** Excretion
- 3.** Regulation of bile secretion

The Role of CCK

- Inhibits gastric emptying
- Stimulates secretion of pancreatic juices
- Induces a feeling of satiety
- Causes the gallbladder to ejecting bile into the small intestine

Absorption

Small Intestine & Absorption



Microvilli of absorptive cell
Goblet cell

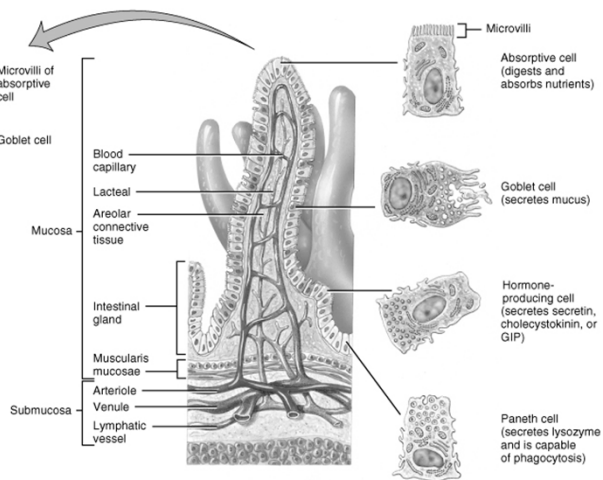
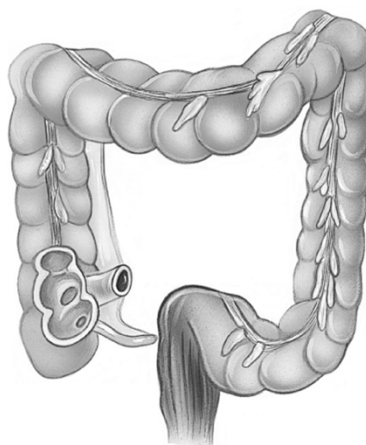


Photo: P. Motta and A. Familiari, University of La Sapienza, Rome/SPI/Photo Researchers © John Wiley & Sons, Inc.

The Physiology of Gut Flora

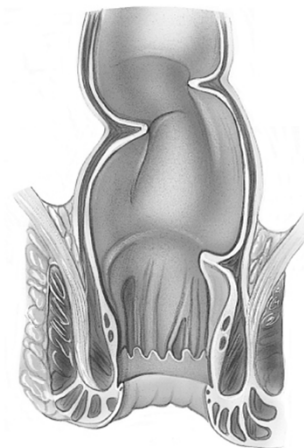
- Functions of GI Flora
- Types of flora: Lactobacillus acidophilus and bifidobacteria
- The origin of flora
- Beneficial effects

Anatomy of the Large Intestine



(a) Anterior view of large intestine

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(b) Frontal section of anal canal

Summary