

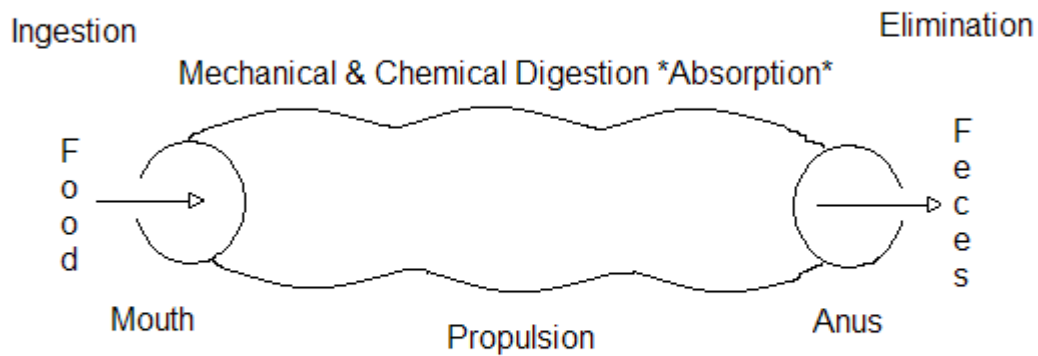
HUMAN ANATOMY & PHYSIOLOGY II LAB – CAHS 123
Key Points

Lab # 7

Overview of Digestion

Know terms associated with digestion:

Digestive Tract (GI Tract or Alimentary Canal):



Ingestion = intake of food (& water) into oral cavity. Oral cavity contains Accessory Digestive organs: Tongue, Teeth & Salivary glands.

Digestion =

Mechanical Digestion = chewing, churning (in stomach), segmentation

Chemical Digestion = enzymes in mouth, stomach and intestines breakdown food into fundamental “building blocks” for absorption. HCl of stomach also aids in this process.

Absorption = nutrient uptake across the lining of GI tract (primarily occurs in small intestine!) This is the **most critical step** of the digestive process. Without it the rest of digestion is pointless.

Propulsion = movement of substances along the GI tract via peristalsis (wave like contraction of smooth muscle)

Know layers of the GI tract:

Mucosa – Inner smooth epithelium, Lamina propria, and Muscularis mucosae

Submucosa

Muscularis externa – Longitudinal and Circular layers (Also, an Oblique layer in stomach)

Serosa = epithelium and connective tissue

Know pathway through the GI tract:

Mouth → Pharynx → Esophagus → Stomach → Small Intestine (Duodenum, Jejunum, Ileum) → Large Intestine (Cecum, Colon: Ascending, Transverse, Descending, Sigmoid) → Rectum → Anus

Know Accessory Structures and Function(s) of each:

Tongue, Teeth, Salivary Glands (Parotid, Submandibular, Sublingual), Liver, Gallbladder and Pancreas

Know and label parts of the stomach: Cardiac region, Fundus, Body, Pylorus, Greater and Lesser Curvature, Rugae

EXERCISE #38 – Anatomy of Digestive System

-Food passes through; only enters cells if digested & absorbed

-Physical and chemical breakdown allows absorption to bloodstream and body cells

<u>GI Tract</u>	<u>Accessory Organs</u>
Layers:	Teeth
Mucosa	Salivary Glands
Submucosa	Liver
Muscularis	Gallbladder
V/P Serosa	Pancreas
Mouth (phys, chem)	
Pharynx	
Esophagus (phys)	
Stomach (phys, chem)	
Small intestine (chem)	
Duodenum	
Jejunum	
Ileum	
Large Intestine	

MOVIE – Digestive System

Revised 12/2007

Histology:

- Trachea and esophagus (Plate 28 p.697): examine juxtaposition of the two
- Esophagus and stomach (Figure 38.6 p.581, Plate 30, p. 698): stratified squamous to simple columnar
- Small intestine, large intestine (Figure 38.9 p. 584, Plates 33-36 p. 698-9): duodenum, jejunum, ileum, colon
- Salivary glands (Figure 38.13 p. 588, Plate 37 p. 699): submandibular, parotid, sublingual
- Liver (Figure 38.15 p. 590, Plate 39 p. 699)
- Pancreas (Figure 27.3 (c) p. 409): dual role in digestion and endocrine

Homework: Review Sheet #38 – take two weeks to complete