

Review:

I. Digestive Processes:

- a. Ingestion - Process of taking in food.
- b. Mechanical Digestion - Physically breaks down food (mastication/chewing) (peristalsis – the rhythmic, squeezing motion).
- c. Swallowing/Deglutition - Voluntary movement of food from mouth to esophagus.
- d. Chemical Digestion - Process in which large food nutrient molecules are broken down into chemicals small enough to be absorbed by the lining of the small intestine.
- e. Absorption - Transport of nutrients from the gastrointestinal tract to the blood.
- f. Defecation - Elimination of indigestible substances from the body in the form of feces.

II. Anatomy of the Digestive System

a. Alimentary Canal:

1. Mouth - site of ingestion.
 - a. Teeth - tear and grind food.
 - b. Tongue - mixes food with saliva to form bolus.
 - c. Salivary Glands - secrete saliva to: moisten food, and breakdown carbohydrates (enzyme = salivary amylase).
2. Pharynx - passageway for food propelled by peristalsis.
3. Esophagus - passageway for food propelled by peristalsis.
4. Stomach - temporary storage pouch for food. Converts food to chyme. Secretions include:
 - a. Hydrochloric acid - activates other enzymes.
 - b. Pepsin - digests proteins.
 - c. Intrinsic Factor - required for vitamin B-12 absorption.
 - d. Gastrin - regulates secretions and contractions.
 - e. Mucus - produced by goblet cells to protect the stomach wall from hydrochloric acid.
5. Small Intestine - major organ for absorption of nutrients. Three regions: duodenum, jejunum, ileum. Secretions include:
 - a. Intestinal juice - mixture of enzymes able to breakdown carbohydrates and proteins.
 - b. Mucus - neutralizes chyme.
6. Large Intestine/Colon - dries out indigestible food residues by absorbing water and eliminates feces.

III. Accessory Digestive Organs

1. Salivary Glands – parotid, sublingual and submandibular
2. Tongue/Teeth
3. Liver - produces bile, a fat emulsifier, stores vitamins A, E, D, & K. aids in detoxification.
4. Gallbladder - stores and concentrates bile.
5. Pancreas – located posterior/under the stomach; produces insulin (for transport of sugar into cells) and pancreatic juices capable of breaking down proteins (protease), carbohydrates (amylase), and lipids (lipase). These enzymes pass into the duodenum (small intestine) through the pancreatic duct.

Terms:

Digestion – process of changing food to a state where it can be used by the body

Metabolism – _____

Catabolism - _____

Anabolism - _____

Flatus – gas

Feces – stool: intestinal waste

Edema – excessive fluid in tissues

Emesis – vomit

Calorie – the amount of heat required to raise the temperature of one gram of water one degree

Disorders (signs and symptoms/definitions)

Appendicitis _____

Hepatitis _____

Cholelithiasis _____

Stomatitis _____

Hemorrhoids _____

Hiatal Hernia _____

Cirrhosis _____

Procedures/Diagnostic Testing

Gastrectomy _____

Colostomy _____

Cholecystectomy _____

Sigmoidoscopy _____

Barium Swallow _____

Barium Enema _____

Cholecystogram _____

Review diagrams