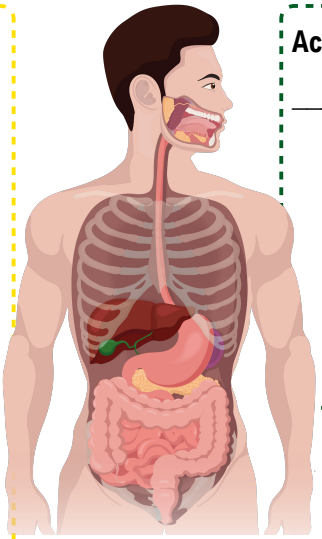
TOPIC: OVERVIEW OF THE DIGESTIVE SYSTEM

Organs of the Digestive System

◆ Organs of digestive system can be broken into ____ basic groups.

Gastrointestinal Tract (GI tract): 30 ft long muscular _____.

- **Mouth:** food and water _____.
- **Esophagus:** food moves to _____.
- **Stomach:** breaks food into _____ molecules.
- **Small intestine:** digests food molecule and _____ nutrients.
- **Large intestine:** absorbs water & eliminates waste products as _____.
- **Sphincters:** keep things moving in ___ direction.



Accessory Organs: ____ part of the tube but ____ in digestion.

- **Teeth & Tongue:** break apart food.
- **Salivary Glands:** release fluid w/ enzymes.
- **Liver:** creates _____ & stores nutrients.
- **Gallbladder:** stores _____.
- **Pancreas:** produces digestive _____.

EXAMPLE

In the box below, the organs of the digestive system are listed. Imagine you are a muffin traveling through the gastrointestinal tract, list the organs that you would pass through, in the order that you would pass through them.

Liver	**Small Intestine**	**Gallbladder**	**Mouth**	**Esophagus**
Stomach	**Pancreas**	**Large Intestine**	**Teeth**	**Salivary Glands**

_____ → _____ → _____ → _____ → _____

Circle the organs that the muffin does not move through.

What do we call this group of organs? _____

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PRACTICE

Which statement below correctly distinguishes accessory organs from organs of the gastrointestinal (GI) tract?

a) Accessory organs all produce digestive fluids, while organs or the GI tract do not.

b) Food passes through organs of the GI tract but does not enter accessory organs.

c) Accessory organs are not essential for digestion while organs of the GI tract are.

d) Organs of the GI tract perform absorption, while accessory organs perform digestion.

PRACTICE

Which organ is responsible for storing bile?

a) Gallbladder. b) Liver. c) Salivary Glands. d) Pancreas.

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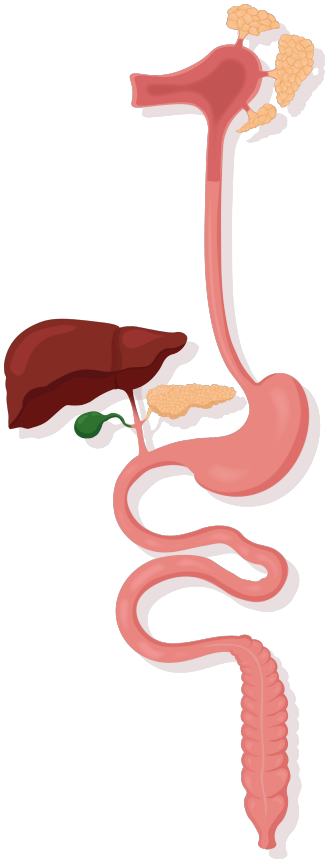
Functions of the Digestive System

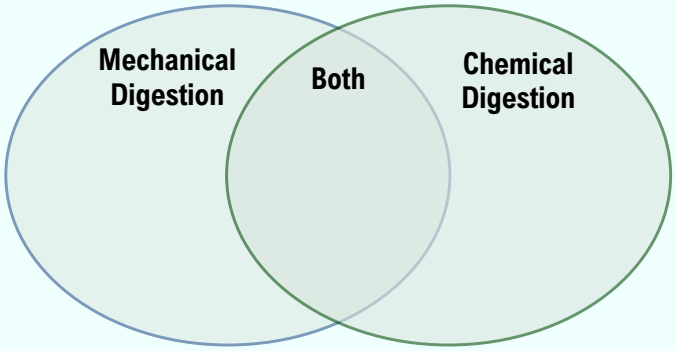


◆ As food moves through the GI tract, it undergoes many processes.

- **Ingestion:** food and water _____ through the mouth.
- **Propulsion:** food moves _____ the GI tract.
  - *Swallowing*: movement of food out of the mouth.
  - *Peristalsis*: muscular _____ that pushes substances through the tract.
- **Digestion:** breaking food into _____ molecules.
  - **Mechanical Digestion:** physical breakdown of food.
    - ___ surface area.
  - **Chemical Digestion:** uses acid or enzymes.
    - Amylase: carbohydrates → simple _____.
    - Lipase: Fats (triglycerides) → _____ acids.
    - Protease + pepsin: proteins → _____ acids.
- **Absorption:** movement of nutrients and water into the blood or _____.
- **Defecation:** elimination of waste products as _____.

EXAMPLE

Fill in the Venn diagram below with the statements about digestion.



Statements

a. Involves pepsin.
b. Involves chewing, churning, and physically breaking up the food.
c. Happens in the stomach.
d. Main function is to increase surface area so enzymes can access molecules more easily.
e. Uses both acids and enzymes.

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PRACTICE

Peristalsis is defined as:

a) The mixing of food with digestive juices.

b) Movement of food from the mouth to the esophagus.

c) Alternating contractions that mix food in the intestines.

d) Muscular waves that move food through the GI tract.

PRACTICE

Which enzyme digests carbohydrates?

a) Amylase. b) Pepsin. c) Lipase. d) Protease.