

# **The Digestive System**

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# The Function

The digestive system works to turn the food you eat into the energy you need to live. As well as packaging and releasing waste.

Digest- The body digests the food into smaller more usable molecules.

Absorb- In the digestive tract the small molecules are absorbed and used as energy.

Release-

<https://www.youtube.com/watch?v=JnzwbipJuAA>

# Four Basic Types of Digestive Systems

- **Monogastric** - Single chambered stomach (humans, dogs, cats..)
- Ruminant - four chambered stomach (cows, goats...)
- Pseudo-ruminant - seen in horses, rabbits,...
- Avian - special type for birds

# How It All Began

- The very first digestive tract system was the GASTROVASCULAR CAVITY.
  - Food and waste entered and exited through the mouth.
  - When the food entered the cavity, cells lining it would release enzymes to break down the food then the cells swallow up individual particles.
    - Example: the jellyfish
- Evolved into the ALIMENTARY CANAL
  - One-way digestive tract.
  - Food enters the mouth and exits through the anus.
    - Example: began first in nematodes resulting in various refined types of alimentary canals

# The Structure

## Major Organs-

Mouth

Esophagus

Stomach

Small Intestine

Large Intestine

Rectum

Anus

Liver

Gall Bladder

Pancreas

A long sectioned tubing with two openings; the mouth and the anus.

**Mouth-** helps chew, chemicals in saliva break down food into forms the body can absorb.

**Esophagus-** valve that acts as a gate between mouth and stomach. Helps ensure that the food can pass.

**Stomach-** Stores food material for hours.

**Small Intestine-** Continues breaking down the food, absorbs nutrients.

# The Digestive System and Homeostasis

Homeostasis- The tendency toward a relatively stable equilibrium.

- One of the main functions of the digestive system is to package up waste from the body for disposal. This keeps our body balanced as the waste would build up.
- Also the digestive system is responsible for breaking down food and absorbing the right amount of nutrients that the body needs to function which keeps our body balanced between too much energy and not enough.



# Diseases and Disorders

**Heartburn-** acid regurgitation into esophagus; burning sensation in chest

**Diverticulosis-** Small pouches in large intestine, caused by abnormal contractions or spasms of the LI; often no symptoms show, sometimes pain or discomfort in lower abdomen.

**Dysphagia-** difficulty swallowing, may be related to Gastroesophageal Reflux Disease, esophageal tumor, or someone other cause, no one knows.

# SOURCES

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