

# HUMAN DIGESTIVE SYSTEM

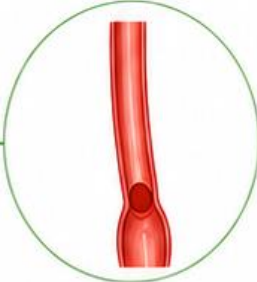
## DIGESTIVE SYSTEM FLOW

### 1. MOUTH



- Teeth cut, tear and grind food.
- Saliva moistens food and begins **starch digestion**.
- Salivary amylase enzyme acts on starch.
- Tongue mixes food and helps in swallowing.
- Soft mass of food is called **bolus**.

### 2. OESOPHAGUS



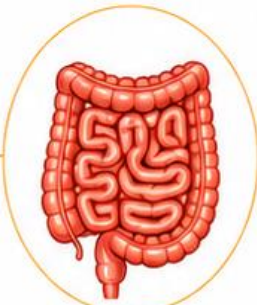
- Connects mouth to stomach.
- Food moves through **peristalsis**.
- Peristalsis: Rhythmic muscular movements that push food forward.

### 3. STOMACH



- Stores and churns food.
- **HCl** provides acidic medium and kills many harmful microbes.
- Pepsin begins **protein digestion**.
- Food changes into semi-liquid called **chyme**.

### 4. SMALL INTESTINE



- Main site of **digestion and absorption**.
- Receives **bile** from liver (helps in fat emulsification).
- Receives **pancreatic juice** (contains enzymes).
- Intestinal juice completes digestion.
- **Villi** increase surface area for absorption.
- Digested nutrients pass into **bloodstream**.

### 5. LARGE INTESTINE



- Absorbs **water** and some salts.
- Undigested material becomes solid.
- Faeces are formed.

### 6. RECTUM



- Temporarily stores faeces.

### 7. ANUS



- Removes faeces from the body.
- Removal of undigested food is called **egestion**.

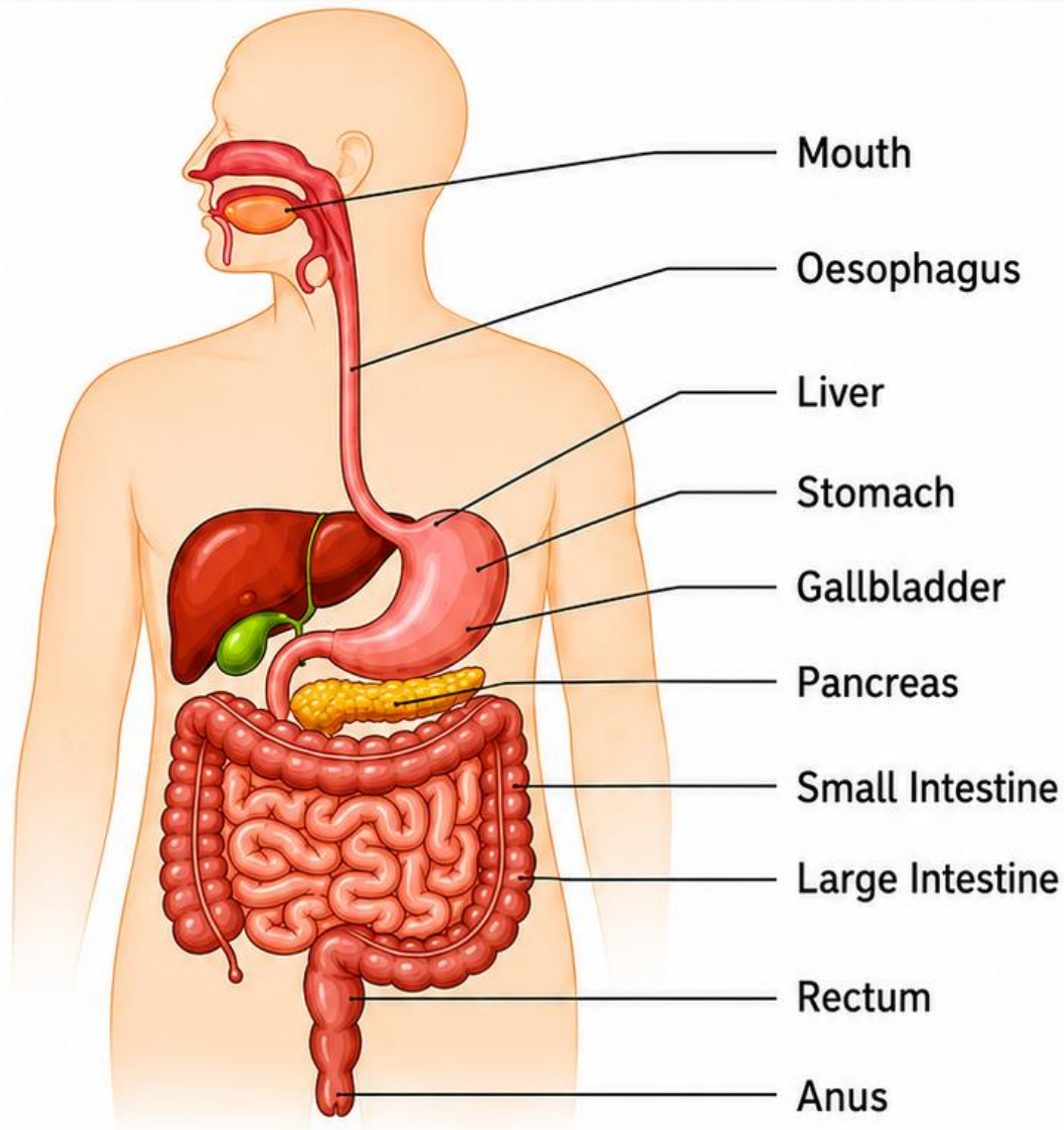


Good digestion leads to good health.



Eat healthy, stay healthy!

# HUMAN DIGESTIVE SYSTEM



## IMPORTANT FACTS

- ★ Bile does **NOT** digest food directly, it helps in emulsification of fats.
- ★ Protein digestion begins in the **stomach**.
- ★ Maximum digestion and absorption take place in the **small intestine**.
- ★ Water absorption takes place in the **large intestine**.
- ★ Movement of food is by **peristalsis**.
- ★ Digestive **enzymes** break complex food into simple substances.
- ★ RTE Act, 2009 ensures good **nutrition** and health for children.



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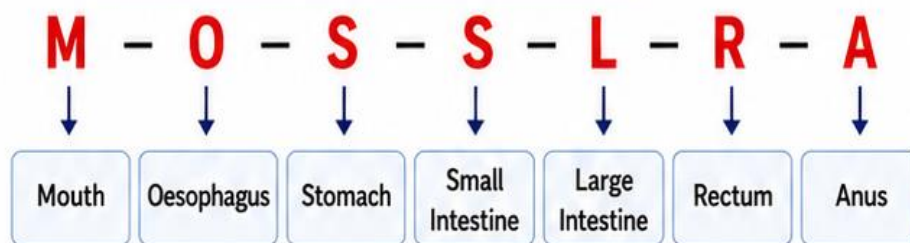
## ACCESSORY ORGANS AND THEIR FUNCTIONS

| Organ                                                                                                         | Function                                                           |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
|  Liver                        | Produces bile which helps in the emulsification of fats.           |
|  Gallbladder                  | Stores and concentrates bile.                                      |
|  Pancreas                    | Produces pancreatic juice (enzymes like trypsin, amylase, lipase). |
|  Villi (in small intestine) | Increase surface area for absorption of nutrients.                 |

## FOOD NUTRIENTS & THEIR DIGESTION

| Nutrient                                                                                        | Where Digestion Begins | Where Digestion Completes | Absorbed In     |
|-------------------------------------------------------------------------------------------------|------------------------|---------------------------|-----------------|
|  Carbohydrates | Mouth                  | Small Intestine           | Small Intestine |
|  Proteins      | Stomach                | Small Intestine           | Small Intestine |
|  Fats          | Small Intestine        | Small Intestine           | Small Intestine |
|  Vitamins     | –                      | –                         | Small Intestine |
|  Minerals    | –                      | –                         | Small Intestine |
|  Water       | –                      | –                         | Large Intestine |

## EASY MEMORY TRICK



**M** – Mouth  
**O** – Oesophagus  
**S** – Stomach  
**S** – Small Intestine

**L** – Large Intestine  
**R** – Rectum  
**A** – Anus



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