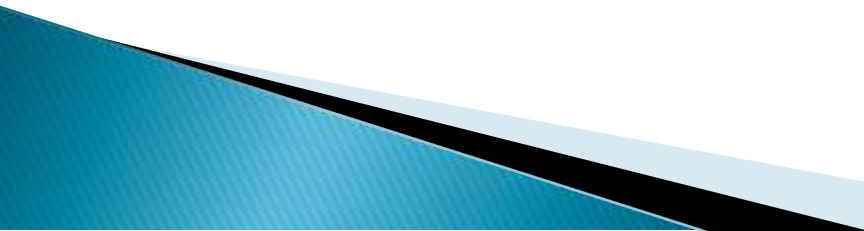


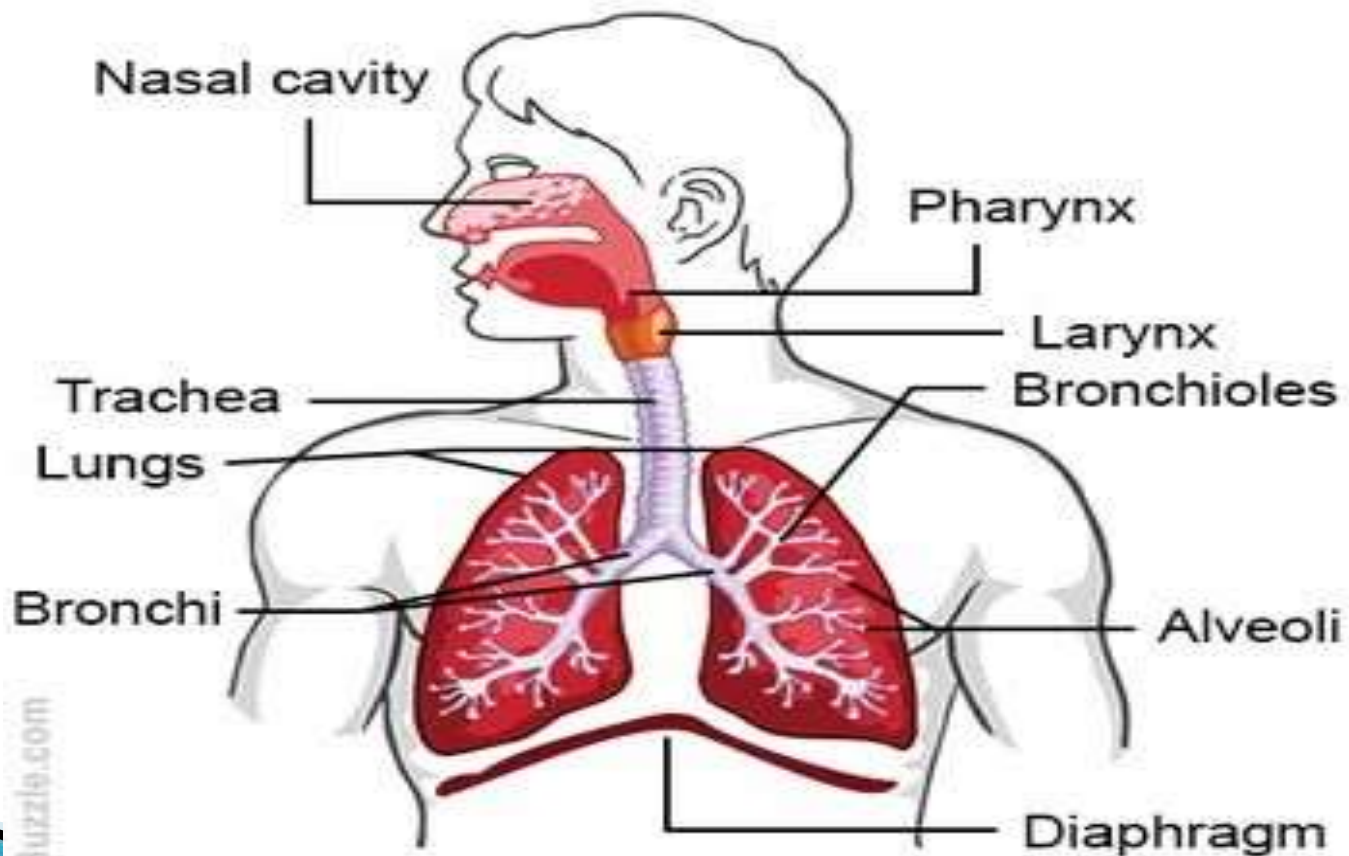
## UNIT–III Respiratory, Digestive and Excretory Systems

The respiratory system: The respiratory passage– the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume. The digestive system: structure and function. Digestive organs, Metabolism. The excretory system: Structure and function of the kidneys and the skin – The endocrine glands: Function of glands pituitary, thyroid, parathyroid, adrenal, pancreatic and the sex glands.

# LUNGS

- ▶ A pair of lungs is located in the Thoracic cavity, which is Conical in shape
  - ▶ Right lung is larger than the left, because of the heart
  - ▶ Heart is slightly located in left
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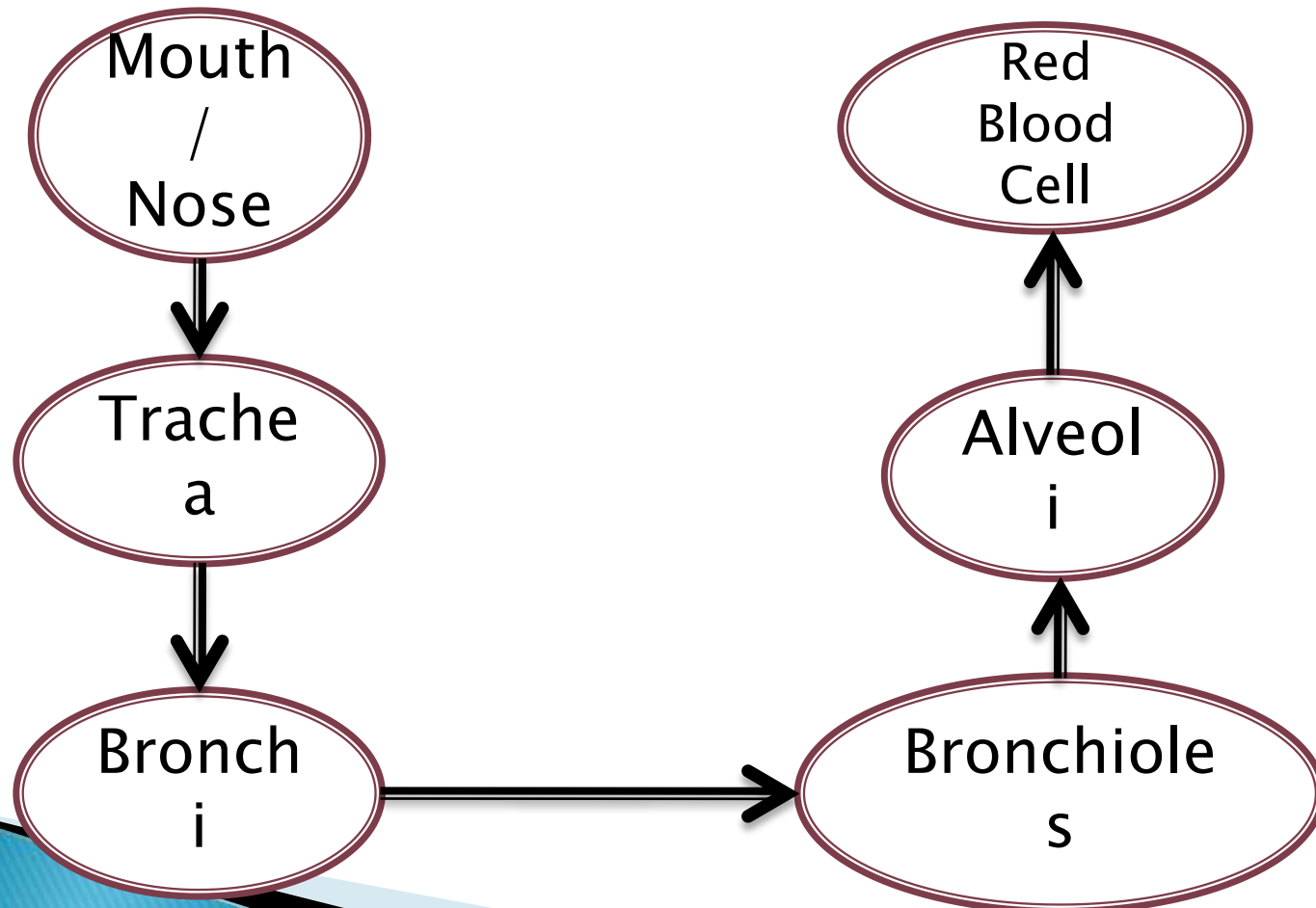
# RESPIRATORY SYSTEM



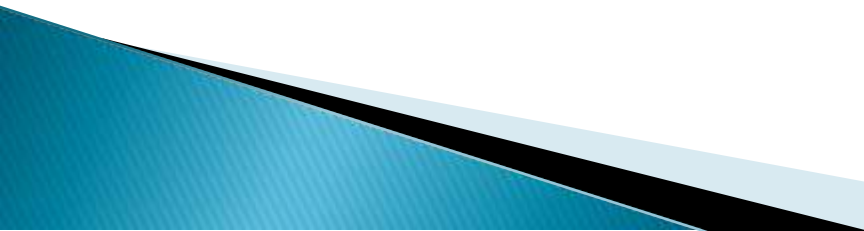
# THE PATHWAY OF AIR THROUGH THE RESPIRATORY SYSTEM

- ▶ 1) Air enters the body through the **nose and mouth** and is warmed by the mucus membranes or damp walls.
- ▶ 2) The air then enters the **trachea/windpipe**
- ▶ 3) The trachea divides into two **bronchi**. The right bronchus goes into the right lung, the left bronchus goes into the left lung.
- ▶ 4) Each bronchus branches out into smaller tubes called **bronchioles**. Air travels through these bronchioles.
- ▶ 5) At the end of the bronchioles, the air enters one of the many millions of **alveoli** where gaseous exchange takes place

# Simplified Pathway of Air Through the Respiratory System



# Lung capacity and Tidal volume

- ▶ Lung capacity or total lung capacity (TLC) is **the volume of air in the lungs upon the maximum effort of inspiration.**
  - ▶ Tidal volume is **the amount of air that moves in or out of the lungs with each respiratory cycle.**
- 

**THE STRUCTURE AND  
FUNCTION OF THE**

**DIGESTIVE SYSTEM**

# Digestive System

- ▶ The food you eat takes an incredible journey through your body, from top (your mouth) to bottom (your anus).
- ▶ Along the way the beneficial parts of your food are absorbed, giving you energy and nutrients.
- ▶ Here's a step-by-step account of the digestive system's workings.



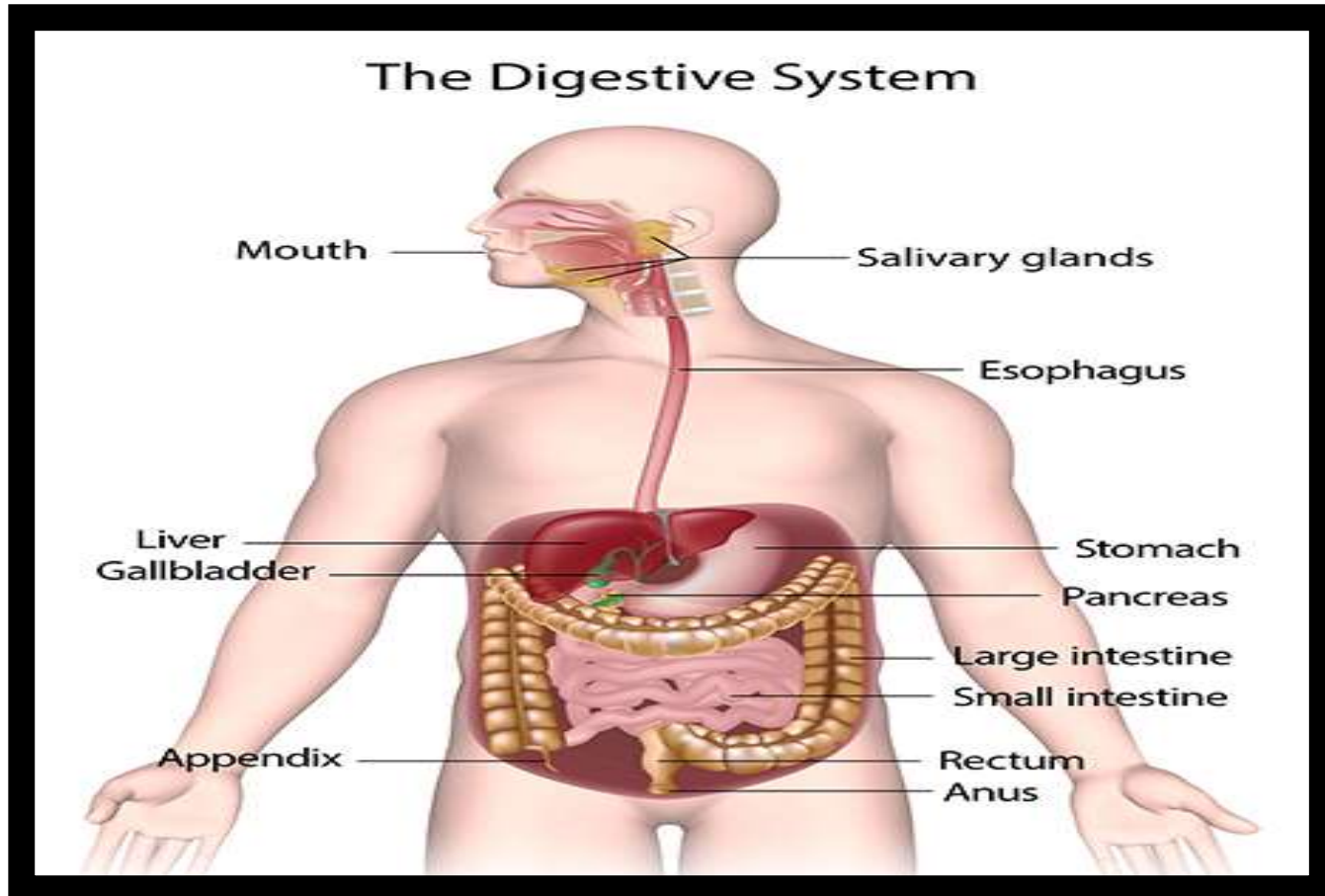
# DIGESTIVE SYSTEM

- The digestive system consists of gastrointestinal tract (alimentary canal) and its glands.
- The function of gastrointestinal tract are ingestion, digestion, and absorption of food and excretion of waste products.

# PARTS OF DIGESTIVE SYSTEM

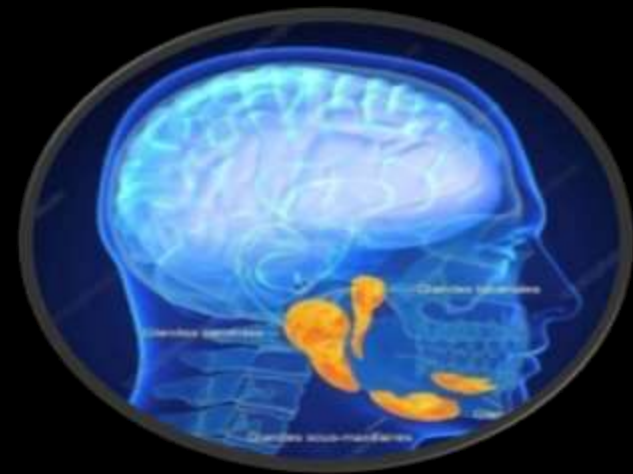
1. Mouth
2. Pharynx
3. Oesophagus
4. Stomach
5. Small intestine
6. Large intestine
7. Rectum
8. Anus

# Structure of the Digestive System

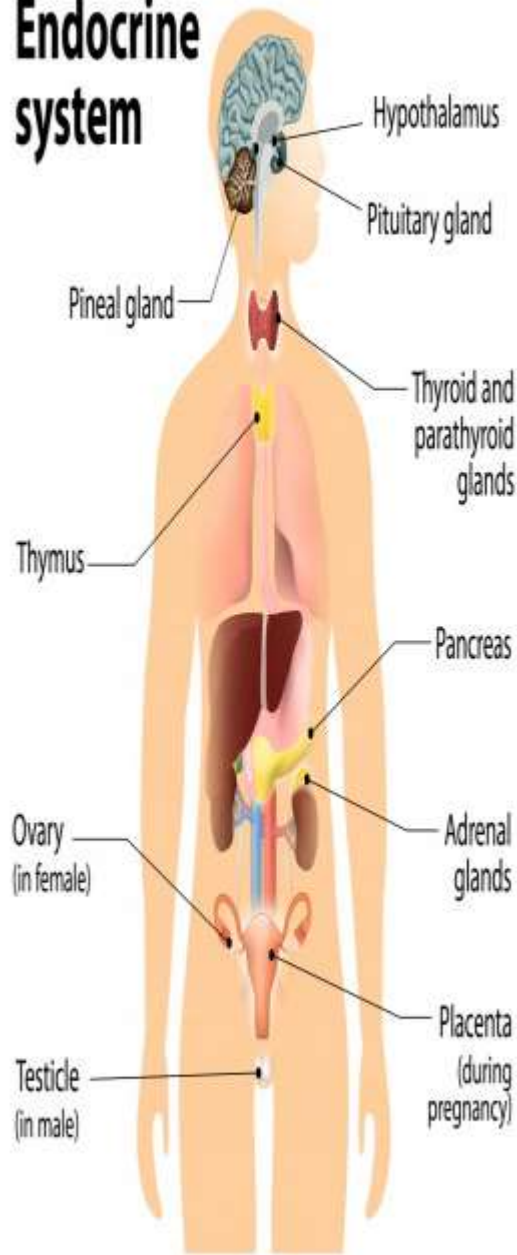


# The important structures of mouth are

1. Tongue
2. Teeth
3. Salivary glands



# Endocrine system

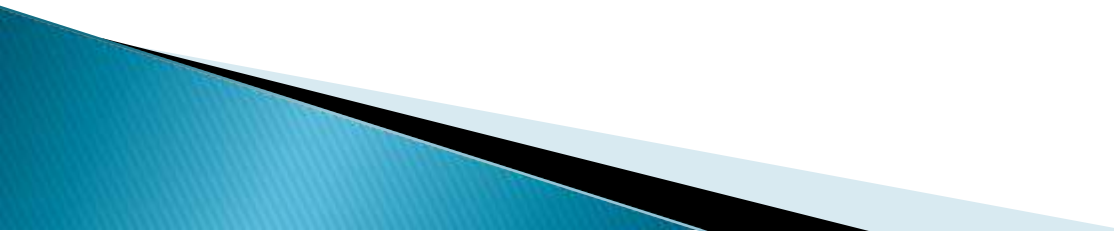


# THE STRUCTURE AND FUNCTION OF THE ENDOCRINE SYSTEM

# ENDOCRINE SYSTEM

The endocrine system consists of ductless glands which secrete hormones.

The hormones are directly poured into circulation without the help of a duct.



The following are the endocrine glands present in the body:

1. Pituitary gland
  2. Thyroid gland
  3. Parathyroid gland
  4. Adrenal glands
  5. Pancreas
  6. Sex glands
  7. Thymus
  8. Pineal gland
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