

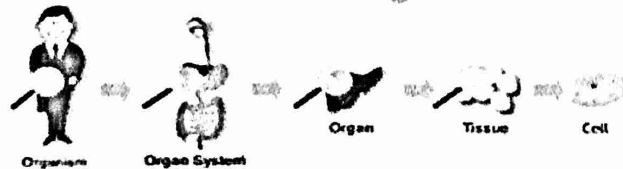
Body Organization

- The human body is a complex structure, but it is made up of several smaller structures;
- There are four levels of structures.

Level of organization

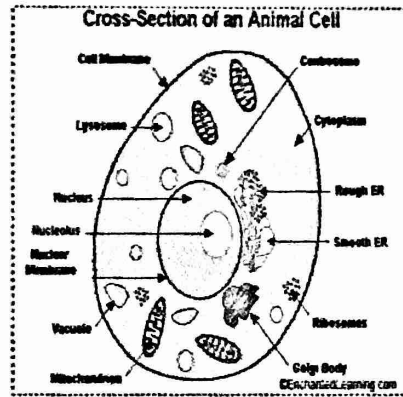
- Cell
- Tissue
- Organ
- System

Levels of Cellular Organization



Cell

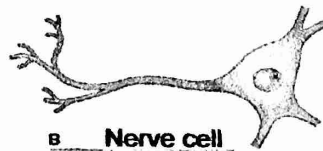
The cell is the fundamental unit of all living things



Types of Cells



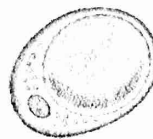
A Muscle cell



B Nerve cell



c Epithelial cell



d Fat cell

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Tissues

- A group of similar cells joined together to perform the same functions
- Groups of muscle cells are muscle tissue, and groups of epithelial cells are epithelial tissue.

Types of Tissue

- Epithelial tissue _ (lining of the internal organs and outer layer of the skin cells).
- Muscle Tissue
- Connective tissue - fat, cartilage, bone, blood.
- Nerve tissue

Four types of tissue



Connective tissue



Epithelial tissue



Muscle tissue

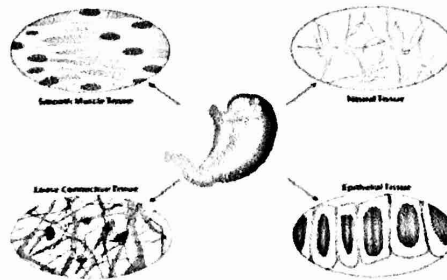


Nervous tissue

ADAM

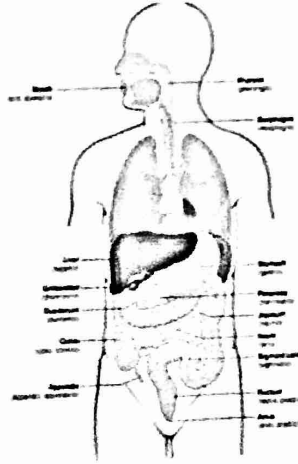
Organs

- Collection of different tissues working together to do a major function.
- An organ such as the stomach has different tissues, such as muscle, epithelial, and nerve, that help the organ function.



Systems

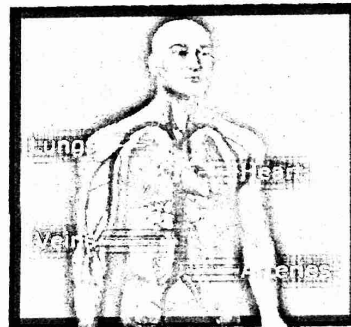
- Groups of organs working together to perform complex function
- The digestive system, for example includes organs such as the mouth, throat, esophagus, stomach, and intestines.



Structures of the cardiovascular system

The major structures of the cardiovascular system are the

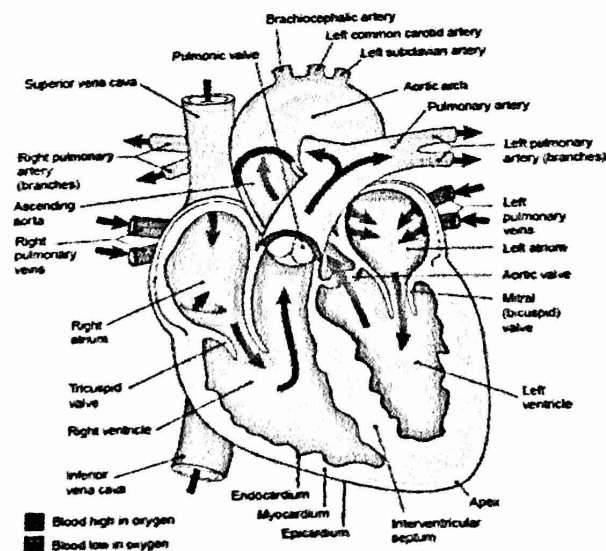
- Heart
- blood vessels
- blood



Heart

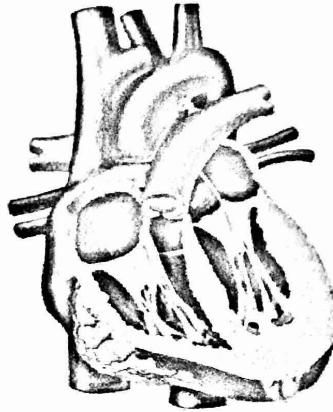
- Muscular organ that pumps blood all over the body
- Divided into four chambers
 - *Two atria*
 - *Two ventricles*
- Heart is divided into right and left sides by a wall called the septum

The heart and great vessels



Atria

- Left and right upper chambers
- Receiving chambers
- Blood returns to atria in veins
 - *Superior and inferior vena cava*
 - *Pulmonary veins*



Ventricles

- Left and right lower chambers
- Pumping chambers
 - *Thick myocardium*
- Blood exits ventricles into arteries
 - *Aorta*
 - *Pulmonary artery*

