

Anatomy

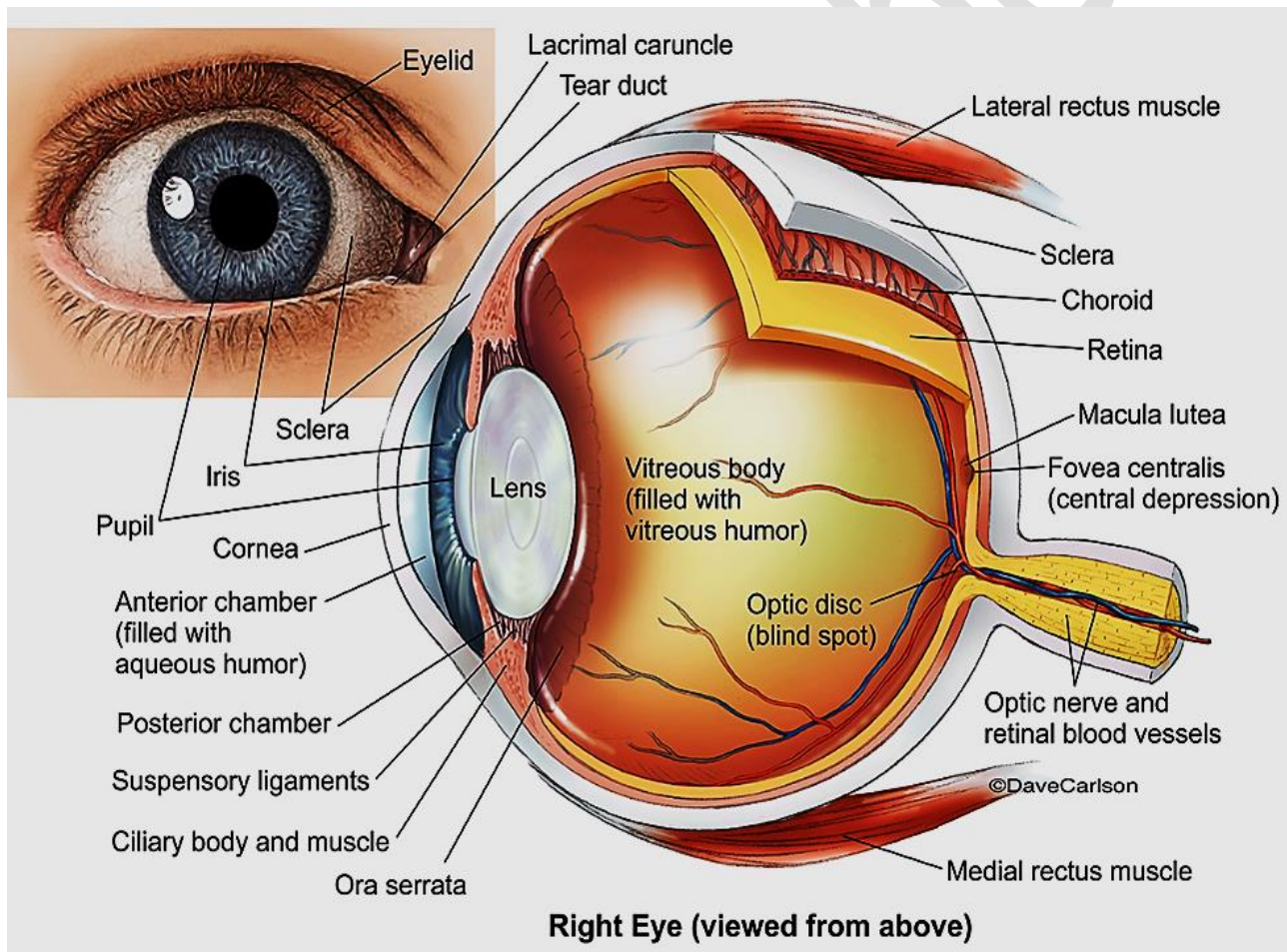
Anatomy: the word anatomy is derived from a Greek word “Anatome” meaning to cut up. It is the study of structures that make up the body and function of the body.

Types of anatomy

Mainly we study two types of anatomy:

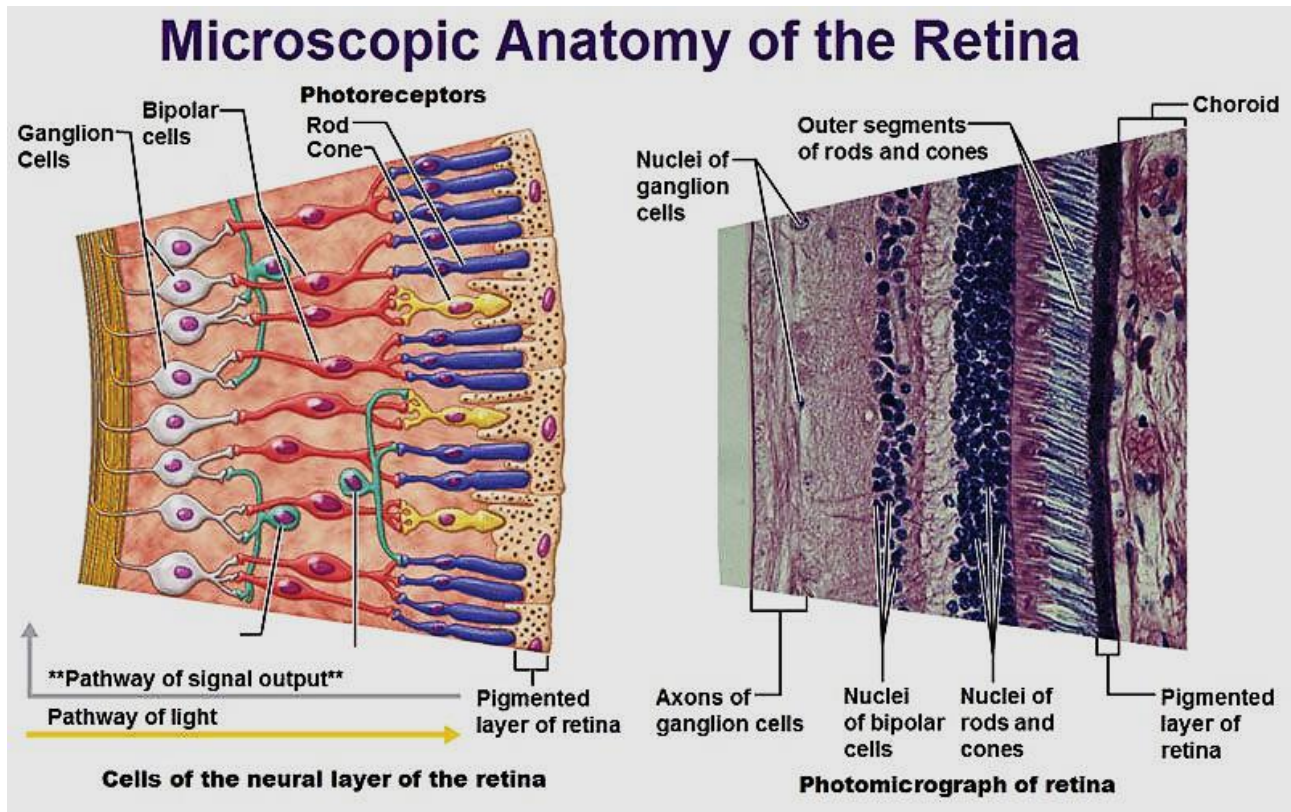
1. Gross Anatomy (macroscopic anatomy)

refers to the study of structures that can be seen with the naked eye (without microscope), such as most bones and muscles.



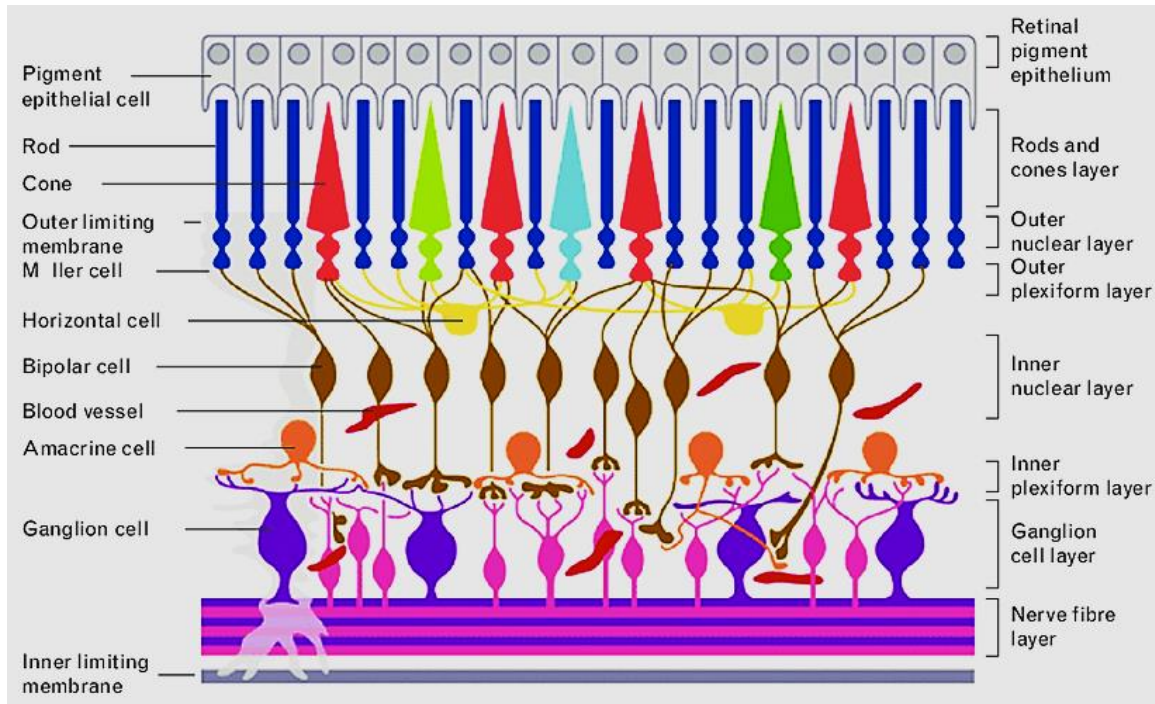
2. Microscopic Anatomy (Histology)

also known as histology (histo = tissue; ology = study), is the study of tissues that are too small to be seen with the naked eye, and therefore require the use of various microscopes.

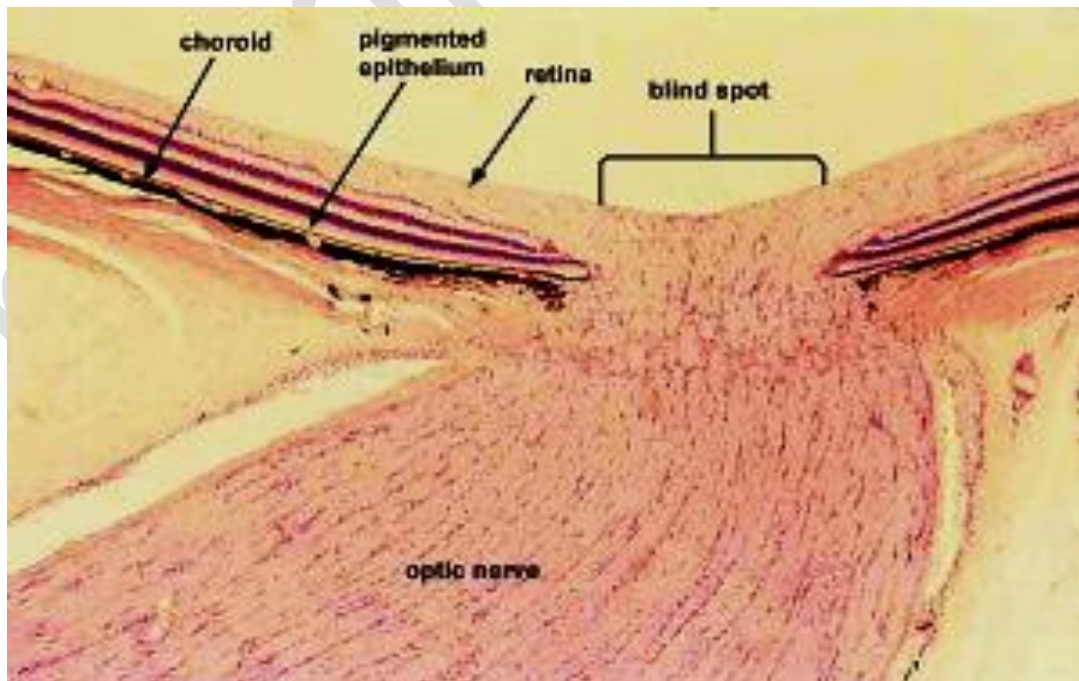


Histology: is the science that study the structure of cells and tissues

a. **The cell:** is the smallest structural and functional unit in the body.



b. **Tissues:** are groups of cells that are similar in structure and function

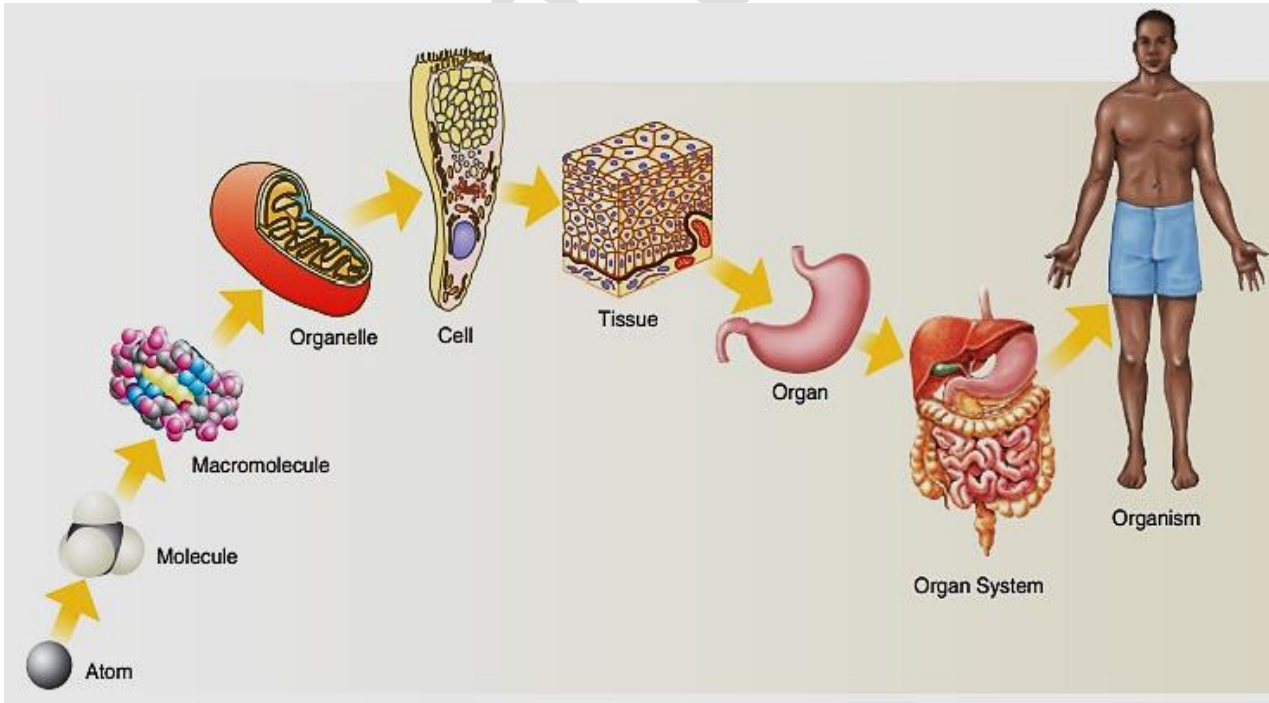


There are four basic tissue types:

- 1) The Epithelial tissue: covering
- 2) The Connective tissue: support
- 3) The Nervous tissue: control
- 4) The Muscular tissue: movement

Levels of Organization مستويات التنظيم

- A. Atoms
- B. Molecules
- C. Organelles
- D. Cells
- E. Tissues
- F. Organs
- G. Organ systems
- H. Organism



الوظائف الأساسية للكائنات الحية Basic Functions of Living Organisms

- A. Responsiveness**
- B. Growth**
- C. Differentiation**
- D. Metabolism**
- E. Movement**
- F. Reproduction**
- G. Excretion**

الأنظمة المدروسة في علم التشريح The Systems Studied in Anatomy

- A. Tissues – four primary tissues: Epithelium; Connective; Muscular; Nervous.**
- B. Integumentary - skin, hair, nails and glands.**
- C. Skeletal - bones, cartilage, articulations.**
- D. Muscular - skeletal, cardiac and smooth muscles.**
- E. Nervous - nerves, glial cells, central nervous system (NS), peripheral NS and autonomic NS. Special Senses - eyes, ears, touch, olfaction, equilibrium and taste.**
- F. Endocrine – primary and secondary endocrine glands.**
- G. Cardiovascular - heart, arteries, capillaries, veins. Lymphatic - lymph ducts, nodes, organs, tissues.**
- H. Respiratory - lungs, bronchial tree.**
- I. Digestive - mouth, esophagus, stomach, small intestine, colon, liver, pancreas.**
- J. Urinary - kidney, ureters, urinary bladder, urethra.**
- K. Reproductive:**
 - 1) Ovary, uterine tube, uterus, vagina.
 - 2) Testes, epididymis, ductus deferens, glands, urethra, penis.