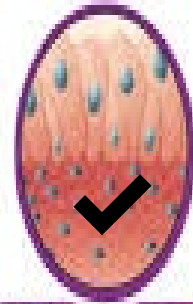


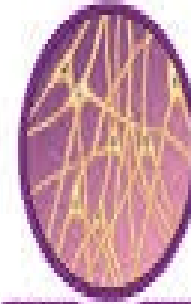
FOUR TYPES OF TISSUES

Human Biology 3rd Practical Lesson Epithelial Tissue

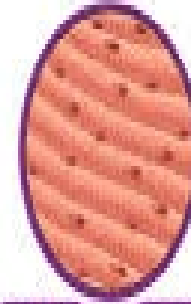
Sunday, Tuesday 11-13/12/2022



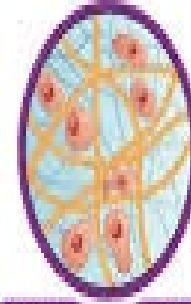
Epithelial tissue



Nervous tissue



Muscle tissue



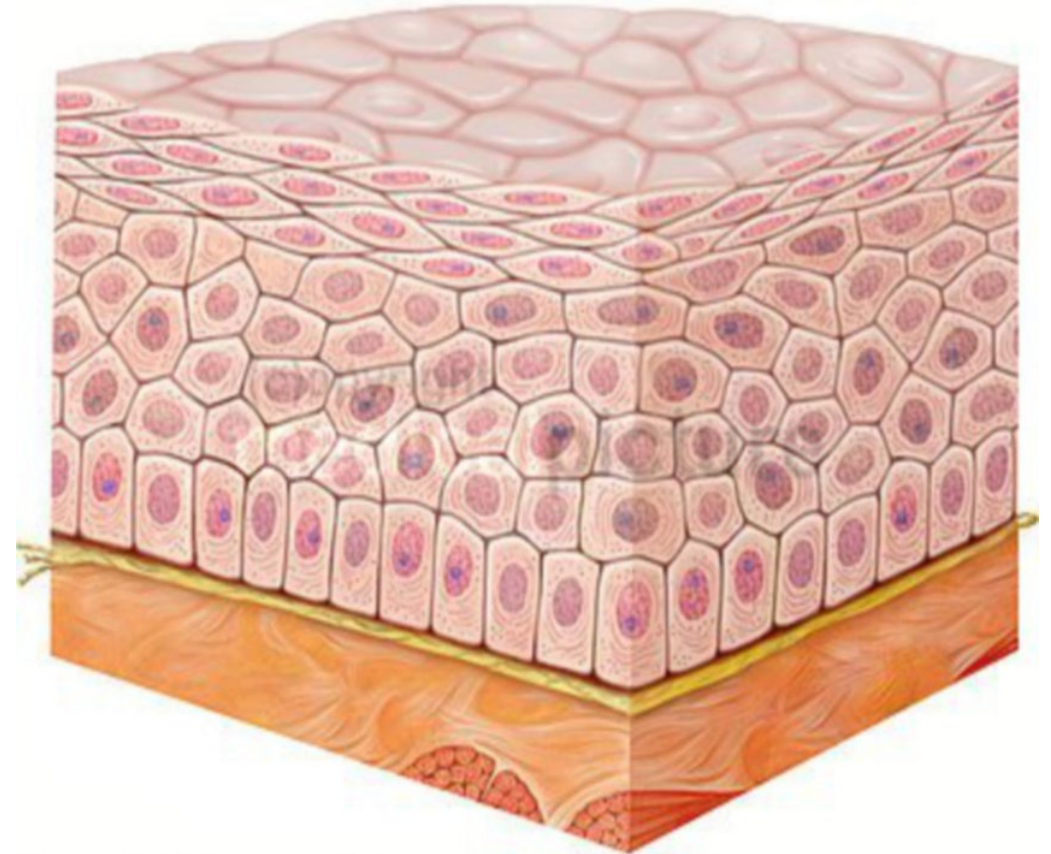
Connective tissue

Assistant Lecturer

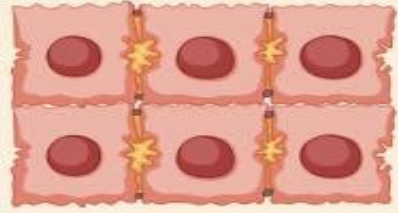
Hussein Mohammed Abboud

Introduction

- Epithelial cells are tightly packed cells make up primary tissues throughout the body.
- It has an apical (top) free surface.
- Its layer based on basal membrane
- Lacks of blood vessels.
- It is innervated : it has rich supply of nerves.



EPITHELIAL TISSUES AND THEIR FUNCTIONS



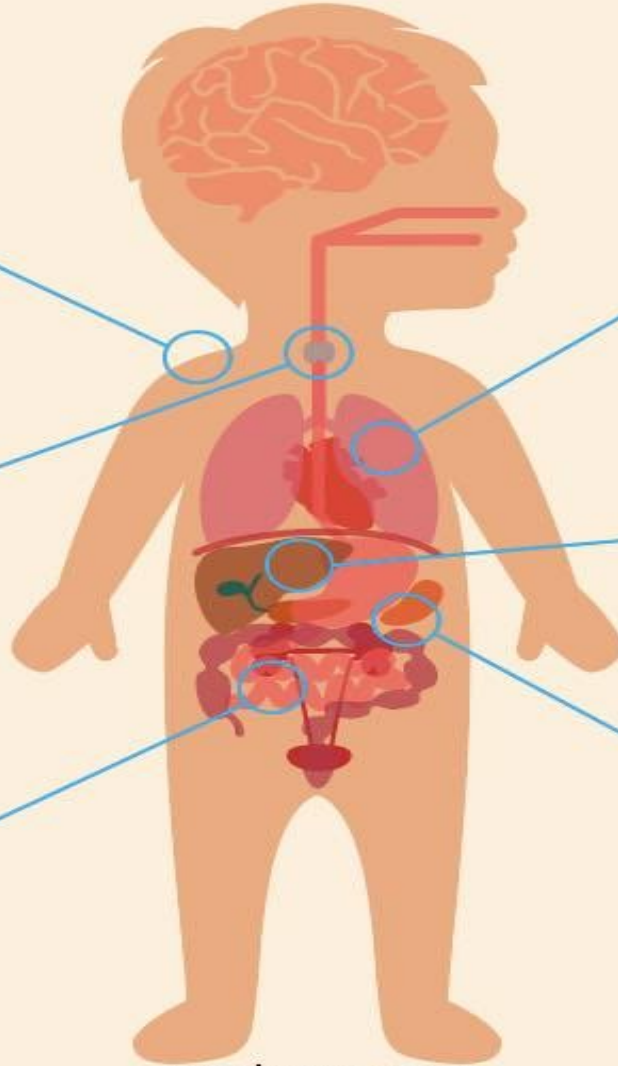
Skin
(protection)



Thyroid
(secretion)



Intestine
(absorption)



rsscience.com



Lung
(protection & gas exchange)



Liver
(secretion)



Kidney
(filtration)

Epithelial Tissue

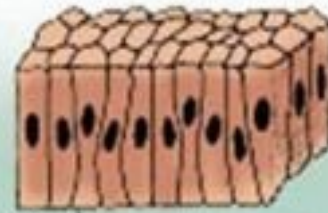
www.onlinebiologynotes.com



Simple squamous



Simple cuboidal

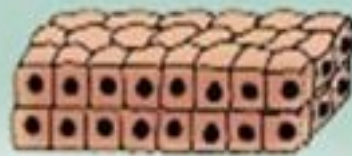


Simple columnar

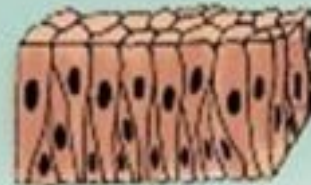
Transitional



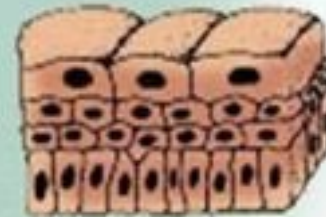
Stratified squamous



Stratified cuboidal

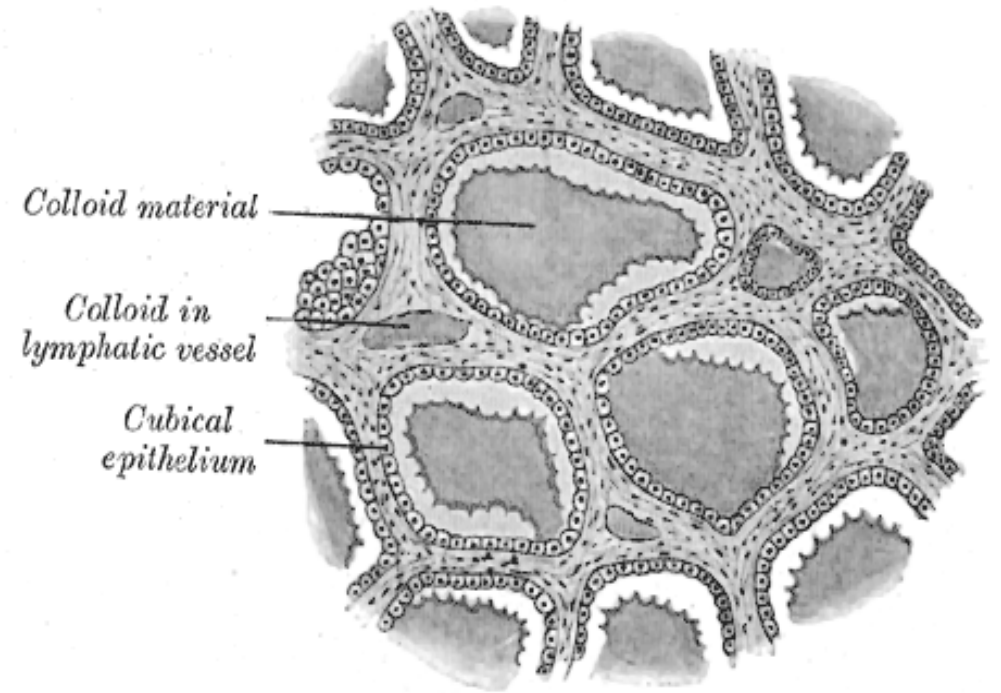


Pseudostratified columnar



Simple cuboidal epithelium

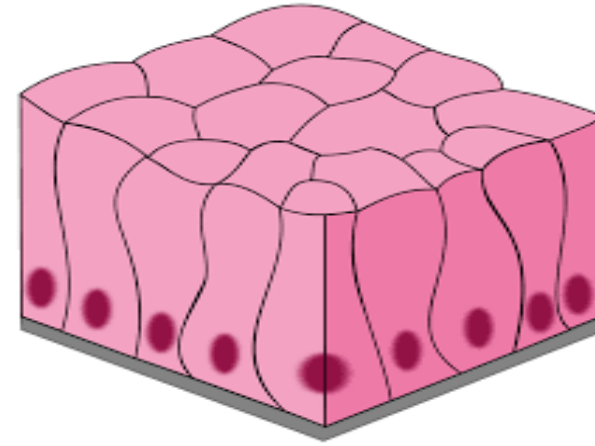
- It is found surrounding the structures in glands, pancreas.
- Cells that surround this circles are cuboidal epithelium.
- Single layer of cube-shaped cells attached to a base membrane.
- The cells are as wide as they are tall.
- The nucleus is usually round and located in the center of the cell.



Gland structures under microscope

Simple columnar epithelium

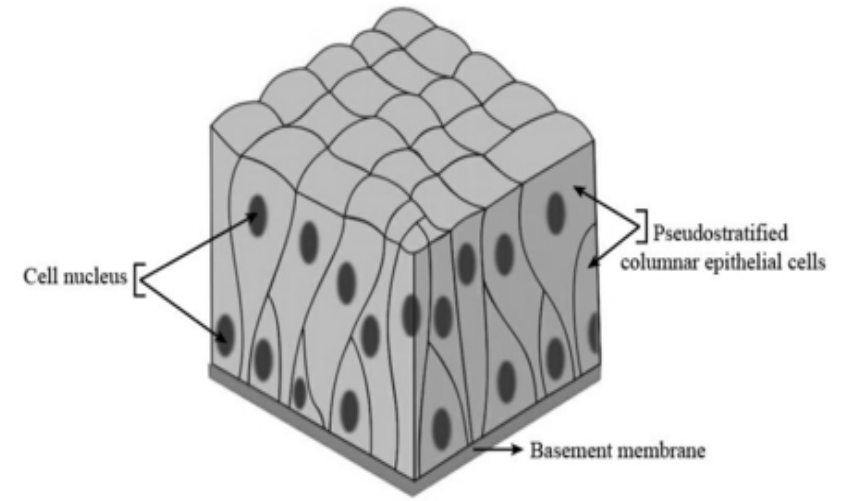
- Composed of one layer of cells that are taller than deep and wider (column or rectangular shape).
- Nucleus is oval shaped and they tend to reside more toward the basal side of cells
- It is lined much of digestive tract , gall bladder, uterus, and uterine tubules.



Digestive tract structures under microscope

Pseudostratified ciliated columnar epithelium

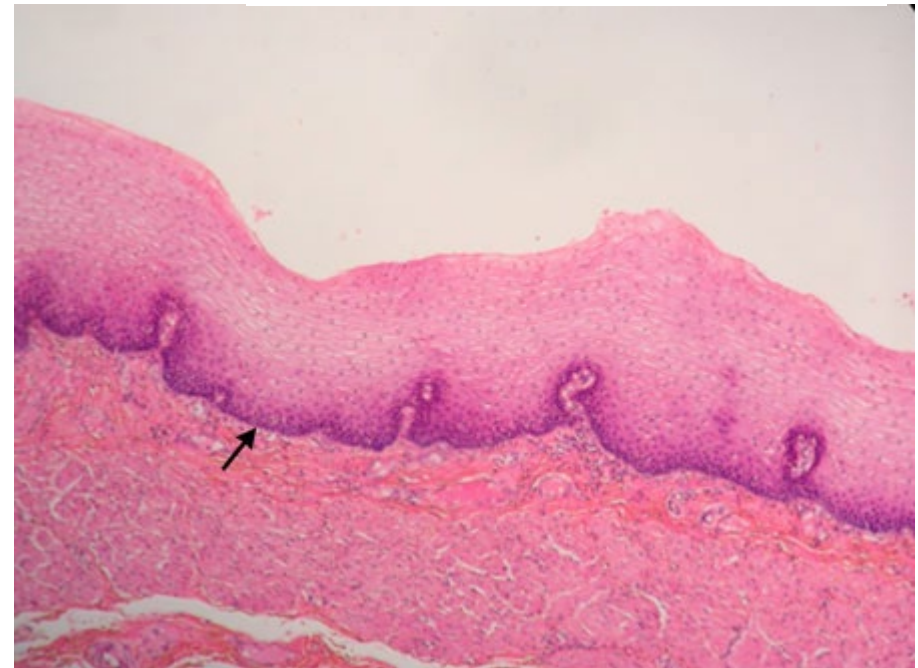
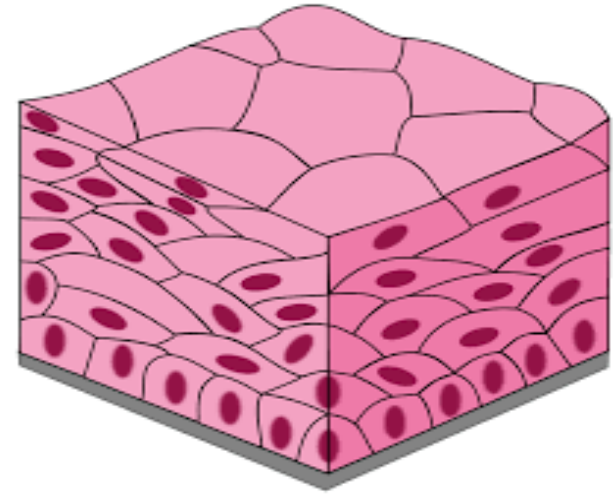
- They appear to have multiple layers, but is actually only comprised of a single sheet of cells.
- The positioning of the nuclei within the individual columnar cells causes this illusion
- Cilia (little hair-like projections) on the apical cell surface.
- Lining nasal cavity, trachea, bronchi, epididymis.



Trachea structures under microscope

Stratified squamous epithelium

- Many layers of flattened cells with nuclei as a thick strip of tissue (dense irregular).
- They have basement membrane and basal layer.
- Two types (non-keratinized) found in mouth, esophagus.
- The keratinized one is located in epidermis of skin.



Esophagus structures under microscope

THANK YOU