

General Definitions

Tissue A group of cells that have similar structure and function plus extracellular substance (matrix)

Histology Study of the tissues of the body and how tissues are arranged to constitute organs

Extracellular Matrix Glue that holds the cells together in tissues

Basic types of tissues

- Epithelial
- Connective
- Muscle
- Nervous

Epithelial Tissues

Location

- Covers internal and external surfaces of the body

- ex: *Skin, linings of the digestive and respiratory tracts, blood vessels, body cavities...*

Characteristics

- Cells close (packed) together (very little extracellular matrix)

- Form most glands

- Have a free (*apical*) surface

- Have a *Basal* surface which attaches epithelial cells to underlying tissue

Places Found

Surface of skin Lining of digestive tract

Lining of respiratory tract Lining of Secretory glands

Classifications of Epithelia

1. Simple Squamous - Single layer of flat cells *eg. lining blood vessels, aveoli of the lungs, kidney tubules, serous membranes...*

Advantage: easier for substances to diffuse or be filtered across

Good for gas exchange

2. Stratified squamous, keratinized - several layers of cells *eg. skin*

3. Stratified squamous, non-keratinized moist *eg. lining esophagus*

4. Simple cuboidal *eg. kidney tubule*

5. Simple columnar *eg. intestine*

6. Pseudostratified *eg. upper respiratory tract*

7. Stratified Cuboidal

8. Stratified Columnar

9. Transitional *eg. urinary bladder*

Funtions of Epithelia

1. Permit the passage of substaces

2. Protect underlying structures

3. Barrier

4. Absorption

5. Secretion

