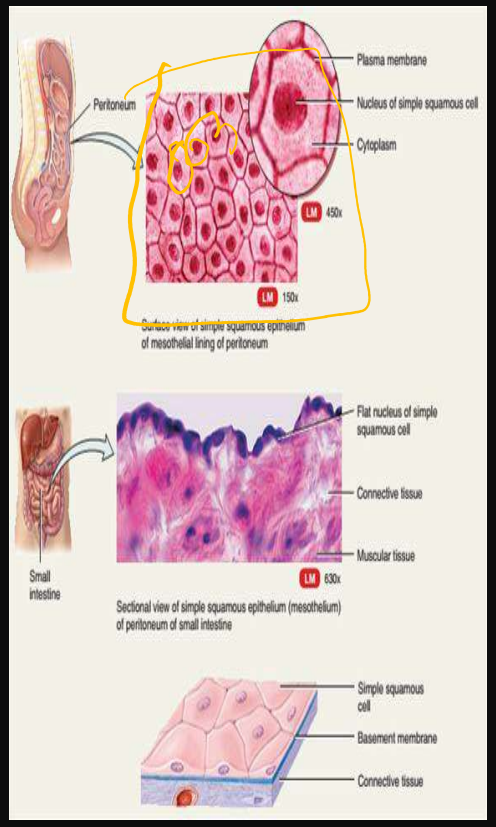
STRUCTURAL ORGANISATION IN ANIMAL

ANIMAL TISSUE



[ooooo] ⇒ Tissue (structurally & functionally same)

Human Body ⇒ Billions of cell (approximately 37.2 trillion)
↳ 10^{12}

TISSUE

Epithelial Tissue

Origin :- Ectoderm
Mesoderm
Endoderm

Func :- Packaging of organ

Connective Tissue

Mesoderm

Connection

Muscularis Tissue

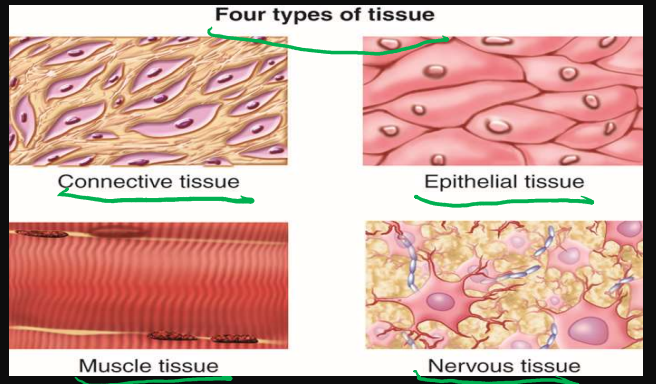
Mesoderm

Contraction

Neural Tissue

Ectoderm

Excitation

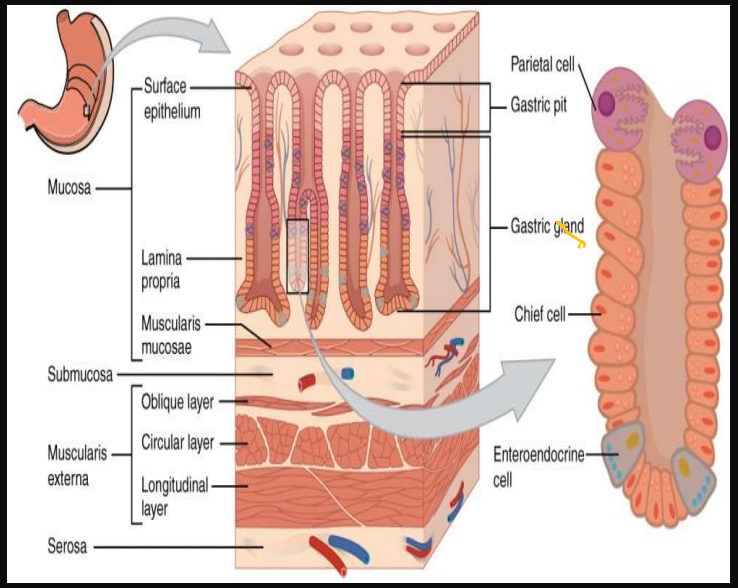


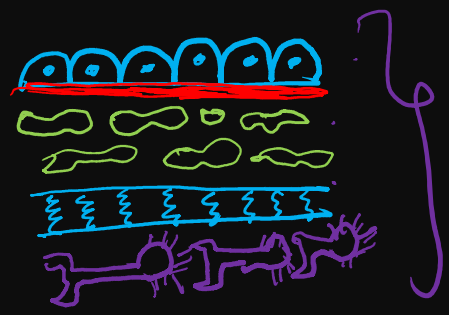
Epithelial Tissue

- Simple [made up of one layer]
  - Squamous Epithelium
  - Cuboidal Epithelium
  - Columnar Epithelium
  - Pseudostratified Epithelium
  - Glandular Epithelium
- Compound [made up of multi layer]
  - Transitional
  - Stratified
    - Keratenoid
    - Non-keratenoid

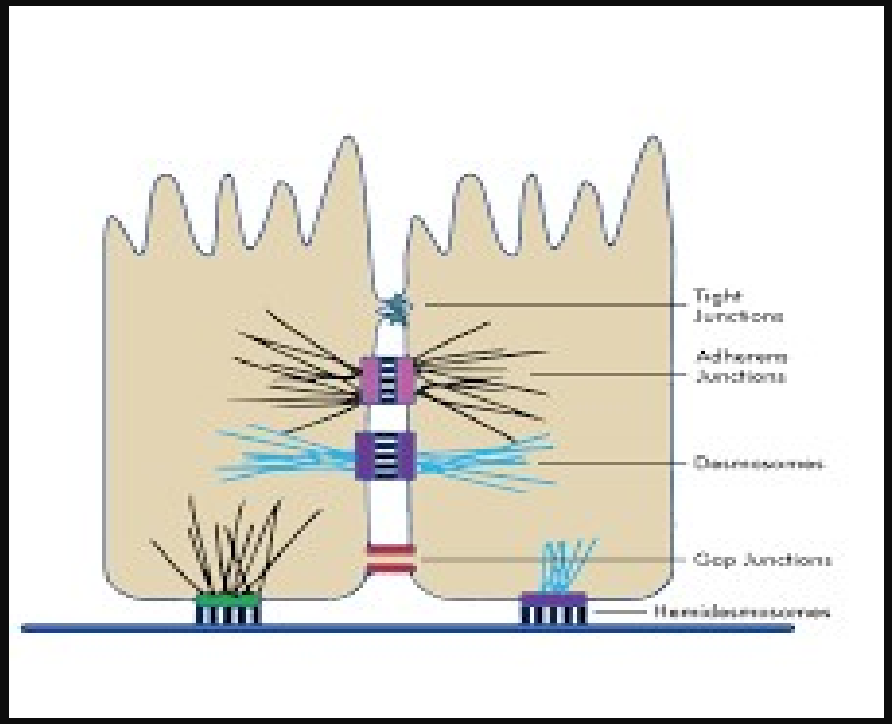
→

General Structure





Cell Junction

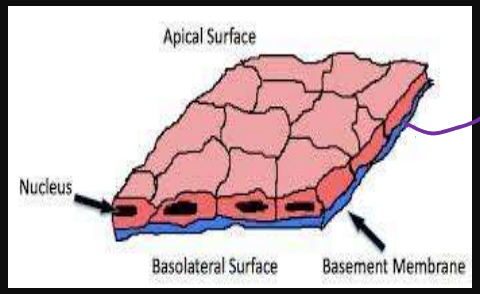


① # Gap Junction [Exchange materials]

② # Tight Junction [Stop Reackge]

③ # Adhren Junction / Desmosome [Neighbouring]

Simple Squamous Epithelium / Pavement Epithelium

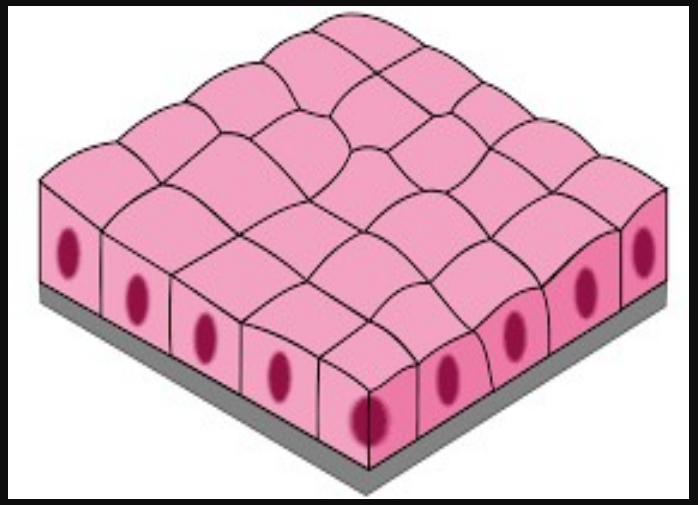


Property :- (i) Polygonal
(ii) Irregular cell boundary.
(iii) Centrally located Nucleus.
(iv) BM ✓

Ba BA

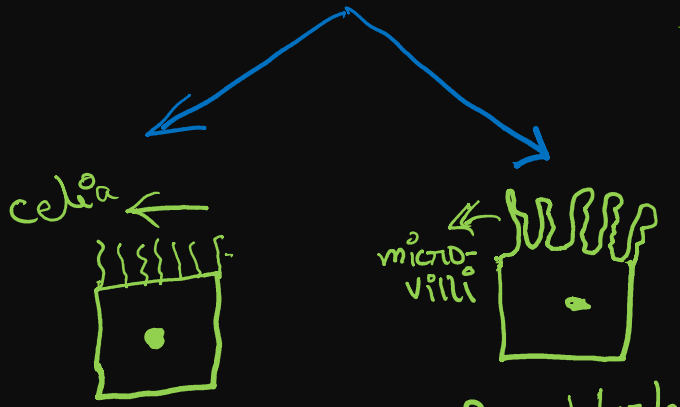
Ba :- Bauman's Capsule
Blood Capilaries
Alveolai.
} ex-change

Simple Cuboidal Epithelium



Property:- (i) Cuboidal shape
(ii) Centrally located Nucleus.
BMV

eg:- (i) PCT
(ii) Thyroid
(iii) Ovary

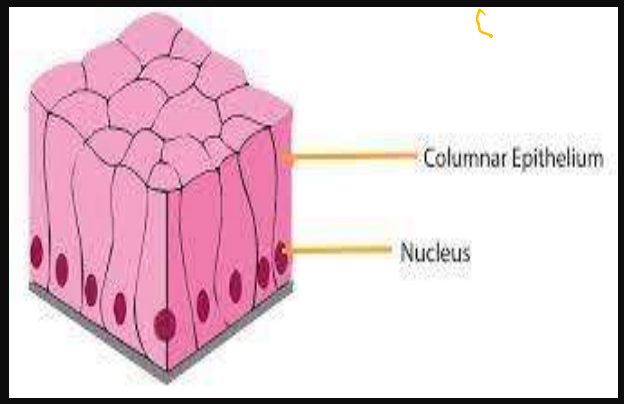


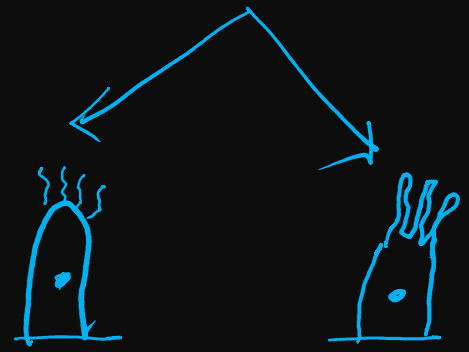
#eg:- Bronchi

PCT/DCT

Simple Columnar Epithelium

Property :- (i) Long & slender cell
(ii) Basally located Nucleus.
(iv) BM ✓





eg :- = Fallopian Tube

Small intestine

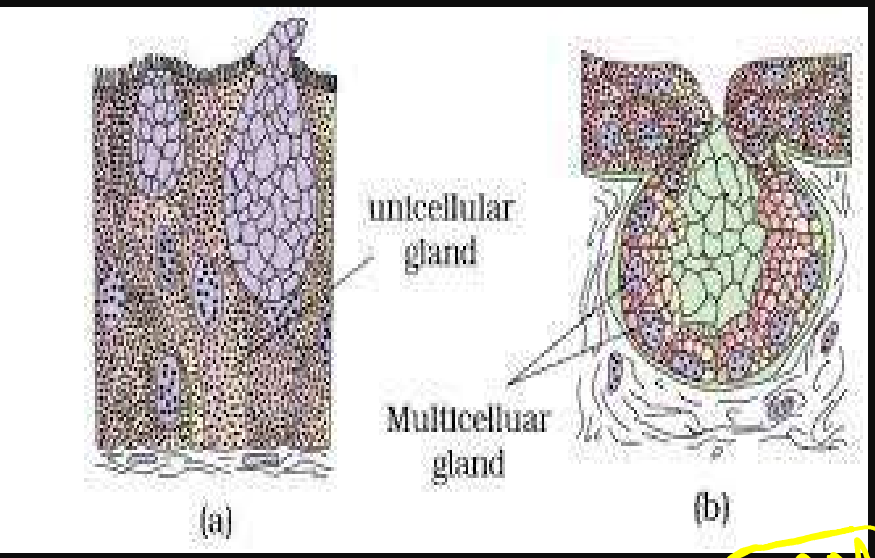
Pseudo Stratified Epithelium

appears double membrane but it is single membrane

eg ♂ = T → Trachea (Respiratory organ)

U → Urethra of male (♂)

Glandular Epithelium



It is modification of cuboidal/columnar epithelium tissue

No of cell

- Unicellular Gland
  - Goblet / Mucus cell (stomach)
- Multicellular Gland
  - Rest

Glands (HAM)

- Holocrine Gland
  - eg:- Sebaceous Glands
- Apocrine Gland
  - Mamary Gland
- Merocrine Gland
  - Sweat Gland
  - Salivary "

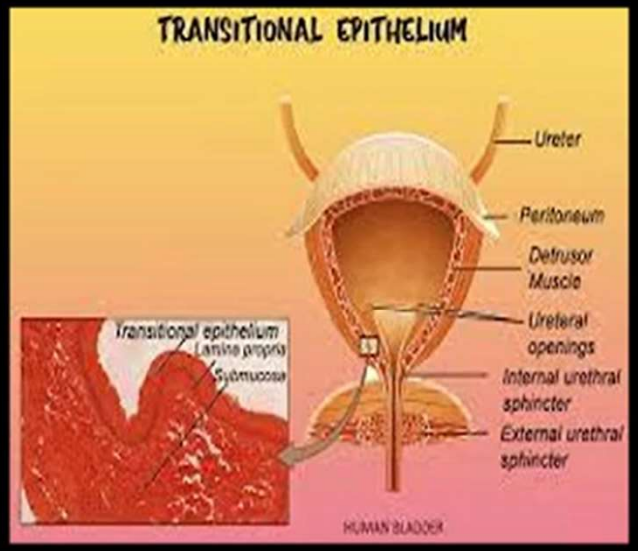
Secretion

- Exocrine Gland
  - # Gastric Gland
  - # Salivary Gland
- Endocrine Gland
  - # Pituitary,
  - # Hypothalmus.

COMPOUND

Transitional Epithelium

URU



→ Flattened cell

} Polygonal cell

→ Cuboidal cell

eg:= Urinary Bladder
Renal pelvis
Ureter

* Basement Membrane ⊗

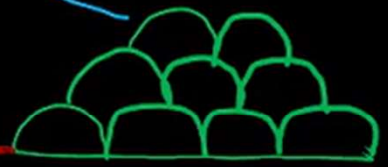
Stratified Epithelium

Keratinised

Non-keratinised

Stratum Corneum

Stratum Germinativum



eg:: Skin

pharynx
Buccal Cavity
Vagina

THANK YOU