TISSUES

Tissue: A Definition

A group of connected, interdependent cells that cooperate to perform a specific function

Categories of Tissue

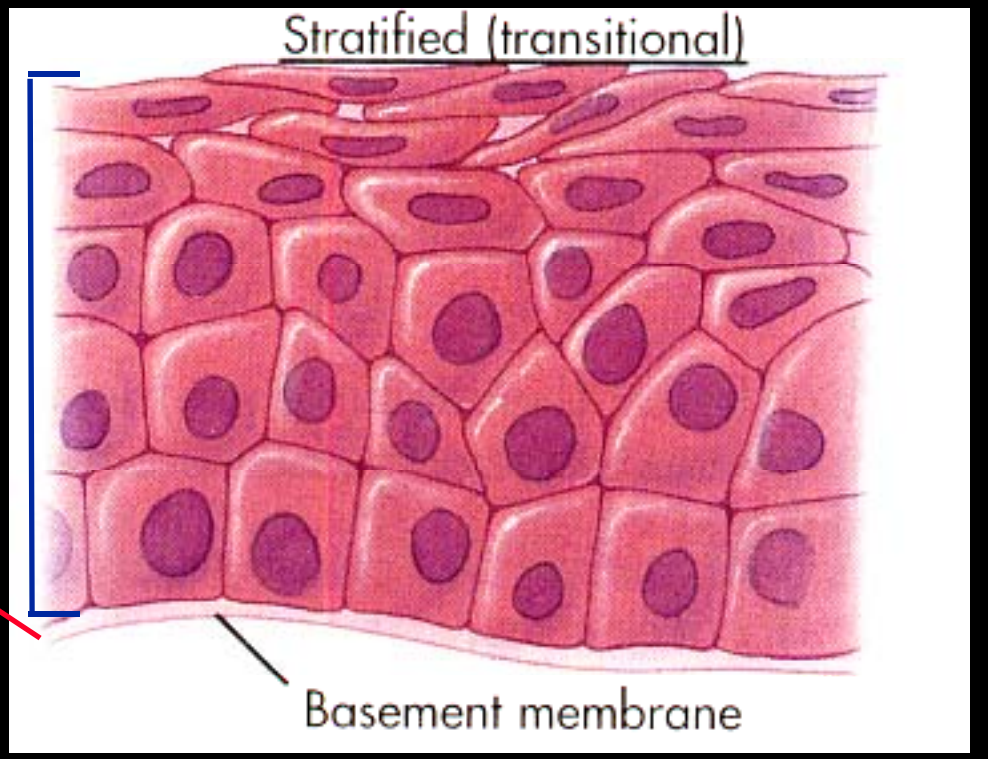
1. Epithelial Tissue
2. Connective Tissue
3. Muscle Tissue
4. Nervous Tissue

Epithelial Tissues

- General Features

Cellular Layer +

Basement Membrane



Epithelial Tissues

- General Features

Cellular Layer + Basement Membrane

No Blood Supply

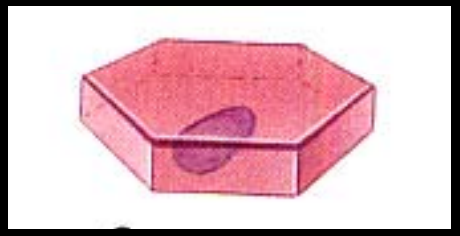
Touching Each Other

Rapid Rate of Cell Reproduction

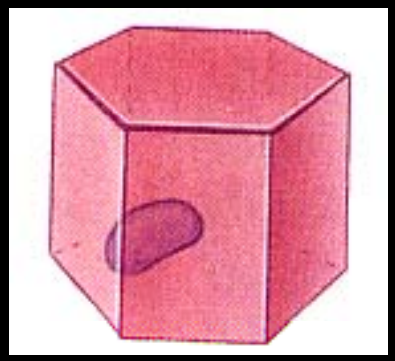
Epithelial Tissues

- Structural Classification

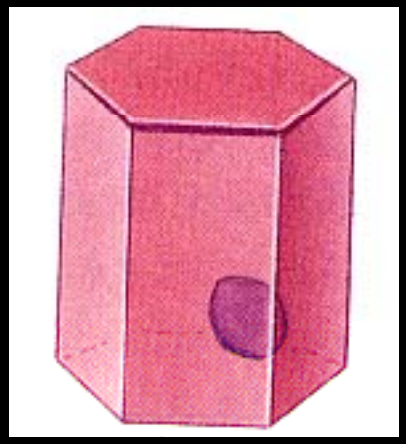
  Cell Shapes



Squamous



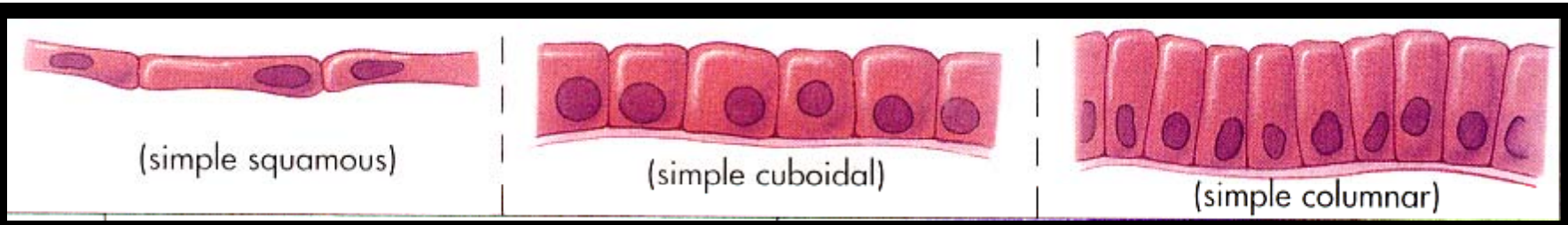
Cuboidal



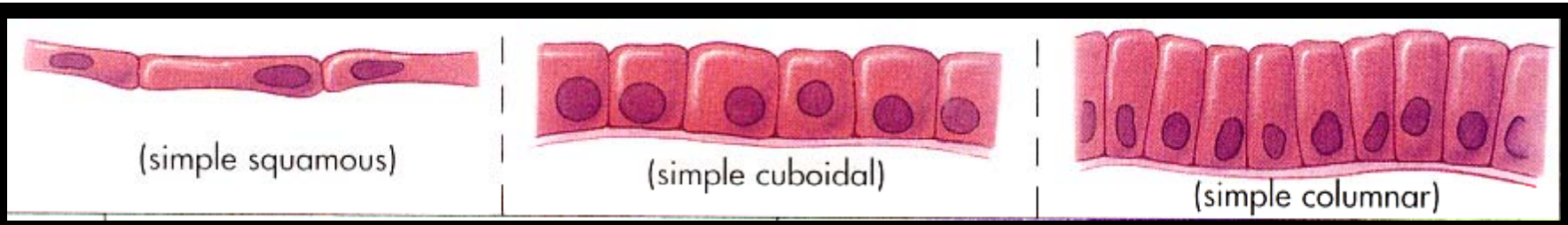
Columnar

Epithelial Tissues

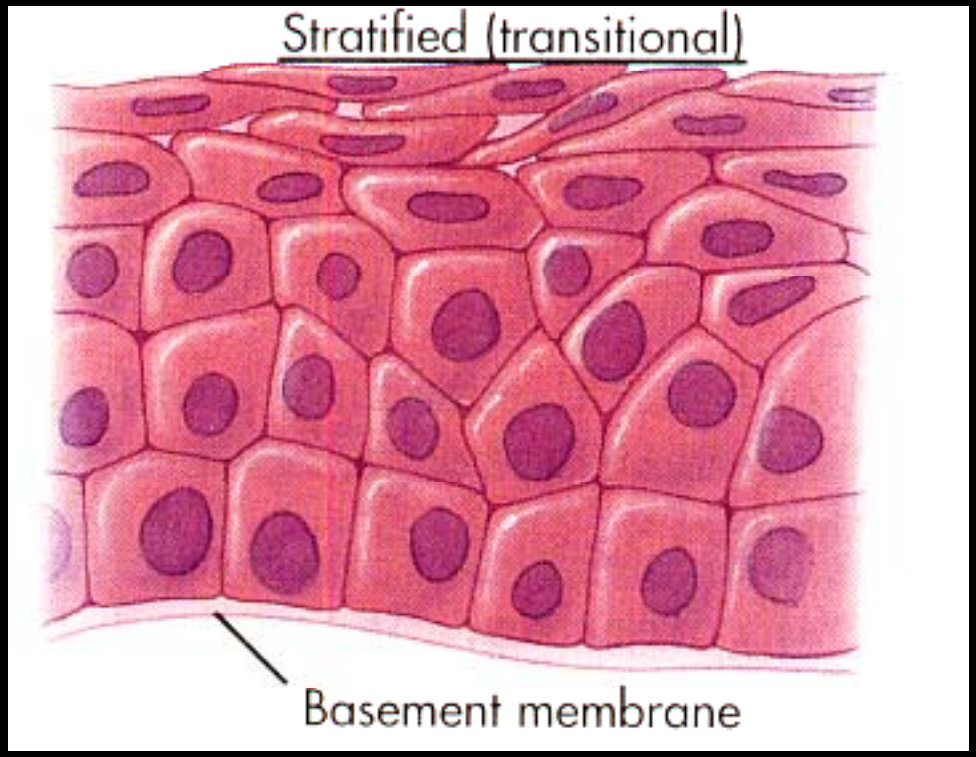
- Structural Classification
  - Cell Shapes
  - Cell Layers



Simple


(simple squamous)
(simple cuboidal)
(simple columnar)

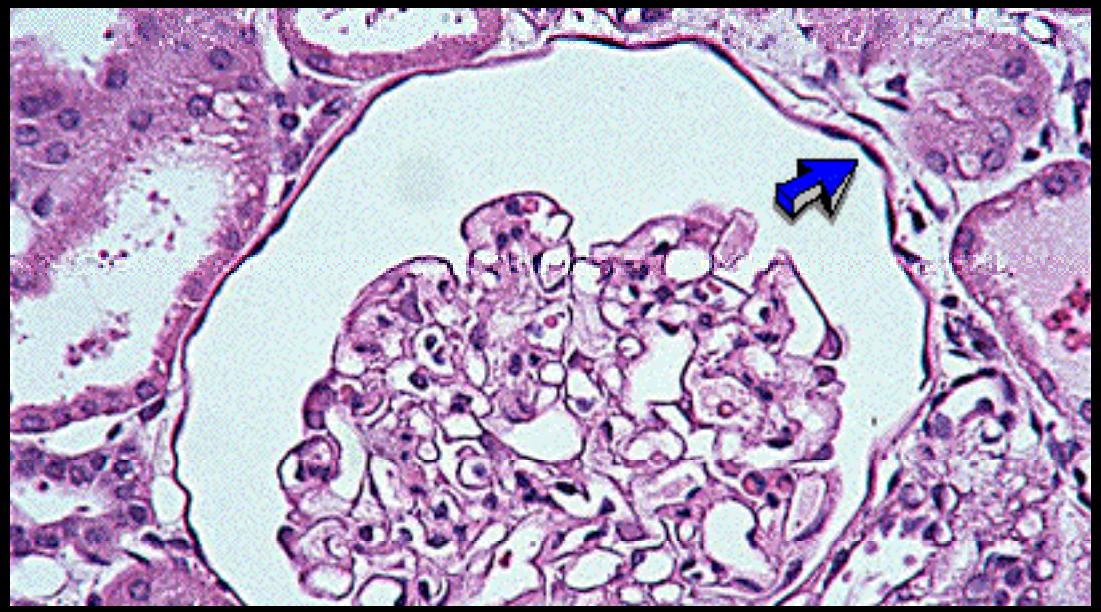
Stratified

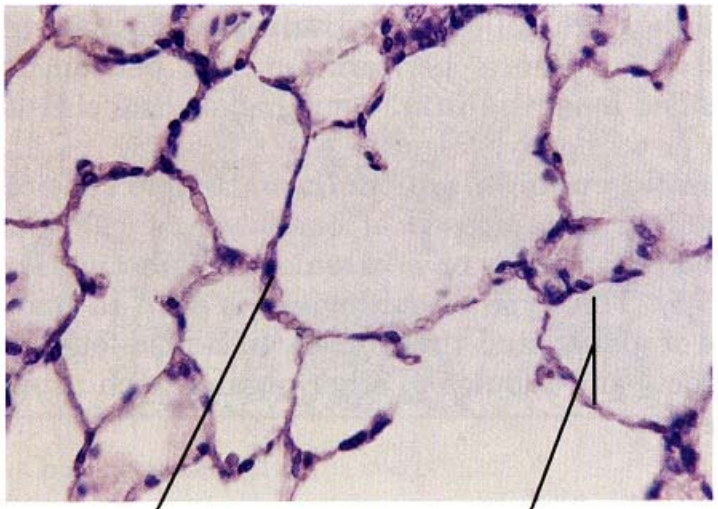

Stratified (transitional)
Basement membrane

Epithelial Tissues

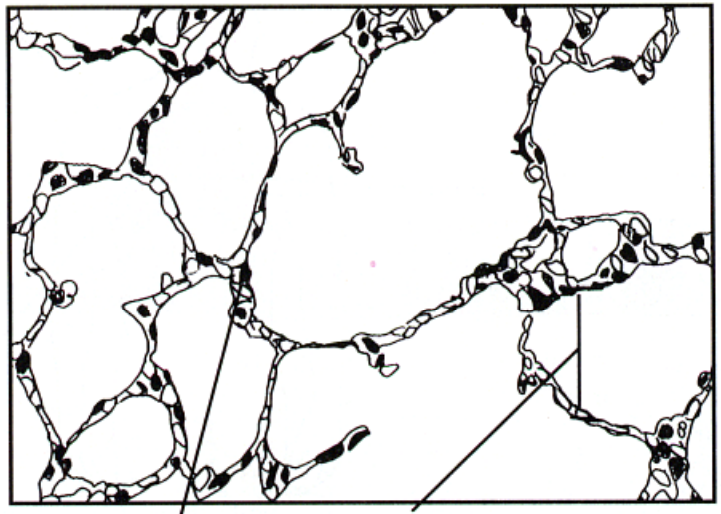
- Major Types

Simple Squamous Epithelium




Simple squamous
epithelial cell
Alveolus
(air sac)

A

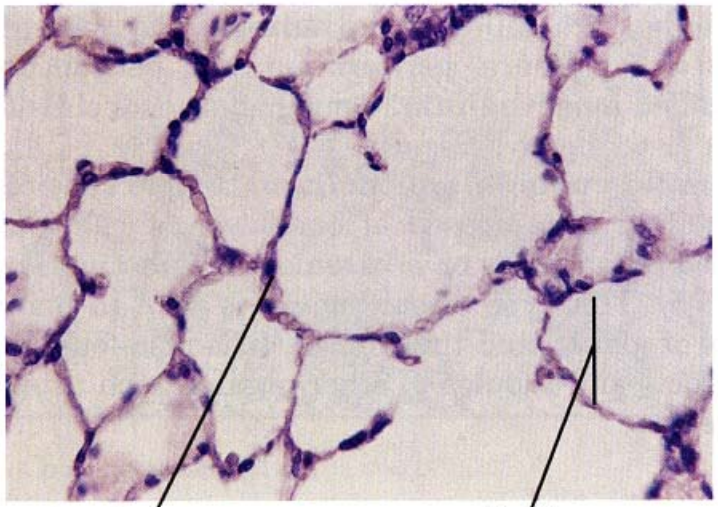

Simple squamous
epithelial cell
Alveolus
(air sac)

B

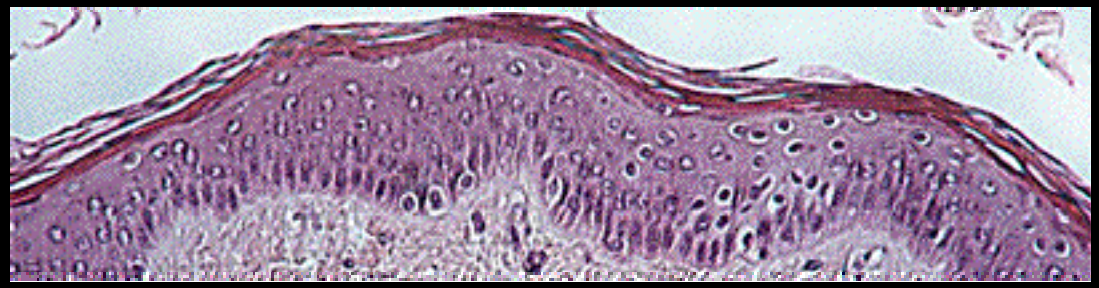
Simple Squamous Epithelium

Function: Exchange

Sample Locations:
Alveoli, capillaries



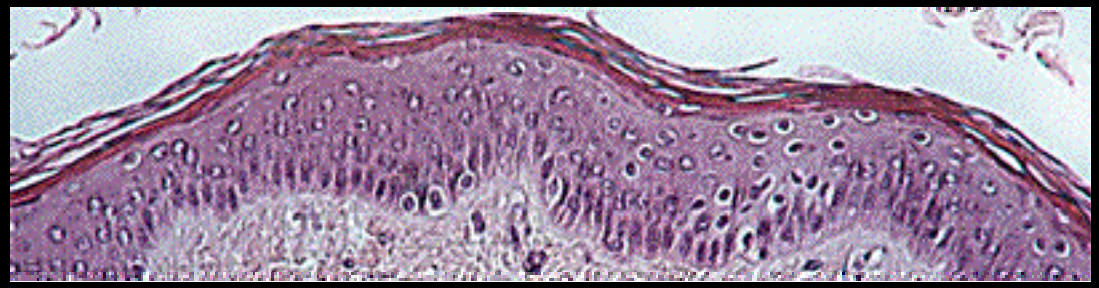
Stratified Squamous Epithelium



Stratified Squamous Epithelium

Function: Protection

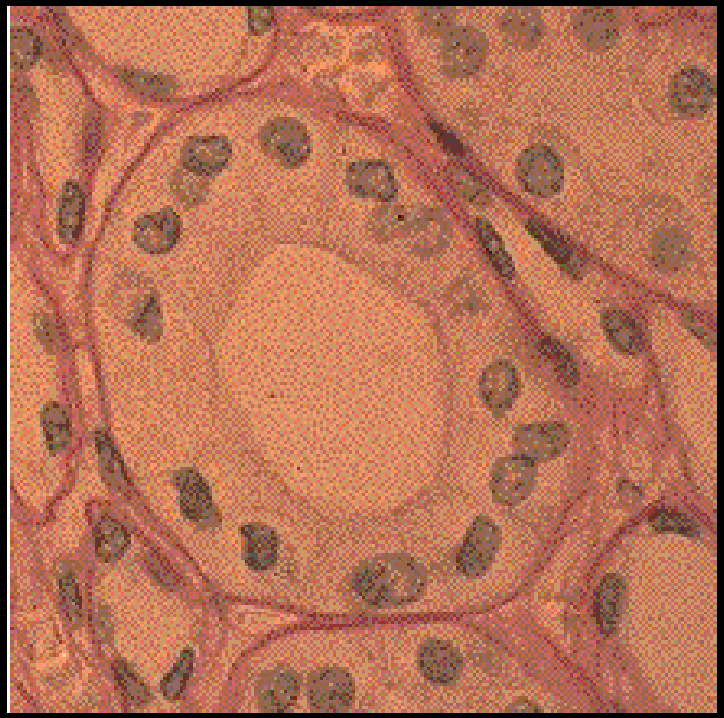
Sample Locations: Skin, Mouth, Repro tracts



Simple Cuboidal Epithelium

Function: Absorption or Secretion

Sample Locations: Kidney, Hormone Glands

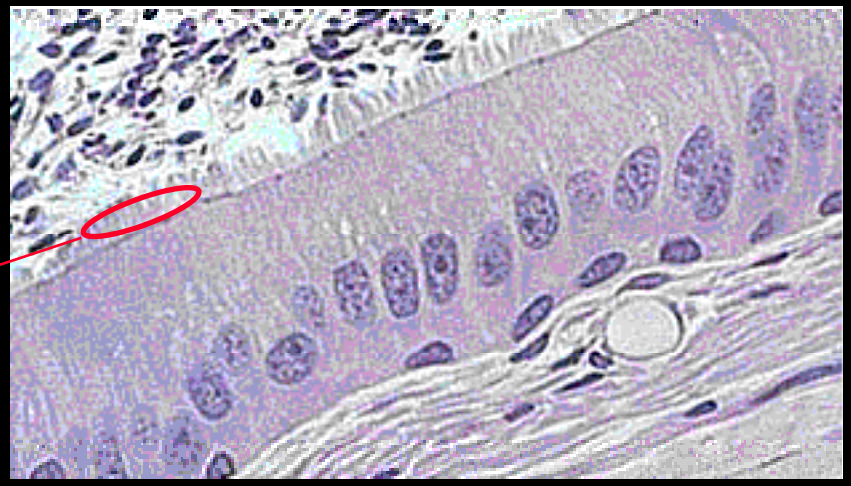


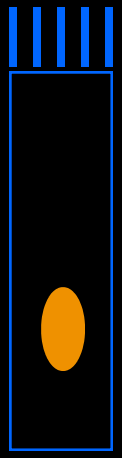
Simple Columnar Epithelium

Function: Absorption (or Secretion)

Sample Location: Digestive Tract

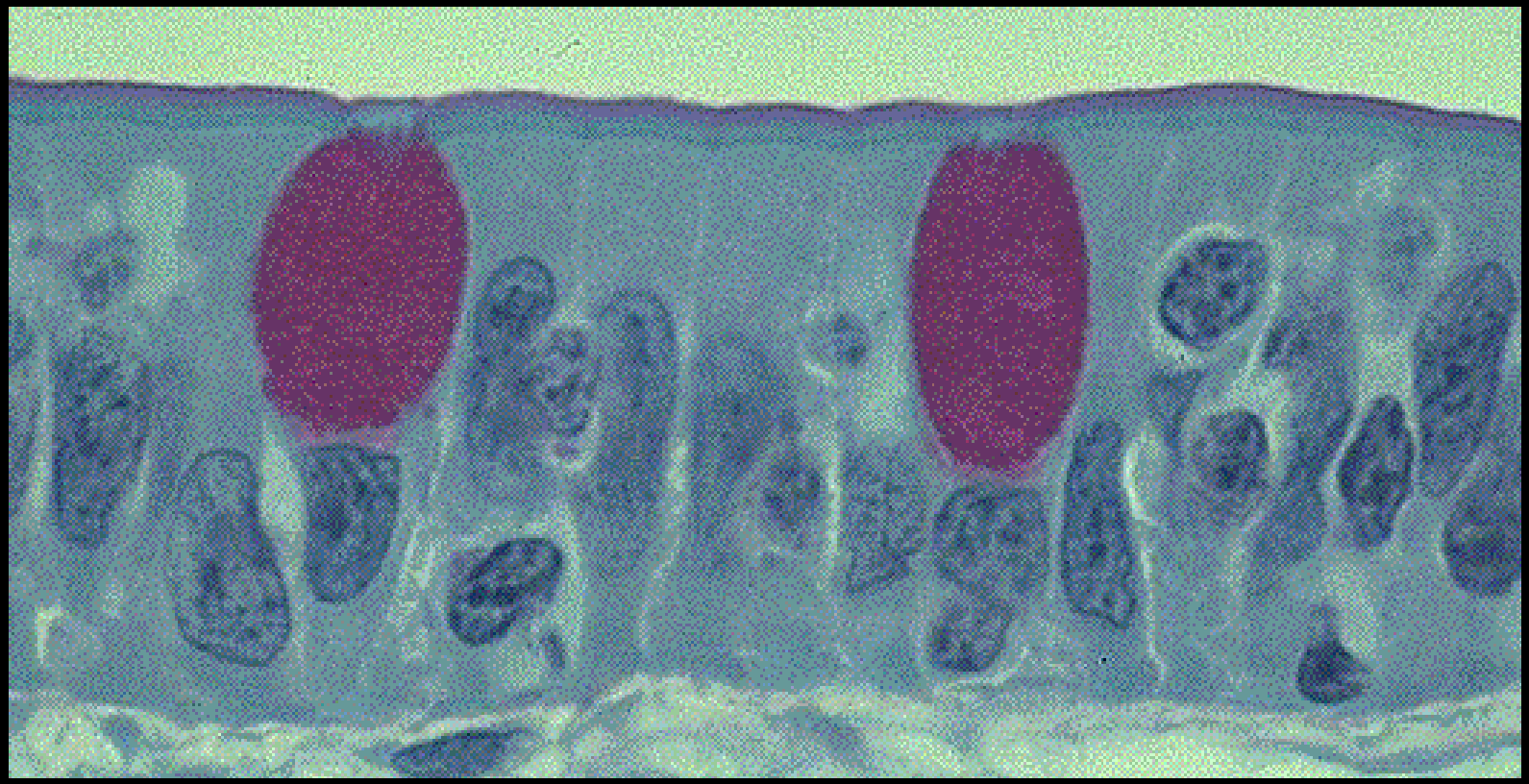
Microvilli



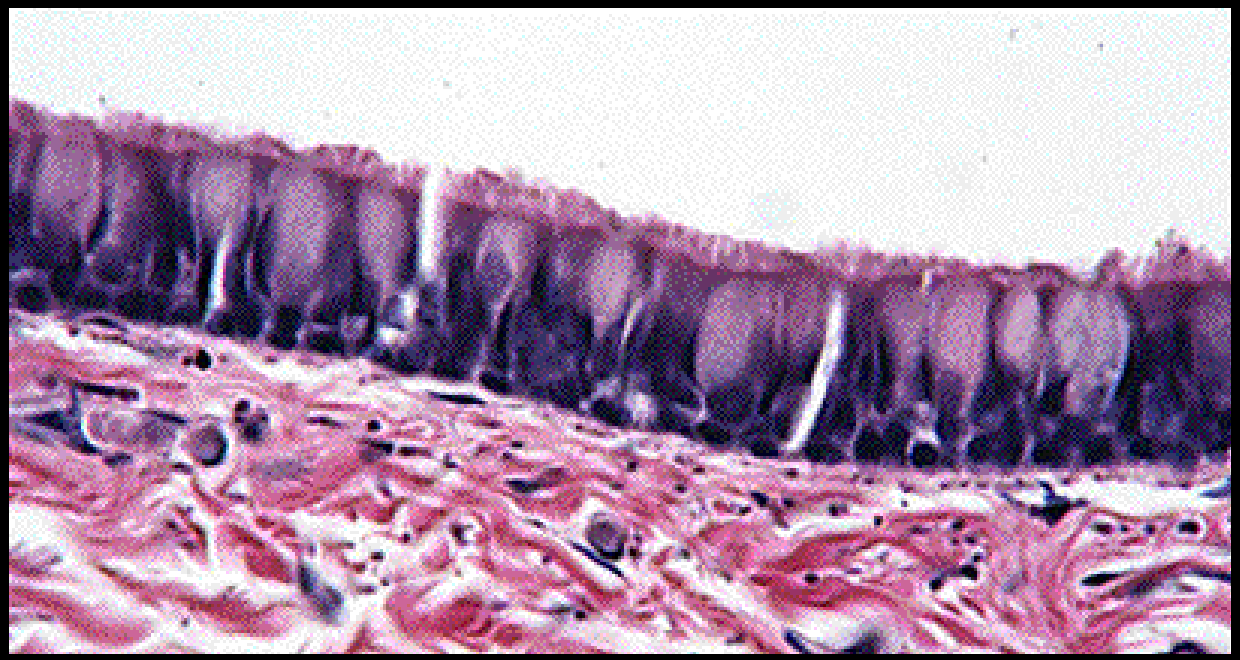


Simple Columnar

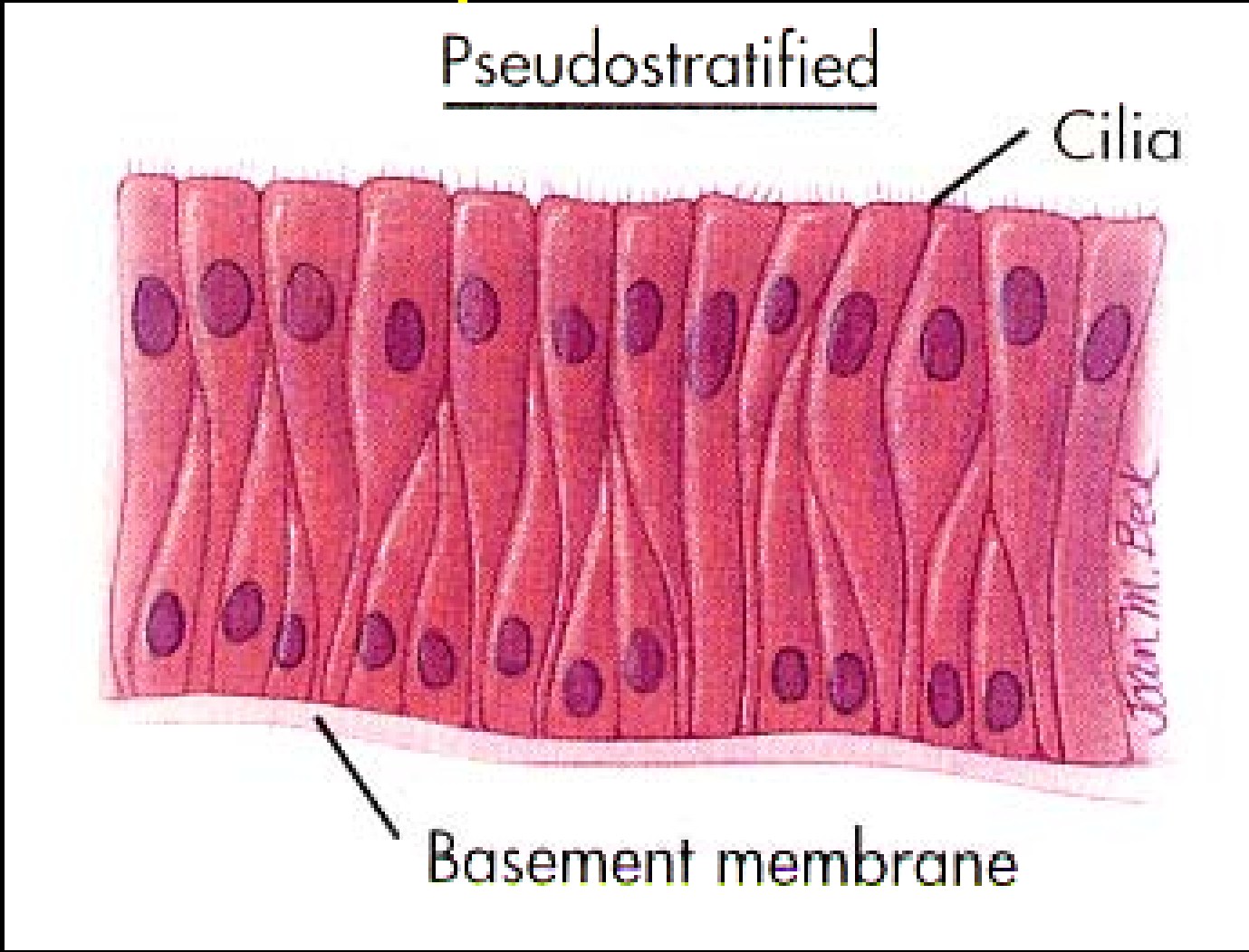
Note goblet cells



Pseudostratified Columnar Epithelium



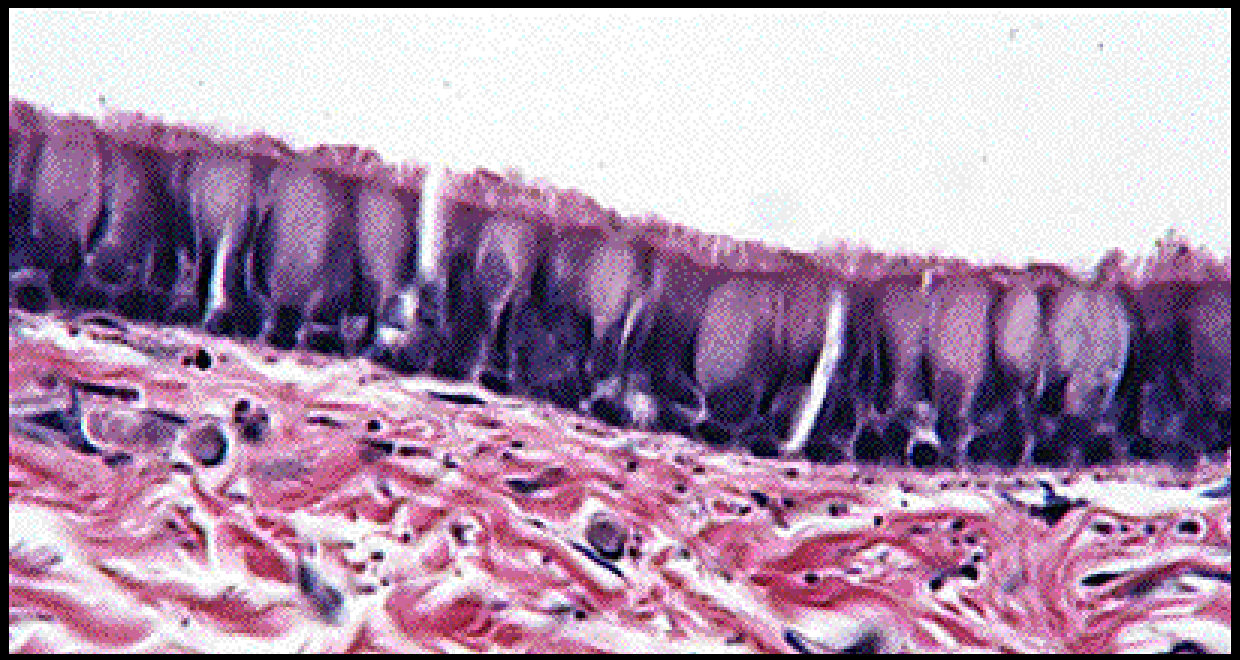
Pseudostratified Columnar Epithelium



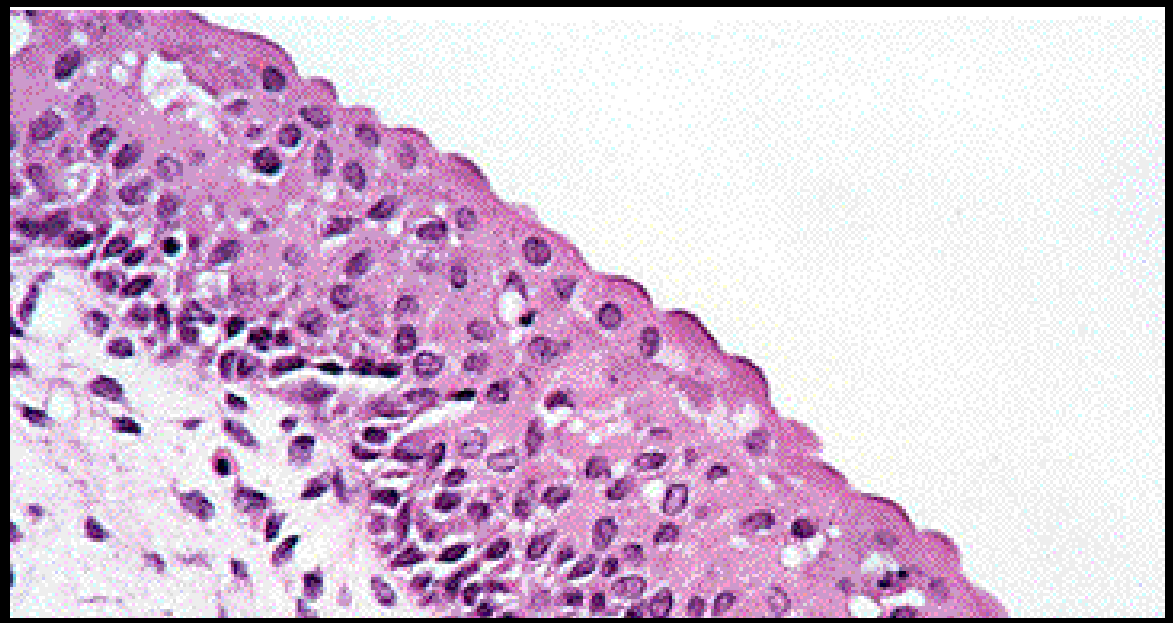
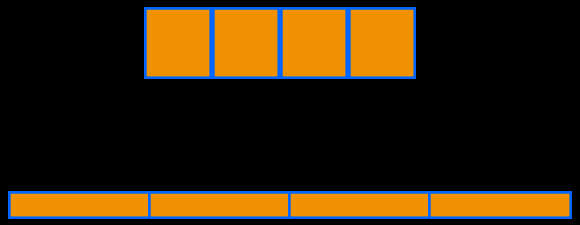
Pseudostratified Columnar Epithelium

Function: Absorption, Secretion, Movement

Sample Locations: Respiratory & Repro Ducts



Transitional Epithelium

Function: Stretchability

Sample Location: Urinary Bladder