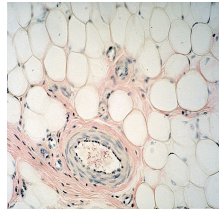


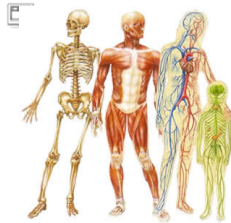
Cells form tissue



Tissues form organs

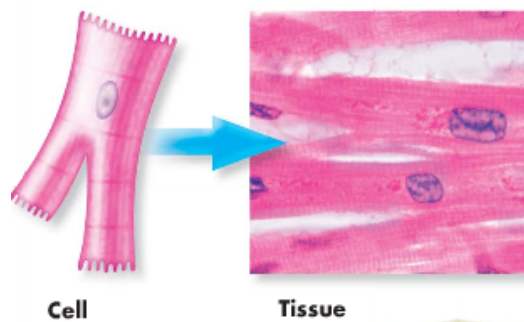


Organs form organ systems



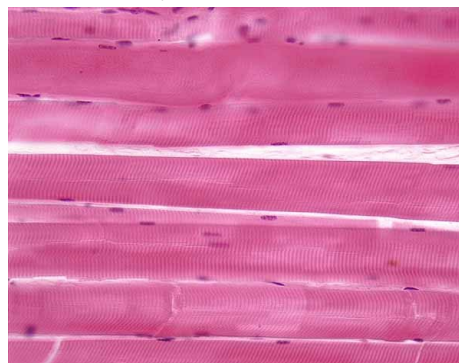
Organ **S**ystems

Cells rarely work alone.
Instead, they often work
together in tissues.



Tissues are a group of the same kind of cells that work together to do the same job.

For example: Muscle cells group in bundles to make up muscle tissues:



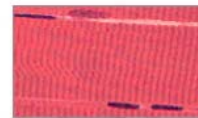
Four types of tissue



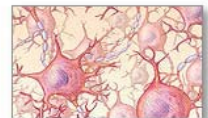
Connective tissue



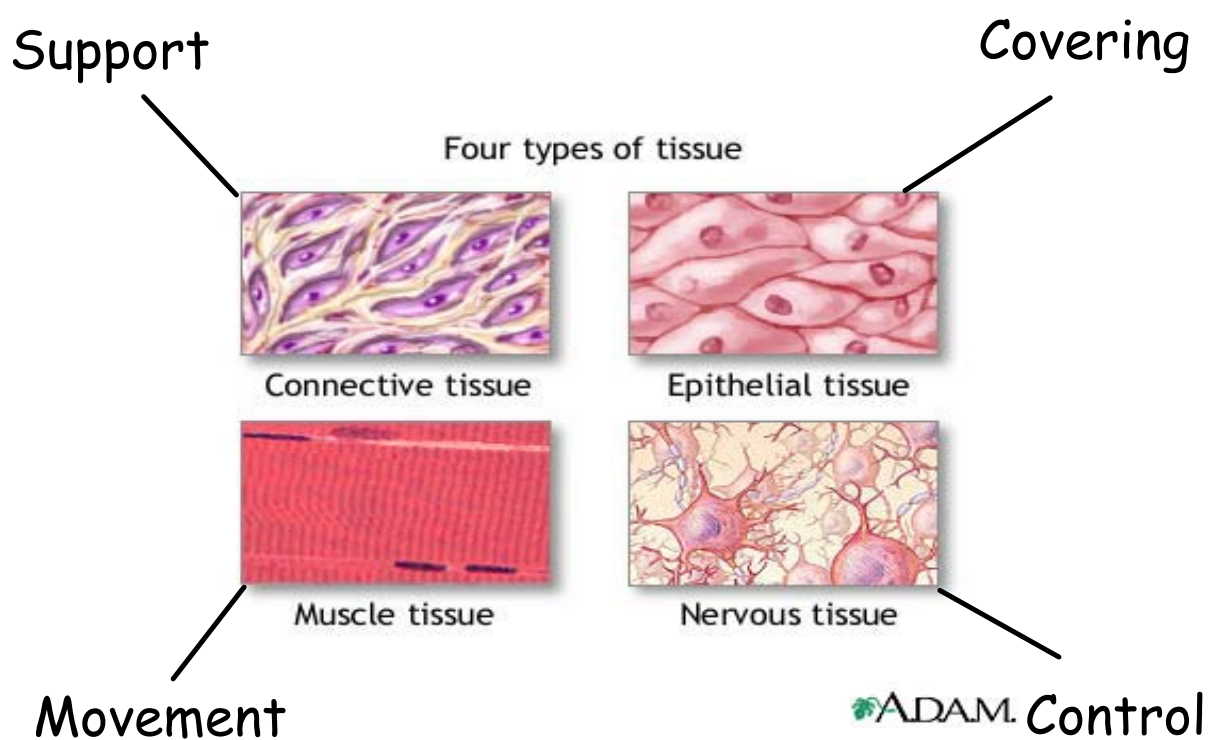
Epithelial tissue



Muscle tissue



Nervous tissue



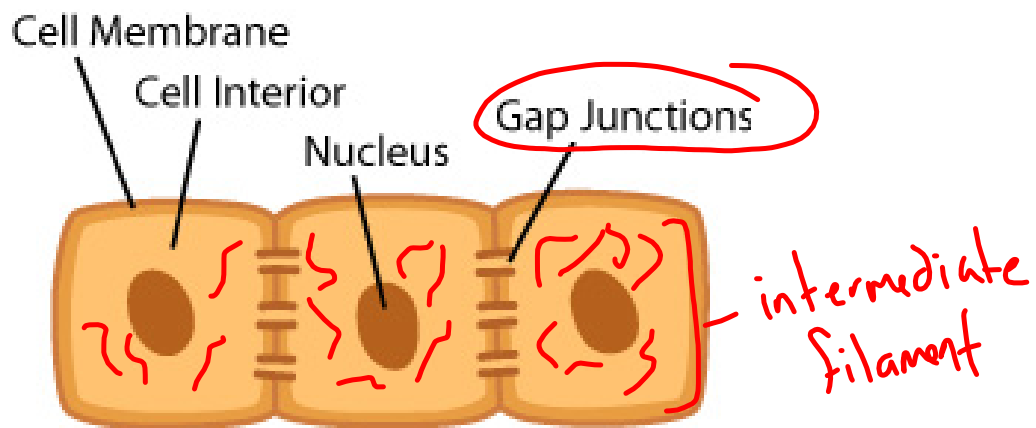
Epithelial Cells and Tissues

<u>Root</u>	<u>Meaning</u>	<u>Example</u>
epitheli/o	skin; epithelium	epithelial
<u>Suffix</u>	<u>Meaning</u>	<u>Example</u>
-al	pertaining to	epithelial

Primary Functions

protection, absorption, filtration, secretion

Generalized Epithelial Cell



Structure

nucleus

stackable shape

intermediate filaments

gap junction

Function

cell "brain"

pack cells closely together

resist tearing

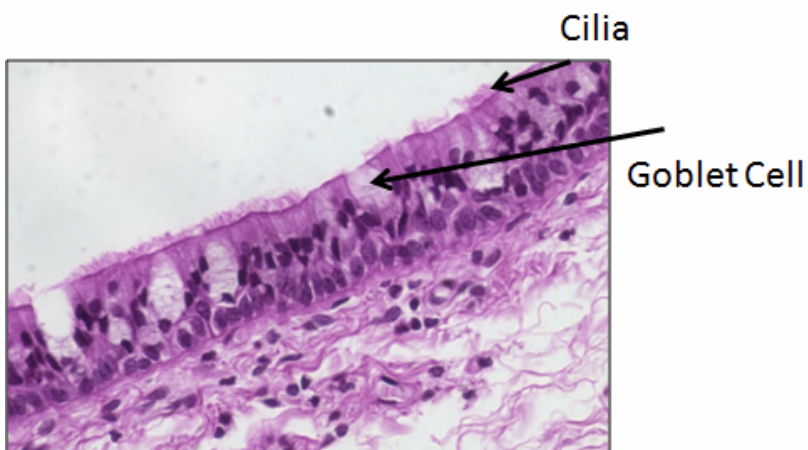
exchange nutrients

Specialized Cellular Structures

Structure: Cilia

Function: move particles (ex: egg through fallopian tube)

Location: Pseudostratified epithelium

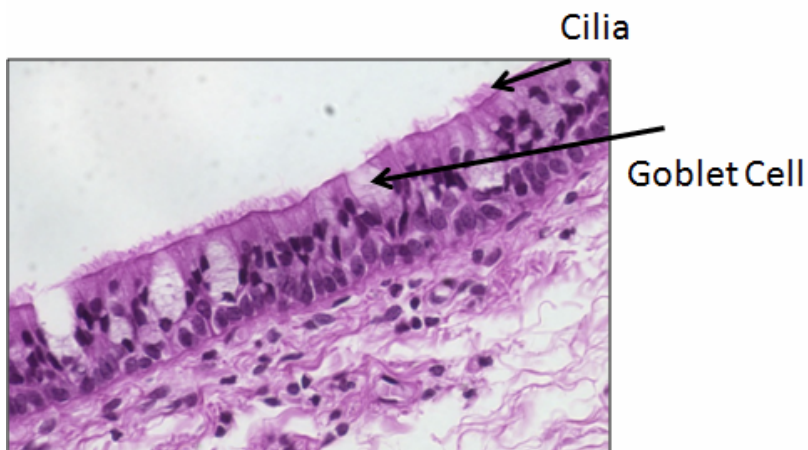


Specialized Cellular Structures

Structure: **Goblet Cell**

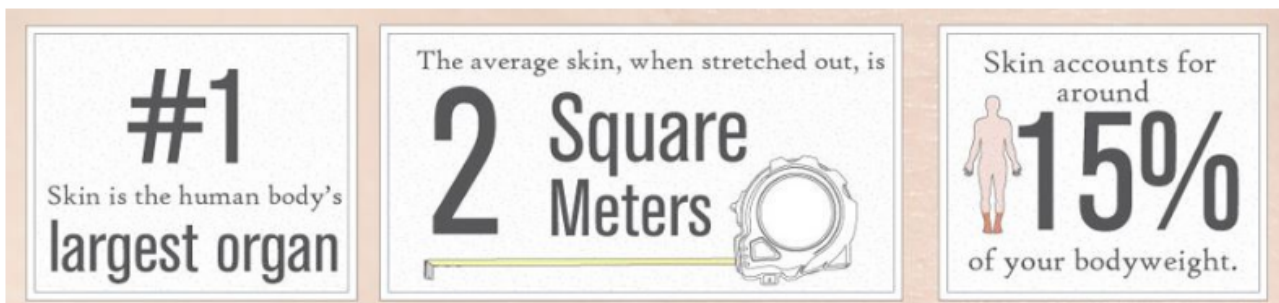
Function: secrete mucus

Location: Pseudostratified epithelium




Epithelial Tissue

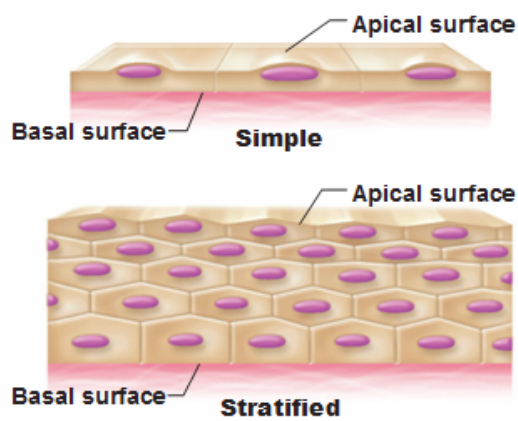
- Covers all body surfaces both inside and out.
- Main glandular (glands) tissue.
- Attached to underlying connective tissue at the basement membrane
- Usually has no vascular tissue - blood supply
- Cells reproduce rapidly, results in rapid healing.
- Cells tightly packed together



If a girl weighs 100 pounds. How much of her weight is skin?

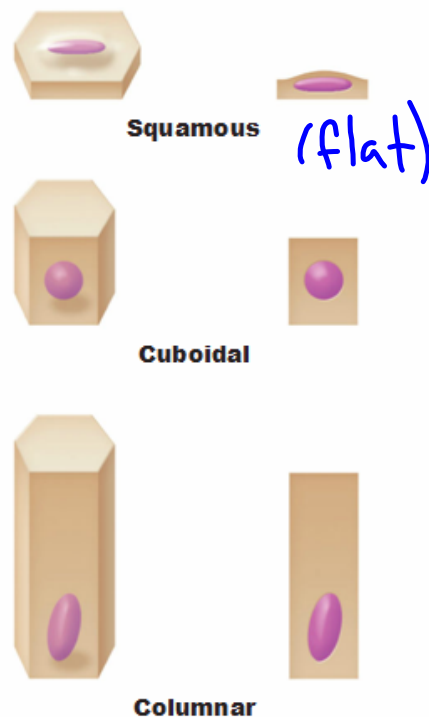
 https://www.youtube.com/watch?v=eXO_ApjKPal

Classifications of Epithelia



(a) Classification based on number of cell layers

Note that basal cells regenerate; as apical cells slough off, they are replaced by basal cells



(b) Classification based on cell shape