

Epithelial Tissues

Worksheet

Introduction

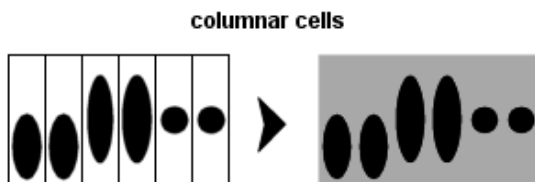
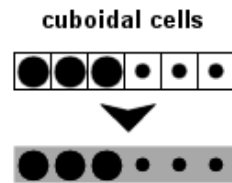
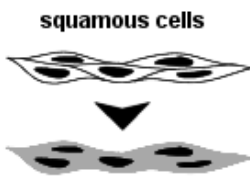
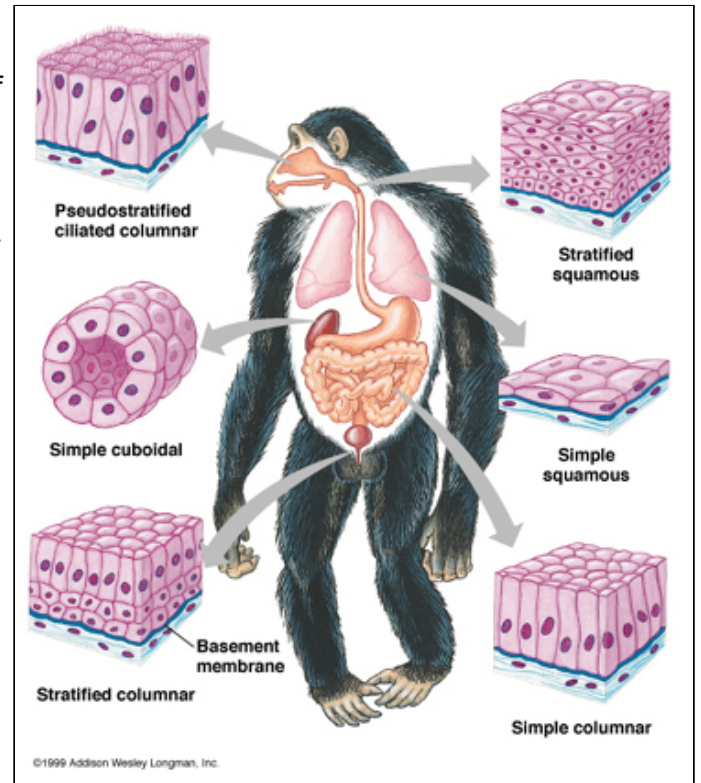
Epithelia are tissues consisting of closely apposed cells without intervening intercellular substances. Epithelia are avascular, but all epithelia "grow" on an underlying layer of vascular connective tissue. The connective tissue and the epithelium are separated by a basement membrane. Epithelium covers all free surfaces of the body. Epithelium also lines the large internal body cavities, where it is termed mesothelium. Furthermore, the internal surfaces of blood and lymph vessels are lined by epithelium, here called endothelium.

Epithelia are classified on the basis of the number of cell layers and the shape of the cells in the surface layer.

* If there is only one layer of cells in the epithelium, it is designated simple.

* If there are two or more layers of cells, it is termed stratified.

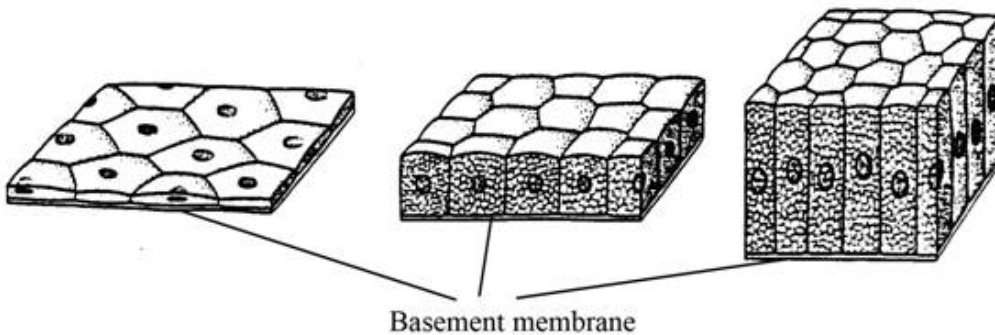
* Cells in the surface layer are, as a rule, described according to their height as squamous (scale- or plate-like), cuboidal or columnar.



Simple squamous

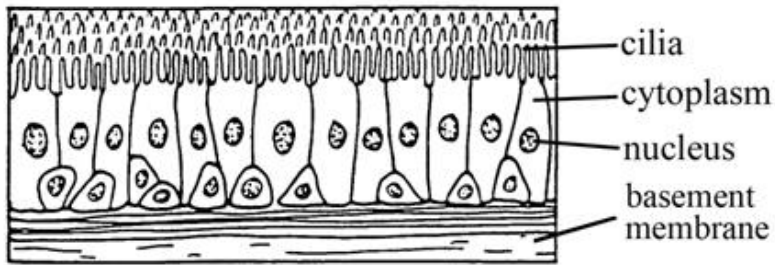
Simple cuboidal

Simple columnar



Pseudostratified epithelia appears to be layered (stratified) because the cell nuclei occur in two or more levels in

a row of aligned cells



View Slides

Type of Tissue	Function	Location
Pseudostratified columnar	removing dust and particles from airways, has cilia	lines the respiratory passageways
Simple Columnar	Absorption	lines the uterus and most organs of the digestive tract
Simple Cuboidal	Secretion and Absorption	glands, kidney tubules, ovaries
Simple Squamous	Diffusion and Filtration	lungs, walls of capillaries and vessels
Stratified Squamous	Protects underlying cells	skin(keratinized) and the throat, vagina, mouth (soft)
Stratified Cuboidal	Protection	lines ducts of the mammary glands, sweat glands, pancreas
Stratified Columnar	Protection, secretion	male urethra and vas deferens, parts of the pharynx
Transitional (unstretched)	Specialized to become distended	urinary tract

***Once you are comfortable with the types of epithelia, move onto the [QUIZ](#). You may use your notes and drawings.