

Lab2: Epithelial Tissue

Tissues: are groups of cells that have a similar structure and perform specific function.

There are 4 Types of animal tissues:



Epithelial Tissues: are thin tissues that lines and covers all body surfaces.

Some Characteristics of Epithelia

1. Cells are firmly attached by intercellular junctions.
2. Cells rest on a basement membrane, a vascular

Functions

1. Protection
2. Absorption
3. Secretion and other functions

Classification of Epithelial tissue

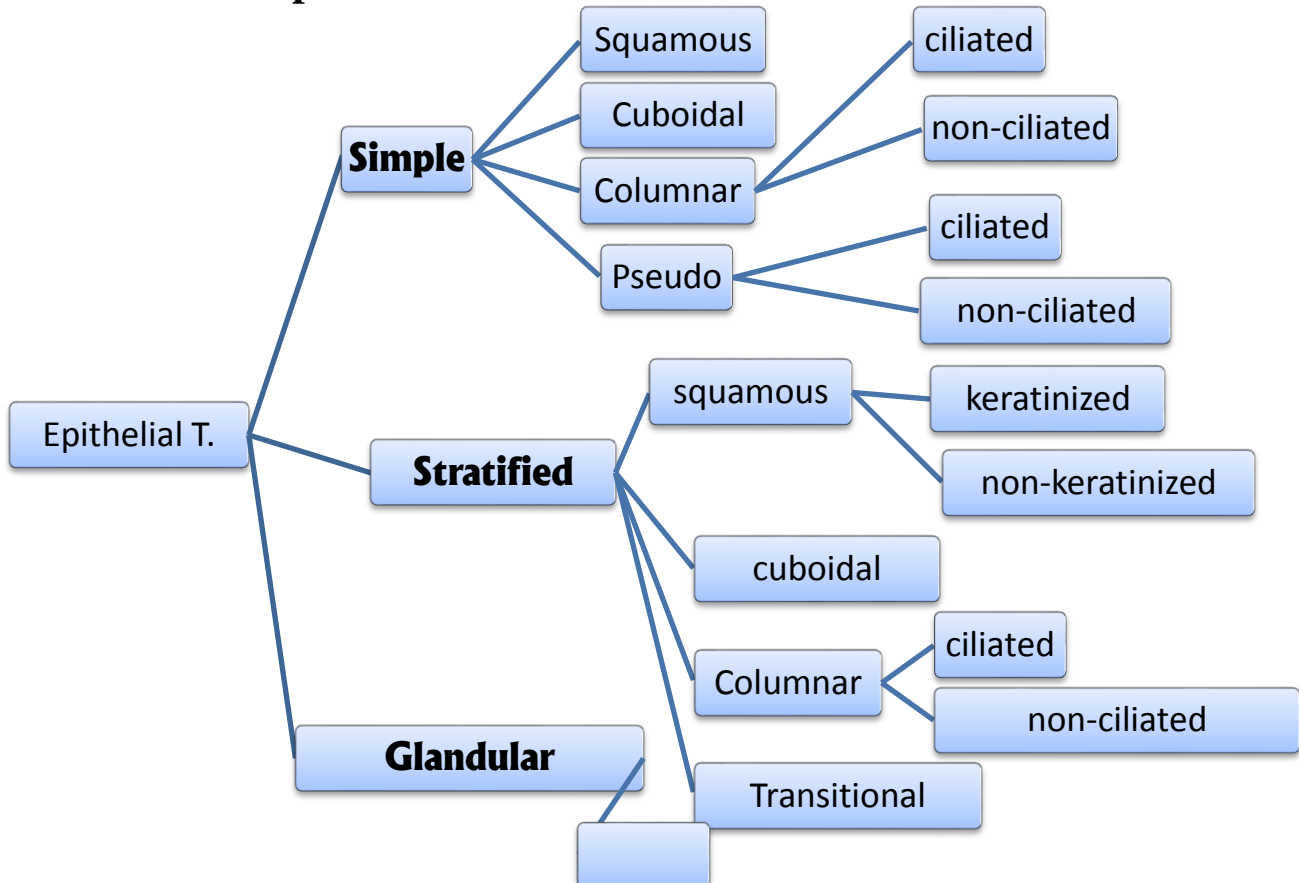


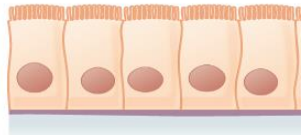
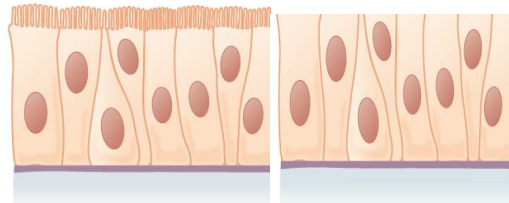
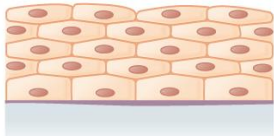
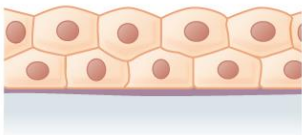
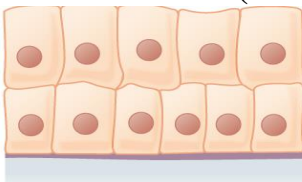
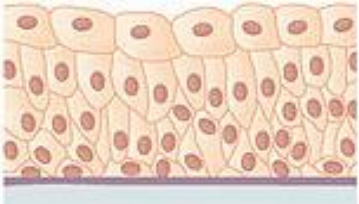


Table 1: Describes location and function of epithelial tissue

Cells:	Location	Function
<p>Simple squamous Ep.T. One layer of flattened cell with disc shaped nuclei.</p> 	Bowman's capsule in kidney	Passage of materials by passive diffusion and filtration
<p>Simple cuboidal Ep.T. : One layer of cube-like cells with large, spherical central nuclei</p> 	Thyroid gland	Secretion (gland) and absorption
<p>Simple columnar Ep.T. : One layer of column-shaped cells with oval nuclei, some bear cilia at their apical surface, May contain goblet cells</p> 	<p>-Non-ciliated from stomach. -Ciliated from oviduct -With brush border small intestine</p>	Absorption, secretion of mucus, and enzymes
<p>Pseudo stratified columnar Ep. T.: All cells lay on B.M. only tall cells reach apical surface. Nuclei lie at varying heights within cells (Gives false impression of stratification). have two types 1-Ciliated Pseudostratified Ep. T. 2- Non-ciliated Pseudostratified Ep. T.</p> 	<p>Ciliated: in the linings of the trachea Non-ciliated with stereocilia (for absorption) in epididymis</p>	Secretion and propulsion of mucus

<p>Stratified squamous Ep. T.T. More than one layer of cells, upper layer composed of squamous cells. 2 types: 1- Keratinized 2- Non keratinized</p>	<p>Esophagus</p> 	<p>Protection</p>
<p>Stratified cuboidal Ep. T. T. 2 layers of cuboidal cells</p> 	<p>Sweat glands in the skin.</p>	<p>Protection</p>
<p>Stratified columnar Ep. T. More than one layer of cells upper layer composed of columnar cells. 2 types: 1-ciliated 2- non-ciliated (with stereocilia)</p> 	<ul style="list-style-type: none"> • Non-ciliated: eye lid • Ciliated: in larynx. 	<p>Protection and secretion</p>
<p>Transitional Ep. T. Superficial cells during relaxation (empty bladder) the cells appear cuboidal-shaped or rounded shape. When Stretches as the bladder becomes full the cells appear squamous-shaped</p> 	<p>Urinary bladder</p>	<p>Allow urinary organ expand and stretch</p>