**Epithelial tissue:**

also called epithelium, consists of tightly packed cells that form a continuous layer or sheet lining the entire body surface and most of the body’s inner cavities. On the **external surface**, it protects the body from injury, drying out, and possible **pathogen** (virus and bacterium) invasion.

On **internal surfaces** , epithelial tissue may be specialized for other functions in addition to protection . For example , epithelial tissue secretes mucus along the digestive tract and sweeps up impurities from the lungs by the cilia. It efficiently absorbs molecules from kidney tubules and from the intestine due to presence of minute cellular extensions called **microvilli.** **There are various types of epithelial tissue**

**a- Squamous epithelium** is composed of flattened cells and is found lining the lungs and blood vessels.

**b- Cuboidal epithelium** contains cube-shaped cells and is found lining the kidney tubules.

**C - Columnar Epithelium**

has cells resembling rectangular pillars or columns, and nuclei are usually located near the bottom of each cell. This epithelium is found lining the digestive tract . Ciliated columnar epithelium is found lining the oviducts, where it propels the egg toward the uterus.

Epithelial tissue is named according to the shape of the cell

An epithelium can be simple or stratified. Simple means the tissue has a single layer of cells, and stratified means the tissue has layers of cells piled one on top of the other. smallest blood vessels, called **capillaries,** are composed of a single layer of epithelial cells. The permeability of capillaries allows exchange of substances between the blood and tissue cells.

The nose, mouth, esophagus, anal canal, and vagina are all lined by stratified squamous epithelium. As we shall see, the outer layer of skin is also stratified squamous epithelium, but the cells have been reinforced by keratin, a protein that provides strength.

**Pseudo stratified epithelium** appears to be layered; however, true layers do not exist because each cell touches the baseline .The lining of the windpipe, or trachea, is called pseudo stratified ciliated columnar epithelium. A secreted covering of mucus traps foreign particles, and the upward motion of the cilia carries the mucus to the back of the throat, where it may either be swallowed or expectorated. Smoking can cause a change in mucus secretion and inhibit ciliary action, and the result is a chronic inflammatory condition called bronchitis.