

### general features of epithelium

covers body surfaces & lines body cavities

composed almost entirely of sheets of closely packed cells

very little intracellular space and extracellular material

no blood vessels: avascular

renewal: capacity to regenerate: good thing: balance cell death and cell proliferation

-more cell death than formed: ulcer -more cell formed: cancer

--most likely location of epi to get damaged is skin

epithelial cells are often strongly connected by junctions.

originate from 3 primary germ layers(ecto, endo, meso-derm)

polarity: diff area diff structure: apical side (the area of an epithelial cell adjacent to the exterior or to body cavity ) opp area=basal; side

ALWAYS supported by a layer extracellular matrix known as basement membrane.

### BM: basement membrane or basal lamina

BM=interwoven network of laminin & collagen IV (4) attached by nidogen/entactin and proteoglycan

epithelial cell membrane attached via integrins to laminin.

IL=lamina lucida: less fiber

LD: lamina densa

-proteoglycan rich in carbs: positive to PAS Shiff...

### function of epithelium

protection

absorption

secretion

transportation

filtration

sensory reception

### types of epithelia

based on **number** of cell layers or **shape** of cells in apical layer

1 layer: simple      1. squamous=flat, scale like

more than 1: stratified.      2. cuboidal=cube-shaped

3. columnar=column-shaped

