

Glandular Epithelium

Glandular Epithelium: are formed by epithelial cells specialized to produce a fluid secretion.

A **gland** is one or more cells that produce and secrete a specific product into ducts or into body fluids.

Classifications of glands:

1- depending on presence and absence of duct into:

Endocrine Glands	Exocrine Glands
Without ducts	With ducts
secreted products directly into the blood. e.g. adrenal gland	NOT released into the blood but to the free surface of the skin or of the open cavities of the body such as the digestive tract. e.g. sweat gland

2- Depending on the number of cells exocrine gland classified to:

Unicellular glands	Multicellular glands:
consists of one cell	consists of many cells
no ducts but secrete their products directly on the free surface e.g. goblet cell	with ducts to connect to the free surface e.g. sebaceous gland

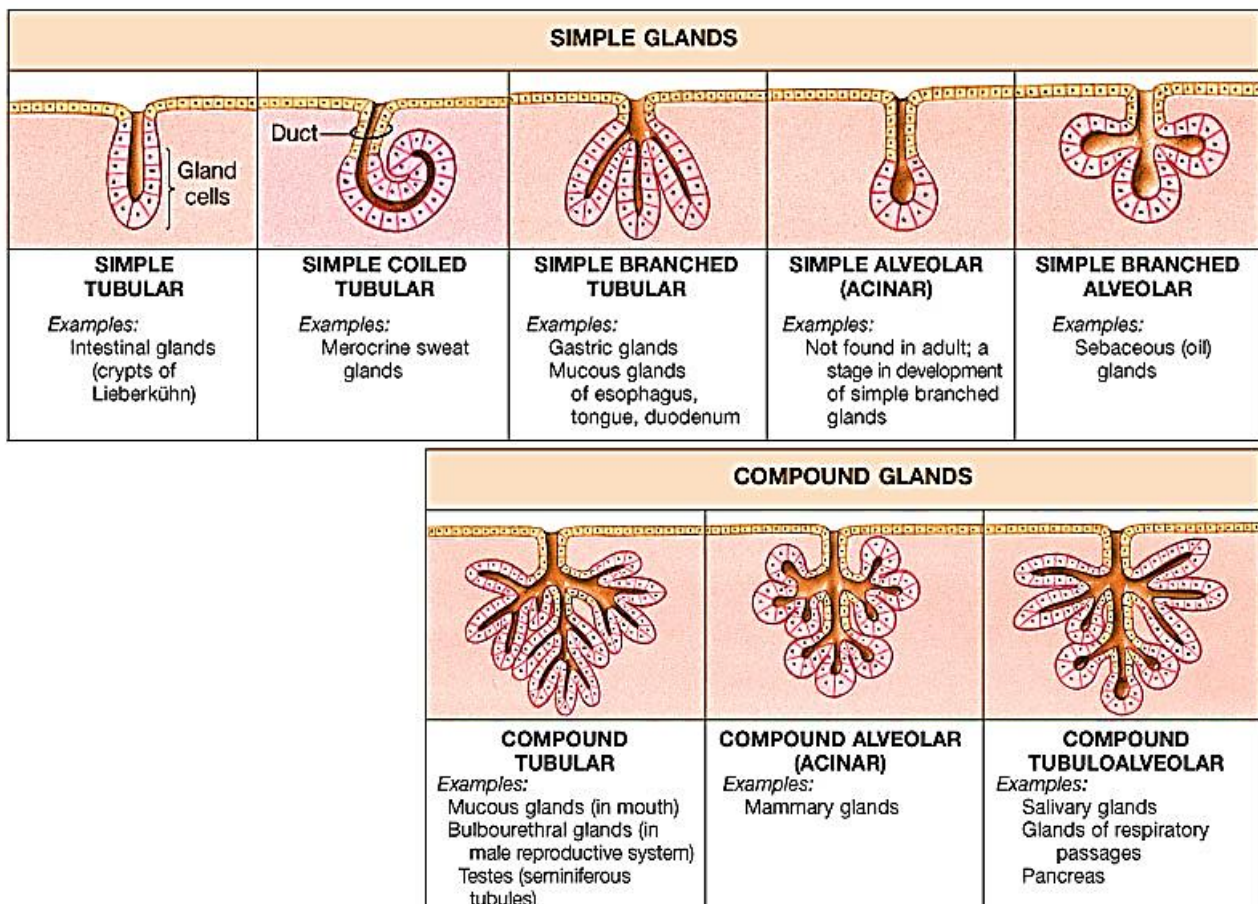
Multicellular exocrine gland classified as following:

1- According to branched and un-branched duct:

A- Simple (unbranched duct).

B- Compound (branched duct)

2- According to the shape of secretory portion :



3- According to the mode of Secretions:

Merocrine gland	Apocrine gland	Holocrine gland
Secretion is done by Exocytosis	a small portion of the apical cytoplasm discharged with the secretory products	The secretion is done by Loss of entire cell with secretory product
Keeps all of their cytoplasm	Growth and repair	Cell bursts and dies
Salivary glands	Mammary glands,	Sebaceous glands of the skin

4-According to the nature of secretion multicellular exocrine gland classified into:

Mucous gland	Serous gland	Muco-serous gland (mixed gland)
Secret mucus.	Secret enzymes.	Contains both serous and mucous
the nuclei are basally located and flattened, acini cuboidal or columnar in shape	acini polyhedral or pyramidal, with round, centrally located nuclei.	
lumen is larger than serous.	Small lumen	Found in submandibular gland
Example is sublingual gland. (light stained)	Found in pancreas (dark stained)	