Glandular Epithelia

Sept. 17, 2019

- Gland: 1 or more cells that make & secrete aqueous fluid

Classificated

Site of Release

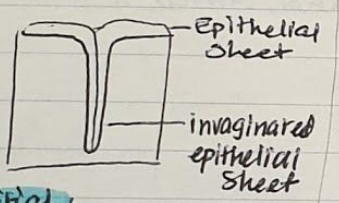
Endocrine: (internal ~~secretion~~ secretion ex. hormones)

Exocrine: external secretion (sweat)

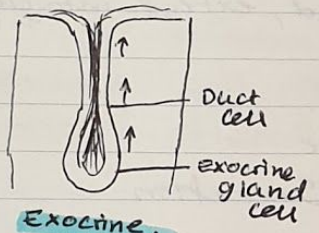
# of cells: → Unicellular (ex. goblet cells)

→ multicellular (ex. salivary)

Multicellular exocrine & endocrine formation:

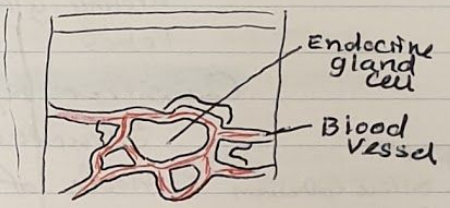


Initial:
glands form by invagination (inward growth) of an epithelial sheet



Exocrine Gland:
Retain connecting cells → form a duct for transporting secretions to epithelial surface, and to skin, body cavities & other bodily surfaces.

Exocrine > Endocrine



Endocrine:
lose connecting cells. Secrete hormones in intestinal fluid. The hormones enter the blood.

↳ hormones travel through lymph or blood

~~All multicellular~~

Exocrine
Can: - multicellular
- unicellular
↳ mucous cells & goblet cells

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Exocrine glands

Unicellular

Example: mucous cells & goblet cells

Location: epithelial linings of intestinal & respiratory tracts

Function: produce mucin (sugar-protein that dissolves in water to form mucus ↳ protective coating)

Multicellular Exocrine glands

DESCRIPTION:

↳ composed of a duct & secretory unit

↳ usually surrounded by supportive connective tissue that supplies blood & innervation

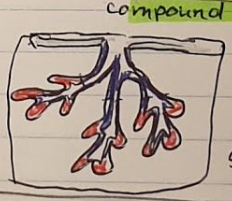
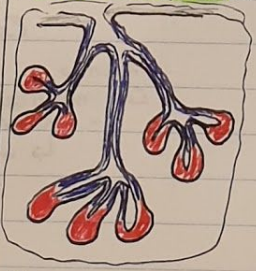
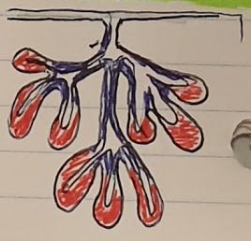
↳ connective tissue can form capsule around gland, extend into gland, divide it into lobes

Classified by:

- Structure
- Mode of Secretion.

KEY
- Surface Epithelium
- Duct cell
- Secretory Epithelium

TYPES of multicellular Exocrine glands

	Simple duct (duct doesn't branch)		Compound duct (duct branches)	
Tubular secretory structure	simple tubular	simple branched tubular	compound tubular	
				
	intestinal glands	Stomach glands		Duodenal glands of small intestine
Alveolar secretory structure	simple alveolar	simple branched alveolar	Compound alveolar	compound tubuloalveolar
				
	No important ex.	sebaceous (oil) glands	Mammary Glands	Tubuloalveolar glands w/ ducts & sacs

In alveolar glands, secretory cells form sacs

Main modes of secretion in Human exocrine glands

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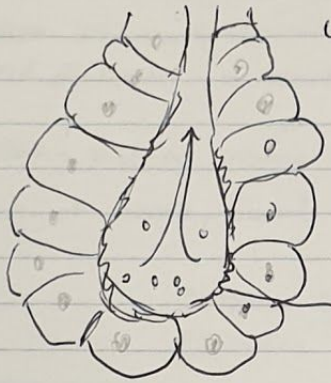
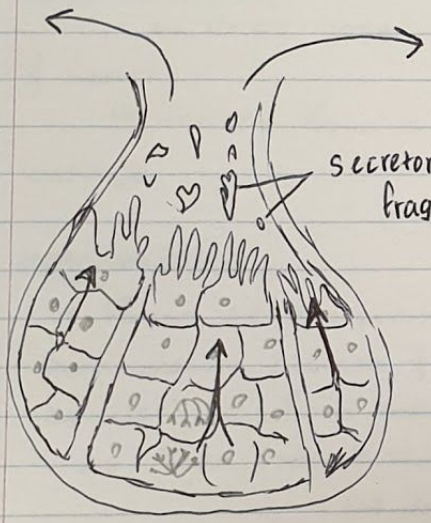


(a) Merocrine glands secrete their products by exocytosis as they're produced ex. sweat glands, pancreas



(b) Holocrine glands, the secretory cell ruptures releasing secretions + dead cell fragments (sebaceous oil glands)

(c) Apocrine: accumulate products within, but only apex ruptures; whether this exists in humans is controversial (mammary cells?)