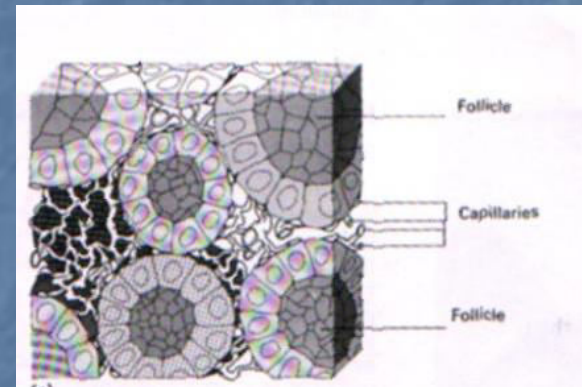


# Glands: epithelial cells that make and secrete a water-based substance

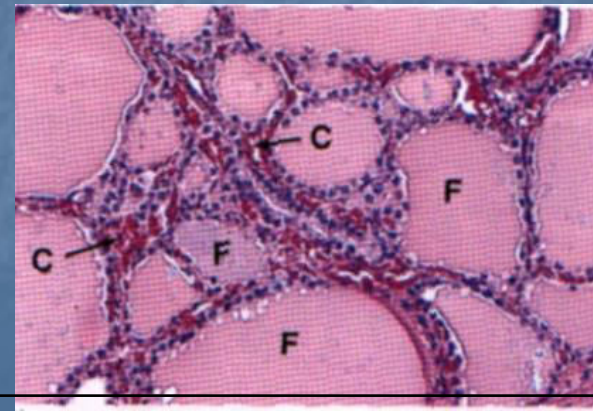
- **Exocrine Glands**

- Secrete substance onto body surface or into body cavity
- Have ducts
- E.G., salivary, mammary, pancreas, liver



- **Endocrine Glands**

- Secrete product into blood stream
- Either stored in secretory cells or in follicle surrounded by secretory cells
- Hormones travel to target organ to increase response
- No ducts



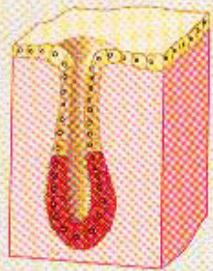
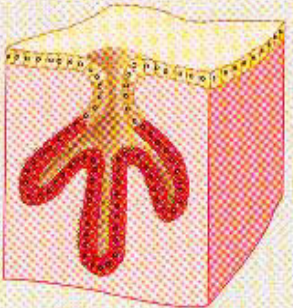
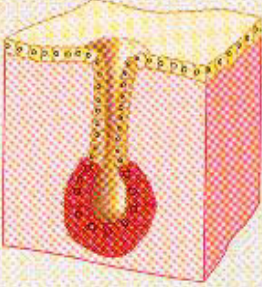
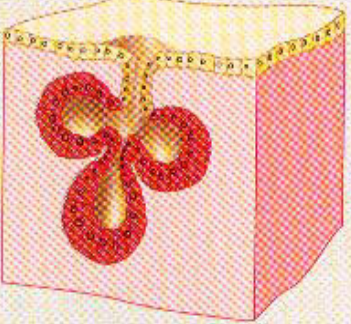
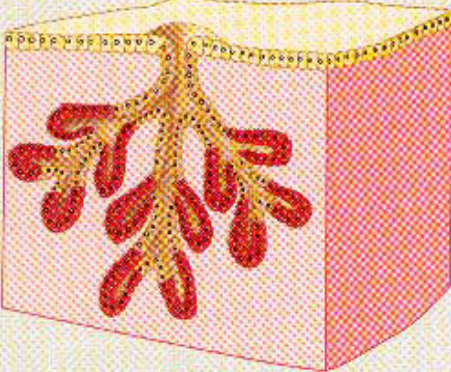
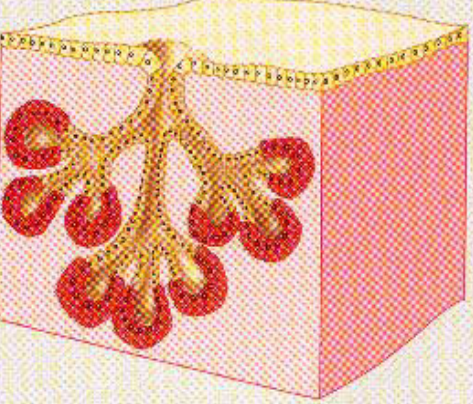
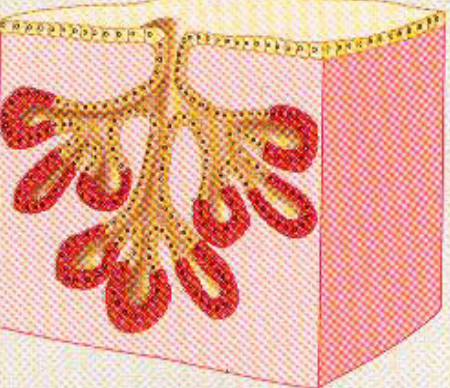
# Shapes of Exocrine glands

- **Branching**

- **Simple – single, unbranched duct**
- **Compound – branched.**

- **Shape: tubular or alveolar**

- **Tubular – shaped like a tube**
- **Alveolar – shaped like flasks or sacs**
- **Tubuloalveolar – has both tubes and sacs in gland**

	Tubular secretory structure		Alveolar secretory structure	
Simple duct structure (duct does not branch)				
	(a) <b>Simple tubular</b> Example: intestinal glands	(b) <b>Simple branched tubular</b> Example: stomach (gastric) glands	(c) <b>Simple alveolar</b> Example: No important example in humans	(d) <b>Simple branched alveolar</b> Example: sebaceous (oil) glands
Compound duct structure (duct branches)				
	(e) <b>Compound tubular</b> Example: kidneys & Testis	(f) <b>Compound alveolar</b> Example: mammary glands	(g) <b>Compound tubuloalveolar</b> Example: salivary glands	

# Modes of Secretion

- (How the gland's product is released)
- Merocrine
  - Just released by exocytosis without altering the gland at all.
  - Ex: Sweat glands and salivary glands
- Holocrine
  - The gland ruptures and releases secretion and dead cells as well.
  - Sebaceous (oil glands on the face) only example

# Thank You