



## Motivational Corner:

"It does not matter how slowly you go as long as you do not stop."



## Objectives:

1- Describe the microscopic structures of the major salivary glands in correlation with function

## 2- Integrated Salivary Glands

Extra notes: Gray

**Important notes: Red**

Revised by

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# Salivary Glands

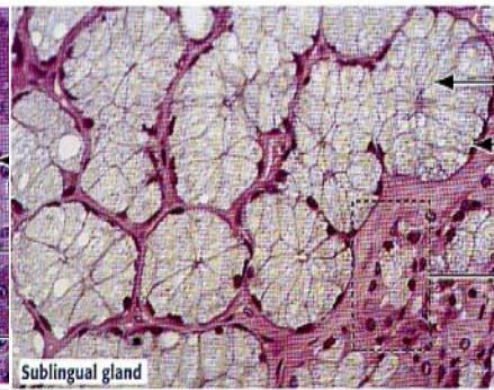
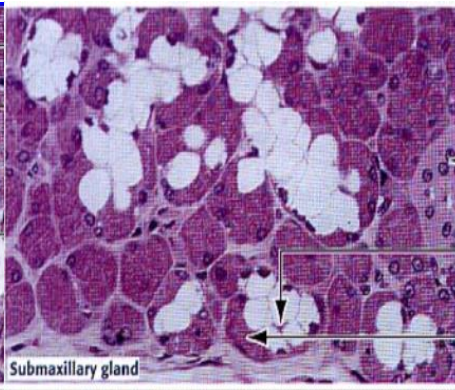
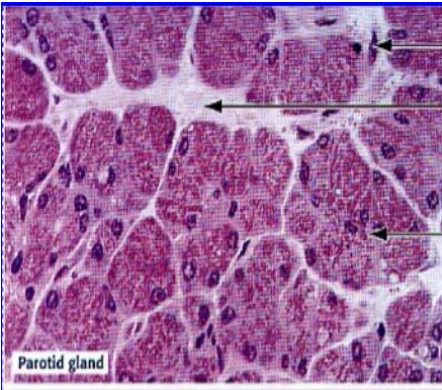
■ **Minor:** Labial, Lingual, Buccal, Palatine.  
Produce 5% of salivary output.

■ **Major:** Parotid, Submandibular, Sublingual.

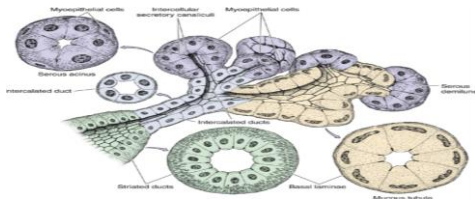
A) **Stroma:** 1) C.T. Capsule 2) C.T. Septa dividing the glands into lobes and lobules.

B) **Parenchyma:** 1) Acini. 2) Duct System.

Parotid	Submandibular	Sublingual
<u>Largest salivary Gland.</u>	—	<u>Smallest Salivary Gland.</u>
Produces 30% of salivary output.	Produces 60% of salivary output.	Produces 5% of salivary output.
Purely serous.	Mixed but mostly serous (90%).	Mixed but mostly mucous.
<ul style="list-style-type: none"> <li>- <u>Prominent intralobular ducts.</u></li> <li>- Secretion rich in: Amylase, Lactoferrin, Lysozyme, secretory IgA.</li> </ul>	Mucous acini are capped by serous demilunes.	



# + Acini & Duct System



## Types of Salivary Acini

### Serous Acini

- Contains **only serous cells**.
- Small, spherical, with a narrow lumen.
- **Secretes serous secretions rich in enzymes**, such as amylase & lysozyme.

### Mucous Acini

- Contains **only mucous cells**.
- Larger, more tubular with a wider lumen.
- **Secretes mucous secretions**.

### Mucoserous (mixed) Acini

- Mucous acini with a cap of serous cells (demilunes).

## Cells of Salivary Acini

### Serous Cells

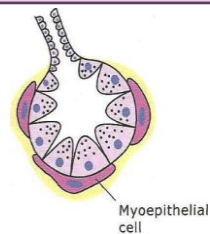
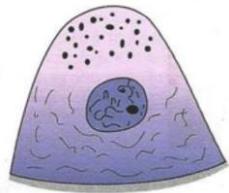
- Pyramidal in shape.
- Nuclei are **round** and **basal**.
- Cytoplasm: Deeply **basophilic** (due to RER "rough endoplasmic reticulum"), with apical **acidophilic** secretory granules (rich in salivary amylase).

### Mucous Cells

- **Pyramidal** or **cuboidal**.
- Nuclei are **flattened** & **basal**.
- Cytoplasm: Pale **basophilic** and vacuolated (foamy) due to dissolved mucinogen secretory granules.

### Myoepithelial Cells (Basket cells)

- Contractile cells that embrace the basal aspect of acini.
- Their contraction releases the secretion into the duct system.



## Duct System of Salivary Gland

### Intralobular Ducts (prominent)

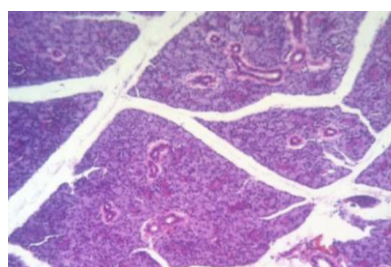
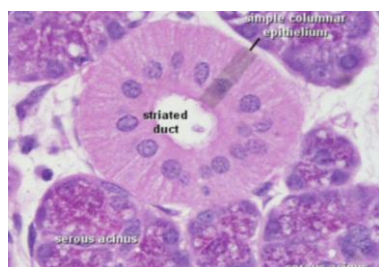
- A) Intercalated Discs:**  
Lined by small **cuboidal** cells.
- B) Striated Ducts:**  
Lined by low **columnar** cells.

### Interlobular Ducts

- Lined by **simple columnar epithelium**.

### Main Duct

- Lined by **stratified columnar epithelium** which becomes stratified squamous (non-keratinized) in the distal end.





# Summary

4  
B  
3  
A  
2  
C  
1  
D

## Structure Major Salivary Glands

Stroma:	Parenchyma:						
-C.T. capsule. -C.T. septa	Salivary Acini.			Duct system.			
	Type:	1. Serous acini:	2. Mucous Acini:	3. Mucoserous (Mixed) Acini:	1. Intralobular ducts (prominent):	2. Interlobular ducts:	3. Main duct:
	Cells:	1. Serous Cells:  Deeply basophilic with apical acidophilic	2. Mucous cells  Pale basophilic and vacuolated	3. Myoepithelial cells (basket cells):  Contractile cells	a. Intercalated b. Striated ducts:		

## MCQs

1) Which one of the following lined by small Cuboidal cells :

- A. Striated Ducts.
- B. Interlobular Ducts.
- C. Main Duct.
- D. Interclated ducts.

2) which of the following is minor salivary gland:

- A. Parotid.
- B. Submandibular.
- C. Lingual.
- D. Sublingual.

3) Submandibular Gland produces about .....of salivary output.

- A. 60%
- B. 5%
- C. 30%
- D. 90%

4) which one of the following Pale basophilic and vacuolated:

- A. Basket cells.
- B. Mucous cells.
- C. Serous cells.

Thanks you for checking our work, Good luck.  
-Team histology.

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