**Lec. 9 Oral phyisology Dr.Muna**

**Composition of the Saliva:**

human saliva comprises 99.5% water, but also contains many important substances, including electrolytes, mucus, antibacterial compounds and various enzymes:

**1. Water: 99.5%**

* 1. **2. Substances 0.5%:** •

1. A. Electrolytes:
   1. .sodium
   2. • potassium
   3. • calcium
   4. • magnesium
   5. • Iodine
   6. B. Mucus.

C. Antibacterial compounds: hydrogen peroxide, Immunoglobulin A.

D. Various enzymes:

* 1. amylase or ptyalin: secreted by the parotid and submandibular glands, starts the digestion of starch.
  2. • lipase, which is secreted by the sublingual gland.
  3. • Antimicrobial enzymes that kill bacteria: Lysozyme, Immunoglobulin A.

**Immunoglobulin A** (**IgA**): is an antibody that plays a role in the immune function of mucous membranes).

Proline: function in enamel formation, Ca2+-binding, microbe killing and lubrication

**Functions of saliva:**

1. It acts as lubricant and enable a bolus to form.

2. It contains salivary amylase which also called ptyalin which is the digestive enzymes has a role in carbohydrates digestion into the simpler form.

3. It has cleansing action of the mouth and teeth.

4. It makes speech possible.

5. It enables the taste buds to respond to sweet, salt, acid, bitter substances.

6. Saliva is fully saturated with calcium that prevents decalcification of the teeth.

7. Saliva contains enzymes that effective by providing the bacterio-static environments.

8. Saliva maintains the pH of the mouth. Saliva is supersaturated with various ions. These ions act as a buffer, keeping the acidity of the mouth within a certain range, typically pH 6.2–7.4. This prevents minerals in the dental hard tissues from dissolving.