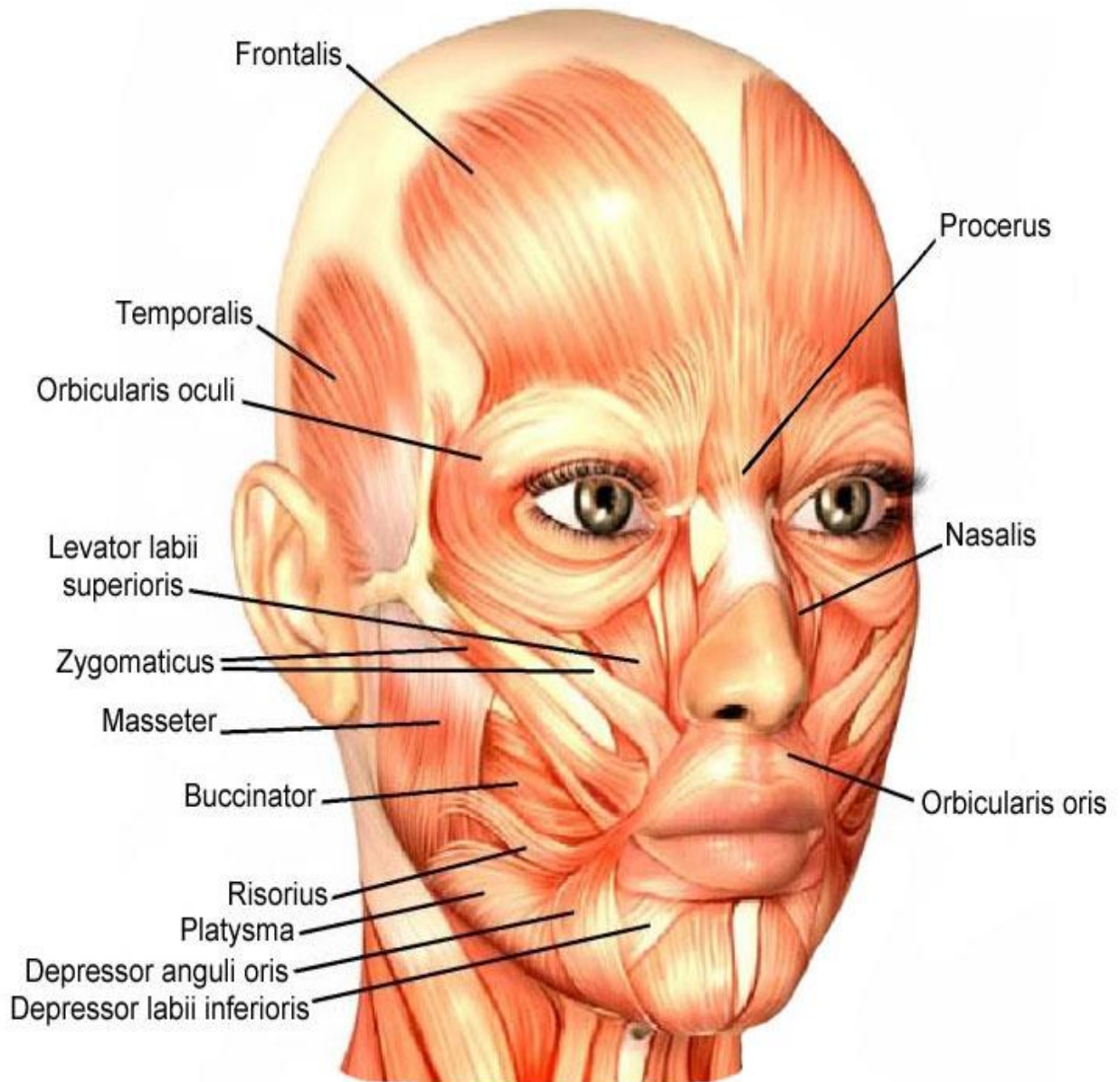


THE FACE

- ★ The face is the anterior aspect of the head.
- ★ It extends from the hair line to the chin and from auricle to auricle.
- ★ **Muscles of the Face:**
 - The muscles of the face are numerous, small and lie in the **superficial fascia**.
 - They have a bony **origin** from the **skull** and are **inserted** into the **skin**.
 - They are called the muscles of **facial expression**.
 - They are supplied by branches from **facial nerve**.
 - The muscles of the face are **divided into** many groups:
 - A- Circumorbital and Palpebral:** e.g. Orbicularis oculi.
 - B- Nasal:** e.g. Procerus.
 - C- Buccolabial:** e.g. Buccinator .
 - D- Oral sphincter:** orbicularis oris.
- ★ The **most important** facial muscles are: **orbicularis oculi, orbicularis oris and buccinator muscles:**

Muscles of the Face

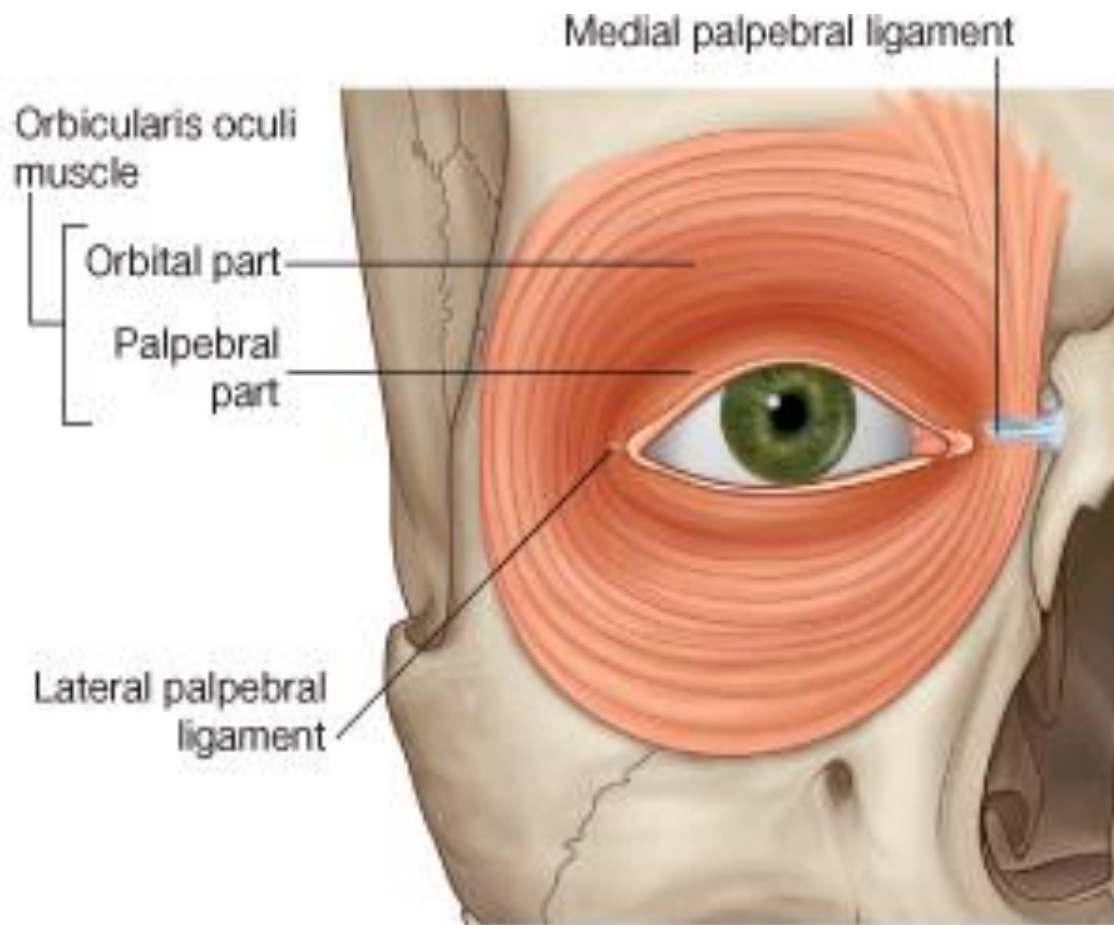


Anatomy of face

I) **Orbicularis oculi muscle:** Formed of 3 parts:

a- **Orbital part** :(around the orbital margin)

- Its fibers **arise** from the upper surface of the **medial palpebral ligament**.
- It curves around the orbital margin to be **inserted** into the lower surface of the **medial palpebral ligament**.
- **Action** : It **closes** the eye lids firmly and suddenly in danger.



b- **Palpebral part** : (in the eye lids)

- **Arises from** the **medial palpebral ligament** and passes in the upper and lower eye lids.

Anatomy of face

- The fibers of both lids **inserted** laterally in the **lateral palpebral ligament**.
- **Action:** It closes the eye lids **gently** as in sleep.

c- Lacrimal part:

- Is a small part **arising** from **lacrimal bone** and from the fascia covering the lacrimal **sac** and blends with the palpebral part in the eye lids.
- **Action:** It stretches and dilates the **lacrimal sac** to help **drainage** of tears.

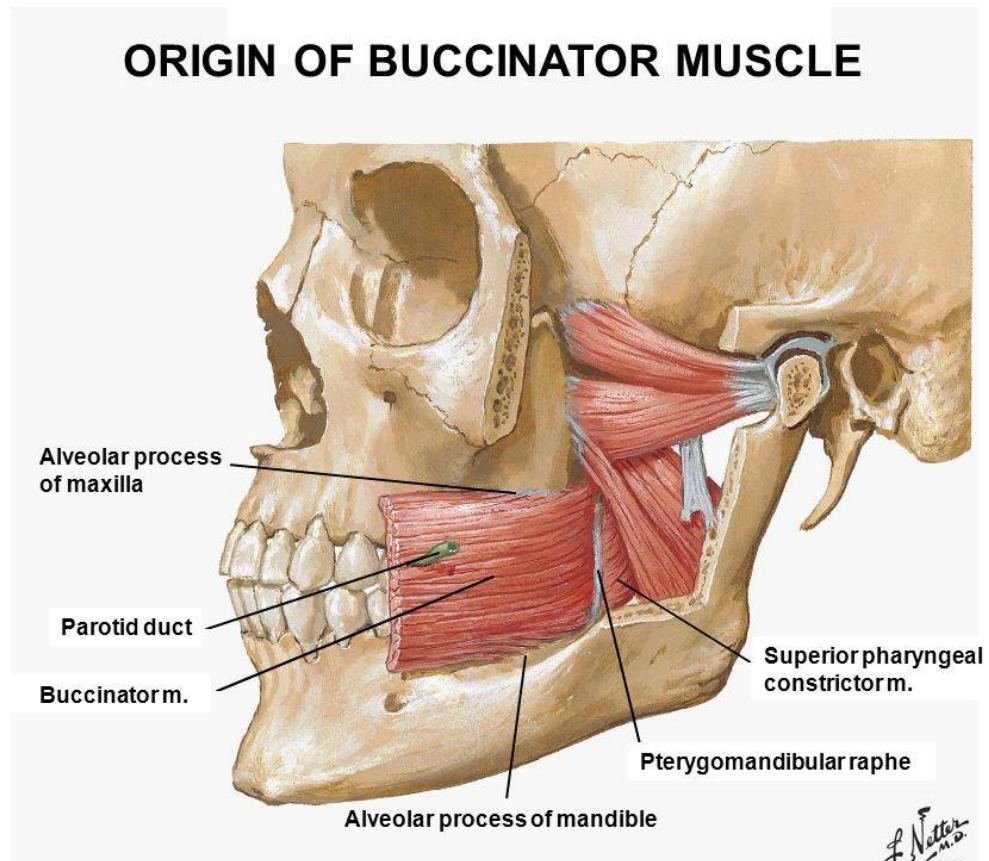
2. Buccinator muscle:

- It is the muscle of the **cheek**. It consists of 3 parts:
- **Origin :**
 - **Upper part:** From alveolar process of **maxilla** above the upper 3 molars.
 - **Lower part:** From oblique line of **mandible** below the lower 3 molars.
 - **Middle part:** From **pterygomandibular ligament** which extends from pterygoid hamulus till the posterior end of the mylohyoid line.
- **Insertion:**
 - **Upper part:** Inserted into the upper lip.
 - **Lower part:** Inserted into the lower lip.
 - **Middle part:** Decussates at the angle of mouth so that the upper fibers enter the lower lip and the lower fibers enter the upper lip acting as a sphincter.

Anatomy of face

- **Action:**

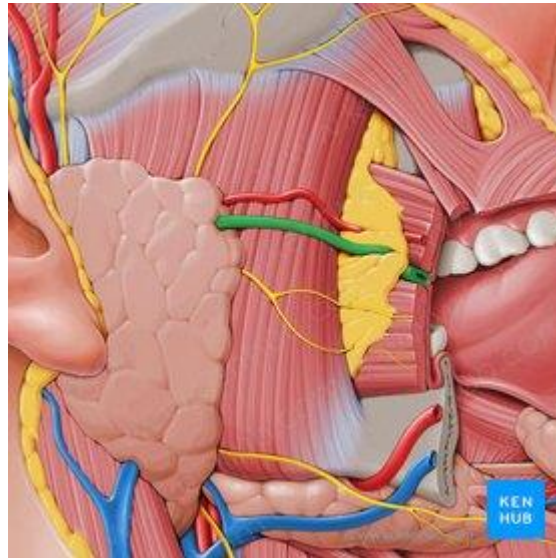
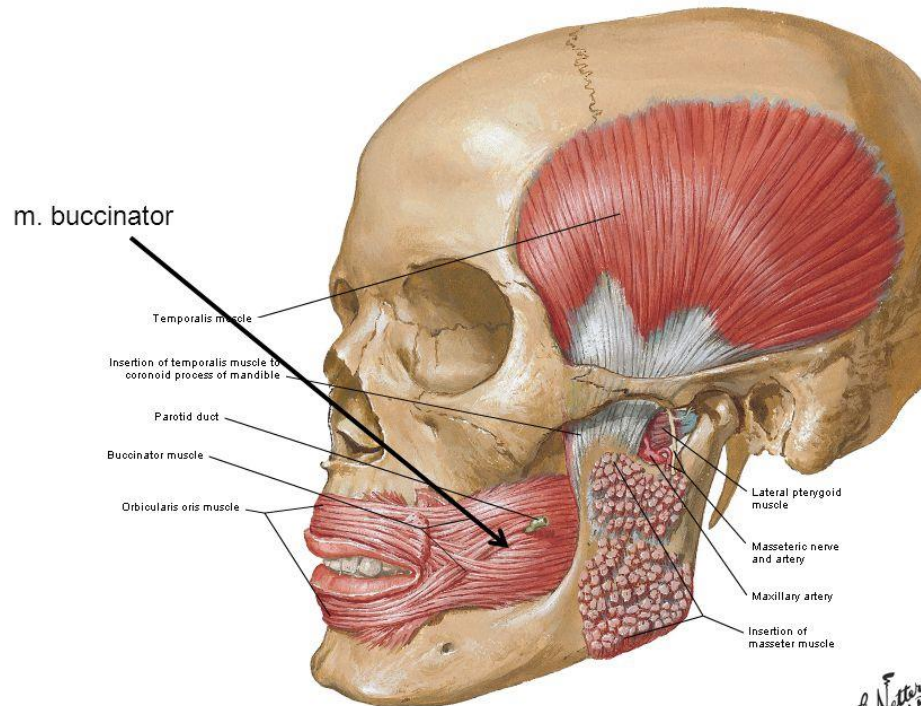
1. It **prevents** accumulation of food & saliva in the vestibule of the mouth and prevents the dribbling of saliva from the angle of mouth.
2. It is the muscle of **blowing and whistling.**



➤ **Relations of buccinator muscle:**

- **Superficial relations:** buccal pad of fat, parotid duct, bucco-pharyngeal fascia, buccal nerve and vessels, and facial blood vessels.
- **Deep relation:** buccal mucosa.
- **The muscle is pierced by many structures : parotid duct, buccal nerve & vessels.**

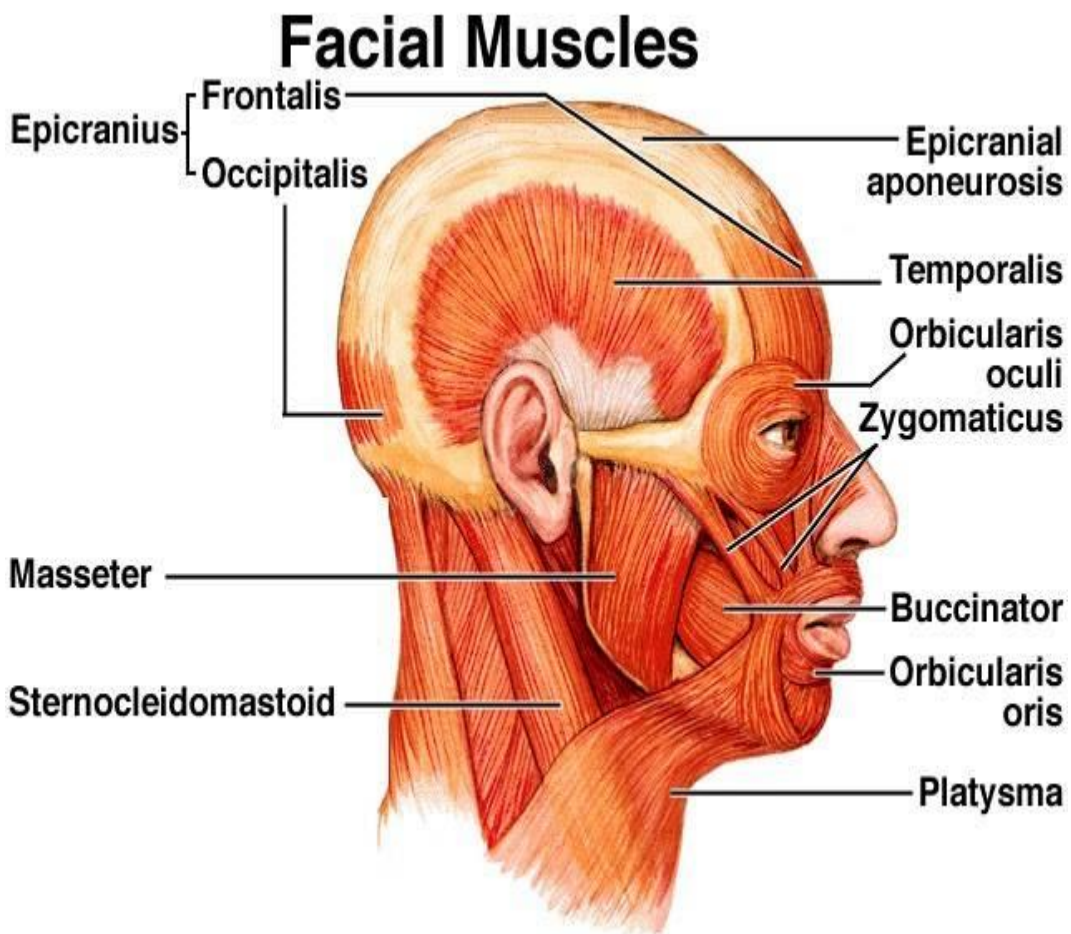
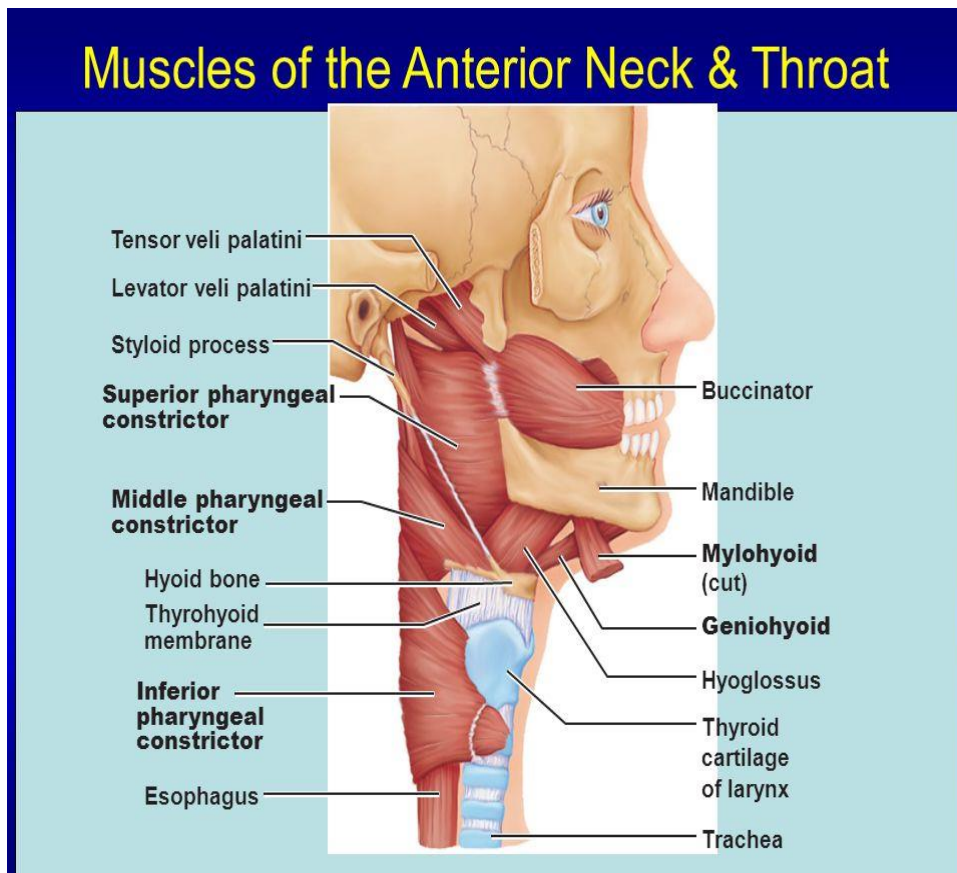
Anatomy of face



3. Orbicularis oris muscle: consists of extrinsic and intrinsic parts:

- The **intrinsic part** surrounds the mouth in the **upper and lower lips**.
- The **extrinsic part** is formed as extensions from the **surrounding muscles** as the buccinator muscle.
- **Action:** It is responsible for the **movements** of the lips and act as a **sphincter** for the mouth to close it.

Anatomy of face

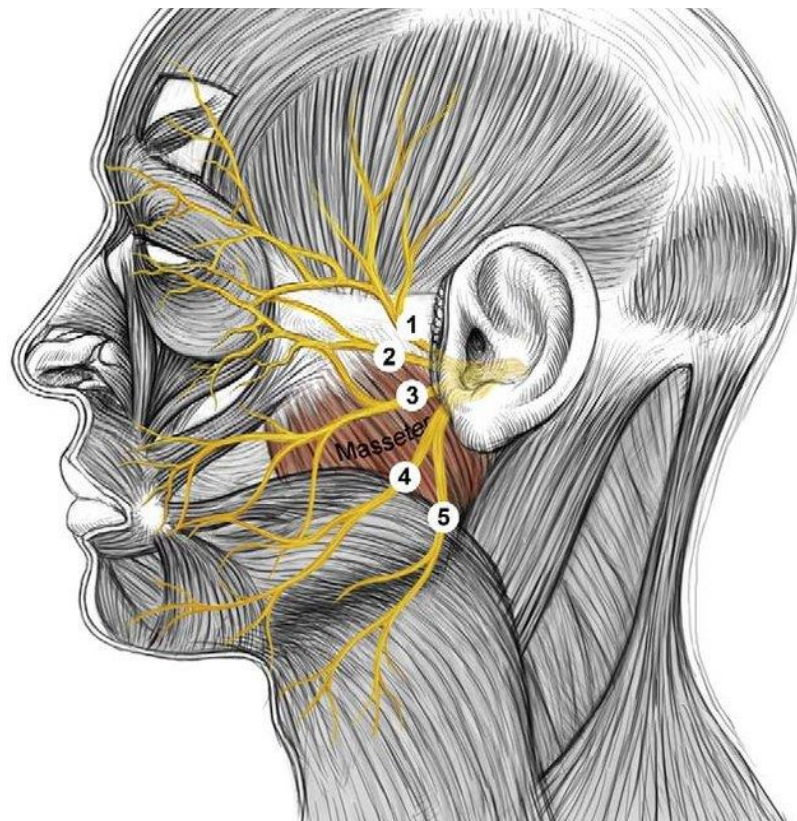


Anatomy of face

★ Nerve Supply of Face:

I. Motor Supply: (from the facial nerve)

- **Facial nerve** supply all muscles of face & scalp.
- The **facial nerve** ends in the parotid gland by dividing into its 5 terminal branches which are:
 1. **Temporal branch:** It supplies frontal belly of occipito-frontalis and orbicularis oculi muscles.
 2. **Zygomatic branches (upper and lower):** It supplies the orbicularis oculi, the muscles present between eye and mouth and the muscles of the nose.
 3. **Buccal branch:** Supplies the buccinator and orbicularis oris.
 4. **Mandibular branch:** Supplies orbicularis oris and muscles of lower lip.
 5. **Cervical branch.**

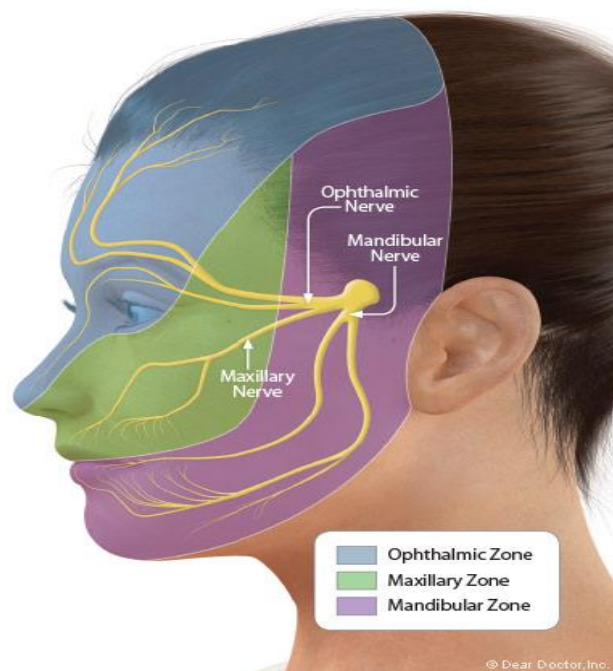


Anatomy of face

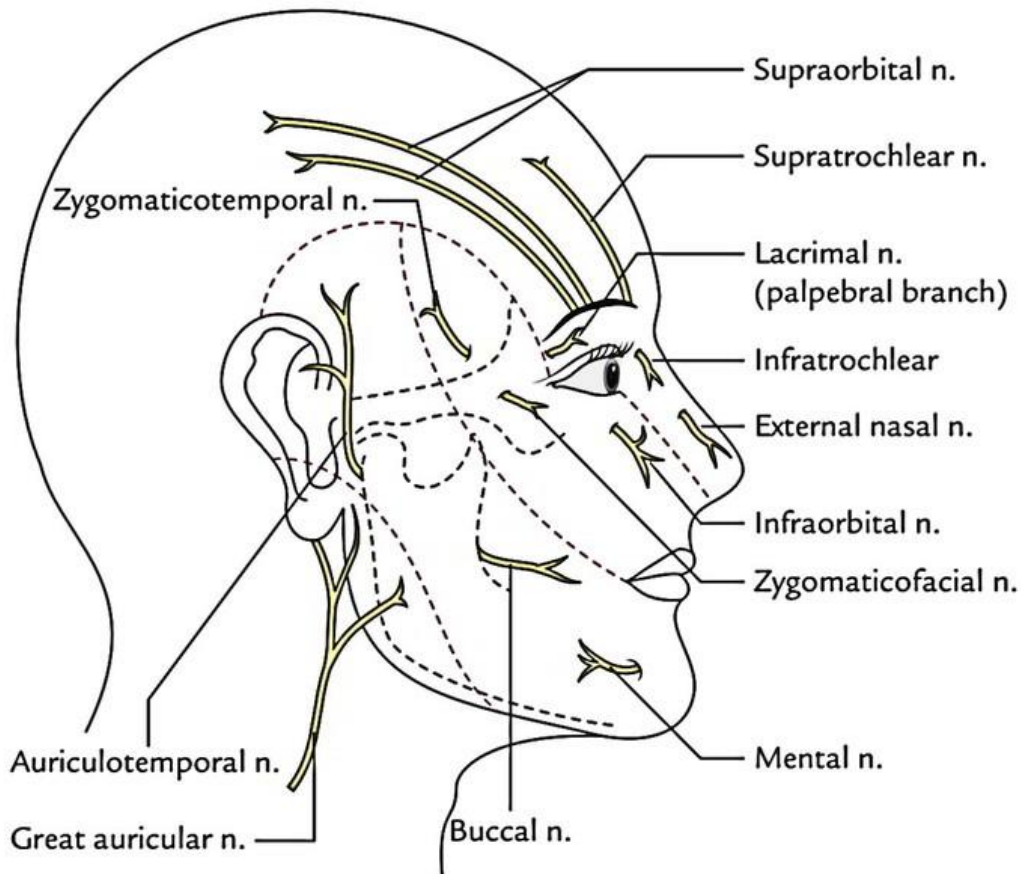
II. Sensory Supply (from the trigeminal nerve):

- The face is supplied by the 3 divisions of the **trigeminal nerve** (ophthalmic, maxillary, mandibular), **except** for a small area of skin covering the **angle of the mandible and the parotid gland** which is supplied by the **great auricular** nerve (C2-C3).
- The trigeminal nerve supply skin of face through the **following branches:**

Ophthalmic nerve	Maxillary nerve	Mandibular nerve
<p>It supplies the skin of forehead, upper eyelids, and dorsum of the nose through 5 branches:</p> <ul style="list-style-type: none"> • Supra-trochlear nerve • Infra-trochlear nerve • Supra-orbital nerve • External nasal nerve • Palpebral branch of lacrimal n. 	<p>It supplies the skin of front of face, lower eyelids, side of nose, upper lip, and skin over zygomatic bone through 2 branches:</p> <ol style="list-style-type: none"> 1. Infraorbital nerve gives palpebral, nasal, and labial branches. 2. Zygomatofacial nerve for the skin over zygomatic bone. 	<p>It supplies the skin of cheek (over the buccinator muscle), skin over the mandible, skin of the chin and lower lip through 2 branches</p> <ol style="list-style-type: none"> 1. Buccal nerve 2. Mental nerve



Anatomy of face



★Arterial supply of face:

1. Facial artery:

- It arises from **external carotid artery** in the neck.
- It has 2 parts; cervical and facial.
 - **Facial part:** It enters the face at the anteroinferior angle of the masseter muscle (where its pulsation is felt) ; it follows a tortuous course to a point 1 cm lateral to the angle of the mouth, then it passes vertically upwards to reach the medial angle of the eye. It **ends as** angular branch, which anastomoses with the supraorbital and supratrochlear branches of ophthalmic artery.

Anatomy of face

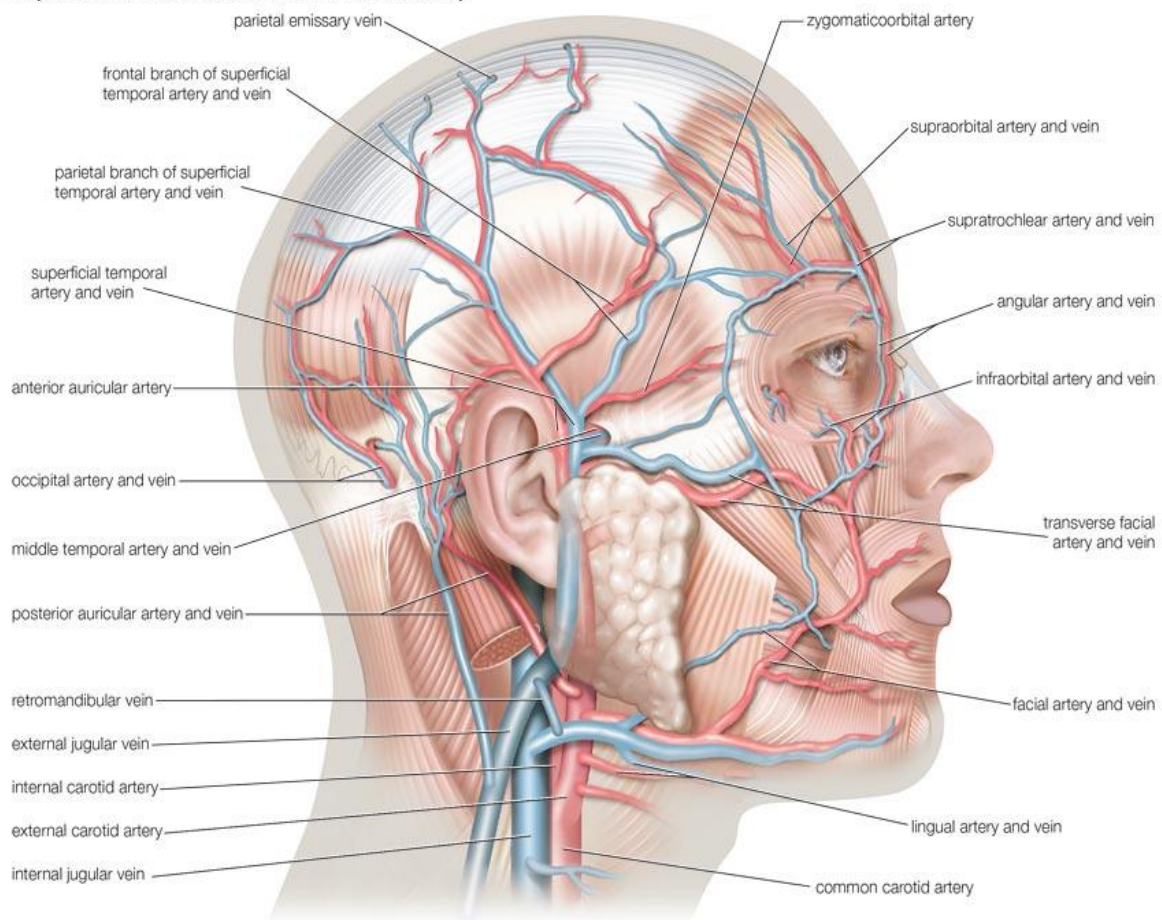
➤ Branches:

a- **Inferior labial artery:** Supplies the lower lip.

b- **Superior labial artery:** Supplies the upper lip and gives a septal branch to the lower anterior part of nasal septum.

c- **Nasal branch:** Supplies the side of the nose.

Superficial arteries and veins of face and scalp



Blood Supply of Face

Anatomy of face

2. **Transverse facial artery:**

- It arises **from** the **superficial temporal** artery inside the parotid gland.
- It leaves the **anterior border** of the gland, passes transversely above the parotid duct.
- It **ends by** anastomosing with other arteries which supply the face.

3. **Infraorbital artery:**

- It is the termination of the **maxillary artery** which comes out from the infra-orbital foramen.
- It divides into 3 branches:
 - a- **Palpebral branch** for the lower eye lid.
 - b- **Nasal branch** for the side of nose.
 - c- **Labial branch** for the upper lip.

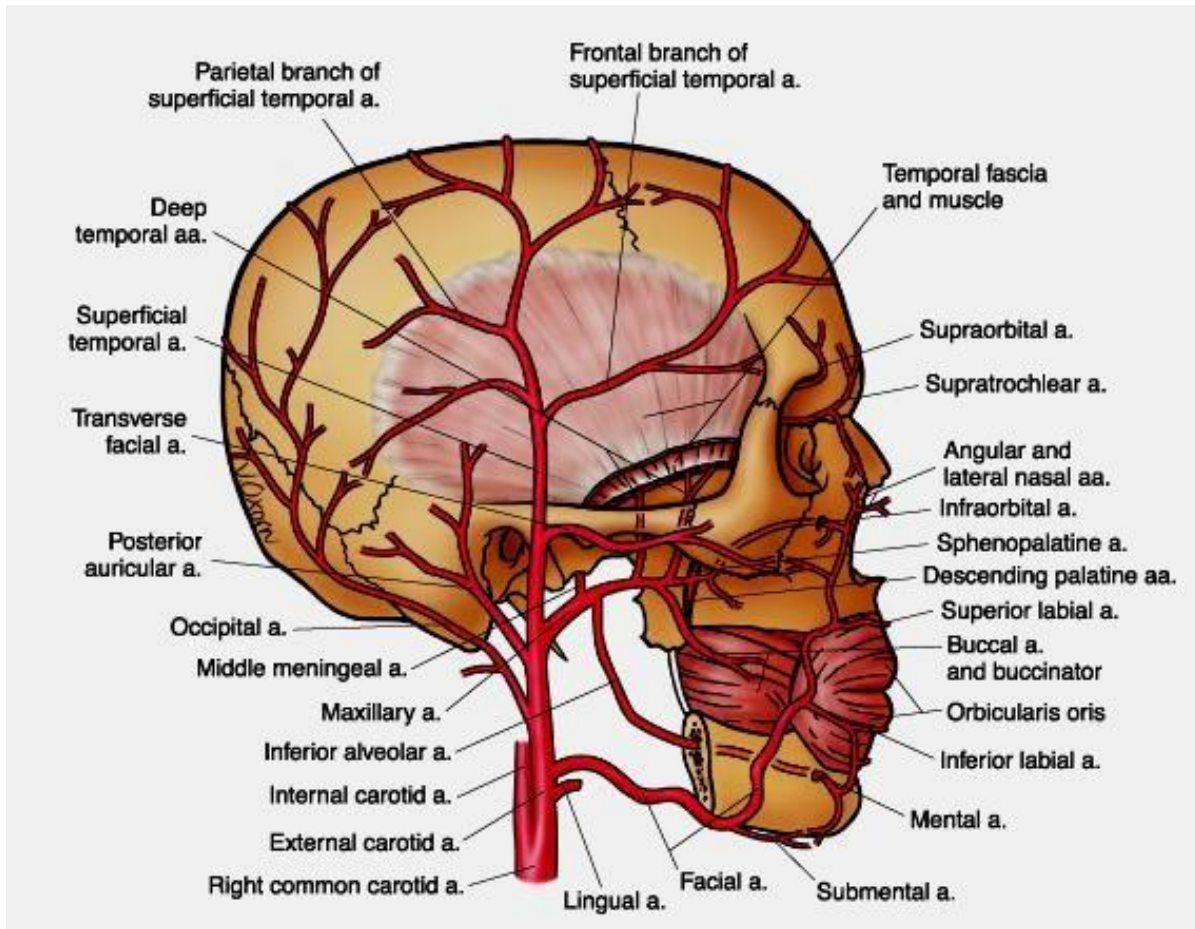
4. **Buccal artery:** It arises from the **maxillary artery** and lies over the buccinator muscle.

5. **Mental artery:** It arises from the **inferior alveolar artery** (from maxillary artery) and supplies the chin and the lower lip.

6. **Supra-orbital and supra-trochlear arteries:** They arise from the ophthalmic artery and supply the upper eye lids and the forehead.

7. **Dorsal nasal artery:** Arises from the ophthalmic artery and supplies the dorsum of the nose.

Anatomy of face



★Venous Drainage of Face:

- There are **two main** veins which drain the face: the **anterior facial** vein (anteriorly) and the **retromandibular** vein (posteriorly).

1. **Anterior facial vein:**

- It is **formed** at the **medial angle** of the eye by the union of **supratrochlear and supra-orbital** veins.
- **It runs a** downwards and backwards in the face **behind** the **facial artery**.
- It **leaves the face** at the antero-inferior angle of masseter muscle, **crosses** the submandibular gland to enter the neck.

Anatomy of face

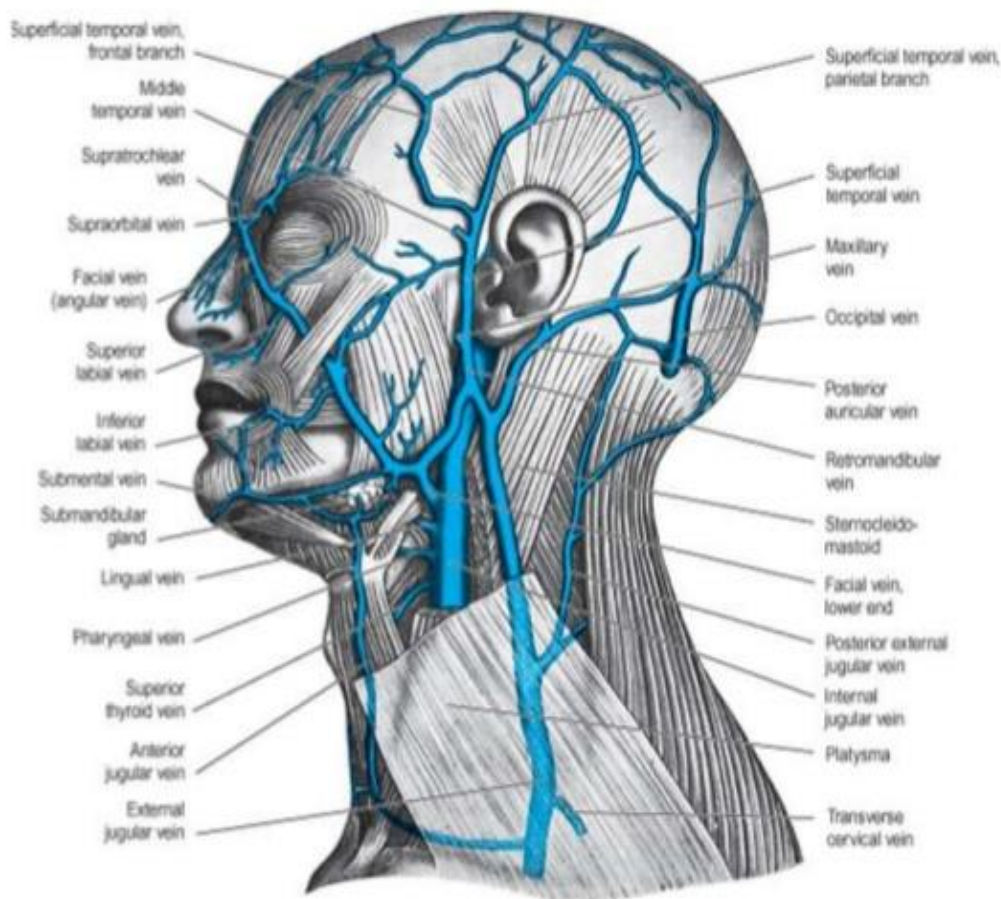
- It **unites with** the anterior division of the **retromandibular vein** to form the **common facial vein** which ends in the **internal jugular vein**.
- **Tributaries:**
 - a. **Supratrochlear and supraorbital** veins.
 - b. **Deep facial vein** which connects it with the pterygoid venous plexus.
 - c. Veins from **submandibular** gland.
 - d. **Tonsillar** vein (from palatine tonsil).

2. Retromandibular vein:

- It is **formed** inside the **parotid** gland by **union of** maxillary and superficial temporal veins.
- It **ends** by dividing into anterior and posterior divisions, which leave the **lower end of the parotid** gland.
 - **Anterior division** unites with anterior facial vein to form the **common facial vein**.
 - **Posterior division** unites with posterior auricular vein to form the **external jugular vein**.

3. Other veins of the face: Transverse facial, infraorbital and mental veins which end in the pterygoid venous plexus.

Anatomy of face



★Applied anatomy: Dangerous area of the face

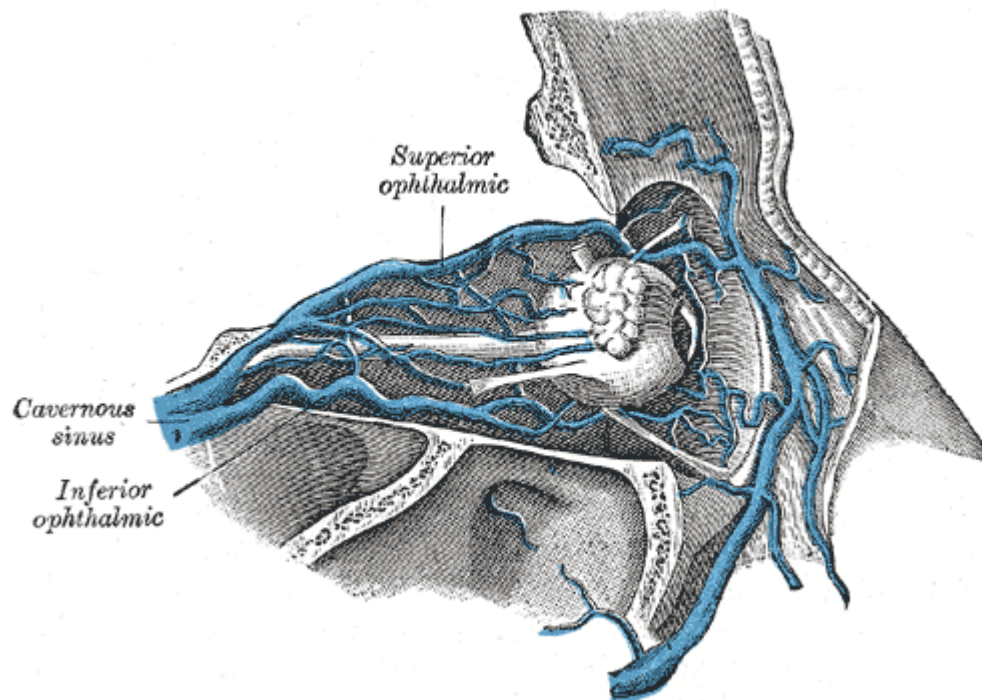
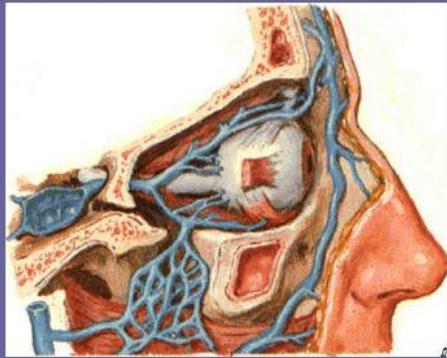
- Triangular area in the middle part of the face **around the nose and upper lip.**
- It is dangerous because infection in this area can spread and reach the cavernous sinus (leading to thrombosis) through :
 - **Anterior facial vein** → deep facial vein → pterygoid venous plexus → emissary vein through foramen ovale → cavernous sinus.
 - **Ophthalmic veins** which end in the cavernous sinus.

Veins of head and neck

“Danger triangle of the face”

- lies between root of nose and two angles of mouth
- In this area the facial vein has no valves

Connections with **cavernous sinus** and **pteygoid venous plexus**



Anatomy of face

★Lymphatic drainage of the face:

- The medial part of forehead & medial parts of eyelids, the nose, medial part of cheek, upper lip and lateral parts of lower lip drain into the **submandibular** LNs.
- The lateral parts of forehead, lateral parts eyelids, temple & lateral part of cheek drain into the **preauricular** & **parotid** LNs.
- The central part of the lower lip & chin drains into the **submental** LNs.
- All previous lymph nodes drain into **upper and lower deep cervical** lymph nodes.



Anatomy of face