

**FACE**



**Dr / Rasha Abdelaziz Abd Ellatif**  
**Associate. Prof. of Human Anatomy and Embryology**

# Lecture ILOS & Objectives:

- **By the end of this lecture the student should be able to:**
- **Understand layers of the face**
- **Understand important muscles of the face**
- **Describe the blood supply of the face**
- **Outline the lymphatic drainage of the face**

# FACE

## Extension:

- The face extends at the sides from ear to ear
- from the chin inferiorly, to the roots of the hair above

## Layers of the face:

**Skin:** Soft, very vascular and contains numerous sweat and sebaceous glands.

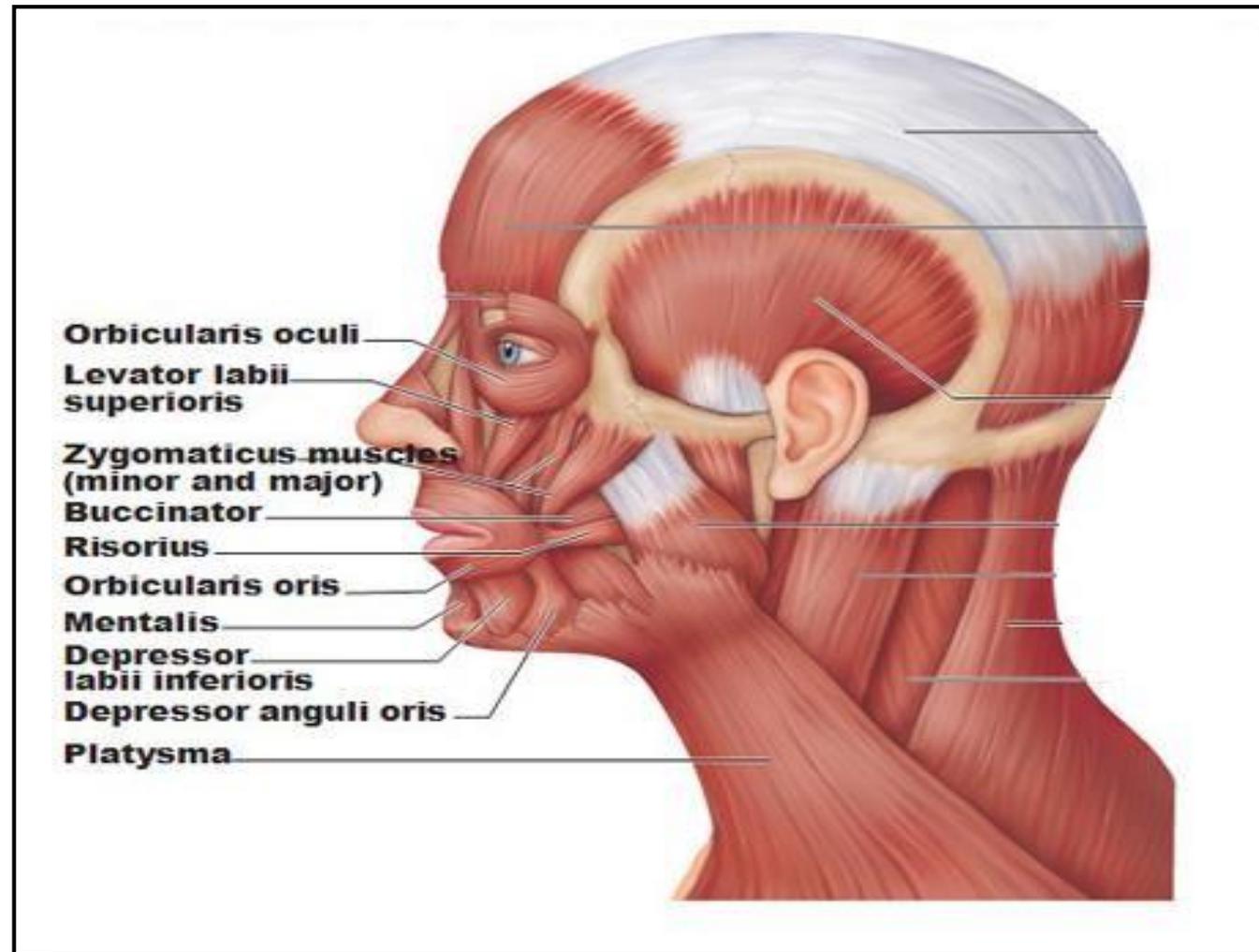
**Superficial fascia:** contains variable amount of fat that Embeds the nerves , vessels and muscles of the face.

**Deep fascia:** NO deep fascia in the face except at the parotid fascia surrounding the parotid gland  
The buccopharyngeal fascia over the buccinator muscle



# MUSCLES OF FACE

- They are known as muscles of expression
- They lie in the superficial fascia
- They are arranged around facial openings
- They arise from facial bones and insert into the skin of face
- They are supplied by facial nerve = 7<sup>th</sup> cranial nerve
- They are developed from 2<sup>nd</sup> branchial arch
- They are connected with the ends of each other



# IMPORTANT MUSCLES OF FACE

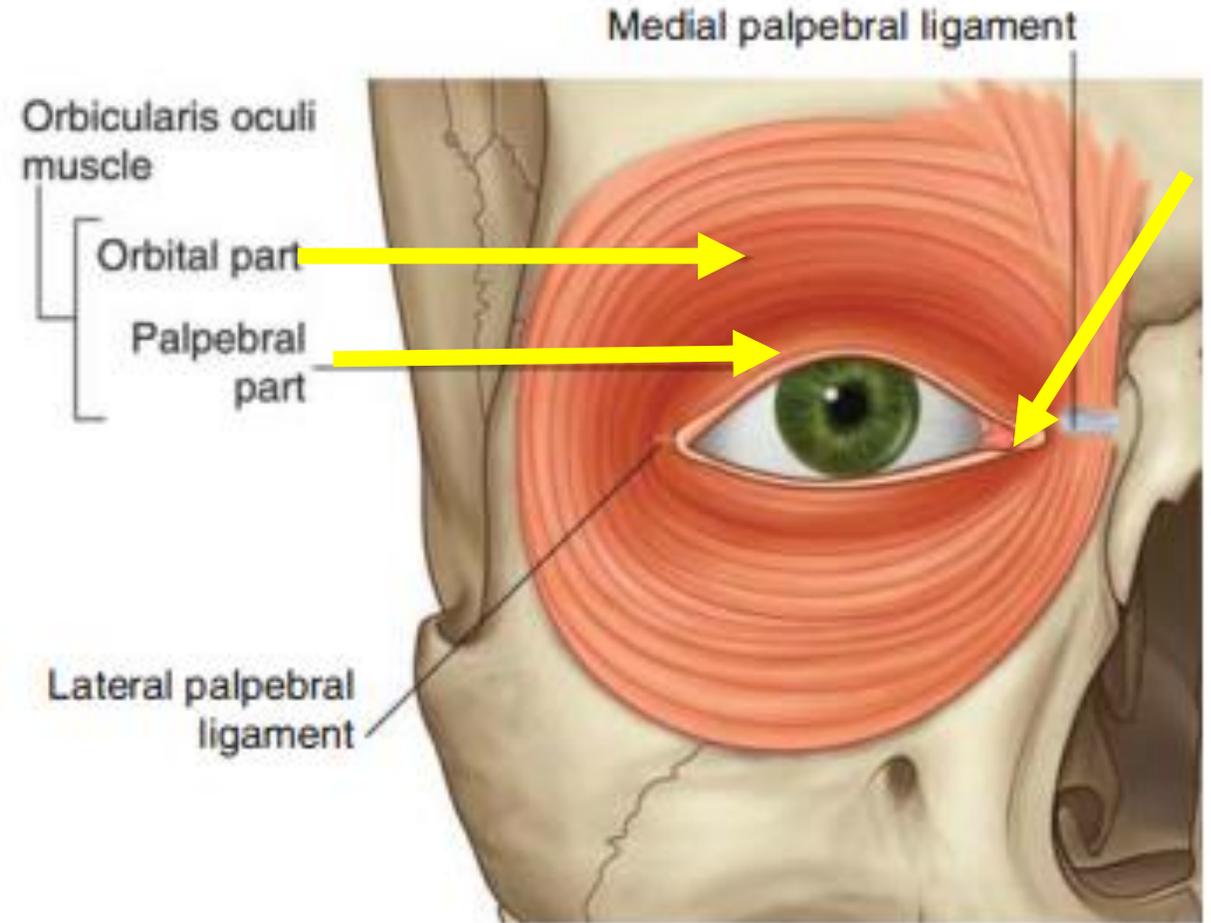
## Orbicularis oculi

### ORIGIN:

**Orbital part:** medial palpebral ligament

**Palpebral part:** medial palpebral ligament

**Lacrimal part:** posterior lacrimal crest and sheath of lacrimal sac.



# Orbicularis oculi

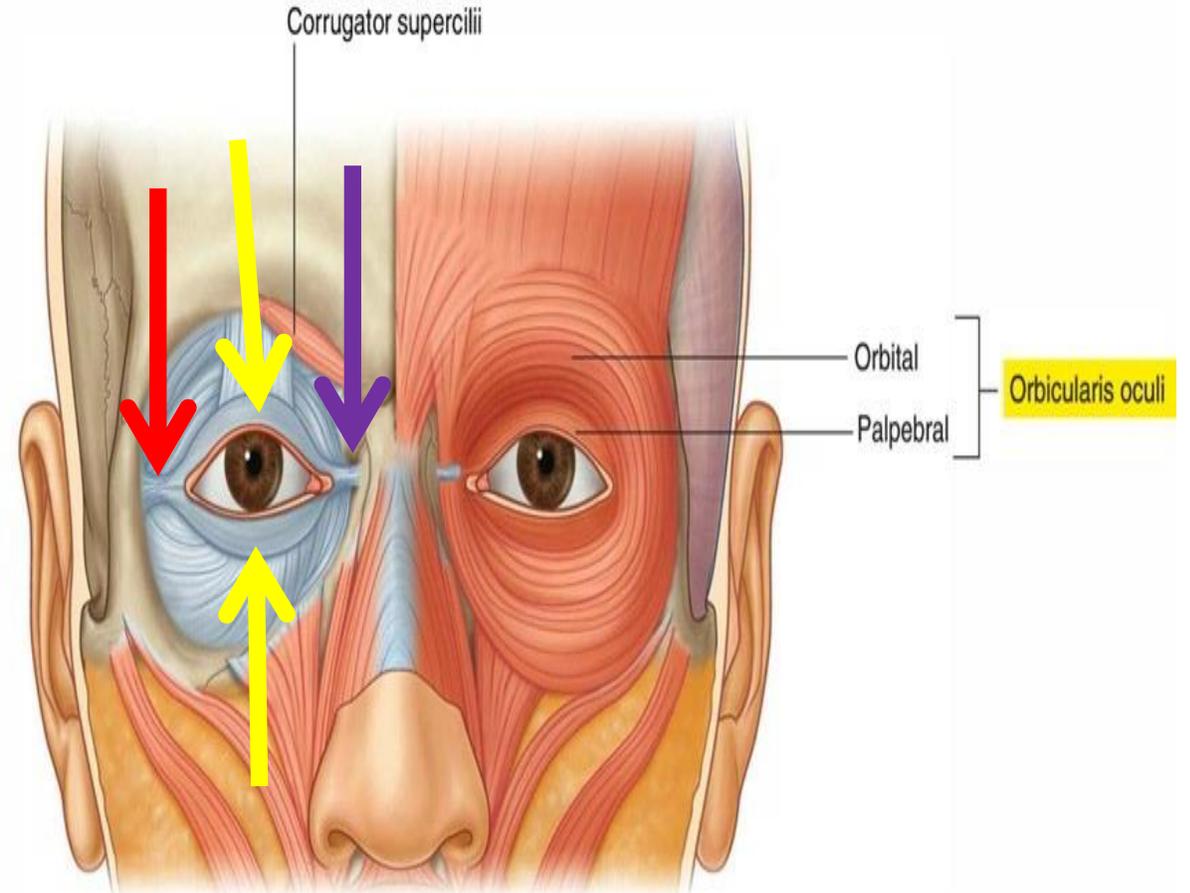
## Insertion :

**Orbital part:** Form concentric loops and return to medial palpebral ligament

**Palpebral part:** Fibers run laterally, interlace together forming lateral palpebral raphe

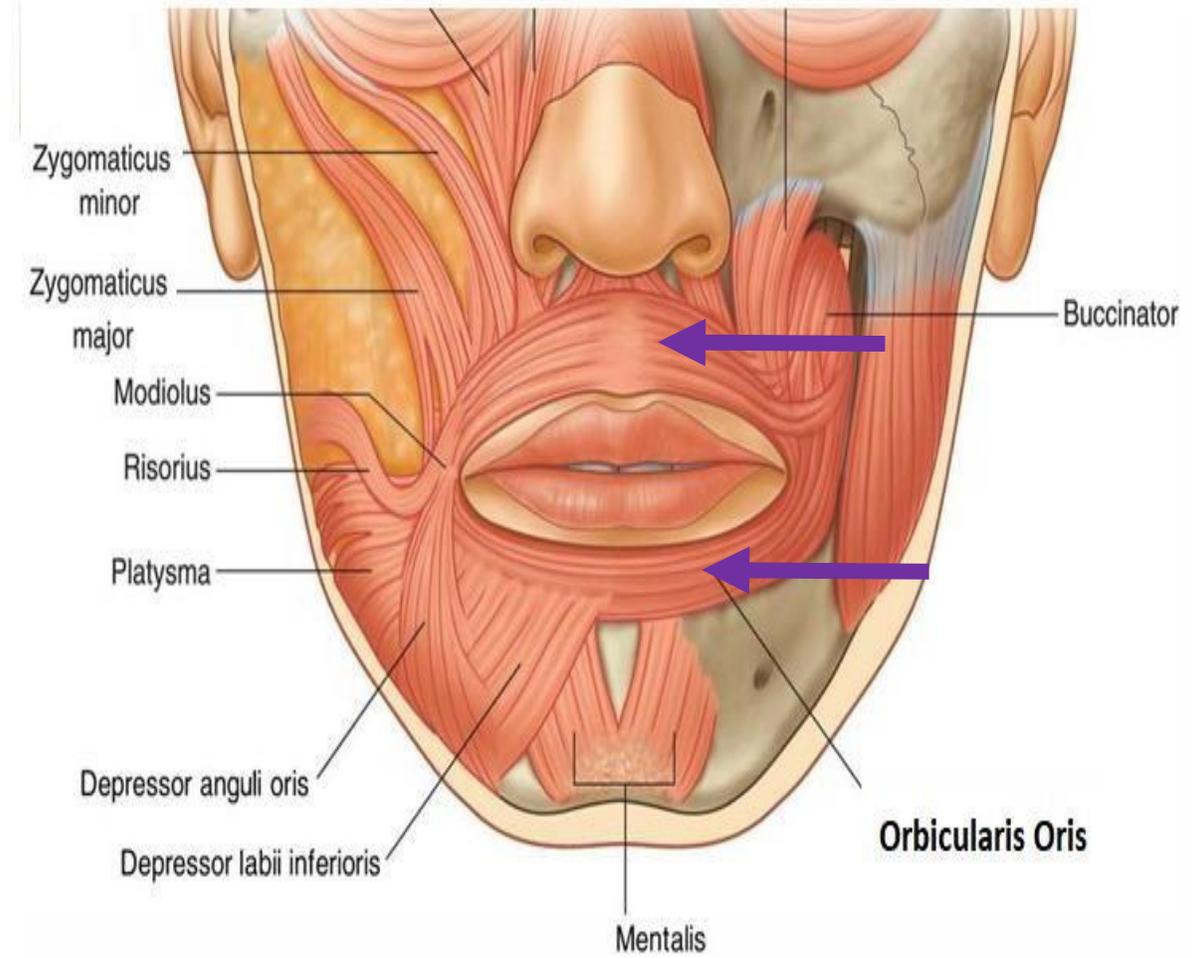
**Lacrimal part:** Tarsi of both lids

- Nerve supply: facial nerve
- Action:
  1. Forcible closure of eye
  2. light closure of the eye lids (Blinking)
  3. Dilates lacrimal sac



# Orbicularis oris:

- **Origin:** maxilla, mandible, skin
- **Insertion:** encircles the oral orifice.
- **Nerve supply:** facial nerve
- **Action:** compresses lips together



# buccinator muscle

## Origin :

- Upper fibers:

alveolar margin of maxilla opposite the last 3 molar teeth.

- Lower fibers:

alveolar margin of mandible opposite the last 3 molar teeth.

- Middle fibers:

pterygo- mandibular ligament.

## Insertion:

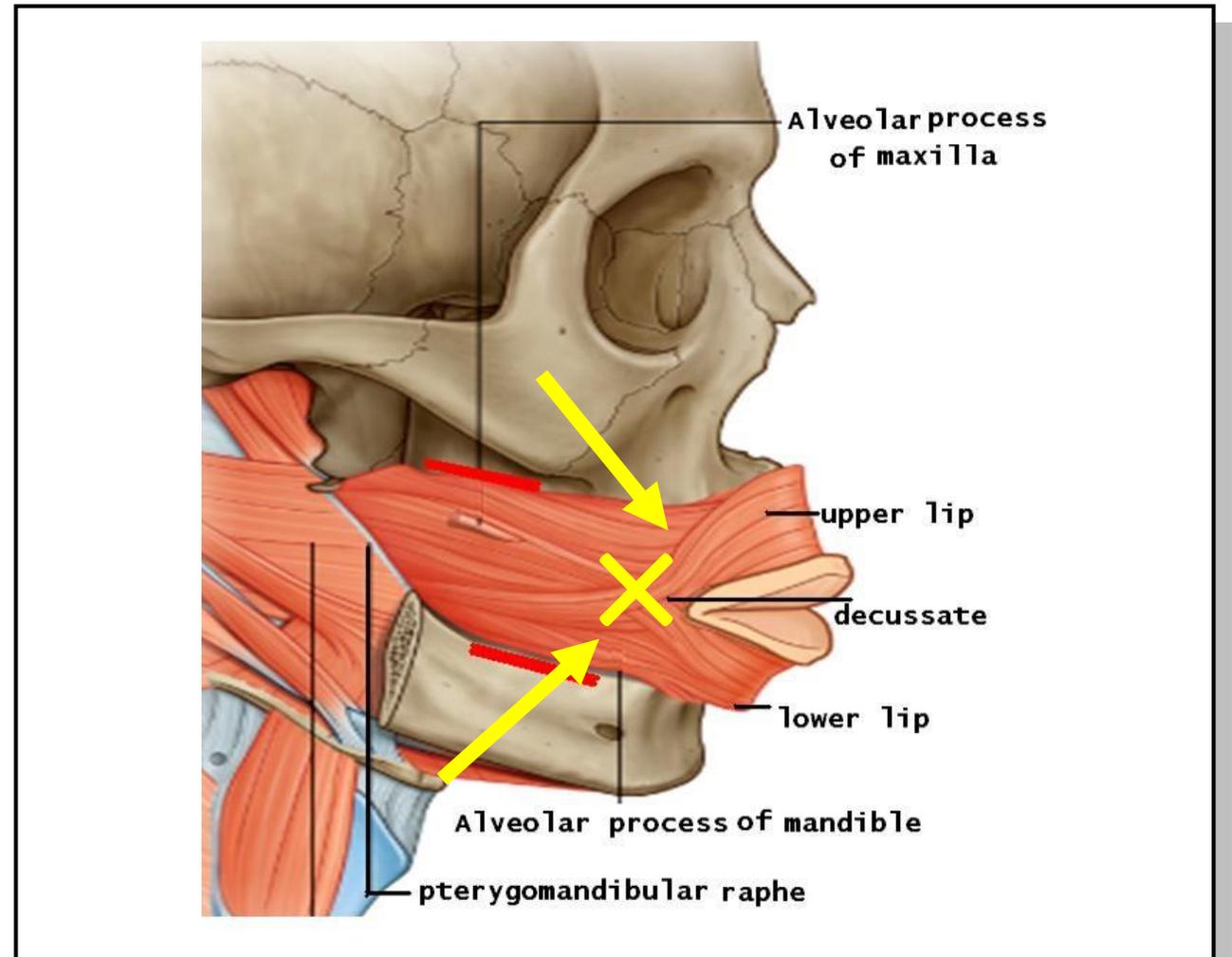
- Upper fibers : Upper lip

- Lower fibers: lower lip

- Middle fibers : decussates

## Nerve supply: facial nerve

## Action: compresses the cheeks and lips against the teeth, suckling in newborn.

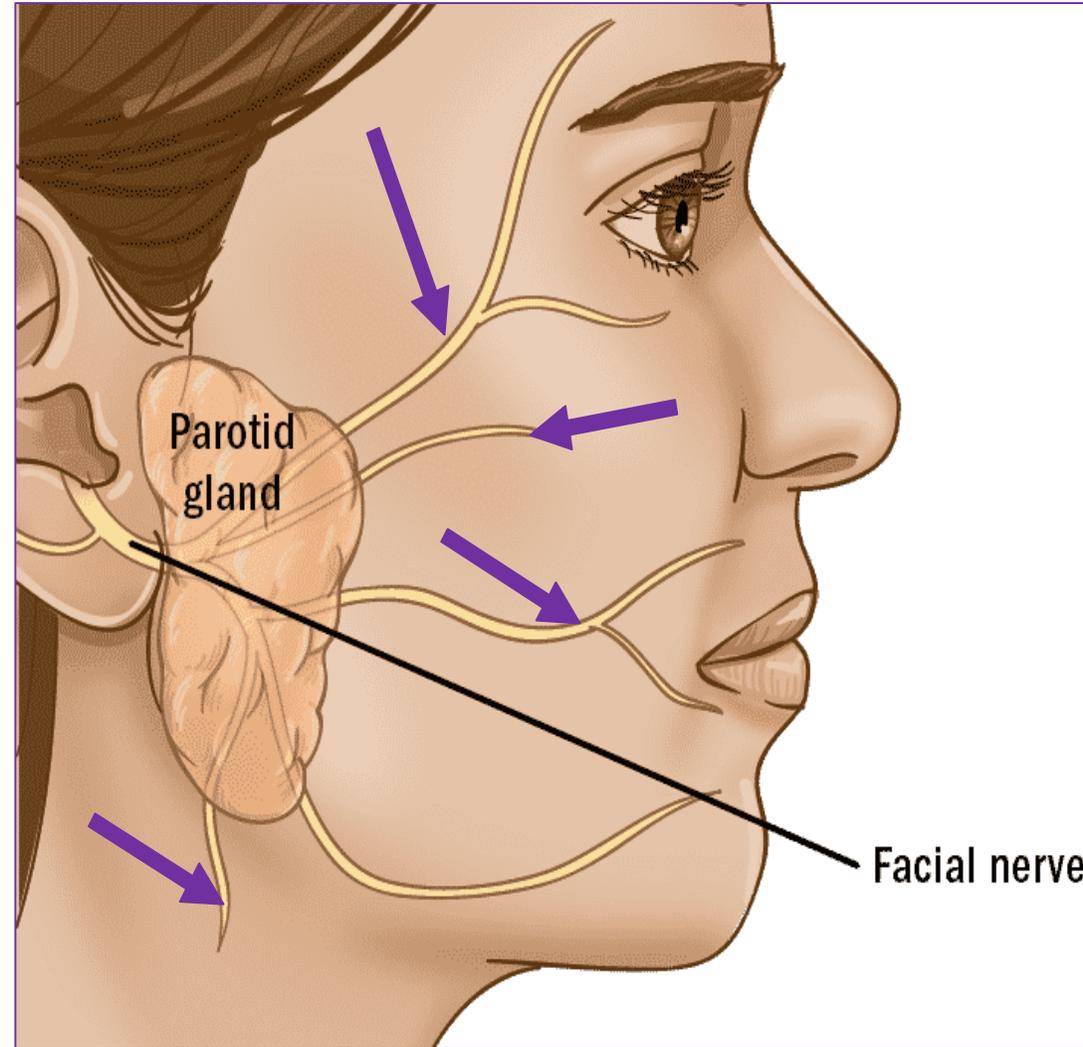


Buccinator muscle

# Motor nerve supply of face

## FACIAL NERVE

- It divides into its five terminal branches as it runs forward within the substance of the parotid salivary gland:
1. **Temporal branch** supplies the frontal belly of the occipitofrontalis and the orbicularis oculi.
  2. **Zygomatic branch** supplies the orbicularis oculi.
  3. **Buccal branch** supplies the buccinator.
  4. **Mandibular branch** supplies the muscles of the lower lip.
  5. **Cervical branch** supply the platysma muscle.



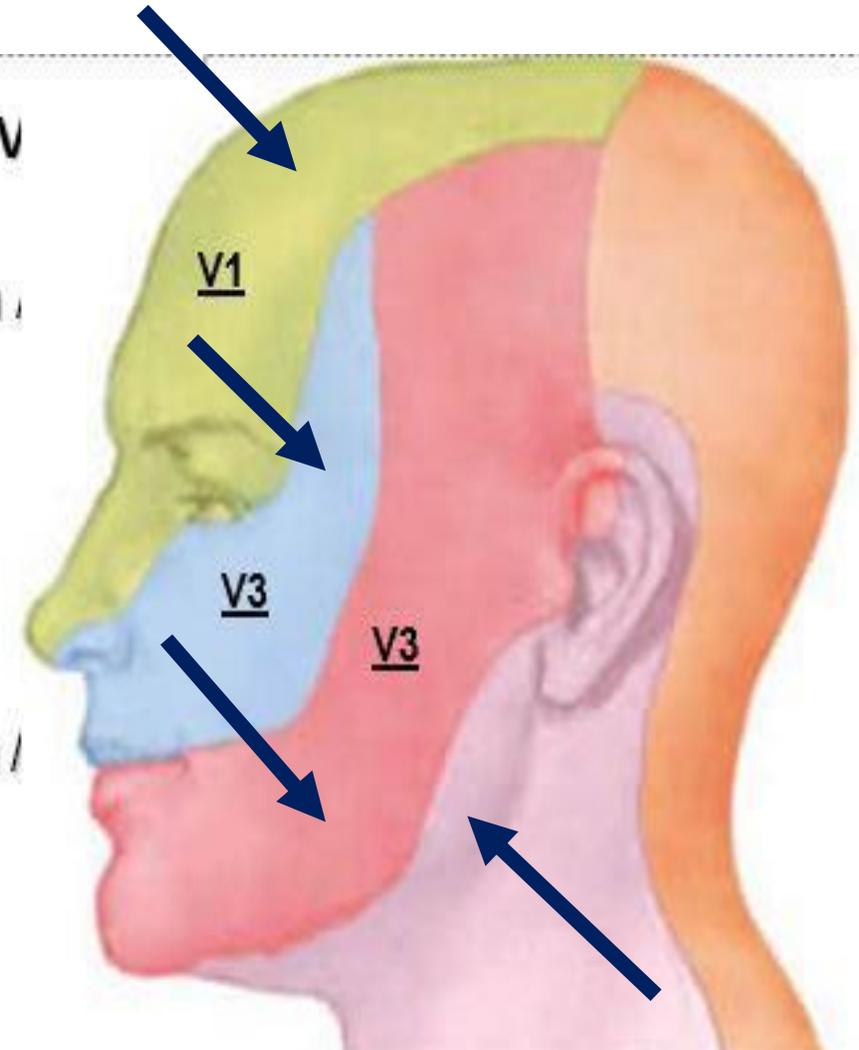
# SENSORY NERVE SUPPLY OF FACE

- The skin of the face is supplied by branches of the three divisions of the **trigeminal nerve** (ophthalmic, maxillary & mandibular).
- Small area over the angle of the mandible is supplied by **great auricular nerve**.

## Trigeminal Nerve /CN V

Branches:

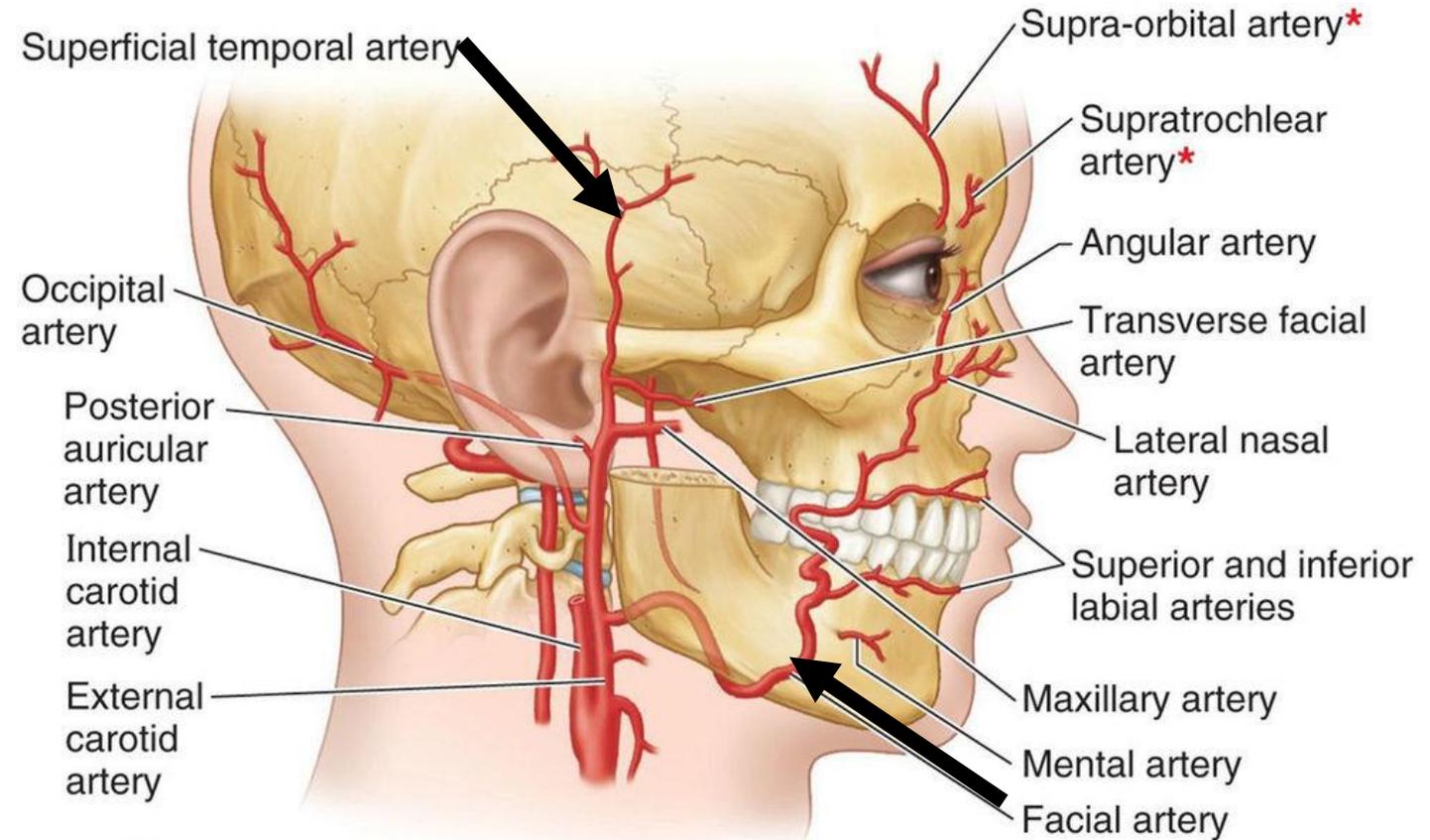
1. Ophthalmic Division / Nerve (V1)
2. Maxillary Division / Nerve (V2)
2. Mandibular Division / Nerve (V3)



# ARTERIAL SUPPLY OF FACE

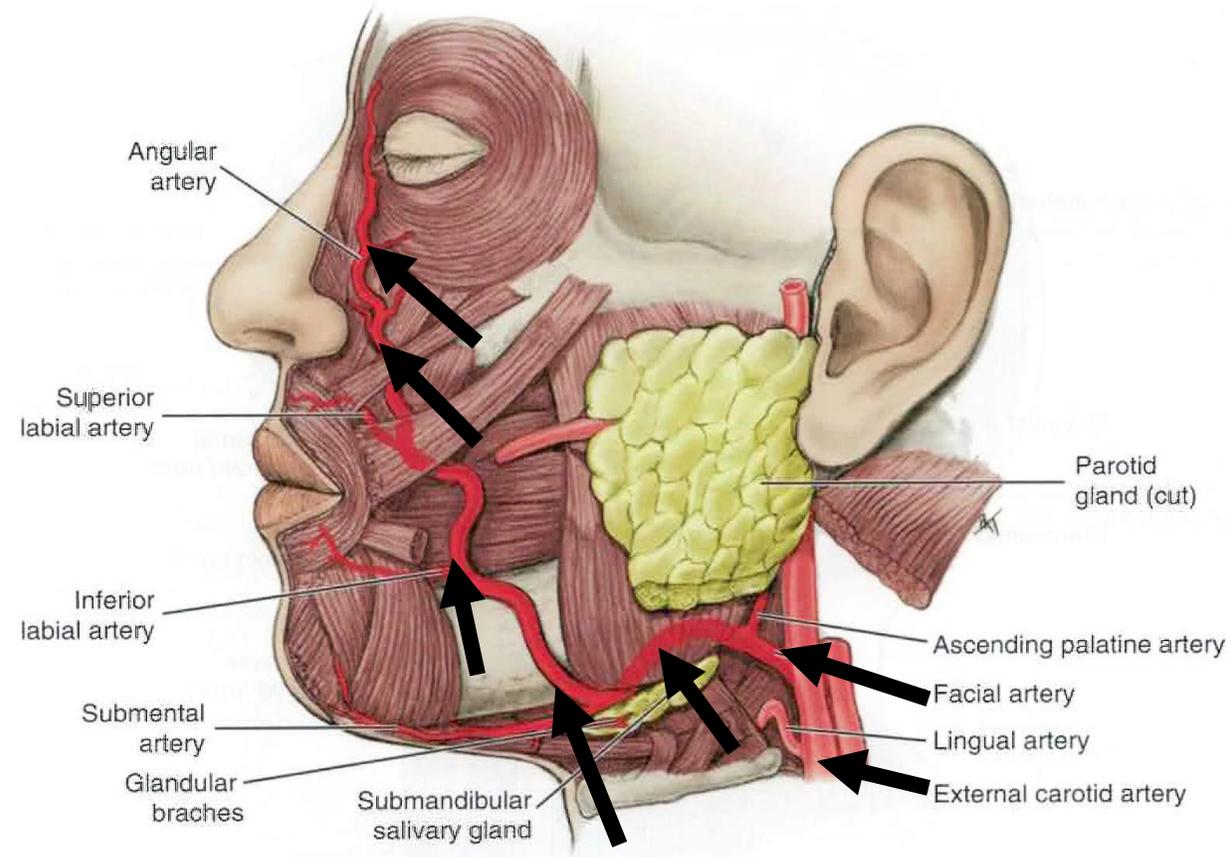
- The face receives a rich blood supply from two main vessels:

1. Facial artery
2. Superficial temporal artery



# FACIAL ARTERY

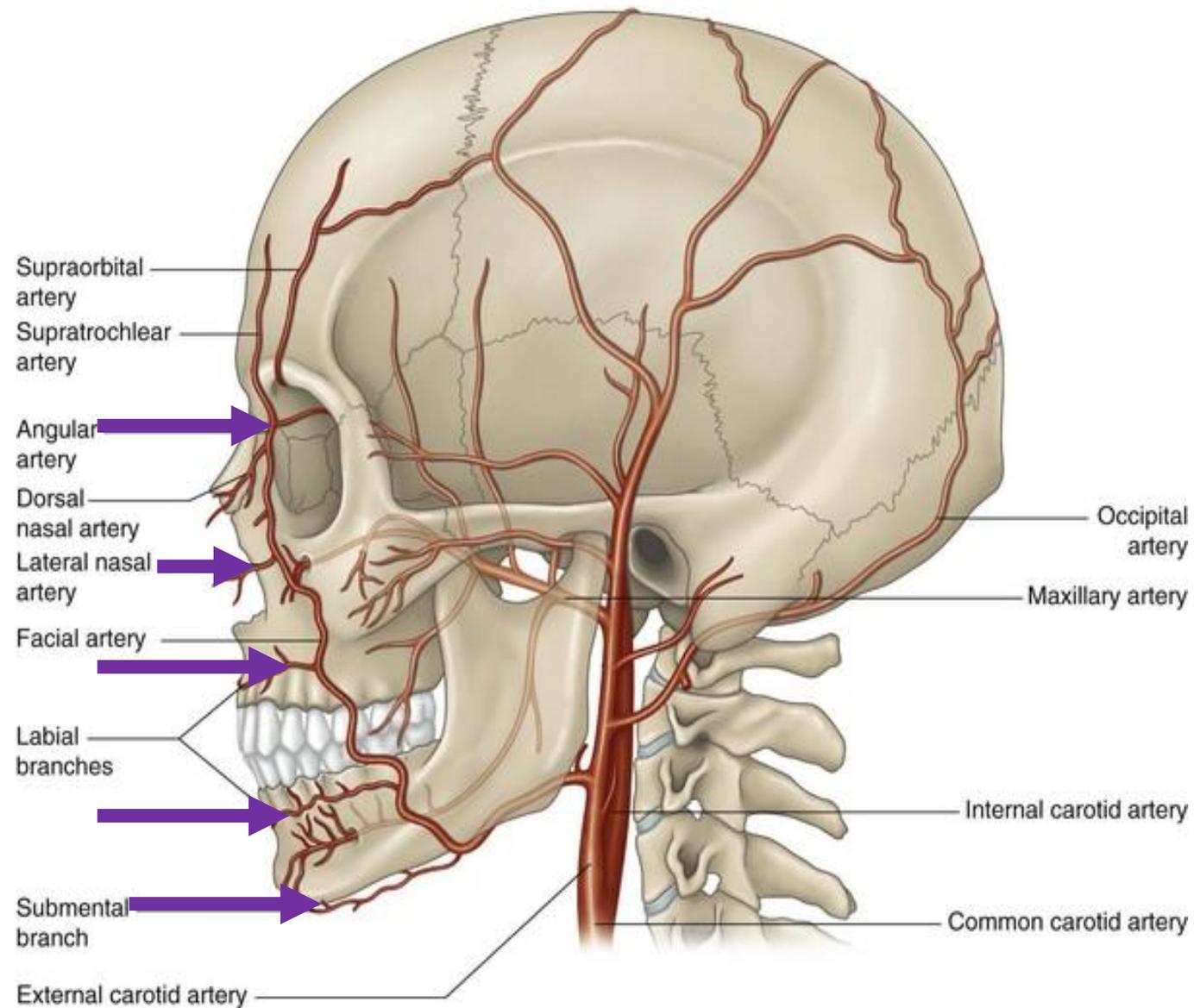
- Facial artery arises from the external carotid artery.
- It curves around the inferior margin of the body of the mandible at the anterior border of the masseter muscle.
- It next runs upward in a tortuous course toward the angle of the mouth.
- It then ascends and runs along the side of the nose to the medial angle of the eye.



# FACIAL ARTERY

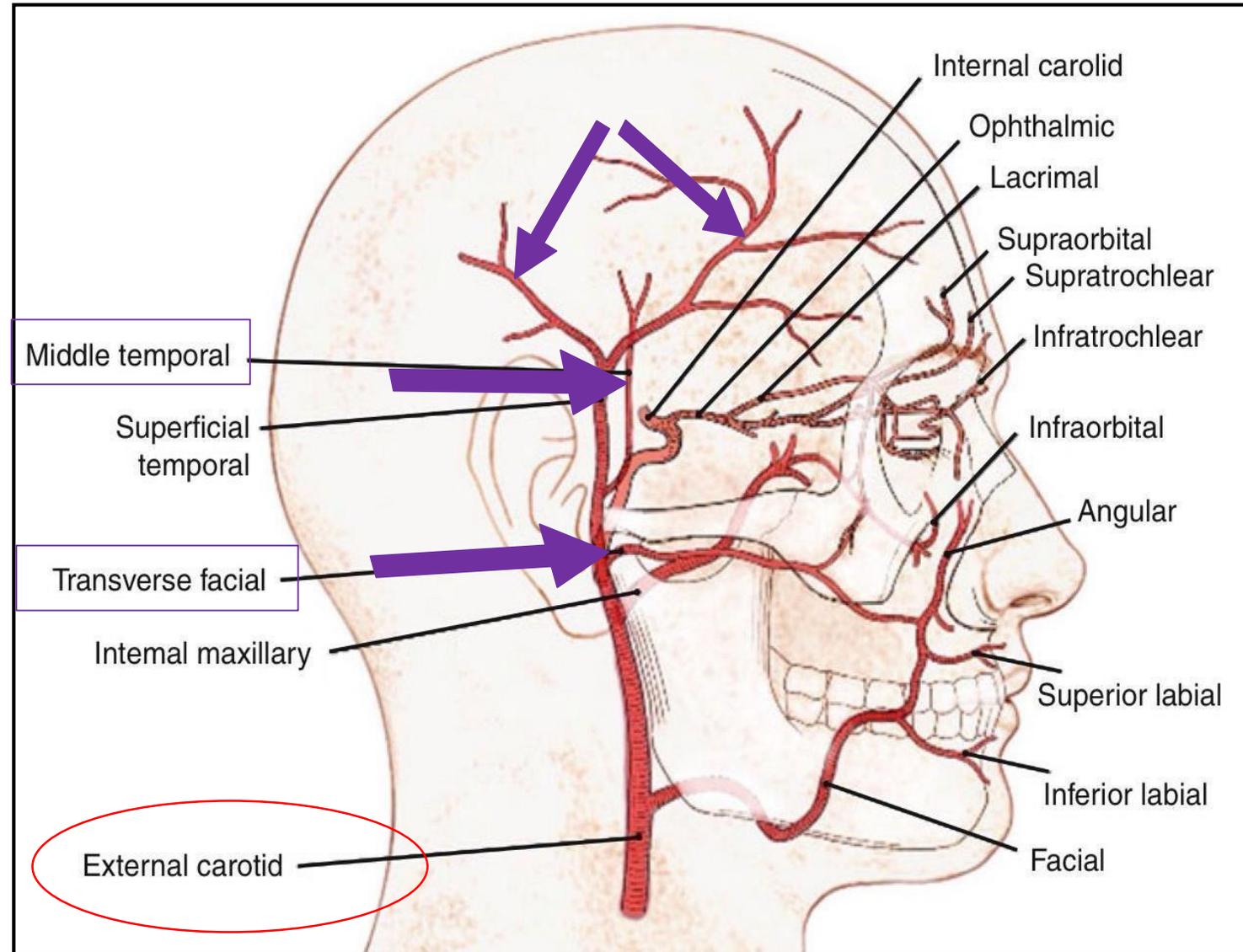
## Branches:

1. **Submental artery** supplies the skin of the chin and lower lip.
2. **Inferior labial artery** supplies the lower lip.
3. **Superior labial artery** supplies the upper lip and septum and ala of the nose.
4. **Lateral nasal artery** supplies the skin on the side and dorsum of the nose.
5. **Angular artery** is the terminal part of the facial artery at angle of the eye.



# SUPERFICIAL TEMPORAL ARTERY

- It is the smaller terminal branch of the external carotid artery.
- It ascends in front of the auricle to supply the scalp.
- Branches:
  1. Transverse facial artery runs just below the zygomatic arch.
  2. Middle temporal
  3. Anterior and posterior terminal branches.

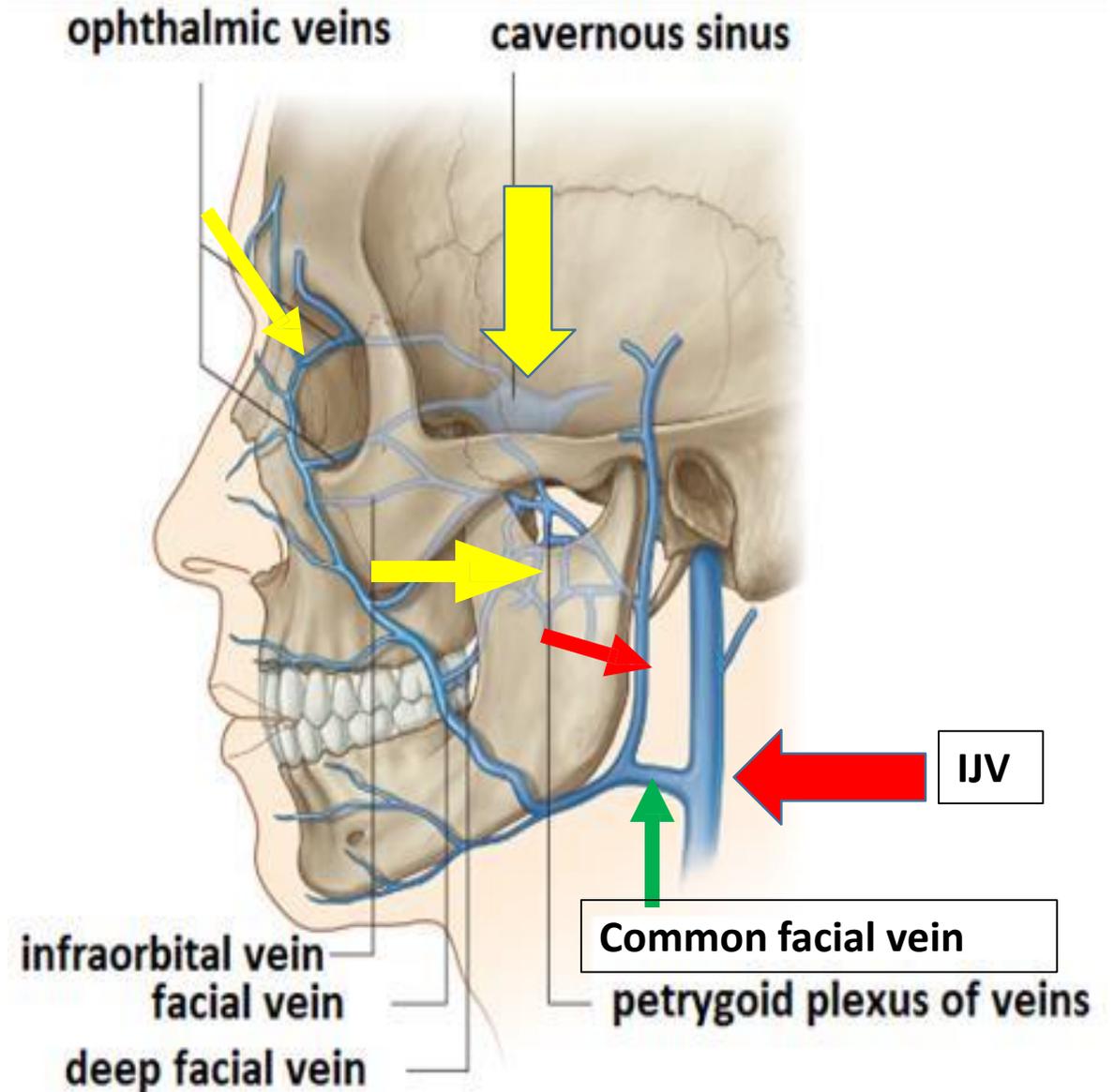


# Venous drainage of the Face

- Anterior facial vein
- Posterior facial vein

# Anterior facial vein

- **Beginning:** At the medial angle of the eye by the union of the supratrochlear and supraorbital veins.
- **Course:** It descends behind the facial artery
- **End:** It joins the anterior division of the posterior facial vein to form the common facial vein.
- **Connections with the cavernous sinus:** by
  1. **Superior and inferior ophthalmic veins:**
  2. **Deep facial vein:** connects it to the pterygoid plexus of veinsthen an emissary vein passes through the foramen ovale to end in the cavernous sinus.



# Posterior facial vein

**Beginning**: by union of superficial temporal and maxillary veins within the the parotid gland.

## **Course and termination:**

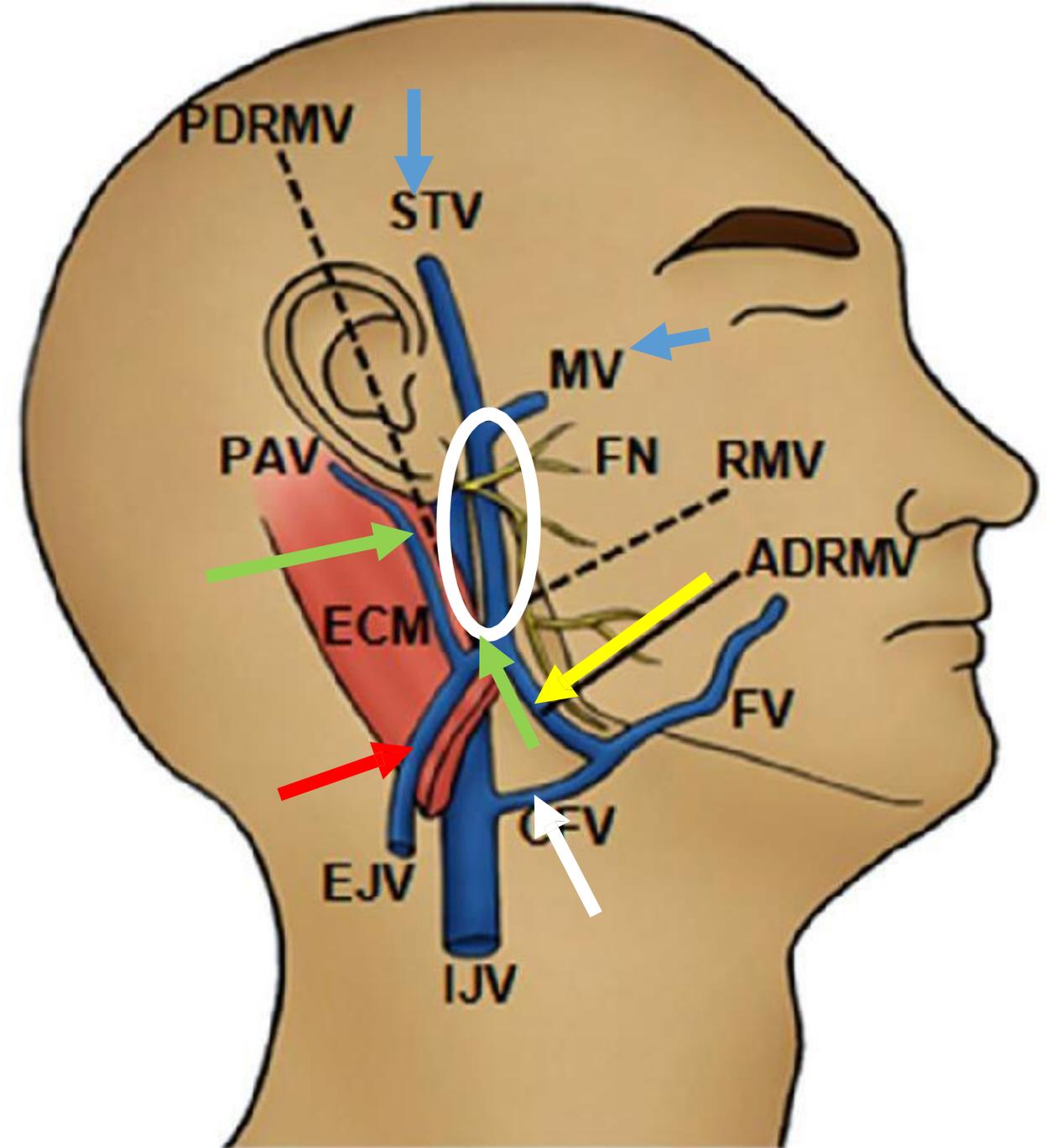
At the lower end of the parotid gland it divides into:

- **Anterior branch:**

Unites with the anterior facial vein to form the common facial vein which drains into the internal jugular vein.

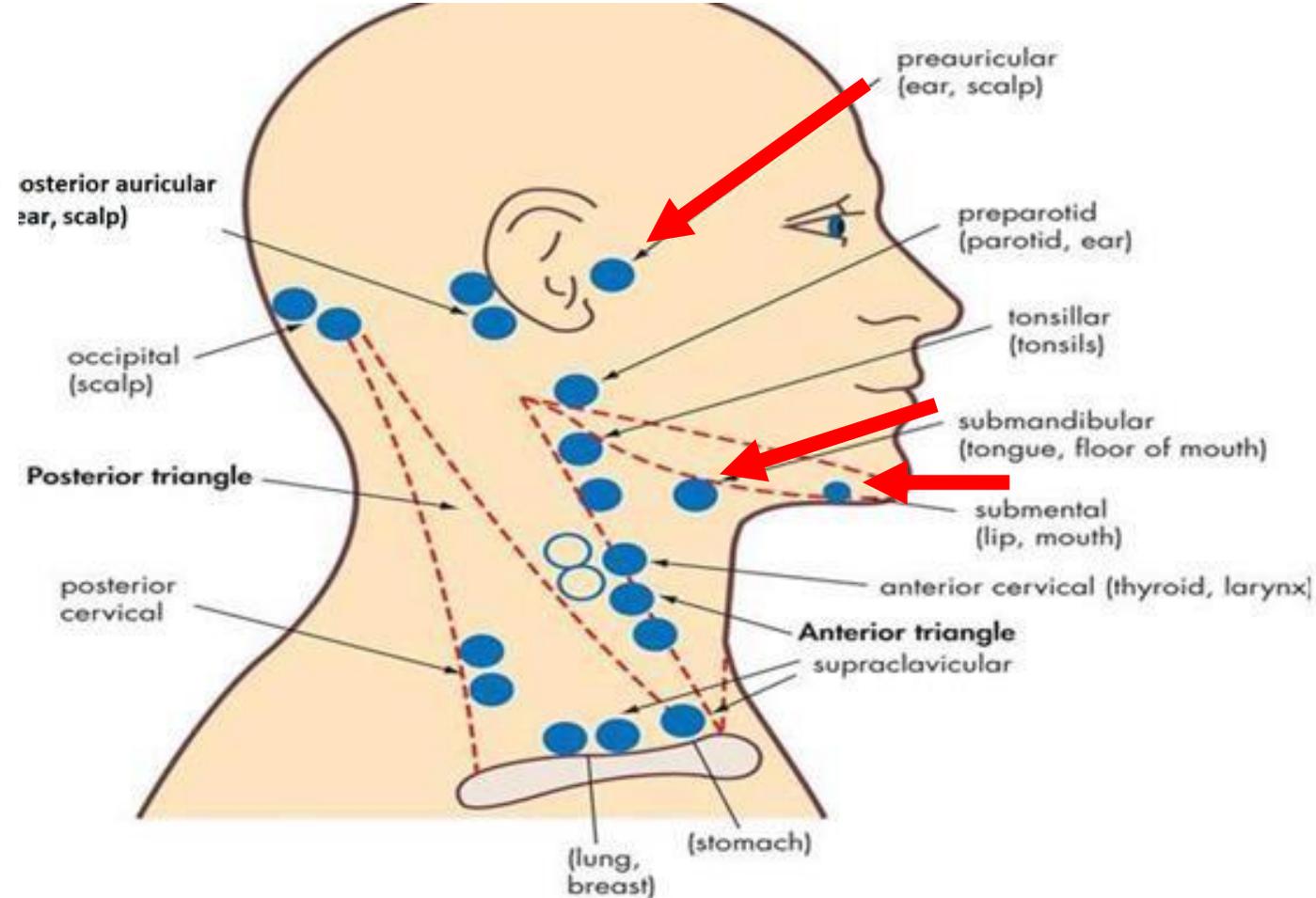
- **Posterior branch:**

Unites with the posterior auricular vein to form the external jugular vein which ends in subclavian vein.



# Lymphatic drainage of the face

- **lateral part of face** Drain into the peri-auricular(parotid) lymph nodes.
- **Forehead and the anterior part of the face** drain into the buccal and submandibular nodes.
- **Central part of the lower lip and the skin of the chin** Drain into submental lymph node



# Dangerous area of the face or maxillofacial death pyramid

## Extension:

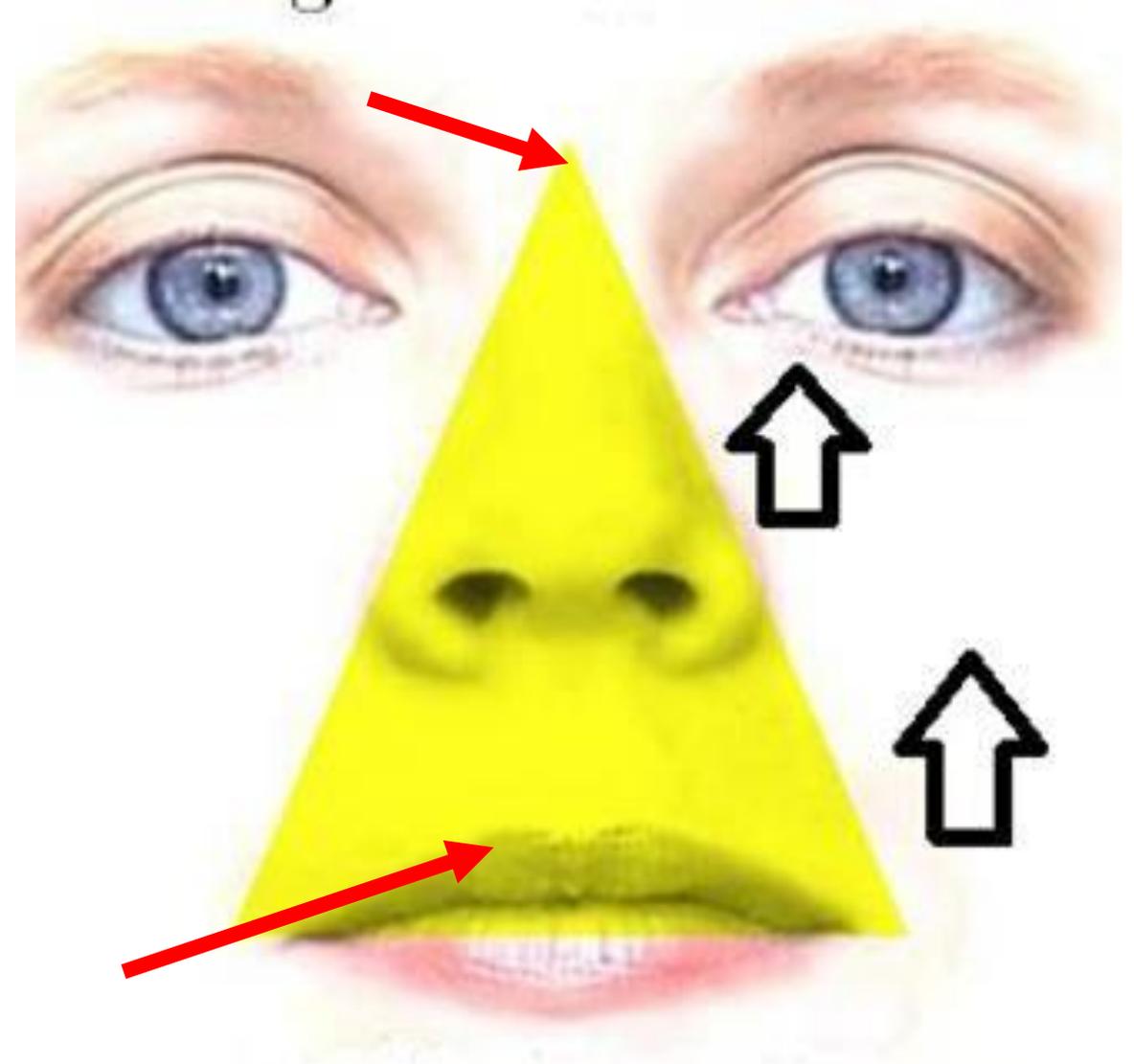
- Apex at the root of nose.
- Base: angles of mouth and upper lip.

## Aspects of danger:

- Spread of infection as in case of acne or abscess from this area to the cavernous sinus leading to **cavernous sinus thrombosis**.

## Route of spread of infection:

- Superior and Inferior ophthalmic vein connecting the anterior facial vein with the cavernous sinus directly
- Deep facial vein connecting the anterior facial vein with pterygoid plexus of veins



# Questions

**Which of the following is the nerve supply of buccinator muscle ?**

- A. Mandibular
- B. Lingual
- C. Facial
- D. Maxillary

**Which of the following lymph nodes receives lymphatics from the lateral part of the face?**

- A. Parotid
- B. Mastoid
- C. Occipital
- D. Submandibular

**List the branches of the facial artery.**

THANK

YOU!

