

# FACE

**Definition:** The area between the two ears and from the chin to the eye brows.

## The muscles of the face

- The muscle of facial expression (include the muscle of the face and the scalp).
- All are derived from the **second pharyngeal arch**.
- All are supplied by the **facial nerve**.
- They surround the facial opening (eye, nose, mouth and the ear).

## MUSCLES OF THE EYELIDS.

-The muscles of the eye lids include:

1. **Orbicularis oculi.**
2. **Levator palpebrae superioris.**

### Orbicularis oculi muscle:

The muscle formed of three parts.

#### The orbital part:

**Origin:** arise from

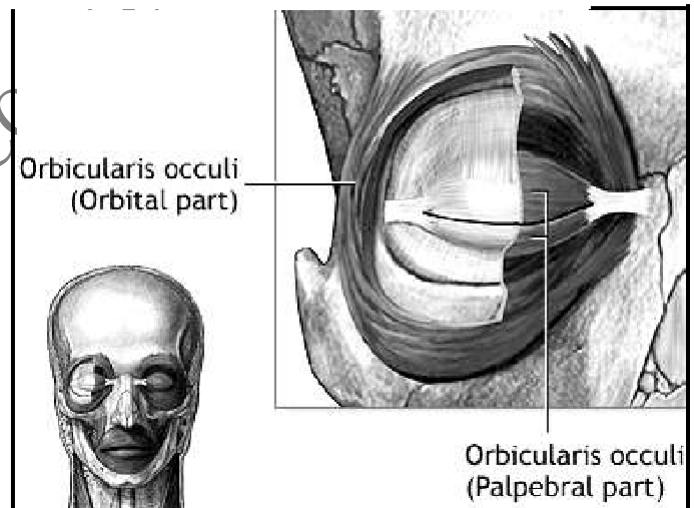
- The medial palpebral ligament.
- Frontal process of maxilla
- Maxillary process of the frontal bone

#### **Insertion:**

- The muscle radiates around the orbital margins and inserted into the skin over their origin.

#### **Action:** -

1. Alone the muscle draw the eye brow forcibly downward, produce skin wrinkles around the orbit. –
2. With the palpebral part: forcible closure of the eye lids as in exposure to the excessive light.





### **The palpebral part:**

This part lies within the eye lids.

#### **Origin: as the orbital part, from:**

- The medial palpebral ligament.
- Frontal process of maxilla
- Maxillary process of the frontal bone.

#### **Insertion:**

The fibers radiate within the eye lids and inserted into.

- The skin
- The tarsal plates
- Lateral palpebral ligament

#### **Action:**

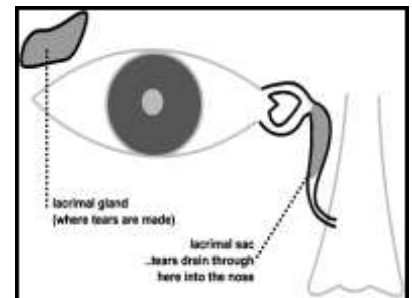
1. Alone it close the eye lids gently as in blinking or sleep.
2. With the orbital part: forcible closure of the eye lids as in exposure to the excessive light.

### **The lacrimal part:**

**Origin:** From the lacrimal crest and lacrimal sac

**Insertion:** into the tarsal plates of the eye lids.

**Action:** Regulate the size of the lacrimal sac, from which tears pass into the nasal cavity.



#### **Nerve supply of the orbicularis oculi muscle:**

- **Temporal** and **Zygomatic** branches of the **Facial** nerve.

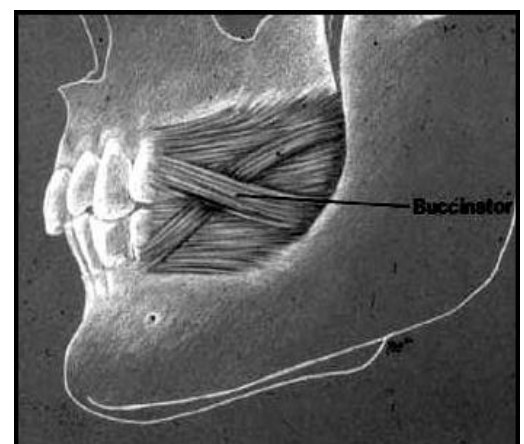
### **MUSCLES OF THE LIPS AND CHEEKS**

They divided into:

**Superficial layer** include small muscles known as the radial muscles of the lips.

– **Deep layer** formed of:

1. **Orbicularis oris (in the lips)**
2. **Buccinator muscle (in the cheeks)**





## **Buccinator muscle:**

### **Origin:**

1. Upper fibers From the outer surface of the maxilla
  2. Lower fibers from the outer surface of the mandible
  3. The middle fibers arise from the pterygo-mandibular raphe
- } opposite the 3 molar teeth.

### **Direction of the fibers:**

- The maxillary and the mandibular fibers pass medially without decussation into the upper and the lower lips
- The middle fibers arise from pterygo-mandibular raphe decussates near the angle of the mouth at modulus (10 mm lateral to the angle of the mandible).

### **Insertion:**

1. Into the mucous membrane of the cheek.
2. Into the lips with the fibers of Orbicularis oris

### **Nerve supply:**

- Buccal branch of the facial nerve.

### **Action:**

1. Compress the cheek against the gum and the teeth during blowing
2. Prevent the accumulation of the food in the vestibule of the mouth during mastication.

### **Relations of the buccinator:**

#### **A. Superficial relations:**

- 1) Buccopharyngeal fascia and buccal pad of fat
- 2) Parotid duct which muscle pierces the
- 3) The facial artery
- 4) Anterior and deep facial veins
- 5) Buccal branches of the facial and mandibular nerves

#### **B. Deep relations:**

- 1) Pharyngobasilar fascia
- 2) Mucous membrane of the cheek

#### **C. Posterior relation:**

- Pterygomandibular raphe



## **Orbicularis oris muscle:** Formed of

### **1. Extrinsic fibers:**

- Are derived from the buccinator and from the other small muscles
- Enter the lips from above and below and the sides.
- Inserted into the deep surface of the skin and mucous membrane.

### **2. Intrinsic fibers:**

- They are small fibers which pass from the skin to the mucous membrane through the extrinsic fibers.

### **Nerve supply:**

- Lower buccal and mandibular branches of the facial nerve

### **Action:**

- Act as sphincter for the mouth opening as in whistling

## **NERVE SUPPLY OF THE FACE**

### **A) Sensory nerve supply:**

1. Branches of the Trigeminal nerve (Ophthalmic, Maxillary, Mandibular.)
2. Great Auricular nerve (C 2, 3).

**Branches of the ophthalmic nerve:** supply skin of the upper part of the face.

1. **Supratrochlear nerve:** supplies the medial part of the forehead and the scalp till the coronal suture & the medial 1/3 of the upper eye lid.
2. **Supraorbital:** longest branch, supply skin of forehead and scalp up to the vertex and middle 1/3 of the upper eye lid
3. **Lacrimal nerve:** supply the skin of the lateral corner of the eye & lateral 1/3 of the upper eye lid
4. **Infratrochlear:** supply the skin of the medial corner of the eye & the upper part of the dorsum of the nose.
5. **External nasal nerve:** supply the skin over the lower part of the dorsum of the nose and tip of the nose..



### **Branches of the maxillary nerve:**

1. **Infraorbital nerve:** come out from the infra orbital foramen and give 3 branches
  - 1) **Labial:** to the skin and mucous membrane of the upper lip
  - 2) **Palpebral:** to the skin and conjunctiva of the lower eye lid.
  - 3) **Nasal:** to the skin of the side of the nose.
2. **Zygomaticofacial nerve:** comes out through the zygomatico-facial foramen, supply the skin of the face over the zygoma
3. **Zygomatico temporal nerve:** comes out from the zygomatico-temporal foramen to the side of the face

### **Branches of the mandibular nerve:**

1. **Mental nerve:** Come out from the mental foramen of the mandible, supplies the skin of the chin and the lower lip.
2. **Buccal nerve:** appear at the anterior border of the masseter muscle, supplies the skin and mucous membrane of the cheek.
3. **Auriculotemporal nerve:** - pass in front of the ear with the superficial temporal vessels to supply the side of the scalp and auricle of the ear...

### **Great auricular nerve**

- One of cutaneous branches of cervical plexus (C 2,3 )
- Supply the skin over the angle of the mandible and the lower part of the auricle (outer surface).

### **B) Motor nerve supply:**

- The muscles of the face supplies with branches of the facial nerve
- The facial nerve divides inside the parotid gland into five terminal branches.
  1. Temporal branch
  2. Zygomatic branch
  3. Buccal branch
  4. Mandibular branch
  5. Cervical branch





## **BLOOD SUPPLY OF THE FACE.**

### **A . Arterial Supply:**

#### **1) The facial artery**

It is the main artery of the face.

##### **Origin:**

- From the external carotid artery

##### **Course in the face:**

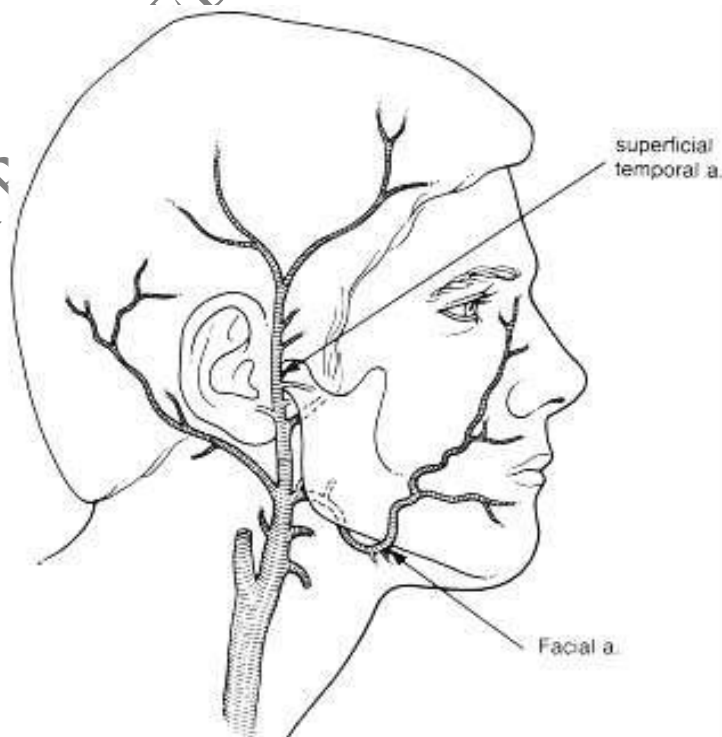
- It enters the face by curve at the lower border of the mandible
- Passing in front of masseter muscle then 1 cm lateral to the angle of the mouth
- It runs in a wavy course toward the side of the nose

##### **Termination:**

- Ends as angular artery at the medial angle of the eye where it anastomosis with branches of the ophthalmic artery.

##### **Branches:**

1. Superior Labial branches to the upper lip
2. Inferior Labial branches to the lower lip
3. Lateral nasal artery; to the side of the nose.





## 2) Superficial temporal artery

### Origin:

- One of the two terminal branches of the **external carotid** artery within substance of the parotid gland behind the neck of the mandible.

### Course:

- Appears at the upper border of the parotid gland.
- Crosses over the zygomatic arch in front of the auricle, where pulsation can be felt.
- Accompanied with the auriculotemporal nerve and superficial temporal vein
- Ends by dividing into anterior and posterior branches

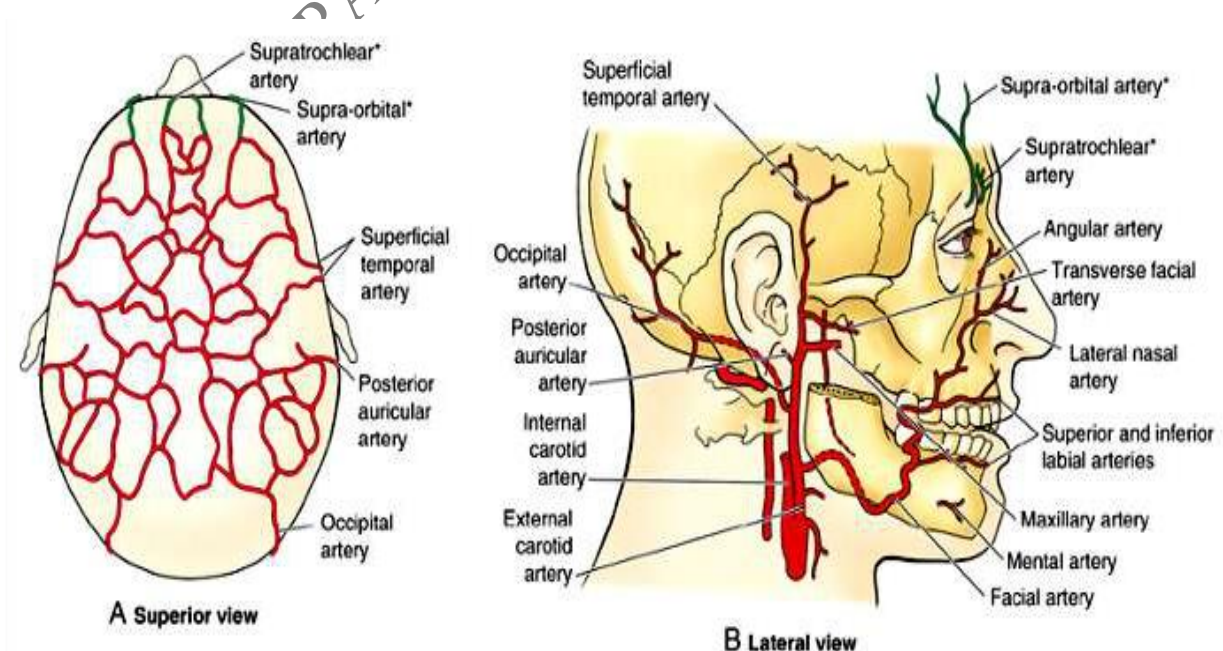
### Branches:

1. Zygomatico -orbital artery: runs over the zygomatic arch
2. Transverse facial artery: passes between the parotid duct and the zygomatic arch
3. Middle temporal artery
4. Anterior auricular
5. Anterior terminal branch
6. Posterior terminal branch

## 3) Small terminal branches of the maxillary artery:

- They are small arteries of the maxillary artery which follow the terminal branches of the **trigeminal nerve**, e.g. **infraorbital artery, mental, buccal, and zygomaticofacial..**

## 4) Supratrochlear and supra orbital arteries: supply the forehead





## **B: The Venous drainage of the face (same as scalp)**

### **1. Anterior facial vein:**

- Formed at medial angle of the eye by Supratrochlear and Supraorbital veins
- Join the anterior division of the retromandibular and form the common facial vein which end into the internal jugular vein
- It passes behind the facial artery in the face

### **2. The posterior facial (retromandibular) vein :**

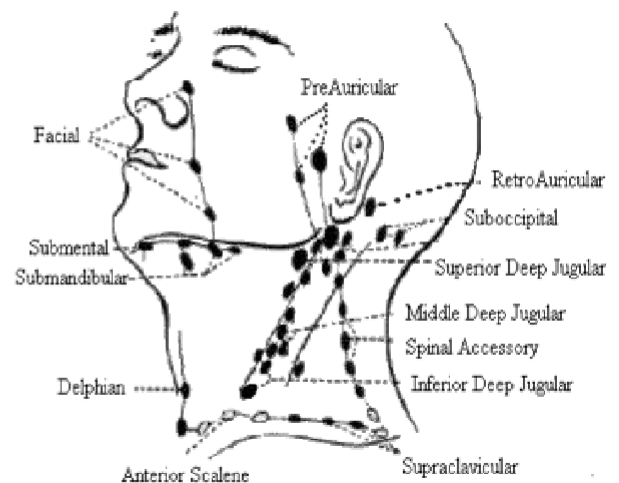
- Formed by union of superficial temporal and maxillary veins within parotid gland
- divided into anterior and posterior divisions

### **3. Posterior auricular vein:** join the posterior division of retromandibular and from the external jugular vein

### **4. Occipital vein:** join the suboccipital venous plexus

## **Lymphatic drainage of the face**

1. The lower lip and chin ---- submental lymph nodes
2. The cheeks and side of the nose ----- submandibular lymph nodes
3. lateral art of cheek ----- Preauricular lymph nodes
4. Mastoid lymph nodes
5. Occipital lymph nodes



- All these lymph nodes drain into the deep cervical lymph nodes

## **Dangerous area of the face:**

- Area around the nose and the upper lip
- The anterior facial vein connected to cavernous sinus through deep facial vein
- Spread of infection may transmitted to the cavernous sinus.

**Danger Triangle of Face**

