

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

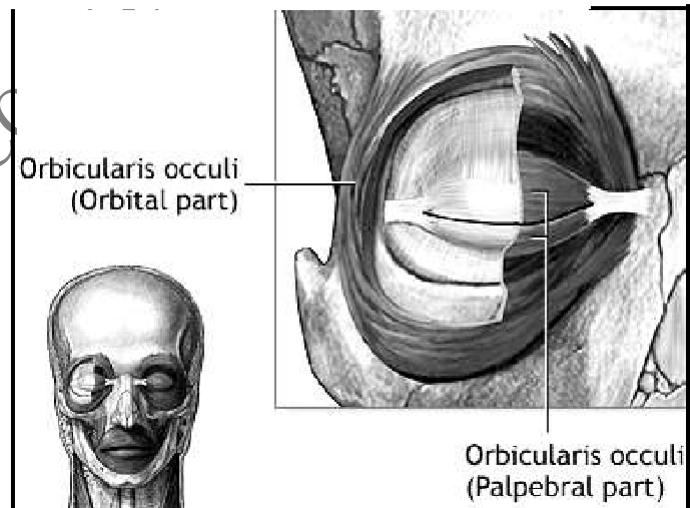
- The medial palpebral ligament.
- Frontal process of maxilla
- Maxillary process of the frontal bone

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:

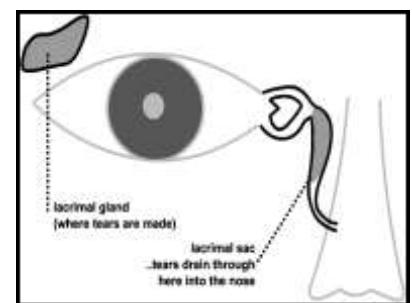
1. Alone it close the eye lids gently as in blinking or sleep.
2. With the orbital part: forcible closure of the eye lids as in exposure to the excessive light.

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:

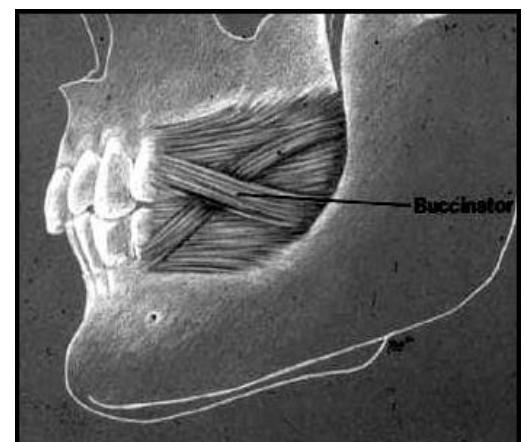
- **Temporal** and **Zygomatic** branches of the **Facial** nerve.

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 angel of the mouth at modulus (10 mm lateral to the angel 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 bad 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 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: appaer at the anterior border of the masseter muscle, supplies the skin and mucous membrane of the cheek.

3. Auriculotemporal nerve: - pass infront 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 angel 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:

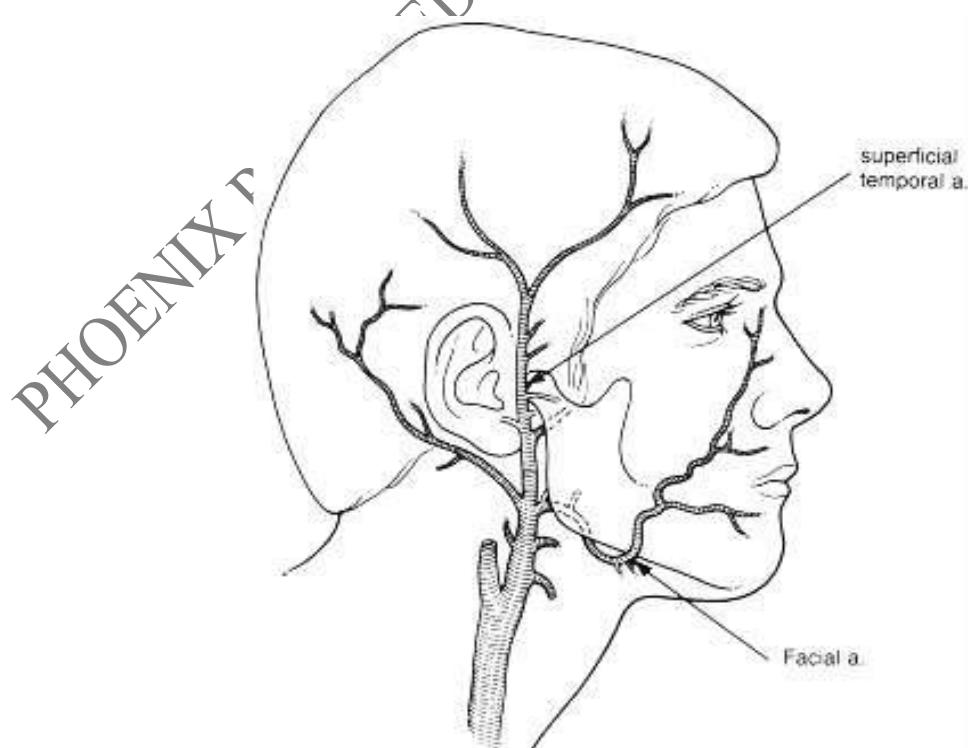
- It enters the face by curve at the lower border of the mandible
- Passing in front of masseter muscle then 1 cm lateral to the angle of the mouth
- It runs in a wavy course toward the side of the nose

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

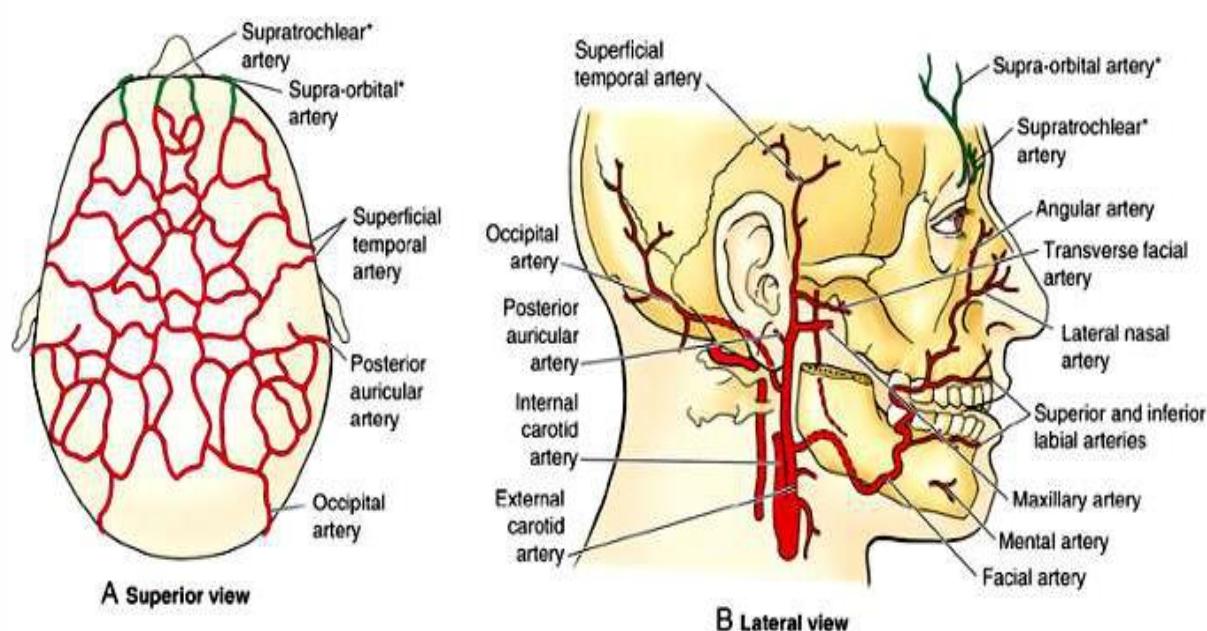
Branches:

- Zygomatico -orbital artery: runs over the zygomatic arch
- Transverse facial artery: passes between the parotid duct and the zygomatic arch
- Middle temporal artery
- Anterior auricular
- Anterior terminal branch
- 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 :

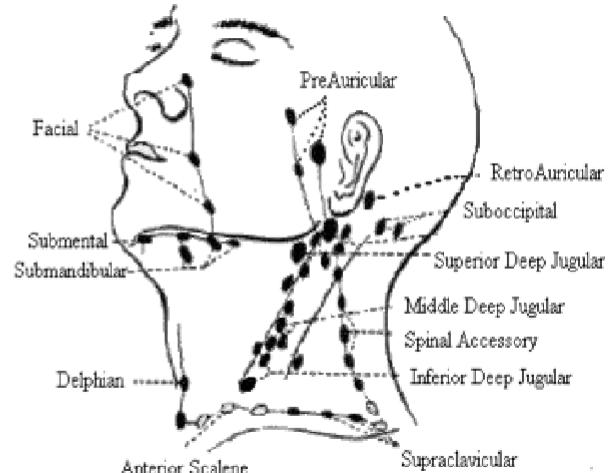
- Formed by union of superficial temporal and maxillary veins within parotid gland
- divided into anterior and posterior divisions

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 part 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

