The Face

The face, is the anterior aspect of head and consists of soft tissue over the facial skeleton or norma frontalis. Extends superiorly from position of hairline, inferiorly to the chin and the base of the mandible, and on each side to the auricle. The forehead is, therefore, common to both the face and the scalp.

Skin of the face:

1. The facial skin is very vascular. Rich vascularity makes the face blush. Wounds of the face bleed profusely but heal rapidly.
2. The facial skin is rich in sebaceous and sweat glands. Sebaceous glands keep the face oily, but also cause acne in young adults. Sweat glands help in regulation of the body temperature.
3. Facial skin is very elastic and thick because the facial muscles are inserted into it.

Superficial Fascia

It contains:

1- The facial muscles.

2-The vessels and nerves, to the muscles and to the skin.

3-A variable amount of fat. Fat is absent from the eyelids, but is well developed in the cheeks, forming the buccal pads that are very prominent in infants in whom they help in sucking.

The **deep fascia is absent from the face** except around the parotid gland and over buccinators muscle**.** Wrinkle lines of the face result from the repeated folding of the skin perpendicular to the long axis of the underlying contracting muscles, coupled with the loss of youthful skin elasticity. Surgical scars of the face are less prominent if they follow the wrinkle lines

Muscles of the Face (Muscles of Facial Expression)

The muscles of the face are embedded in the superficial fascia, and most arise from the

bones of the skull and are inserted into the skin. The orifices of the face, namely, the orbit (palpebral fissure), nose (nostrils), and mouth (oral fissure). The function of the facial muscles to serve as sphincters (constrictors) or dilators of these structures. Sphincters are naturally circular and the dilators radial in their arrangement. A secondary function of the facial muscles is to modify the expression of the face. All the muscles of the face are developed from the second pharyngeal arch and are supplied by the facial nerve.

Muscles of the Eyelids

The sphincter muscle of the eyelids is the orbicularis oculi (close the eyelids), and the dilator muscles are the levator palpebrae superioris and the frontalis part of occipitofrontalis (open the eyelids). Corrugator supercilia, pulls the skin of the eyebrow downward and medially.

Muscles of the Nostrils

1-The sphincter muscle is the compressor naris and the dilator muscle is the dilator naris. 2-Procerus 3-Depressor septi.

Muscles around the Mouth

Orbicularis Oris (Sphincter Muscle of the Lips):

Origin and insertion**:** The fibers encircle the oral orifice within the substance of the lips. Some of the fibers arise from the maxilla above and the mandible below. Many of the fibers are derived from the buccinators muscle.

Nerve supply: Buccal and mandibular branches of the facial nerve

Action: Compresses the lips together.

Dilator Muscles of the Lips

The dilator muscles radiate out from the lips, and their action is to separate the lips; this movement is usually accompanied by separation of the jaws. The muscles arise from the bones and fascia around the oral aperture and converge to be inserted into the substance of the lip. The muscles are named as follow:

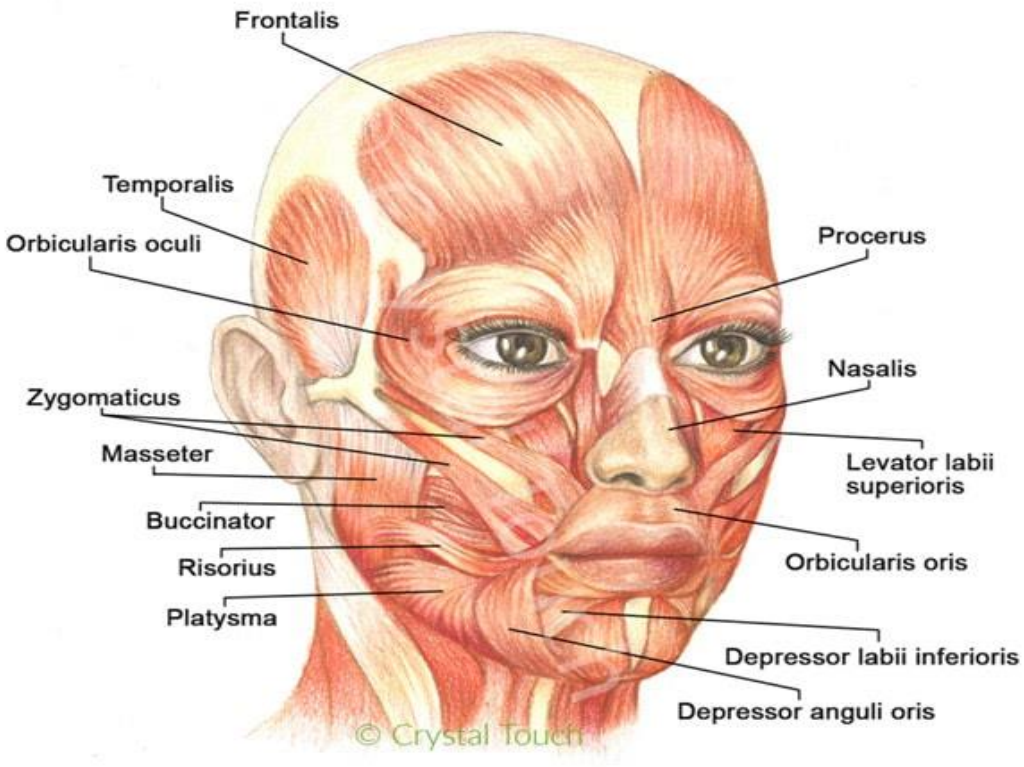
1- Levator labii superioris alaeque nasi **2-** Levator labii superioris **3-** Levator anguli oris **4-** Depressor labii inferioris **5-** Depressor anguli oris **6-** Zygomaticus major 7-Zygomaticus minor **8-** Risorius **9-** Mentalis.

Muscle of the Cheek

Buccinator

Origin: From the outer surface of the alveolar margins of the maxilla and mandible

opposite the molar teeth and from the pterygomandibular ligament.
Insertion: The muscle fibers pass forward, forming the muscle layer of the cheek. The muscle is pierced by the parotid duct. At the angle of the mouth the central fibers decussate, those from below entering the upper lip and those from above entering the lower lip; the highest and lowest fibers continue into the upper and lower lips, respectively, without intersecting. The buccinator muscle thus blends and forms part of the orbicularis oris muscle.
Nerve supply: Buccal branch of the facial nerve.
Action: Compresses the cheeks and lips against the teeth.



Muscles of
Facial Expression

Muscle	Origin	Insertion	Actions	Innervation	Facial expression
Orbicularis oris	the maxilla and mandible, fiber of buccinators muscle	Skin of the lips	Compresses the lips together	Buccal and mandibular branches of facial nerve	-Close mouth, -compresses and protrudes lips - whistling
Levator labii superioris alaeque nasii	Frontal process of the maxilla	Skin of the lateral part of the nostril and skin of the upper lip	elevates the wing of the nose and elevates upper lip	Zygomatic branch of facial nerve	snarling
Levator labii superioris	The infra-orbital margin of the maxilla	Skin of the upper lip	Lifts the upper lip	Buccal branch of facial nerve	worry, anxiety
Levator angli oris	The canine fossa on the anterior surface of the maxilla right below the infraorbital foramen	Skin of the angle of the mouth	Lifts the angle of the mouth supralaterally	Buccal and zygomatic branch of facial nerve	participating in creating a smile
Depressor anguli oris	the oblique line of the mandible	Skin of the angle of the mouth	Pulling the angle of the mouth downward inferolateral	mandibular branch of facial nerve	Sadness
Depressor labia inferioris	The oblique line of the base of the mandible	Skin of the lower lip.	Pulls the lower lip downward and forward	mandibular branch of facial nerve	perseverance and diliagence
Risorius	Parotid fascia and buccal skin	Skin of the angle of the mouth	Pulls the angle of the mouth laterally	Buccal branch of facial nerve	Grinning
Zygomaticus major	Zygomatic arch	Skin of the angle of the mouth	Lift the angle of the mouth upwards and laterally beyond canine	Zygomatic and buccal branches of facial nerve	pleasure or laugher (smiling)
Zygomaticus minor	Lateral surface of the zygomatic bone	Skin of the lateral part of the upper lip and extends	Pulls the upper lip backward, upward and out word to canine	Buccal branch of facial nerve	participating in creating a smile

		to the nasolabial sulcus			
Buccinator	The alveolar processes of the maxilla and mandible at the region of the 1st and 2nd molar teeth, and from the pterygoidmandibuar raphe	The angel of the mouth radiating into the fibers of the orbicularis oris muscle	Presses the cheeks to the teeth	The buccal branch of facial nerve	Blowing Sucking mastication
Mentalis	Incisive fossa of mandible	Skin of chin	protruded of lower lip or produces small dimples in chin	mandibular branch of facial nerve	doubt and indecision

Nerve Supply of Face

Motor Nerve Supply

The *facial nerve* is the motor nerve of the face. Its five terminal branches, **temporal, zygomatic, buccal, marginal mandibular and cervical** emerge from the parotid gland and diverge to supply the various facial muscles.

Branches of facial nerve can be simulated by putting your right wrist on the right ear and spreading five digits: The thumb over the temporal region, the index finger on the zygomatic bone, middle finger on the upper lip, the ring finger on the lower lip and the little finger over the neck.

- The **temporal branch** emerges from the upper border of the gland and supplies the anterior and superior auricular muscles, the frontal belly of the occipitofrontalis, the orbicularis oculi, and the corrugator supercilii.
- The **zygomatic branch** emerges from the anterior border of the gland and supplies the orbicularis oculi.
- The **buccal branch** emerges from the anterior border of the gland below the parotid duct

and supplies the buccinator muscle and the muscles of the upper lip and nostril.

- The **mandibular branch** emerges from the anterior border of the gland and supplies the muscles of the lower lip.
- **The cervical branch** emerges from the lower border of the gland and passes forward in the neck below the mandible to supply the platysma muscle; it may cross the lower margin of the body of the mandible to supply the depressor anguli oris muscle.

Sensory Nerves of the Face

The skin of the face is supplied by branches of the three divisions of the trigeminal nerve, except for the small area over the angle of the mandible and the parotid gland which is supplied by the great auricular nerve (C2 and C3). These nerves not only supply the skin of the face, but also supply proprioceptive fibers to the underlying muscles of facial expression. They are, in addition, the sensory nerve supply to the mouth, teeth, nasal cavities, and paranasal air sinuses.

1. Ophthalmic Nerve

The ophthalmic nerve supplies the skin of the forehead, the upper eyelid, the conjunctiva, and the side of the nose down to and including the tip. **Five branches of the nerve pass to the skin.**

1. The **lacrimal nerve** supplies the skin and conjunctiva of the lateral part of the upper eyelid.
2. The **supraorbital nerve** winds around the upper margin of the orbit at the supraorbital notch. It divides into branches that supply the skin and conjunctivaon the central part of the upper eyelid; it also supplies the skin of the forehead.
3. The **supratrochlear nerve** winds around the upper margin of the orbit medial to the supraorbital nerve. It divides into branches that supply the skin and conjunctiva on the medial part of the upper eyelid and the skin over the lower part of the forehead, close to the median plane.
4. The **infratrochlear nerve** leaves the orbit below the pulley of the superior oblique muscle. It supplies the skin and conjunctiva on the medial part of the upper eyelid and the adjoining part of the side of the nose.
5. The **external nasal nerve** leaves the nose by emerging between the nasal bone and the upper nasal cartilage. It supplies the skin on the side of the nose down as far as the tip.

2. Maxillary Nerve

The maxillary nerve supplies the skin on the posterior part of the side of the nose, the lower eyelid, the cheek, the upper lip, and the lateral side of the orbital opening. Three branches of the nerve pass to the skin.

1. The **infraorbital nerve** is a direct continuation of the maxillary nerve. It entersthe orbit and appears on the face through the infraorbital foramen. It immediately divides into numerous small branches, which radiate out from the foramen and supply the skin of the lower eyelid and cheek, the

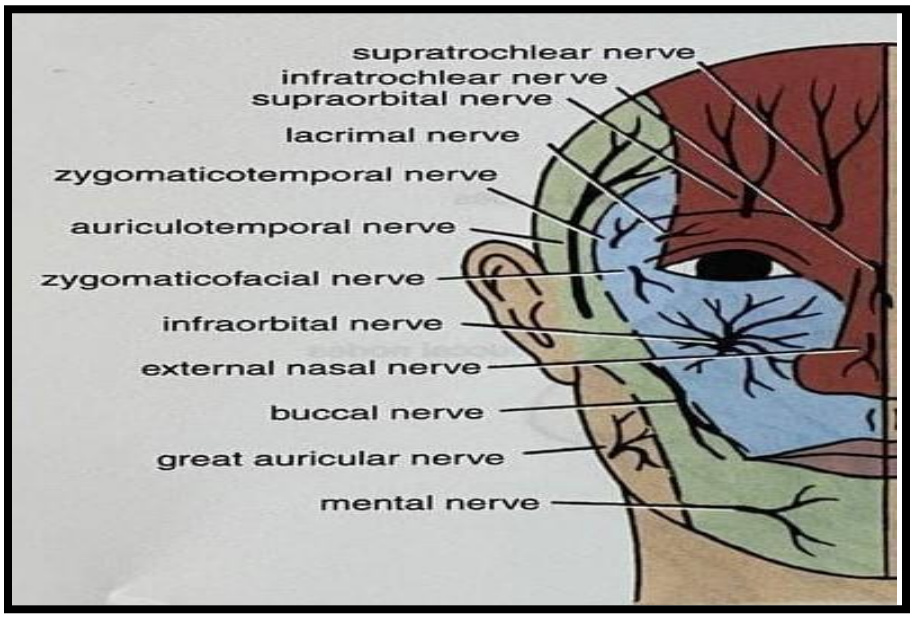
side of the nose, and the upper lip

2. The **zygomaticofacial nerve** passes onto the face through a small foramen on the lateral side of the Zygomatic bone. It supplies the skin over the prominenceof the cheek.
3. The **zygomaticotemporal nerve** emerges in the temporal fossa through a small foramen on the posterior surface of the zygomatic bone. It supplies the skin over the temple.

3. Mandibular Nerve

The mandibular nerve supplies the skin of the lower lip, the lower part of the face, thetemporal region, and part of the auricle. It then passes upward to the side of the scalp.Three branches of the nerve pass to the skin.

1. The **mental nerve** emerges from the mental foramen of the mandible and supplies the skin of the lower lip and Chin.
2. The **buccal nerve** emerges from beneath the anterior border of the masseter muscle and supplies the skin over a small area of the cheek.
3. The **auriculotemporal nerve** ascends from the upper border of the parotid gland between the superficial temporal vessels and the auricle. It supplies the skin of the auricle, the external auditory meatus, the outer surface of the tympanic membrane, and the skin of the scalp above the auricle.



Sensory Nerve Supply of the Skin of the Face

Arterial Supply of the Face

The face receives a rich blood supply from: **the facial**, **superficial temporal arteries**, and **small branches of ophthalmic artery** which are accompanied the sensory nerves of the face.

- The **facial artery** arises from the external carotid artery.

Branches of the facial artery

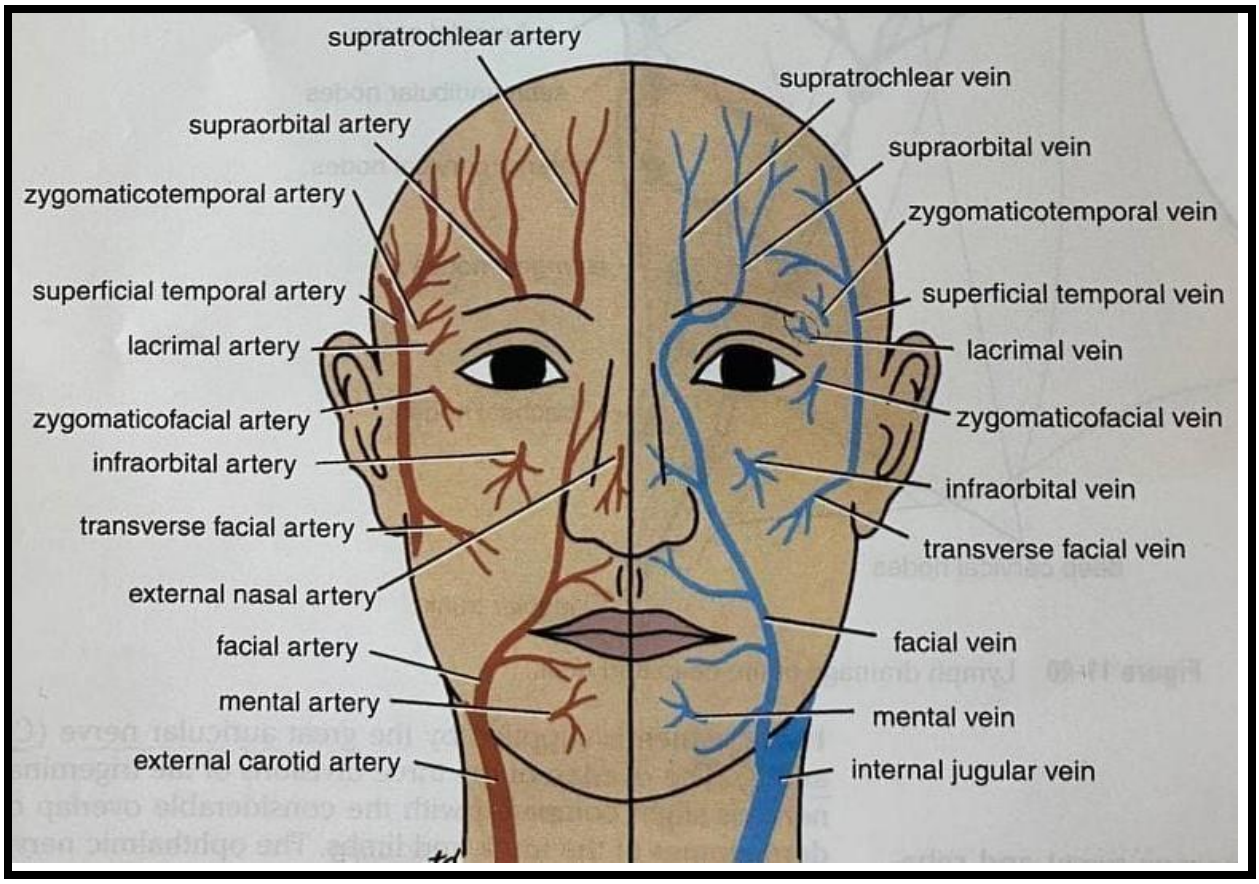
1. The **submental artery** arises from the facial artery at the lower border of thebody of the mandible. It supplies the skin of the chin and lower lip.
2. The **inferior labial artery** arises near the angle of the mouth. It runs mediallyin the lower lip and anastomoses with its fellow of the opposite side.
3. The **superior labial artery** arises near the angle of the mouth. It runs mediallyin the upper lip and gives branches to the septum and ala of the nose.
4. The **lateral nasal artery** arises from the facial artery alongside the nose. Itsupplies the skin on the side and dorsum of the nose.

- The **superficial temporal artery**, the smaller terminal branch of the external carotid artery, commences in the parotid gland. It ascends in front of the auricle to supply the scalp. The **transverse facial artery,** a branch of the superficial temporal artery, arises within the parotid gland. It runs forward across the cheek just above the parotid duct.

- The **supraorbital** and **supratrochlear arteries,** branches of the ophthalmicartery, supply the skin of the forehead.

Venous Drainage of the Face

The **facial vein** is formed at the medial angle of the eye by the union of the supraorbital and supratrochlear veins. It is connected to the superior ophthalmic vein directly through the supraorbital vein. By means of the superior ophthalmic vein, the facial vein is connected to the cavernous sinus; this connection is of great clinical importance because it provides a pathway for the spread of infection from the face to the cavernous sinus. The facial vein descends behind the facial artery to the lower margin of the body of the mandible. It crosses superficial to the submandibular gland and is joined by the anterior division of the retromandibular vein. The facial vein ends by draining into the internal jugular vein.



Arterial supply and venous drainage of the face

Lymph Drainage of the Face

1. Upper region, including the greater part of the forehead, lateral halves of eyelids, conjunctiva, lateral part of the cheek and parotid area, drains into the preauricular parotid nodes.

2. Middle region, including a strip over the median part of the forehead, external nose, upper lip, lateral part of the lower lip, medial halves of the eyelids, medial part of the cheek, and the greater part of lower jaw, drains into the submandibular nodes.

3. Lower region, including the central part of the lower lip and the chin, drains into the submental nodes