

Face

Features

The face extends

- **Superiorly** from the adolescent position of hairline,
- **Inferiorly** to the chin and the base of the mandible, and
- **Each side** to the auricle.

Skin

1. The facial skin is very **vascular**.
2. The facial skin is **rich in sebaceous and sweat glands**.
3. **Boils in the nose and ear are acutely painful** due to the fixity of the skin to the underlying cartilages.
4. Facial skin is **very elastic and thick** because the facial muscles are inserted into it. The wounds of the face, therefore, tend to gape.

SUPERFICIAL FASCIA

It contains:

- The **facial muscles**
- The **vessels and nerves**
- The *deep fascia is absent* from the face, except over the parotid gland.

FACIAL MUSCLES

- Embryologically

Develop from the mesoderm of the 2nd branchial arch,
(facial nerve)

- Morphologically

Represent the remnants of the panniculus carnosus

- Topographically

The muscles are grouped under six heads

Table 2.2: Functional groups of facial muscles

<i>Opening</i>	<i>Sphincter</i>	<i>Dilators</i>
A. Palpebral fissure	Orbicularis oculi	<ol style="list-style-type: none">1. Levator palpebrae superioris2. Frontalis part of occipitofrontalis
B. Oral fissure	Orbicularis oris	All the muscles around the mouth, except the orbicularis oris, the sphincter, and the mentalis which do not mingle with orbicularis oris (<i>see above</i>)
C. Nostrils	Compressor naris	<ol style="list-style-type: none">1. Dilator naris2. Depressor septi3. Medial slip of levator labii superioris alaeque nasi

I. Muscle of the Scalp

Occipitofrontalis

II. Muscles of the Auricle—Vestigeal

1. Auricularis anterior
2. Auricularis superior
3. Auricularis posterior

III. Muscles of the Eyelids/Orbital Openings

1. Orbicularis oculi
2. Corrugator supercilii
3. Levator palpebrae superioris

IV. Muscles of the Nose

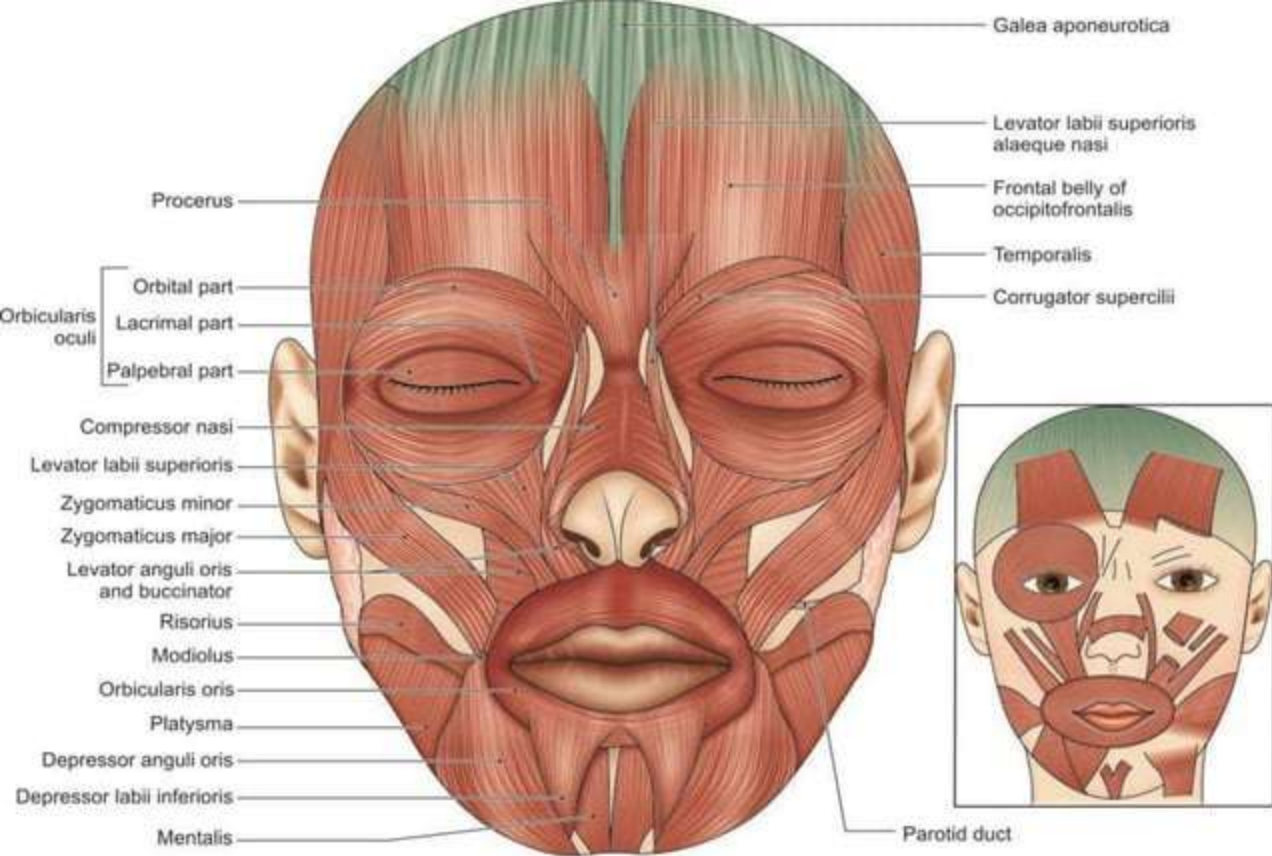
1. Procerus
2. Compressor naris
3. Dilator naris
4. Depressor septi

V. Muscles around the Mouth

1. Orbicularis oris
2. Buccinator (Latin *cheek*)
3. Levator labii superioris alaeque nasi
4. Zygomaticus major
5. Levator labii superioris
6. Levator anguli oris
7. Zygomaticus minor
8. Depressor anguli oris
9. Depressor labii inferioris
10. Mentalis (Latin *chin*)
11. Risorius (Latin *laughter*)

VI. Muscles of the Neck

Platysma



The facial muscles

Table 2.3: The facial muscles

<i>Name</i>	<i>Origin</i>	<i>Insertion</i>	<i>Actions</i>
Muscles of eyelid/orbital opening			
1. Corrugator supercilii	Medial end of superciliary arch	Skin of mid-eyebrow as in frowning	Vertical lines in forehead,
2. Orbicularis oculi	Medial part of medial palpebral ligament, frontal process of maxilla and nasal part of frontal bone	Concentric rings return to the point of origin	Protects eye from bright light, wind and rain. Cause forceful closure of eyelids
a. Orbital part, on and around the orbital margin			
b. Palpebral part, in the lids	Lateral part of medial palpebral ligament	Lateral palpebral raphe	Closes lids gently as in blinking and sleeping
c. Lacrimal part, lateral and deep to the lacrimal sac	Lacrimal fascia and posterior lacrimal crest, forms sheath for lacrimal sac	Pass laterally in front of tarsal plates of eyelids to the lateral palpebral raphe	Dilates lacrimal sac for sucking of lacrimal fluid into the sac, directs lacrimal puncta into lacus lacrimalis; supports the lower lid
Muscles around nasal opening			
3. Procerus	Nasal bone and upper part of lateral nasal cartilage	Skin of forehead between eyebrows and on bridge of the nose	Causes transverse wrinkles
4. Compressor naris	Maxilla just lateral to nose	Aponeurosis across dorsum of nose	Nasal aperture compressed
5. Dilator naris	Maxilla over the lateral incisor	Alar cartilage of nose	Nasal aperture dilated
6. Depressor septi	Maxilla over the medial incisor	Lower mobile part of nasal septum	Nose pulled inferiorly

Contd

Muscles around the lips

7. Orbicularis oris a. Intrinsic part, deep stratum, very thin sheet	Superior incisivus, from maxilla; inferior incisivus, from mandible	Angle of mouth	Closes lips and protrudes lips, numerous extrinsic muscles make it most versatile for various types of grimaces
b. Extrinsic part, two strata, formed by converging muscles	Thickest middle stratum, derived from buccinator; thick superficial stratum, derived from elevators and depressors of lips and their angles	Lips and the angle of the mouth	
8. Buccinator, the muscle of the cheek	1. Upper fibres, from maxilla opposite molar teeth	1. Upper fibres, straight to the upper lip	Flattens cheek against gums and teeth; prevents accumulation of food in the vestibule. This is the <i>whistling muscle</i>
Pierced by – Parotid duct and – Buccal branch of mandibular nerve	2. Lower fibres, from mandible, opposite molar teeth	2. Lower fibres, straight to the lower lip	
	3. Middle fibres, from pterygo-mandibular raphe	3. Middle fibres decussate	
9. Levator labii superioris alaeque nasi	Frontal process of maxilla	Upper lip and alar cartilage of nose	Lifts upper lip and dilates the nostril
10. Zygomaticus major	Posterior aspect of lateral surface of zygomatic bone	Skin at the angle of the mouth	Pulls the angle upwards and laterally as in smiling
11. Levator labii superioris	Infraorbital margin of maxilla	Skin of upper lateral half of the upper lip	Elevates the upper lip, forms nasolabial groove
12. Levator anguli oris	Maxilla just below infraorbital foramen	Skin of angle of the mouth	Elevates angle of mouth, forms nasolabial groove

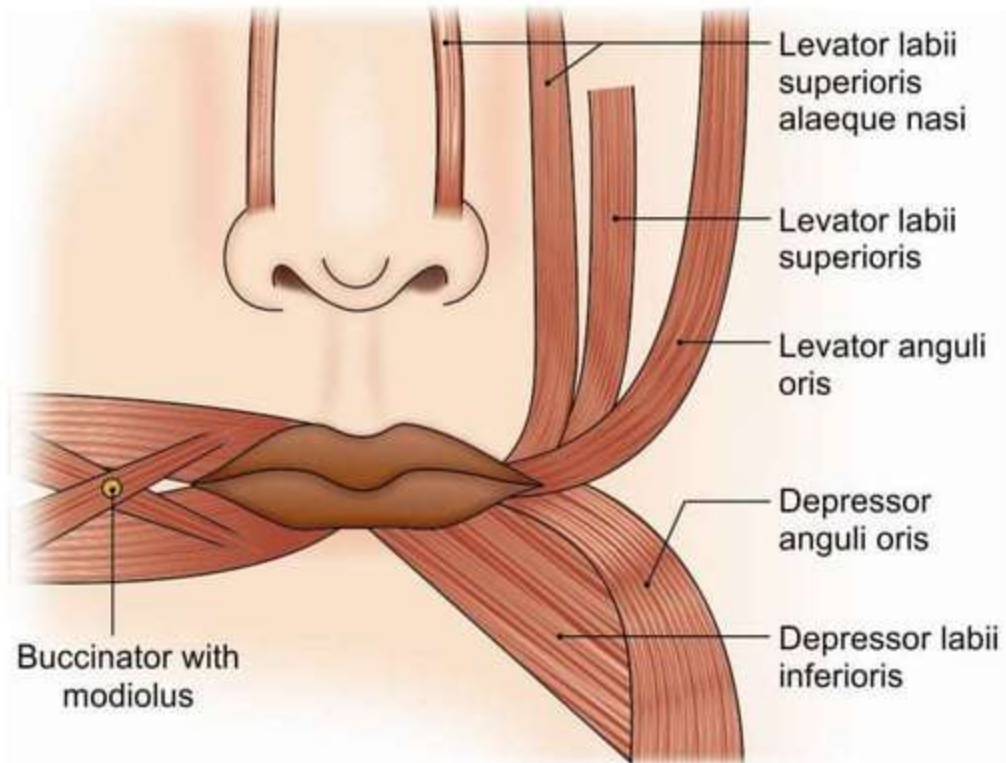
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13. Zygomaticus minor	Anterior aspect of lateral surface of zygomatic bone	Upper lip medial to its angle	Elevates the upper lip
14. Depressor anguli oris	Oblique line of mandible below first molar, premolar and canine teeth	Skin at the angle of mouth and fuses with orbicularis oris	Draws angle of mouth downwards and laterally
15. Depressor labii inferioris	Anterior part of oblique line of mandible	Lower lip at midline, fuses with muscles from opposite side	Draws lower lip downward
16. Mentalis	Mandible inferior to incisor teeth	Skin of chin	Elevates and protrudes lower lip as it wrinkles skin on chin
17. Risorius	Fascia on the masseter muscle	Skin at the angle of the mouth	Retracts angle of mouth

Muscles of the neck

18. Platysma	Upper parts of pectoral and deltoid fasciae Fibres run upwards and medially	Anterior fibres, to the base of the mandible; posterior fibres to the skin of the lower face and lip, and may be continuous with the risorius	Releases pressure of skin on the subjacent veins; depresses mandible; pulls the angle of the mouth downwards as in horror or fright
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Modiolus: It is a compact, mobile fibromuscular structure present at about 1.25 cm lateral to the angle of the mouth opposite the upper second premolar tooth. The five muscles interlacing to form the modiolus are: zygomaticus major, buccinator, levator anguli oris, risorius and depressor anguli oris.



Some of the facial muscles

ACTIONS OF THE MUSCLES

1. Smiling and laughing: Zygomaticus major
2. Sadness: Levator labii superioris and levator anguli oris.
3. Grief: Depressor anguli oris.
4. Anger: Dilator naris and depressor septi.
5. Dislike: Corrugator supercilii and procerus.
6. Horror, terror and fright: Platysma
7. Surprise: Frontalis,
8. Doubt: Mentalis,
9. Grinning: Risorius
10. Contempt: Zygomaticus minor.
11. Closing the mouth: Orbicularis oris
12. Whistling /kissing: Buccinator, and orbicularis oris.



Smile



Sad



Dislike



Surprised



Fright



Whistling

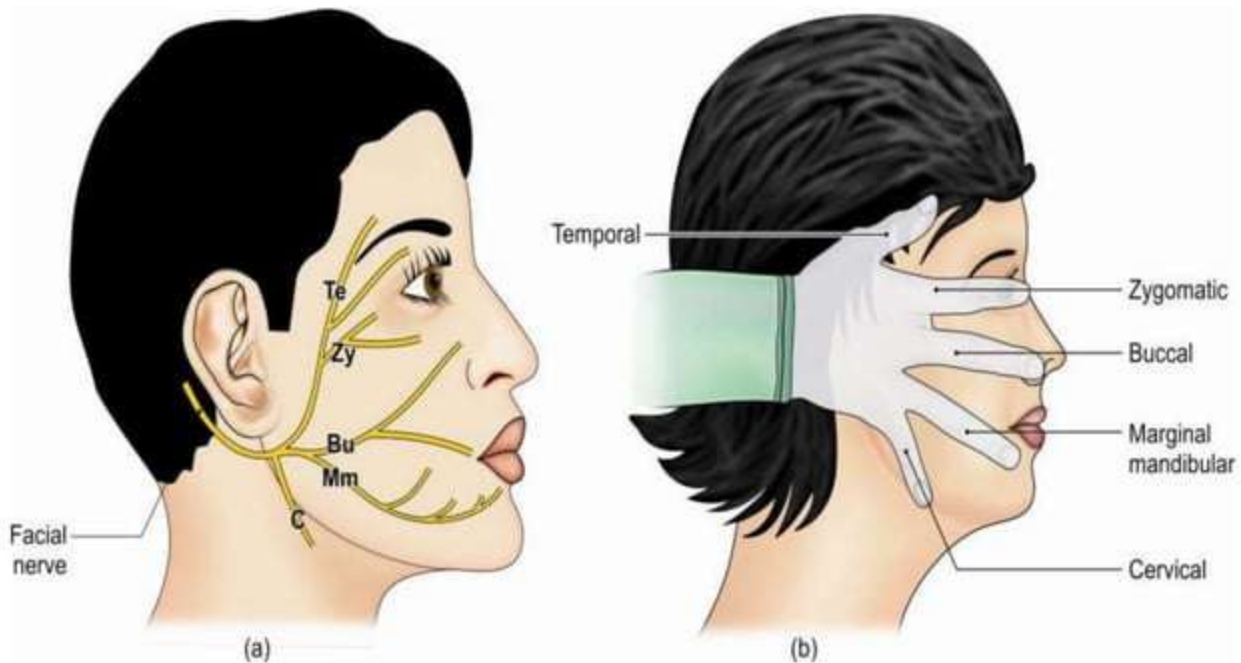
Some common facial expressions

NERVE SUPPLY OF FACE

Motor Nerve Supply

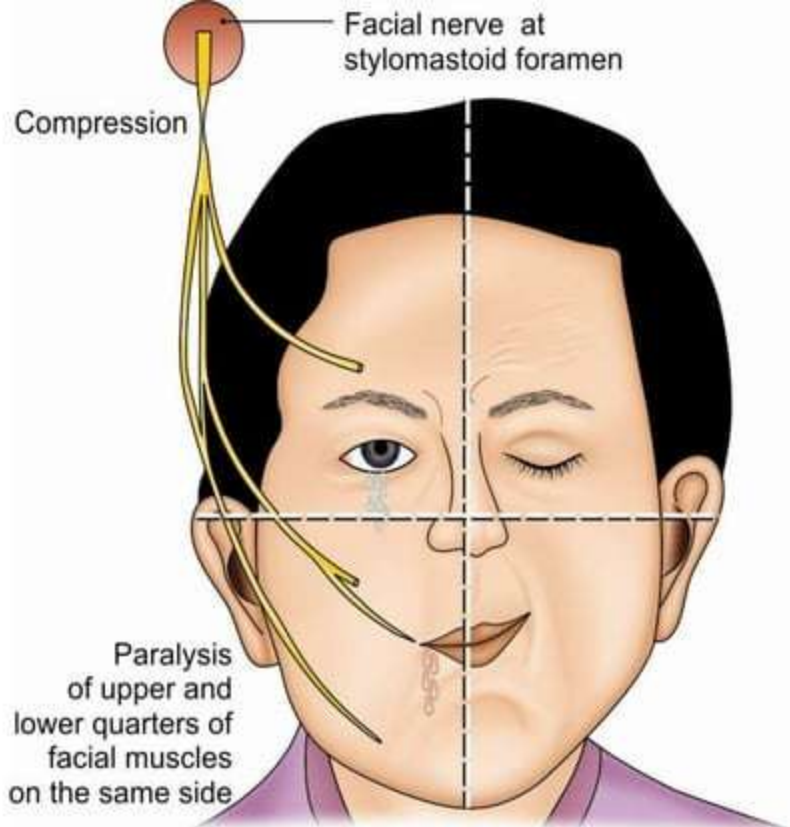
The facial nerve is the motor nerve of the face. Its five terminal branches emerge from the parotid gland

- Temporal—frontalis, auricular muscles, orbicularis oculi.
- Zygomatic—orbicularis oculi (lower eyelid part).
- Buccal—muscles of the cheek and upper lip.
- Marginal mandibular—muscles of lower lip.
- Cervical—platysma.



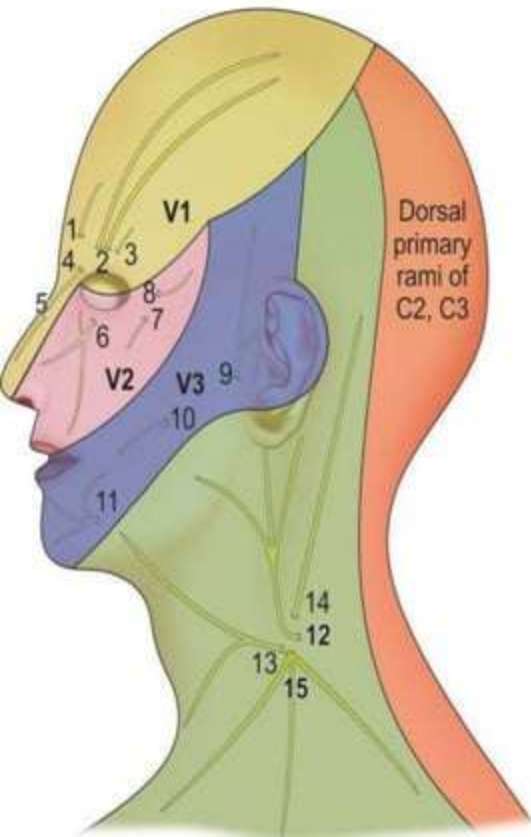
Terminal branches of the facial nerve

CLINICAL ANATOMY



Infranuclear lesion of right facial nerve or Bell's palsy

Sensory Nerve Supply



The sensory nerves of the face and neck.

- (1) Supratrochlear,
- (2) Supraorbital,
- (3) Palpebral branch of lacrimal,
- (4) Infratrochlear,
- (5) External nasal,
- (6) Infraorbital,
- (7) Zygomaticofacial,
- (8) Zygomaticotemporal,
- (9) Auriculotemporal,
- (10) Buccal,
- (11) Mental,
- (12) Great auricular,
- (13) Transverse cutaneous nerve of neck,
- (14) lesser occipital, and
- (15) supraclavicular

Table 2.4: Cutaneous nerves of the face

<i>Source</i>	<i>Cutaneous nerve</i>	<i>Area of distribution</i>
a. Ophthalmic division of trigeminal nerve	<ol style="list-style-type: none">1. Supratrochlear nerve2. Supraorbital nerve3. Lacrimal nerve4. Infratrochlear nerve5. External nasal nerve	<ol style="list-style-type: none">1. Upper eyelid and forehead2. Upper eyelid, frontal air sinus, scalp3. Lateral part of upper eyelid4. Medial parts of both eyelids5. Lower part of dorsum and tip of nose
b. Maxillary division of trigeminal nerve	<ol style="list-style-type: none">1. Infraorbital nerve2. Zygomaticofacial nerve3. Zygomaticotemporal nerve	<ol style="list-style-type: none">1. Lower eyelid, side of nose and upper lip2. Upper part of cheek3. Anterior part of temporal region
c. Mandibular division of trigeminal nerve	<ol style="list-style-type: none">1. Auriculotemporal nerve2. Buccal nerve3. Mental nerve	<ol style="list-style-type: none">1. Upper two-thirds of lateral side of auricle, temporal region2. Skin of lower part of cheek3. Skin over chin
d. Cervical plexus	<ol style="list-style-type: none">1. Anterior division of great auricular nerve (C2, C3)2. Upper division of transverse (anterior) cutaneous nerve of neck (C2, C3)	<ol style="list-style-type: none">1. Skin over angle of the jaw and over the parotid gland2. Lower margin of the lower jaw

ARTERIES OF THE FACE

Features

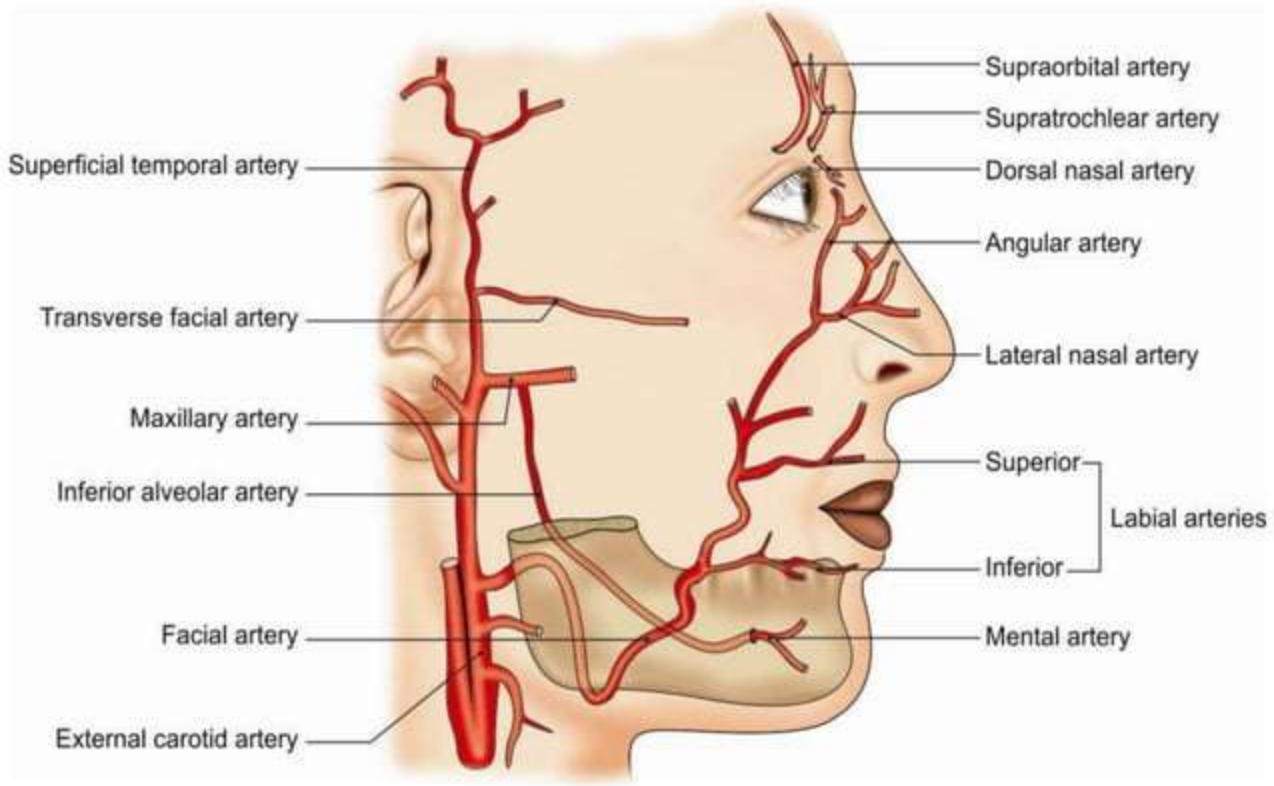
The face is richly vascular. It is supplied by:

1. The facial artery,
2. The transverse facial artery, and
3. Arteries that accompany the cutaneous nerves.

Branches

They are:

- Inferior labial
- Superior labial
- Lateral nasal
- The posterior branches are small and unnamed.



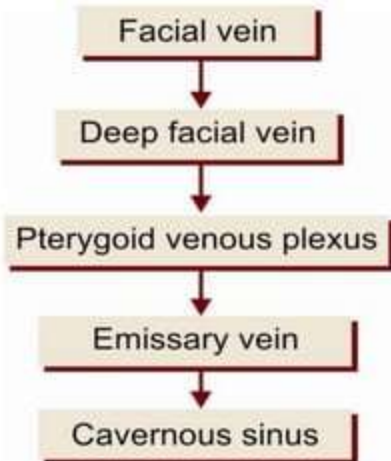
Arteries of the face

VEINS OF THE FACE: These accompany the arteries

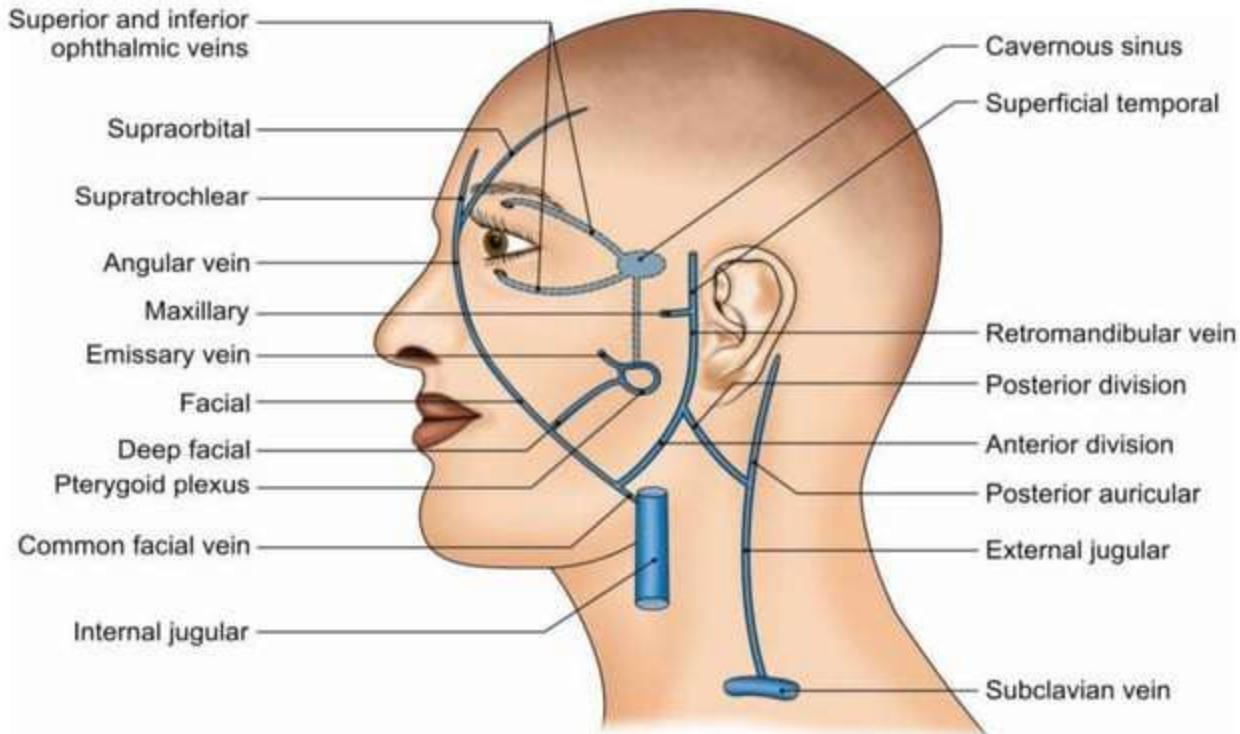
Deep Connections:

A communication between the supraorbital and superior ophthalmic veins.

Another connection with the pterygoid plexus in.



VENOUS DRAINAGE



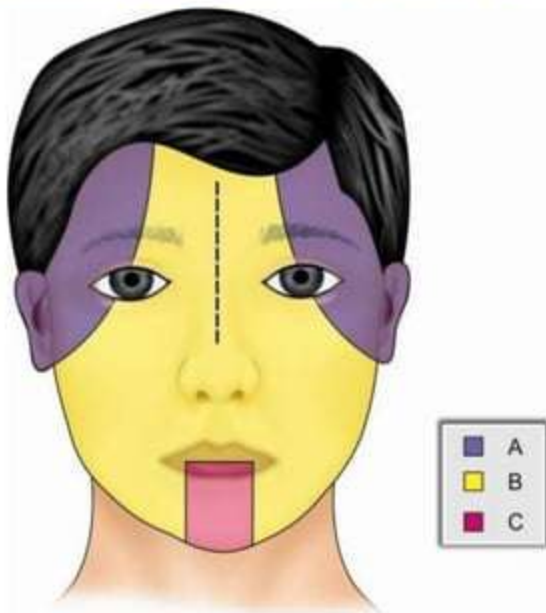
The veins of the scalp, face and their deep connections with the cavernous sinus and the pterygoid plexus of veins

DANGEROUS AREA OF FACE



Dangerous area of the face (stippled). Spread of infection from this area can cause thrombosis of the cavernous sinus

LYMPHATIC DRAINAGE OF THE FACE



The lymphatic territories of the face. Area (a) drains into the preauricular nodes, area (b) drains into the submandibular nodes, and area (c) drains into the submental nodes

I. Muscle of the Scalp
Occipitofrontalis

ACTION:

SURPRISE
FRIGHT
HORROR



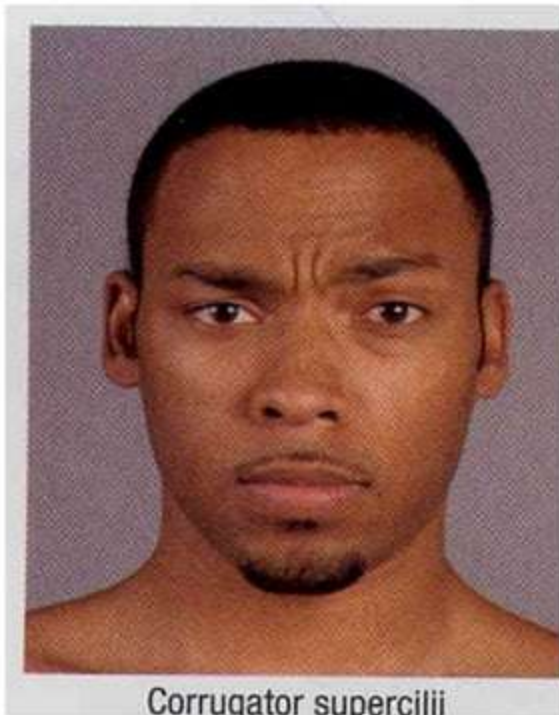
III. Muscles of the Eyelids/Orbital Openings

1. Orbicularis oculi
2. Corrugator supercilii
3. Levator palpebrae superioris

ACTION:

DRAGS EYE BROW
MEDIALLY &
DOWNWARDS

VERTICAL WRINKLES OF
FOREHEAD - ANNOYANCE



Smiling and
laughing:

Zygomaticus major



