Anatomy of the Face

Dr Maan Al-Abbasi
PhD (UK)
MBChB
Learning Objectives

• Identify layers of the face
• Understand the different nerve supplies of the face (sensory and motor)
• Recognize the clinical importance of face venous drainage and lymphatics
• Identify the muscles of facial expression
Aging ...

- Smooths Furrow Lines
- Reduces Crows Feet
- Diminishes Fine Lines
- Lifts Sagging Cheeks
- Tightens Enlarged Pores
- Smooths Wrinkles
- Softens Frown Lines

From very fine lines in the 20s to noticeable wrinkles after 30s.

Expression lines form around the cheek and eye areas.

Fine lines and sagging skin start to develop around the mouth.

The skin down the jaw line loses elasticity.
Skin Langers Lines
SEPTAE:
- Superior temporal septum
- Inferior temporal septum

ADHESIONS:
- Temporal adhesion
- Lateral orbital thickening

TRUE LIGAMENTS:
- Zygomatic ligament
- Masseteric ligaments

1. Skin
2. Subcutaneous
3. Musculo-aponeurotic
4. Retaining ligaments and space
5. Periosteum and Deep fascia

Sub-galea plane
Galea
Skin
SMAS
Sub-SMAS plane
Deep fascia
Mandibular ligament
SMAS — superficial musculo aponeurotic system
SMAS — superficial musculo aponeurotic system
Superficial fat compartments
Sensory nerves of the face

**Trigeminal Nerve / CN V**

Branches:
1. Ophthalmic Division / Nerve (V1)
2. Maxillary Division / Nerve (V2)
3. Mandibular Division / Nerve (V3)
Sensory nerves of the face

- Supratrochlear
- Supraorbital
- Infratrochlear
- External nasal
- Lacrimal
- Zygomaticotemporal
- Zygomaticofacial
- Infraorbital
- Auriculotemporal
- Buccal
- Mental
- Ophthalmic
- Maxillary
- Mandibular
Sensory nerves of the face
Trigeminal neuralgia
Arterial supply of the face
Arterial supply of the face
Temporal artery pulsation & Temporal Arteritis
Venous drainage of the face
Venous Connection
Retromandibular vein

- **Superficial temporal vein**
  - Maxillary vein
- **Posterior division**
  - Joins posterior auricular v. to form external jugular v.
- **Anterior division**
  - Joins facial v. to form common facial v. → A tributary of the internal jugular v.
Venous connections of cavernous sinus

Flow can reverse, pterygoid plexus has valves & can act as a suction pump (yawning). Danger for infection between angular & deep facial veins.
Lymphatic Drainage of the Face
Now you see the muscles!
Muscles of the Face

- Epicranius aponeurosis
- Occipitofrontalis (frontal belly)
- Corrugator supercili
- Orbicularis oculi
- Occipitofrontalis (occipital belly)
- Orbicularis oris
- Buccinator

Facial muscles (anterior view) and (lateral view)
Facial Nerve

- Temporal
- Zygomatic
- Buccal
- Marginal
- Cervical

Branches:
- Temporofacial division
- Facial n.
- Post. auricular n.
- To digastric & stylohyoid mm.
- Cervicofacial division
Central facial palsy

- Preservation of forehead & brow movements
- Loss of nasolabial folds & drooping of the lower lip

Peripheral facial palsy

- Loss of forehead & brow movements
- Inability to close eyes & drooping of eyelids
- Loss of nasolabial folds & drooping of the lower lip
Facial Palsy

- [https://www.youtube.com/watch?v=hmmvHqosZow](https://www.youtube.com/watch?v=hmmvHqosZow)
Quiz: Which side of the face is the affected one?
The most dangerous places
Quiz sample!