Face.
Lateral regions
Regio temporalis

Lateral region of the face

**Boundaries**

Superiorly - linea temporalis superior

Inferiorly - arcus zygomaticus
Regio temporalis

Subcutaneous layer

- Adipose connective tissue - more pronounced in front
- Muscles
  - Mm. auriculares anterior and superior
- Thin fascia for galea aponeurotica, over os zygomaticum
  - passes under the skin of the face
Regio temporalis

Vessles

A. temporalis superficialis
- r. frontalis
- r. parietalis
- a. temporalis media

Nerves

n. auriculotemporalis
n. zygomaticotemporalis
rr. temporales
Fascia temporalis

Attachment:

Superiorly - linea temporalis superior

Inferiorly – splits into two sheets, superficial to arcus zygomaticus,
depth to fascia of m. masseter

- interfascial space – filled with loose connective tissue
  - a. temporalis media
**Regio temporalis**

**M. temporalis**

Fan-shaped with vertical, oblique and horizontal fibers. Located in osteo-fibrous bed.

**O. Fossa & fascia temporalis**

**I. Processus coronoideus**

F. Closes mouth, posterior fibers

Draw lower jaw backward.

**N. Nn. temporales profundi**
Regio temporalis

Well-developed layer of fat btw m. temporalis and fascia temporalis, continuous with corpus adiposum buccae. Contains:

- aa., vv., nn. temporales profundi, penetrating the muscle.

Broad communication btw temporal & infratemporal region.
The latter communicates with the orbit thru fissura orbitalis inferior.
Regio parotideomasseterica

Lateral region of the face.

Boundaries

- **Superior** - arcus zygomaticus
- **Inferior** - basis mandibulae
- **Posterior** – external acoustic meatus, processus mastoideus, anterior margin of m. sternocleidomastoideus
- **Anterior** – anterior margin of m. masseter
Regio parotideomasseterica

Basic structures in the region

- Glandula parotis
- M. masseter
Fossa retromandibularis

Btw ramus mandibulae & proc. mastoideus with apex medially и and base laterally.

**Anterior wall:** m. masseter, ramus mandibulae, m. pterygoideus med., lig. sphenomandibulare.

**Lateral wall:** skin, subcutaneous layer, fascia.

**Posterior wall:** m. sternocleidomastoideus, m. digastricus (venter posterior), m. stylohyoideus, m. styloglossus, m. stylopharyngeus, lig. stylomandibulare.

**Superiorly:** art. temporomandibularis, meatus acusticus externus.

**Inferiorly:** CT sheet btw angulus mandibulae & m. sternocleidomastoideus.
Glandula parotis

Serous tubulo-acinous gland. Lobulated surface. Covered by parotid fascia. The surface is modeled by the unevenness of the walls of its bed.

- Laterally prominent, lying on m. masseter.
- Medially narrowing into proc. pharyngeus
- Posteriorly protruding btw m. sternocleidomastoideus & m. digastricus
- m. digastricus & proc. styloideus.

Ductus parotideus – over m. masseter, thru corpus adiposus buccae and m. buccinator, opens in papilla parotidea

Glandula parotidea accessoria
Elements in glandula parotidea

A. carotis externa enters thru posterior aspect. At collum mandibulae splits into two branches:

1. A. temporalis superficialis - reaches reg. temporalis, where splits into r. parietalis & r. frontalis.

In the gland gives off:

A. transversa faciei
A. zygomaticoorbitalis
A. temporalis media
Elements in glandula parotidea

2. A. maxillaris enters reg. infratemporalis btw collum mandibulae & lig. sphenomandibulare

V. retromandibularis forms by joining v. temporalis superficialis & v. maxillaris
**Elements in glandula parotidea**

**N. auriculotemporalis.** Sensory and parasympathetic.

Enters btw collum mandibulae & lig. sphenomandibulare. Ascends posterior to temporomandibular joint with a.,v. temporales superficiales.

**Supplies** parotid gland and temporal region.

**N. facialis.** Motor for muscles of facial expression.

Reaches the gland btw proc. styloideus and v. jugularis interna.

Most superficial in the gland.

Forms **parotid plexus**
Vagina carotica
Proc. styloideus
M. digastricus v. posterior
N. auriculotemporalis
A. carotis externa
V. retromandibularis
M. masseter

M. masseter. Consists of two parts - pars superficialis and pars profunda. Covered by thick fascia - fascia masseterica

O. Arcus zygomaticus

- External surface - pars superficialis
- Internal surface - pars profunda

I. Tuberositas masseterica

F. Masticatory. Closes mouth.

Lying on the muscle are anterior part of
gl. parotis, duct. parotideus, rr. zygomatici & rr. buccales.

N. N. massetericus (V3)
Regio buccalis

Lateral region of the face without bone base. Thickening from front to back

Boundaries

Superior - arcus zygomaticus
Inferiorly - basis mandibulae
Posteriorly - преден ръб на m. masseter
Anteriorly - angulus oris
Regio buccalis

Skin - soft, thin. In men hairy inferiorly

Subcutaneous layer

- Adipose connective tissue - well expressed in children, poor adults
- Muscle of facial expression
  - m. platysma
  - m. risorius
  - m. zygomaticus major
- Ductus parotideus
Regio buccalis

- Blood vessels
  * a., v. transversa faciei
- Nerves
  * motor - rr. bucales from pl. parotideus,
  * sensory – branches of n. trigeminus
- Lymphatic vessels
- Nodi lymphatici buccales
Regio buccalis

Deep layer of fat - corpus adiposum buccae.

Enclosed in a capsule fat between m. masseter and m. buccinator.

Separated from the remaining adipose tissue.

Well expressed in children.

Ductus parotideus
Regio buccalis

Vessels

- A.,v. facialis
  - a.v. labialis inferior
  - a.v. labialis superior
- A.,v. buccalis
  Branches of a.v. maxillaris,
  Enter from reg. infratemporalis.

Nerves

- N. buccalis (V3)
  Innervating the skin and mucosa in
  the region of the cheek.
**M. buccinator**

**M. buccinator.** Muscle base of the cheek. Covered from outside with fascia buccopharyngea, from inside with mucosa.

Papilla parotidea is found on the mucosa.

**O. Processus alveolaris maxillae**
- Raphe pterygomandibulare
- Crista buccinatoria

**I. Angulus oris**

**F.** Draws laterally the mouth angle.

Presses the cheek against the lower jaw,

Pumps the air out of the mouth.

**N. Rr. buccales of n. facialis**
INFRATEMPORAL REGION
Boundaries

- **Anterior:**
  Maxilla.

- **Superior:**
  Greater wing of sphenoid.

- **Medial:**
  Lateral pterygoid plate.

- **Lateral:**
  Coronoid process and ramus of mandible.
Boundaries

- **Inferior:**
  Continuous with neck.

- **Posterior:**
  TMJ and styloid process.

- **Communicates with:**
  Orbit via inferior orbital fissure.
  Pterygopalatine fossa via pterygomaxillary fissure.
Contents

- Mandibular nerve.
- Maxillary artery.
- Medial and lateral pterygoid muscles.
- Lower part of temporalis muscle.
- Chorda tympani nerve.
- Otic ganglion.
Maxillary Artery

- **Characteristics and branches:**
  - Terminal branch of external carotid artery.
  - Divided into three parts by lateral pterygoid muscle:
    - Artery may pass superficial or deep to muscle.
Maxillary Artery: Parts

- First part:
  Origin to lower margin inferior to lateral pterygoid.

- Second part:
  Superficial or deep to inferior lateral pterygoid.

- Third part:
  Lies within pterygopalatine fossa.
Maxillary Artery: First Part

- Deep auricular artery
- Anterior tympanic artery
- Middle meningeal artery
- Accessory meningeal artery
- Inferior alveolar artery
Maxillary Artery: Second Part

- Deep temporal artery
- Pterygoid artery
- Masseteric artery
- Buccal artery
Maxillary Artery: Third Part

- Posterior superior alveolar artery
- Infraorbital artery
- Descending palatine artery
- Artery of pterygoid canal
- Pharyngeal artery
- Sphenopalatine artery
Lateral pterygoid muscle

- **Origin**: upper head from infratemporal surface of greater wing of sphenoid; lower head from lateral pterygoid
- **Insertion**: two heads converge backward and inserted onto pterygoid fossa of mandible and articular disc of TMJ
- **Nerve supply**: Anterior division of mandibular nerve
- **Action**: pulls neck of mandible forward with articular disc during process of opening of mouth; acting with medial pterygoid of same side, it pulls neck of mandible forward with articular disc, causing jaw to rotate around opposite condyle, as in chewing
Mandibular division of trigeminal nerve

- Sensory & motor roots of mandibular nerve emerge from skull through foramen ovale
- Immediately below the foramen, small motor root of mandibular nerve unites with large sensory root
- Mandibular nerve now descends and divides into a small anterior and a large posterior division
Mandibular division branches

Branches from main trunk:

- Meningeal branch
- Nerve to medial pterygoid to tensor tympani n

Branches from anterior division:

- Masseteric, 2 deep temporal, lateral pterygoid (motor)
- Buccal (sensory)

Branches from posterior division:

- Auriculotemporal N (sensory)
- Lingual N (sensory)
- Inferior alveolar N (motor)
Chorda Tympani

- Branch of facial nerve
- Enters infratemporal fossa and runs downward and forward to join lingual nerve
- Carries
  - preganglionic parasympathetic fibers to submandibular and sublingual glands
  - taste fibers from ant 2/3 of tongue and floor of mouth;
    - cell bodies of taste fibers in sensory geniculate ganglion of facial nerve
    - end by synapsing with cells of nucleus solitarius in Pons.
Pterygoid venous plexus
- Receives veins, corresponding to branches of maxillary artery
- Its posterior end drained by maxillary vein.
- Communicates with facial vein thru deep facial vein

Maxillary vein
- Drains post end of pterygoid venous plexus
- Runs backward with max artery, on medial side of neck of mandible
- Joins superficial temporal vein within parotid to form retromandibular vein