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PAROTID GLAND 3

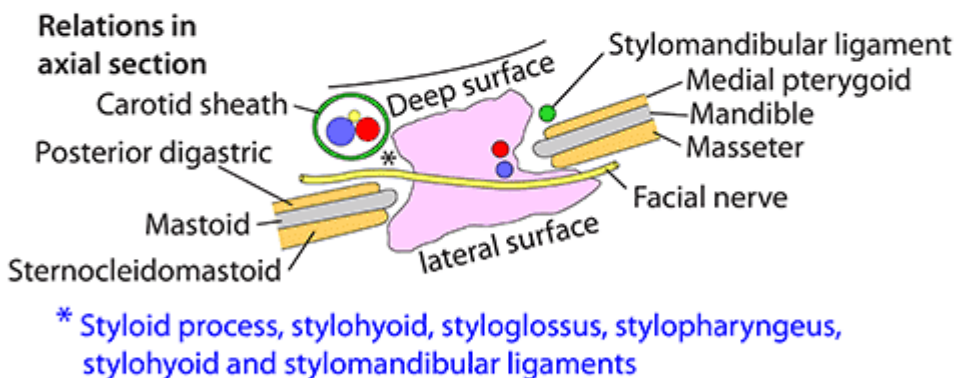
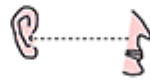
PAROTID GLAND



PAROTID GLAND 2

- **Blood supply:** Branches of external carotid
- **Venous drainage:** To retromandibular
- **Lymph drainage:** Pre-auricular to deep cervical
- **Nerve supply:** **Secretomotor** via inferior salivary nucleus to glossopharyngeal nerve to its tympanic branch to lesser petrosal nerve to otic ganglion to auriculotemporal nerve. **Sympathetics** via superior cervical ganglion and external carotid artery. **Sensation** for gland - auriculotemporal (Vc), for fascia - great auricular (C2)
- **Duct:** 5cm long, crosses masseter, pierces buccinator at 3rd molar and mucosa at 2nd molar. Stenson's duct
- **Surface markings of duct:**

Intertragic notch of ear Philtrum



Development Lining of mouth → Ectoderm → Tunnel → Far end proliferates

Histology



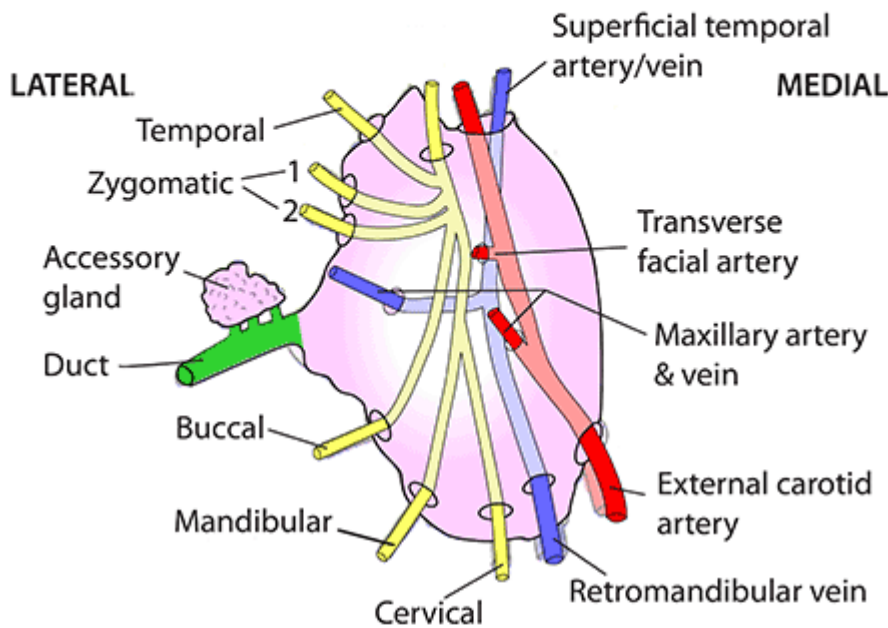
Stratified cuboidal ducts



Tubulo-acinar glands with the occasional myoepitheliocyte

PAROTID GLAND 3

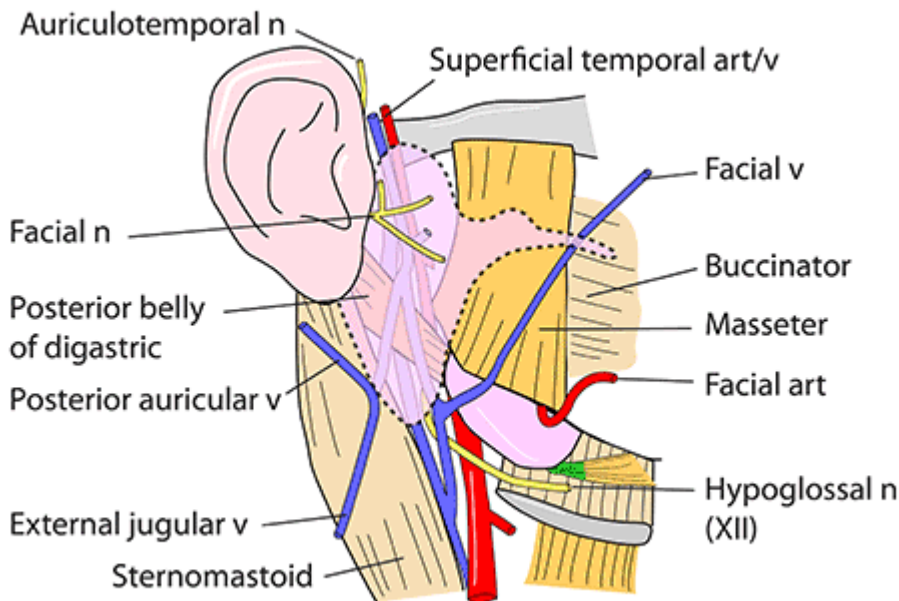
MEDIAL SURFACE OF RIGHT PAROTID GLAND



CLINICAL ASPECTS

- Mikiulitz & Sjorgren's syndromes
- Adenomas
 - Both sexes equal occurrence
 - Pleomorphic
 - Poorly circumscribed
 - Can become malignant
 - Usually superficial to VII
- Adenolymphoma - Warthin's tumour (more in males than females)
- Primary malignant - adenocystic, acinar cell
- Secondary malignant - from face
- Stones in duct
- Frey's syndrome - gustatory sweating. Regrowth of parasympathetic fibres into damaged sympathetic fibres in the auriculotemporal nerve

PAROTID GLAND 1



Lies between mastoid, styloid process, ramus of mandible.
Surrounded by parotid fascia (investing layer of deep fascia)

- Serous secretions
- Produces amylase, water, Ig factors (lubricates & oral hygiene)
- Has an upper & lower pole, lateral, anterior & deep surface

RELATIONS:

Posterior

Sternocleidomastoid
Mastoid process

Above

External acoustic meatus
Temporomandibular joint

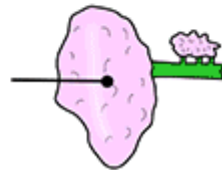
Anterior

Angle of mandible
Medial pterygoid plate
Masseter
Stylomandibular ligament

In gland: Facial nerve, retromandibular vein, external carotid artery, lymph nodes, fibres of auriculotemporal nerve

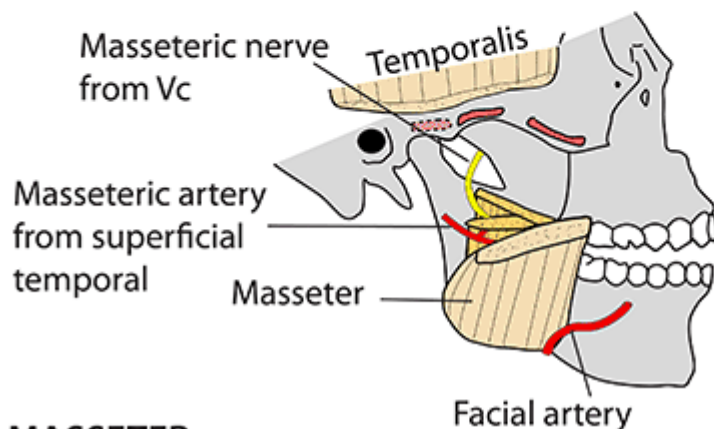
Deep to gland: Mastoid process, sternomastoid, posterior belly of digastric, styloid process, stylohyoid ligament & muscle, styloglossus, stylopharyngeus, temporomandibular joint

Lateral:
subcutaneous surface



PAROTID REGION & MASSETER

- **Definition:** In front and below ear
- **Features:** Masseter & Parotid gland



MASSETER

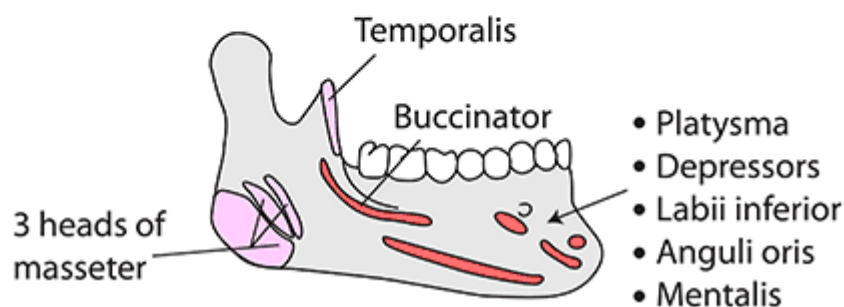
Origin: 3 heads from zygomatic arch

1. Superficial - anterior 2/3
2. Intermediate - middle 1/3
3. Deep - Deep surface of posterior arch

Insertion: Ramus/angle of mandible

Action: Closes jaw

Nerve: Masseteric branch of mandibular division of trigeminal (Vc)



parotid region

- features
 - largest of salivary gland
 - situated below external acoustic meatus
 - between the ramus of mandible and sternocleidomastoid
 - skin over gland supplied by greater auricular nerve
- structures within parotid gland
 - arteries
 - external carotid artery enters gland through posteromedial surface
 - maxillary artery leaves the gland through its anteromedial surface
 - superficial temporal artery gives transverse facial artery and emerges at the
 - anterior part of superior surface
 - veins

- retromandibular vein is formed within the **gland**
 - union of
 - superficial temporal and maxillary veins
- in lower part of **gland** vein divides into
 - these emerge close to the apex (lower pole)
 - anterior division
 - posterior division
- **nerve**
 - facial **nerve** is the **nerve** of second branchial arch
 - leaves the skull by passing through stylomastoid foramen
 - extracranial course
 - 1. crosses the lateral side of base of styloid process
 - then enters the posteromedial surface of parotid **gland**
 - branches at its exit from stylomastoid foramen
 - communicating branches with adjacent cranial and spinal nerves
 - posterior auricular **nerve** arises just below the stylomastoid foramen
 - ascends between mastoid process and external acoustic meatus
 - supplies
 - auricularis posterior
 - occipitalis
 - intrinsic muscles on back of auricle
 - digastric branch arises close to previous **nerve**
 - short and supplies posterior belly of digastric
 - stylohyoid branch arises with digastric branch
 - long and supplies stylohyoid **muscle**
 - terminal branches
 - temporal branches cross zygomatic arch and supply
 - auricularis anterior
 - auricularis superior
 - intrinsic muscles on the lateral side of **ear**
 - frontalis
 - orbicularis oculi
 - corrugator supercili
 - zygomatic branches
 - run across zygomatic bone
 - supply orbicularis oculi
 - buccal branches are two in number
 - marginal mandibular branch
 - runs below the angle of mandible
 - **deep** to platysma
 - crosses **body** of mandible supplies
 - muscles of lower lip and chin
 - cervical branch
 - emerges from apex of parotid **gland**
 - runs downwards and forwards in the neck to supply platysma
- bells palsy
 - sudden paralysis of facial **nerve** at stylomastoid foramen
 - results in asymmetry of **corner** of **mouth**
 - inability to close **eye**
 - disappearance of nasolabial fold
 - loss of wrinkling of skin of forehead on same side

- **nerve supply**
 - parasympathetic nerves are secretomotor
 - reach the **gland** through auriculotemporal **nerve**
 - preganglionic fibres begin in inferior salivatory nucleus
 - pass through glossopharyngeal **nerve**
 - tympanic branch
 - relay in otic ganglion
 - sympathetic nerves
 - postganglionic
 - vasomotor
 - derived from plexus around middle meningeal artery
 - travel along branches of maxillary, external carotid artery and their branches
 - sensory nerves
 - to the **gland** come from
 - auriculotemporal **nerve**
 - parotid fascia innervated by sensory fibres of great auricular **nerve**
- parotid duct or stensons duct
 - superiorly
 - accessory parotid **gland**
 - transverse facial vessels
 - upper buccal branch of facial **nerve**
 - inferiorly
 - lower buccal branch of facial **nerve**
 - anterior border of masseter
 - parotid duct turns medially and pierces
 - buccal **pad** of fat
 - buccopharyngeal fascia
 - buccinator
- contains
 - largest salivary **gland**
 - histology
 - it is a serous acini
- external features
 - surfaces
 - superior (base of pyramid)
 - forms the upper end of the **gland**
 - small and concave
 - related to cartilaginous part of external acoustic meatus
 - posterior surface of temporomandibular joint
 - superficial temporal vessels
 - auriculotemporal **nerve**
 - superficial
 - largest surface
 - covered by
 - skin
 - superficial fascia
 - containing anterior branches of great auricular **nerve**
 - preauricular or superficial parotid lymph nodes
 - posterior fibres of platysma
 - risorius
 - parotid fascia which is thick and adherent

- anteromedial
 - grooved by posterior border of ramus of mandible
 - related to
 - masseter
 - lateral surface of temporomandibular joint
 - posterior border of the ramus of mandible
 - medial pterygoid
 - emerging branches of facial [nerve](#)
- posteromedial
 - moulded to mastoid
 - moulded to styloid process
 - structures attached to them
 - related to
 - mastoid process
 - sternocleidomastoid
 - posterior belly of digastric
 - styloid process with structures attached to it
 - external carotid artery and facial [nerve](#)
 - enter the [gland](#) through this surface
 - internal carotid artery lies [deep](#) to styloid process
- relations
- borders
 - anterior
 - separates superficial surface from anteromedial surface
 - extends from anterior part of the superior surface to the apex
 - following structures emerge at this border
 - parotid duct
 - terminal braches of facial [nerve](#)
 - transverse facial vessels
 - posterior
 - separates superficial surface from posteromedial surface
 - overlaps sternocleidomastoid
 - medial / pharyngeal edge
 - separates anteromedial surface from posteromedial surface
 - related to lateral wall of pharynx
- blood supply
- parotid lymph nodes
- CLINICAL ANATOMY
 - parotid abscess
 - caused by spread of infection from opening of parotid duct
 - drained by making holes (hiltons method)
 - mixed parotid tumour is slow growing tumour
 - parotid calculi may [be](#) formed in the parotid duct

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