

Digestive system I. (oral cavity)

Digestive system functions:

- food intake
- mechanical and chemical processes
- absorption of substances
- excretion of the wasting products and useless remains



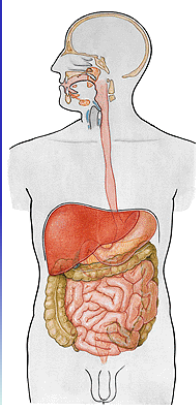
Digestive system structure:

Digestive tube:

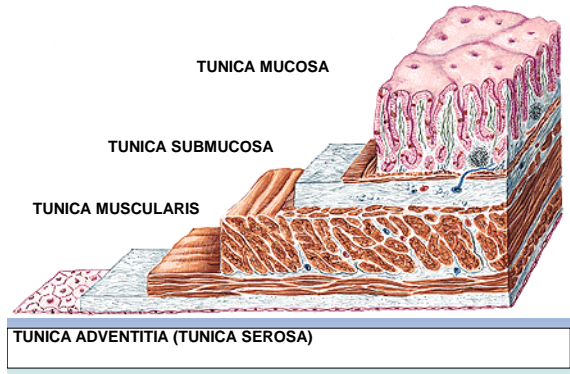
- oral cavity
- pharynx
- oesophagus
- stomach
- small intestine
- great intestine

Glands:

- liver
- pancreas



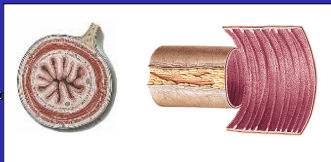
Digestive system ultrastructure:



TUNICA MUCOSA

- lamina epithelialis
- lamina propria (folliculi lymphatici solitarii et aggregati)
- lamina muscularis

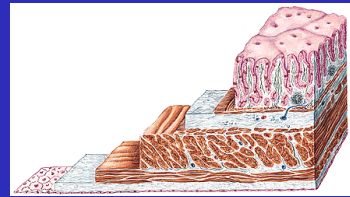
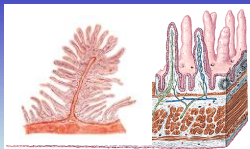
Folds (plicae)



papillae



villi intestinales



TUNICA SUBMUCOSA – vascular and neural plexus (plexus submucosus Meisneri)

TUNICA MUSCULARIS – striated muscles (oral cavity until upper third of esophagus, m. sphincter ani externus)

smooth muscles - stratum circulare et longitudinale (plexus myentericus Auerbachii)

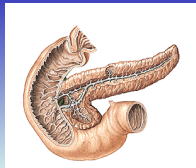
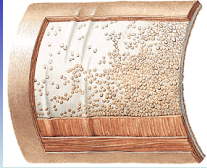
TUNICA EXTERNA – tunica adventitia or tunica serosa

Glands of the digestive system (gladulae, adenos)

glandular cells
glands (separate organs)

intramural

extramural



Oral cavity – cavitas oris



Borders:

- Rima oris
- Isthmus faucium
- Lips, buccae
- Palatum
- Diaphragma oris

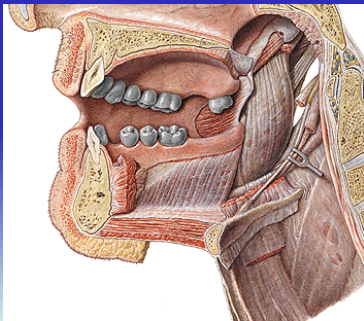
Content:

- Tongue
- Teeth

CAVITAS ORIS

vestibulum oris

cavum oris proprium



Vestibulum oris

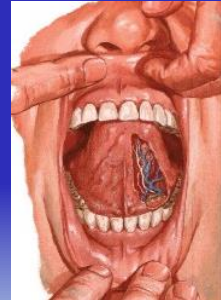


Tremata

Trigonum retromolare

Papilla parotidea

Plica pterygomandibulare



Fornix vestibuli sup. (frenulum labii sup.)

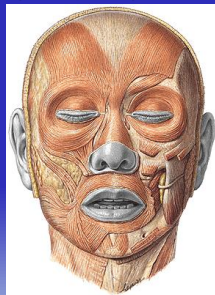
Fornix vestibuli inf. (frenulum labii inf.)

Lips (labia oris) and cheek (bucca, mala)



Sulcus nasolabialis et mentolabialis

Philtrum, tuberculum labii sup.

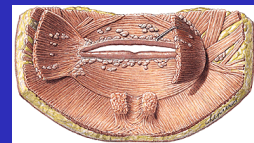


Corpus adiposum buccae



Frenulum labii superioris

Frenulum labii inferioris



Glandulae labiales at buccales



Papilla parotidea

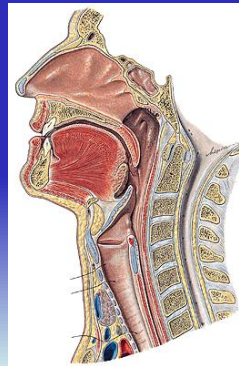
Proper oral cavity



Borders:

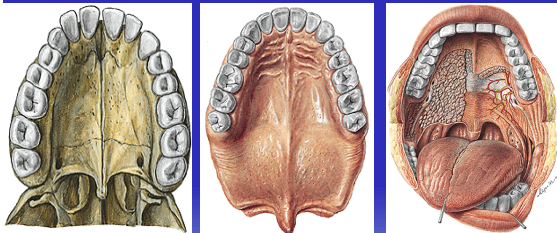
- Teeth
- Isthmus faucium
- Palatum
- Diaphragma oris

Palate (palatum)



- Hard palate
- Soft palate

Palatum durum

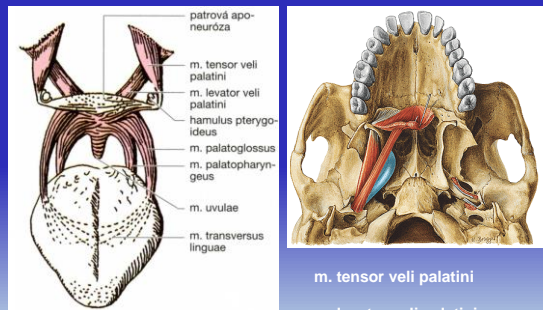


Papilla incisiva (dustus incisivi, nervus nasopalatinus)

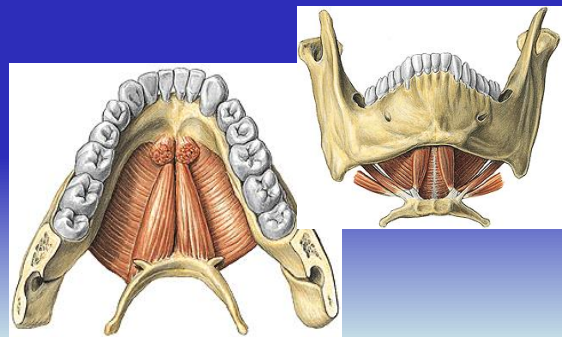
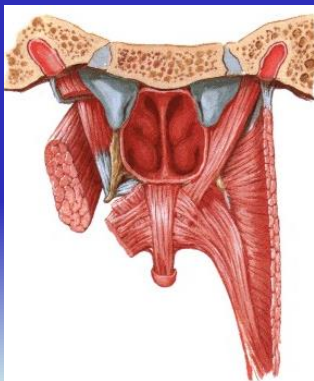
Plicae palatinae transversae

Glandulae palatinae

Soft palate



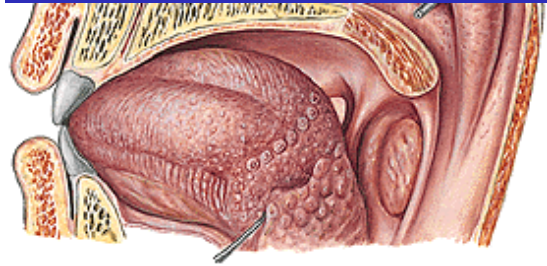
Diaphragma oris



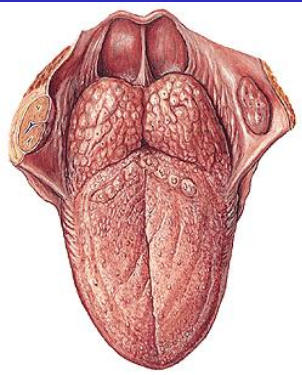
The bottom of oral cavity



Tongue (lingua, glossa)

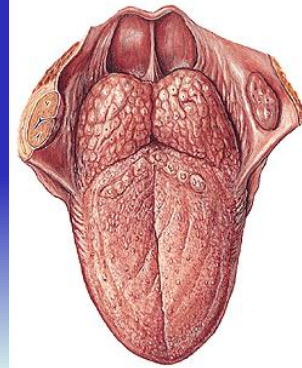


1. Pars oralis (corpus, apex)
2. Pars pharyngea (radix)

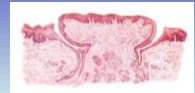


- Radix linguae
- Corpus linguae
- Apex linguae
- Sulcus terminalis
- Sulcus medianus
- Foramen caecum
- Margines linguae

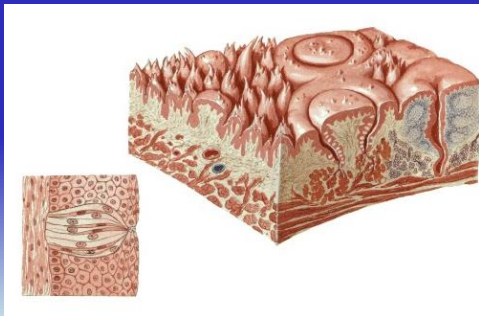
Dorsum linguae



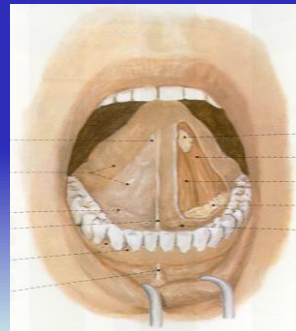
- Papillae filiformes
- Papillae fungiformes
- Papillae foliatae
- Papillae vallatae



Caliculi gustatorii

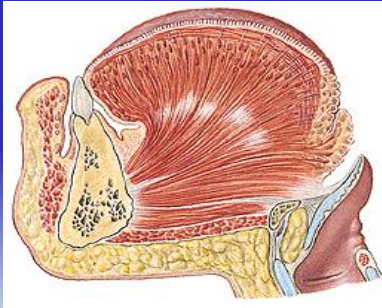


Inferior surface of the tongue



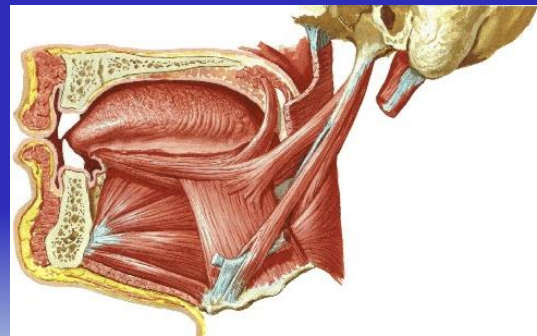
- Plica fimbriata
- Plica sublingualis
- Frenulum linguae

Extraglossal muscles



Aponeurosis linguae

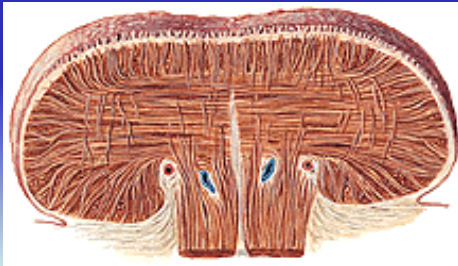
M. genioglossus



Musculus hyoglossus
Musculus styloglossus
Musculus palatoglossus

Intraglossal muscles

M. longitudinalis sup. et inf.
M. transversus linguae
M. verticalis linguae



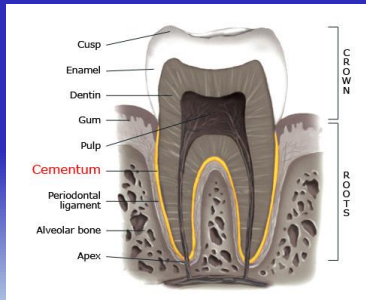
Septum linguae

Gingiva



Alveolar mucous membrane
Gingiva marginalis et alveolaris (paramarginal line)
Papillae gingivales, gingivodental closure, sulcus gingivalis

Teeth (dentes)



Fixation of the teeth:

Type: Gomphosis

Periodontium (fixative ligaments):

(apical, alveolar, transseptal, gingival)

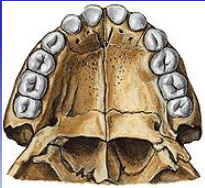
Parodontium:

all of the fixative structures of the tooth (periost, periodontium, cementum, gingiva)

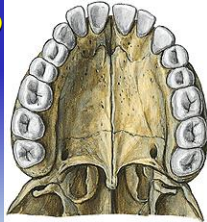


Heterodont teeth:

- Dentes incisivi (incisors)
- Dentes canini (canines)
- Dentes praemolares (premolars)
- Dentes molares (molars)



Deciduous teeth



Adult (permanent) teeth

Incisors



Canines



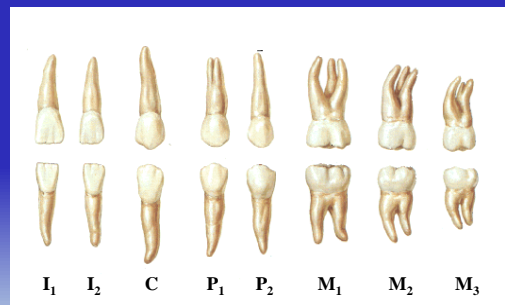
Premolars



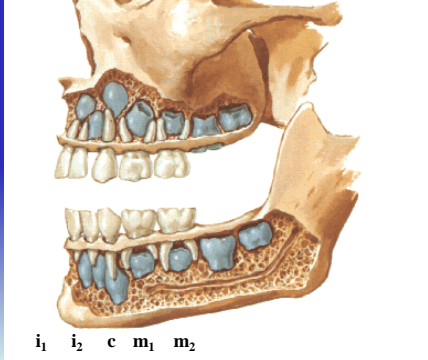
Molars



Adult teeth

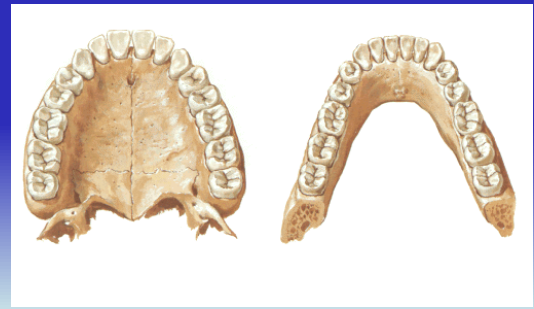


Dentes decidui

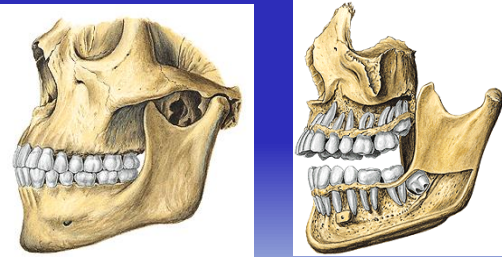


Arcus dentalis superior (half of elips)

Arcus dentalis inferior (parabola)

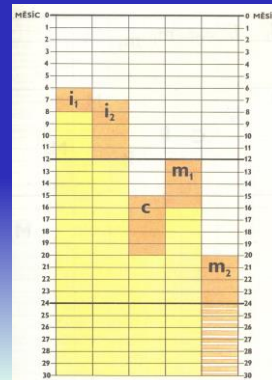


Occlusion



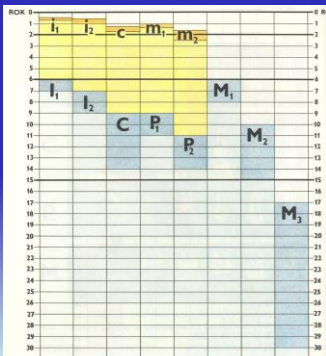
Pseudodont occlusion

Tooth eruption - primary teeth

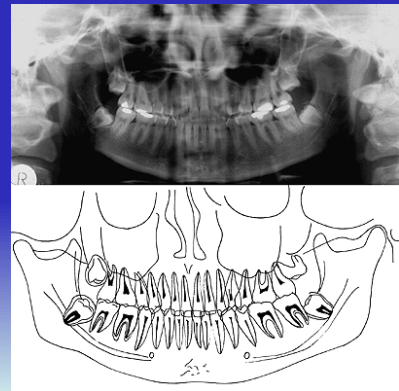


- Sequence:
- First incisor (6 months)
 - Second incisor
 - First molar
 - Canin
 - Second molar (2-2,5 yrs)

Eruption - adult teeth



- Sequence:
- First incisor, first molar
 - Second incisor
 - First premolar
 - Canine
 - Second molar
 - Second premolar
 - Third molar



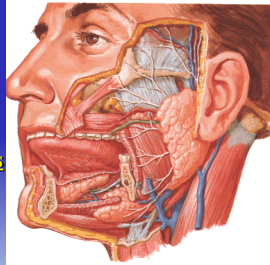
Salivary glands

GLANDULAE SALIVARIAE MINORES

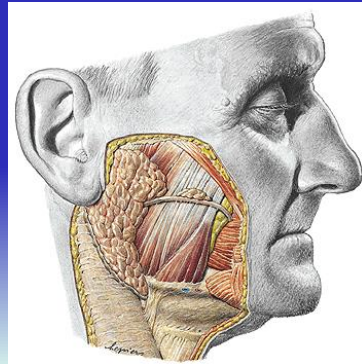
- glandulae labiales
- glandulae buccales
- glandulae palatinae
- glandulae linguales

GLANDULAE SALIVARIAE MAJORES

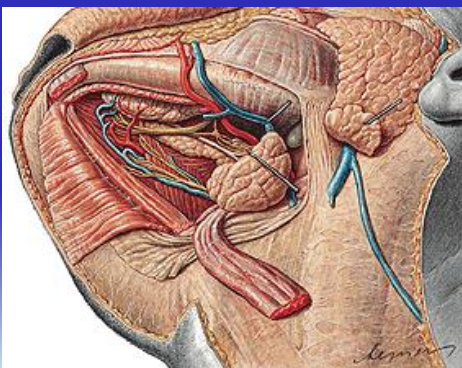
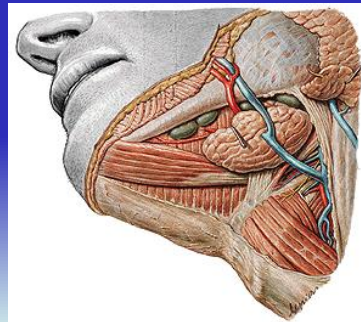
- glandula parotidea
- glandula submandibularis
- glandula sublingualis



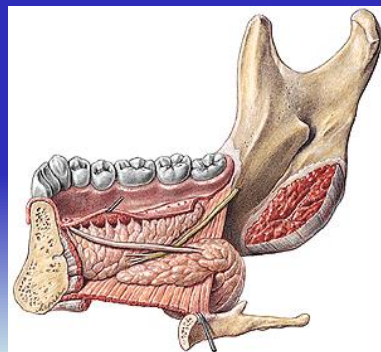
GLANDULA PAROTIDEA

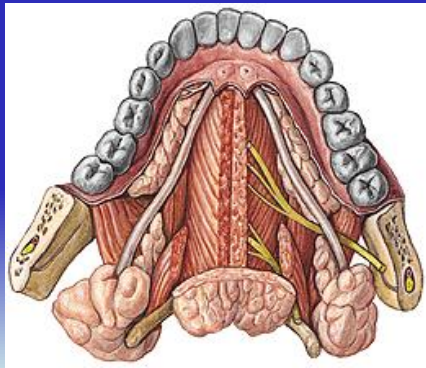


GLANDULA SUBMANDIBULARIS



GLANDULA SUBLINGUALIS

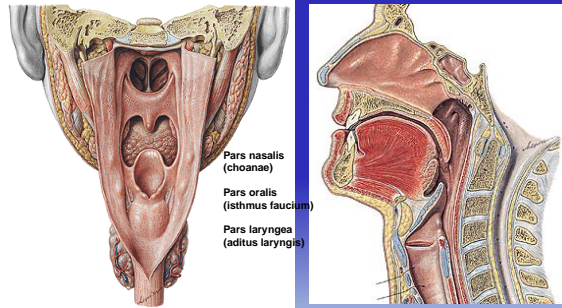




Sialolithiasis



PHARYNX

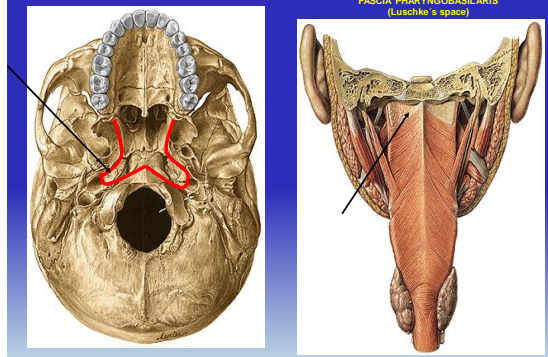


Base of skull – C6

cavum pharyngis
fornix pharyngis

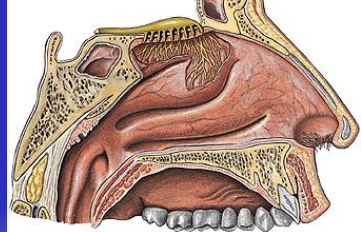
RECESSUS PHARYNGEUS

FASCIA PHARYNGOBASILARIS (Luschka's space)



PARS NASALIS PHARYNGIS

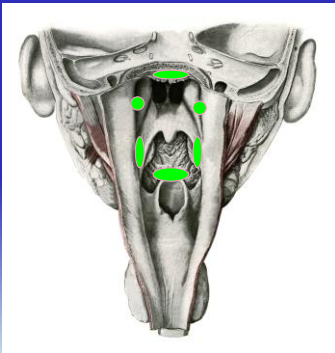
nasopharynx, epi-pharynx



- CHOANAE
- FORNIX PHARYNGIS
- TONSILLA PHARYNGEA
- HYPHYSIS PHARYNGIS

- OSTIUM PHARYNGEUM TUBAE AUDITIVAE:
- TORUS TUBARIUS (PLICA SALPINGOPHARYNGEA)
- TORUS LEVATORIUS
- PLICA SALPINGOPHARYNGEA
- TONSILLA TONSILIS

Waldeyer's lympho-epithelial ring

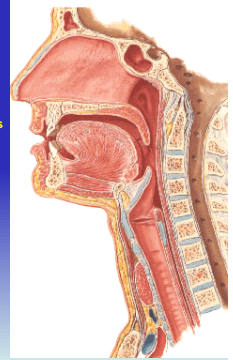


- Tonsilla pharyngea
- Tonsillae tubariae
- Tonsillae palatinae
- Tonsilla lingualis

PARS ORALIS PHARYNGIS (oropharynx)



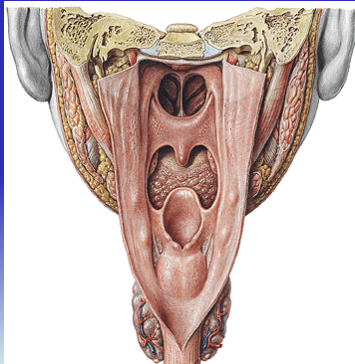
- Isthmus faucium:**
- palatum mole
 - arcus palatoglossus
 - arcus palatopharyngeus
 - tonsilla palatina
 - radix linguae



PARS LARYNGEA PHARYNGIS (laryngo-, hypopharynx)

Aditus laryngis:

- epiglottis
- plicae aryepiglotticae
- tuberculum cuneiforme
- tuberculum corniculatum
- plica interarytaenoidea (during respiration)
- insisura interarytaenoidea (during fonation)



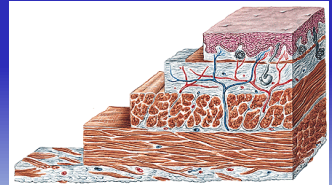
Ultrastructure of the pharyngic wall

Mucous membrane
 epithelium: pseudostratified columnar, ciliated (nasopharynx)
 stratified squamous, non-keratinized (oro- a laryngopharynx)
 gll. pharyngeae (mixed, mucinous)
 lymphatic tissue

Submucosal tissue
 fascia pharyngobasilaris

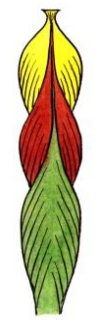
Muscles
 mm. pharyngis (constrictores, levatores)

Adventitia

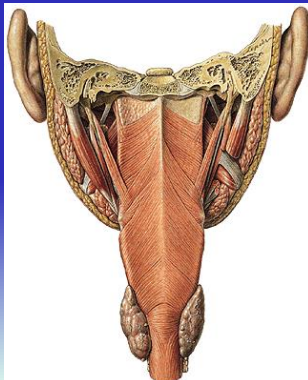


CONSTRICTORES PHARYNGIS

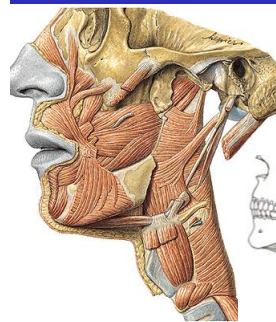
RAPHE PHARYNGIS



- M. CONSTRICTOR PHARYNGIS SUP.
- M. CONSTRICTOR PHARYNGIS MEDIUS
- M. CONSTRICTOR PHARYNGIS INF.

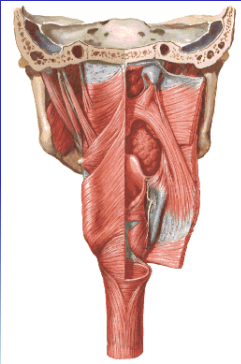


CONSTRICTORES PHARYNGIS



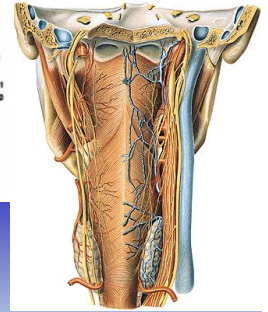
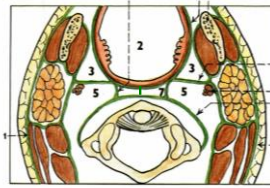
- M. CONSTRICTOR PHAR. SUP.
- PARS PTERYGOPHARYNGEA
- BUCOPHARYNGEA
- MYLOPHARYNGEA
- GLOSSOPHARYNGEA
- M. CONSTRICTOR PHAR. MED.
- PARS CHONDROPHARYNGEA
- CERATOPHARYNGEA
- M. CONSTRICTOR PHAR. INF.
- PARS THYROPHARYNGEA
- CRICOPHARYNGEA

LEVATORES PHARYNGIS



- M. STYLOPHARYNGEUS (proc. styloideus)
- M. SALPINGOPHARYNGEUS (tuba auditiva)
- M. PALATOPHARYNGEUS (aponeurosis palatina)

SPATIUM RETROPHARYNGEUM ET PARAPHARYNGEUM



RETROPHARYNGEAL SPACE

pharynx, praevertebral layer of cervical fascia, lig. retropharyngeum medianum, lat. septa

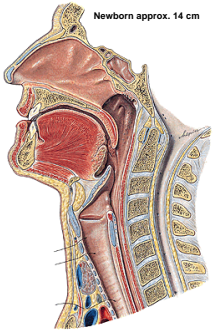
PARAPHARYNGEAL SPACE

styloid septum - pre-styloid space

retro-styloid space (neurovascular bundle)

OESOPHAGUS (C6 - Th11)

Oesitium cardiacum:
adult 40 cm from inferior incisors
Newborn approx. 14 cm



pars cervicalis

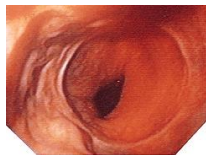
pars thoracica
pars retrotrachealis
et retropericardica

pars abdominalis

C6

Th4

Th11

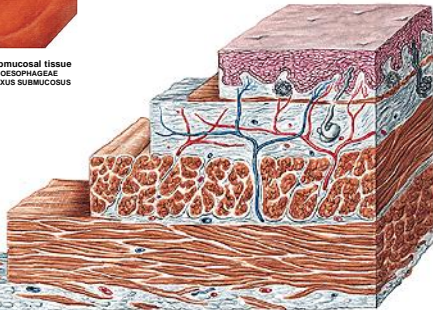


Mucosa membrane
JUNCTION GASTROESOPHAGEALIS
LONGITUDINAL FOLDS

Submucosal tissue
GL. OESOPHAGEAE
PLEXUS SUBMUCOSUS

Muscular tissue
upper 1/3 striated
lower 1/3 smooth
(circular, longitudinal)

External layer
ADVENTITIA
SEROSEA - pars abd.



ESOPHAGOGRAPHY

