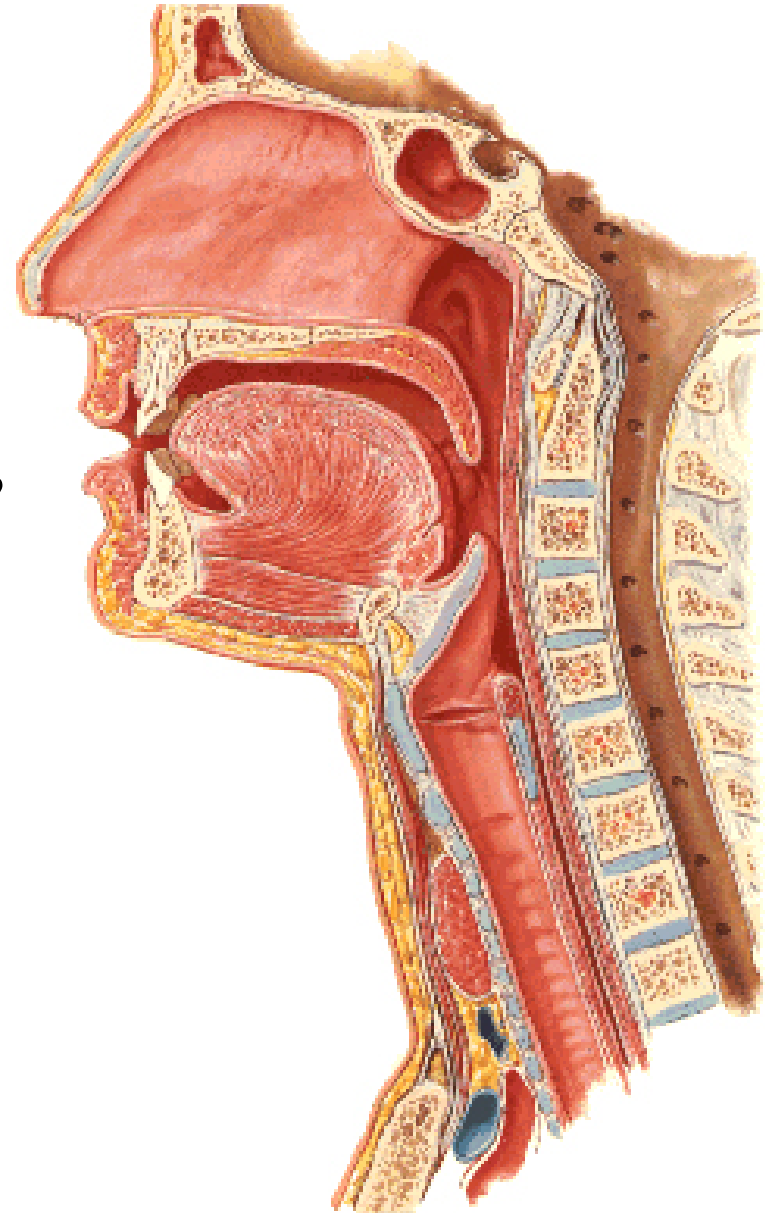


Tongue

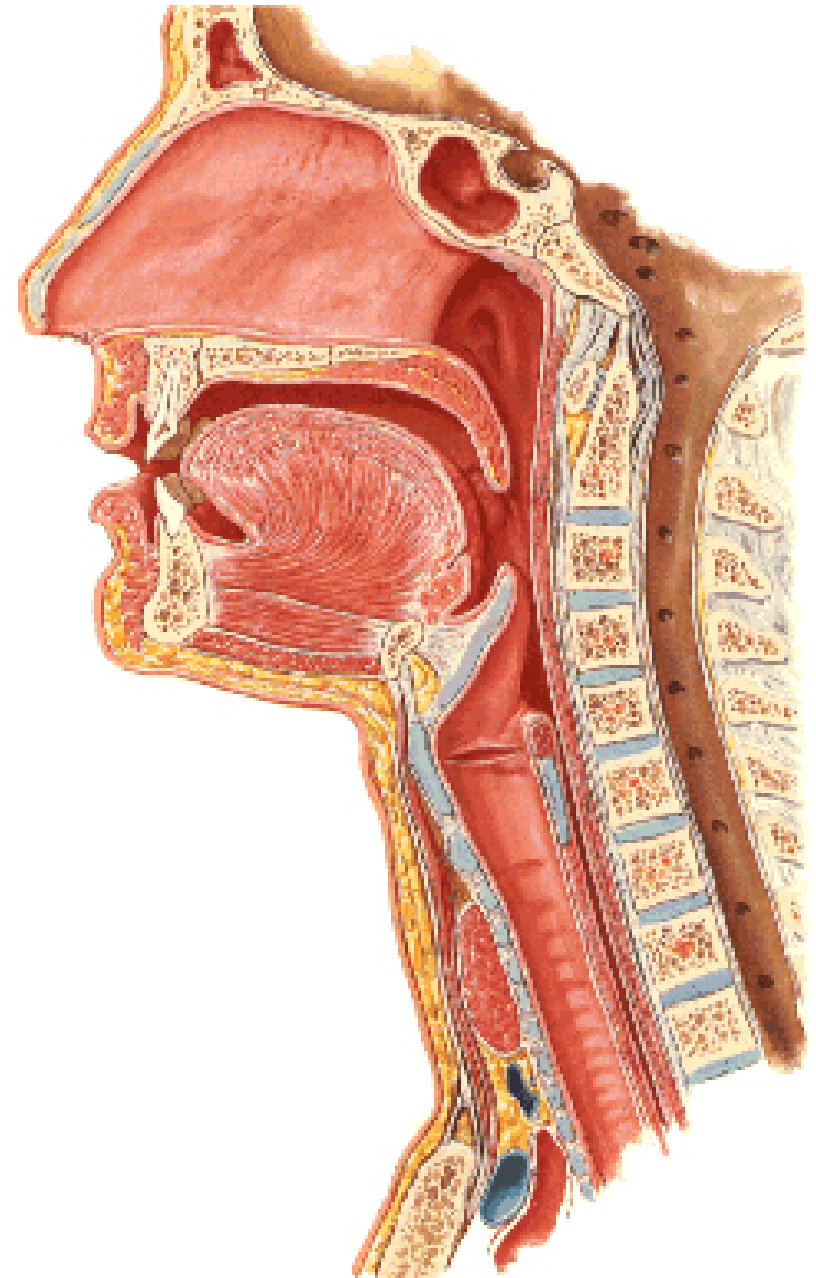
- Pink ,Moist ,Solid
Conical muscular organ ,
in floor of mouth
- Partly oral and partly
pharyngeal in position
- Covered by mucous
membrane



Tongue

attached by its muscles to

- Hyoid bone
- Mandible
- Styloid process
- Soft palate &
- Pharyngeal wall



Tongue

Main Functions - Organ of
Deglutition
Taste &
Speech

Tongue

Others

- Helps in **mastication** ,
- Helps in **moistening lips**
- **Tongue prints** displaying patterns of lingual papillae – ML purpose – Identification
- Clinically – Mirror of **GIT ailments**



Tongue

Functions

- Utilised in **gestures** and **postures** of facial expression
- **Thermo – regulation** in lower animals



Tongue

Tongue
Dorsum

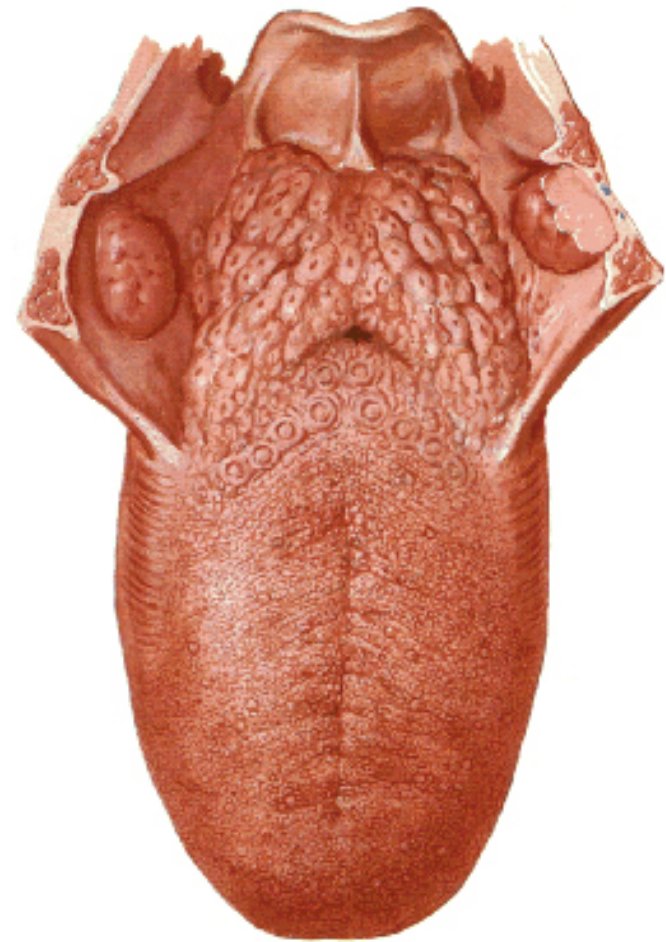
Parts

- Tip (Apex)
- Base
- Root

Two surfaces

Dorsal & Inferior

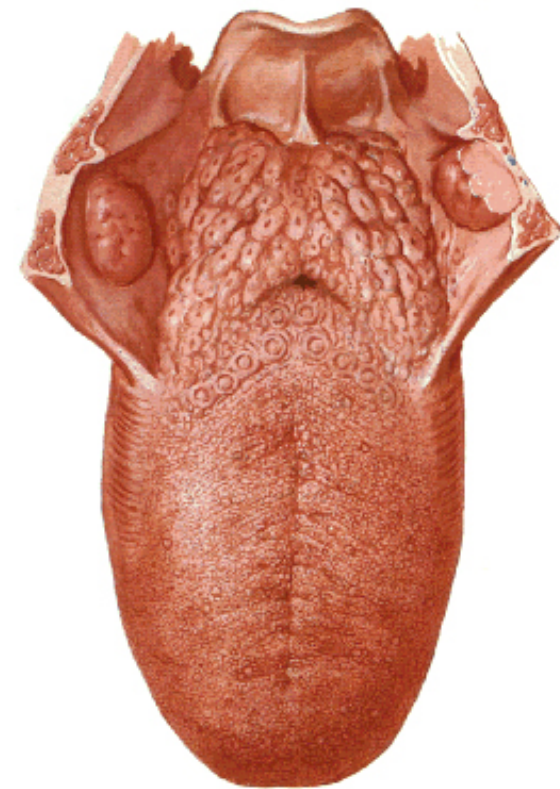
Two lateral margins



Tongue

- **Tip** – Ant. Free end directed forward in contact with the incisor at rest
- **Base** – directed backward towards oro-pharynx ,formed by post 1/3rd

Tongue
Dorsum

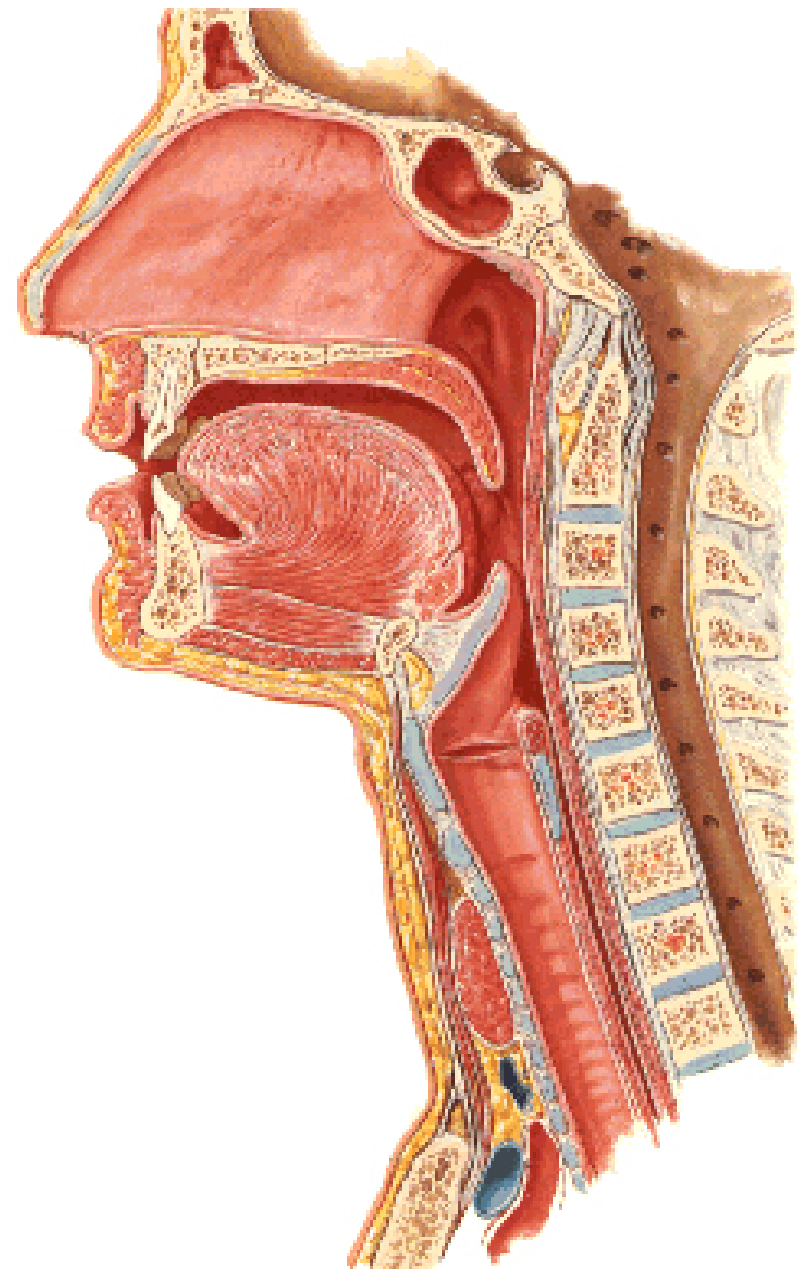


Sagittal Section

Tongue

Root

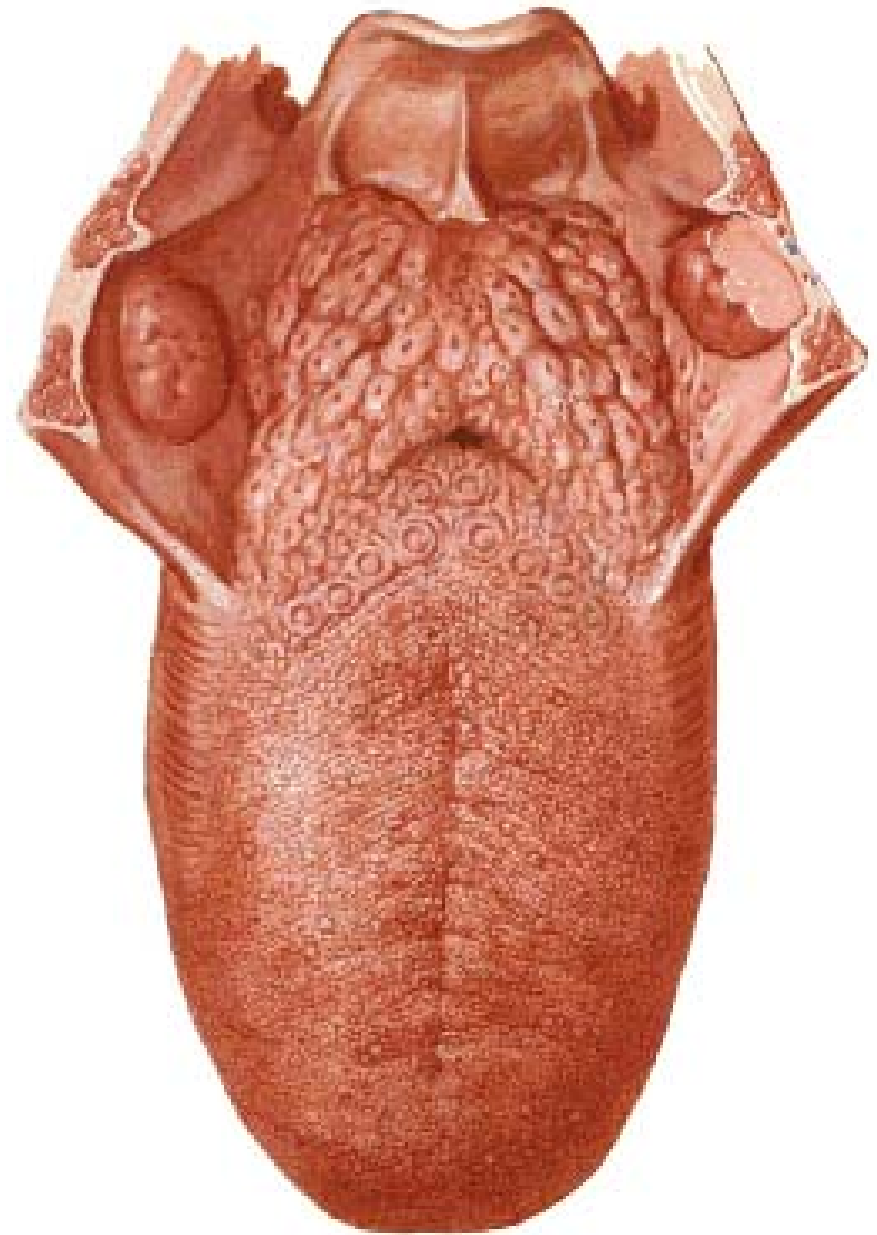
- Attached to hyoid and mandible and is in contact inferiorly with geniohyoid and mylohyoid muscles



Tongue

Dorsal Surface

- Convex on all sides
- Covered with moist and pink mucous memb. lined by st. sq. non. kera. Epi.



- Divided by a V shaped (**sulcus terminalis**) into

ant. 2/3rd (oral or pre-sulcal)
facing upward and

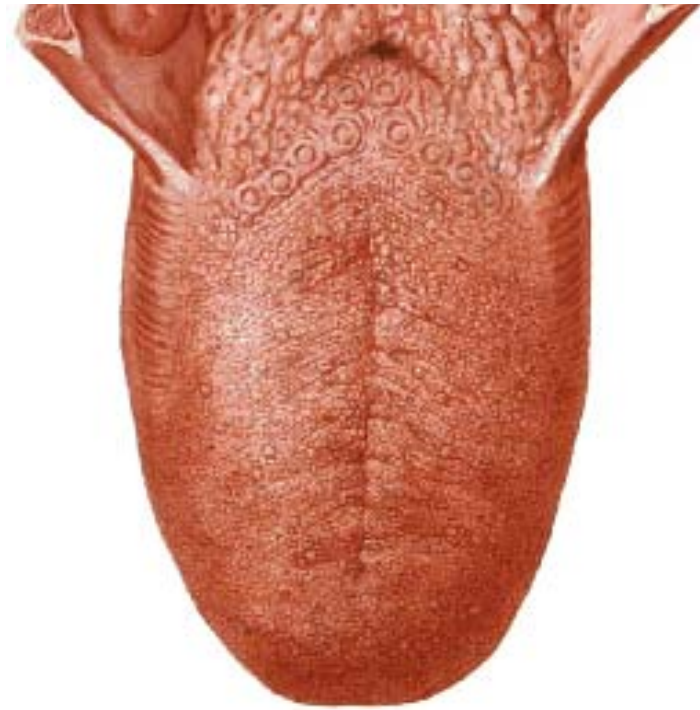
post. 1/3rd (pharyngeal or
post-sulcal) facing backward
at rest
- Limbs passes anterolaterally
from a median depression
(**foramen caecum**) indicate
site of upper end of thyroid
diverticulum

Tongue
Dorsum



Presulcal part

- Mucous memb. Adherent to underlying muscles by lamina propria
- Provided with numerous **papillae** of different types
- Each papilla is a projection of lamina propria covered by mucous memb (characteristic roughness)



Types of Papilla

- Vallate
- Fungiform
- Foliate
- Filliform

Vallate

- 8-12 in no. , 1-2 mm diameter
- Arranged in V shaped , single row
- Immediately in front of sulcus

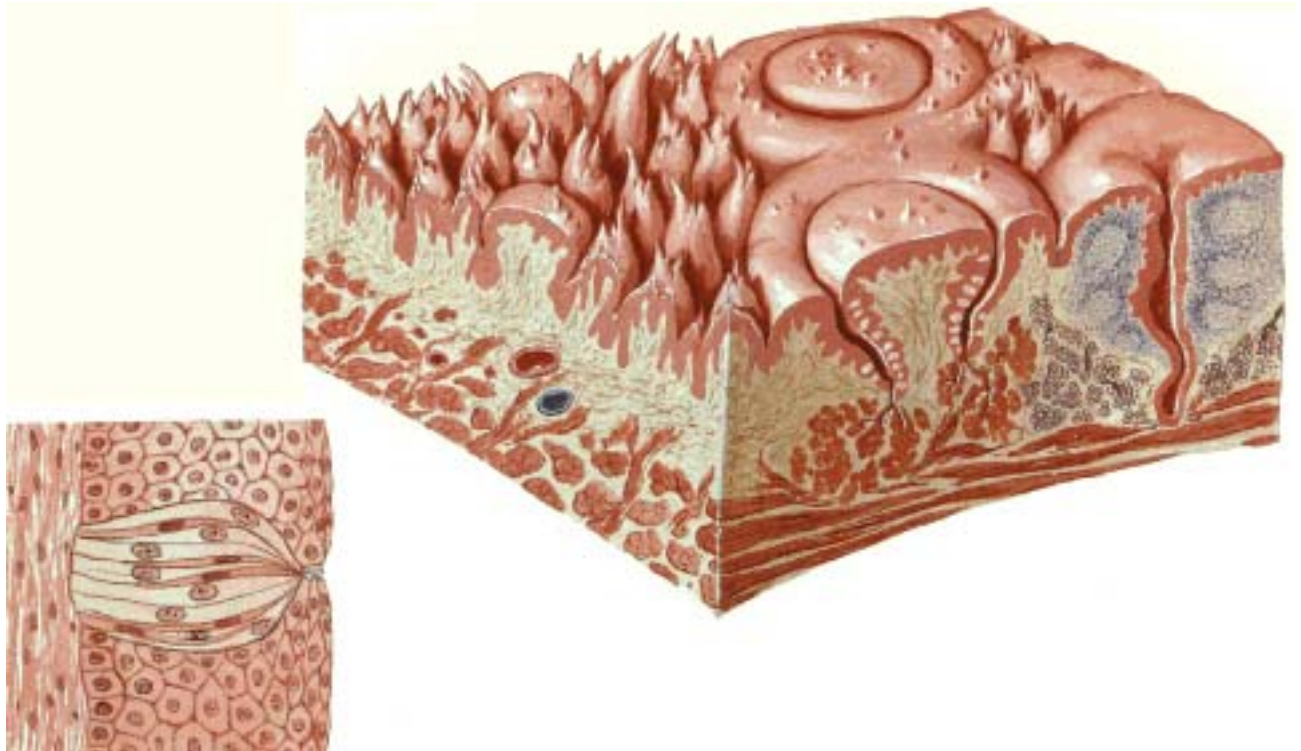
Fungiform

- Rounded reddish elevation , distributed discretely numerous along margins and tip of tongue –bright red colour (contain taste buds)

Filiform

Numerous tiny conical projections over the entire dorsal surface of ant. 2/3rd of tongue (devoid of taste buds)

Give velvety appearance)



Foliate

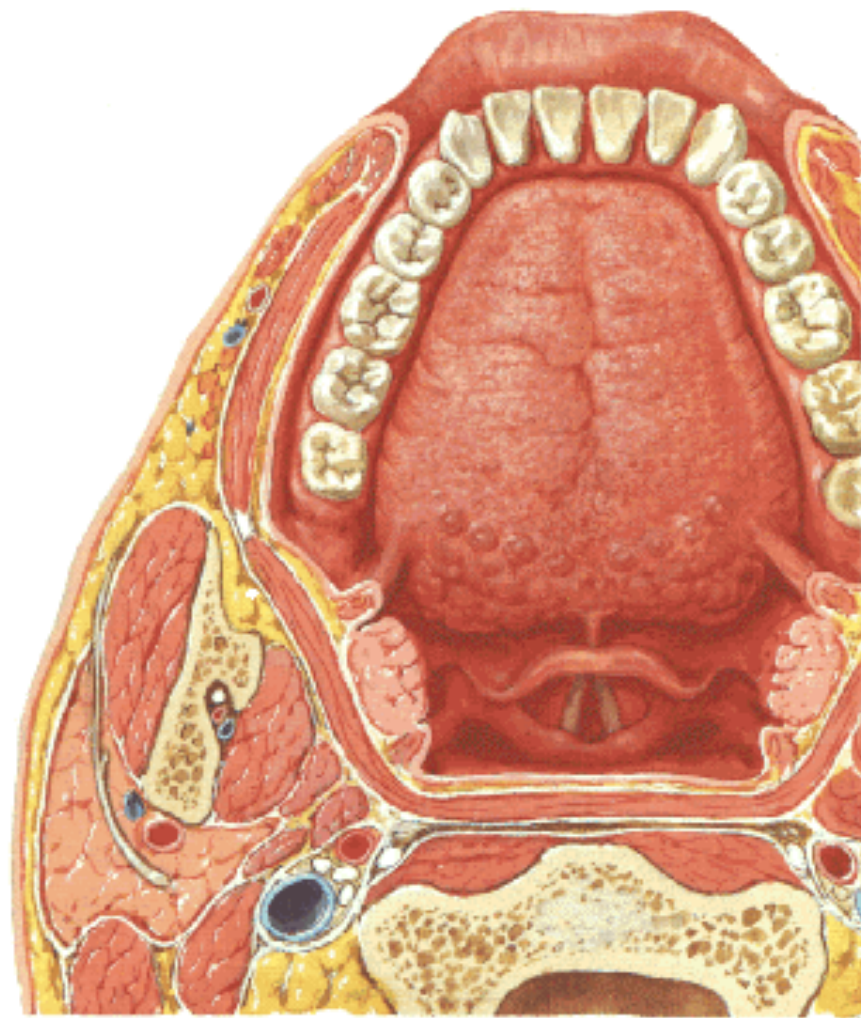
3-4 vertical mucous folds at margins of tongue in front of sulcus (contain taste buds)

Tongue Dorsum

Post sulcal (Pharyngeal) part

- Lie behind palatoglossal arch and sulcus & form ant. wall of oropharynx
- Connected to epiglottis by a median and a pair of lateral glosso-epiglottic folds with a depression in b/w (epiglottic vallecula)



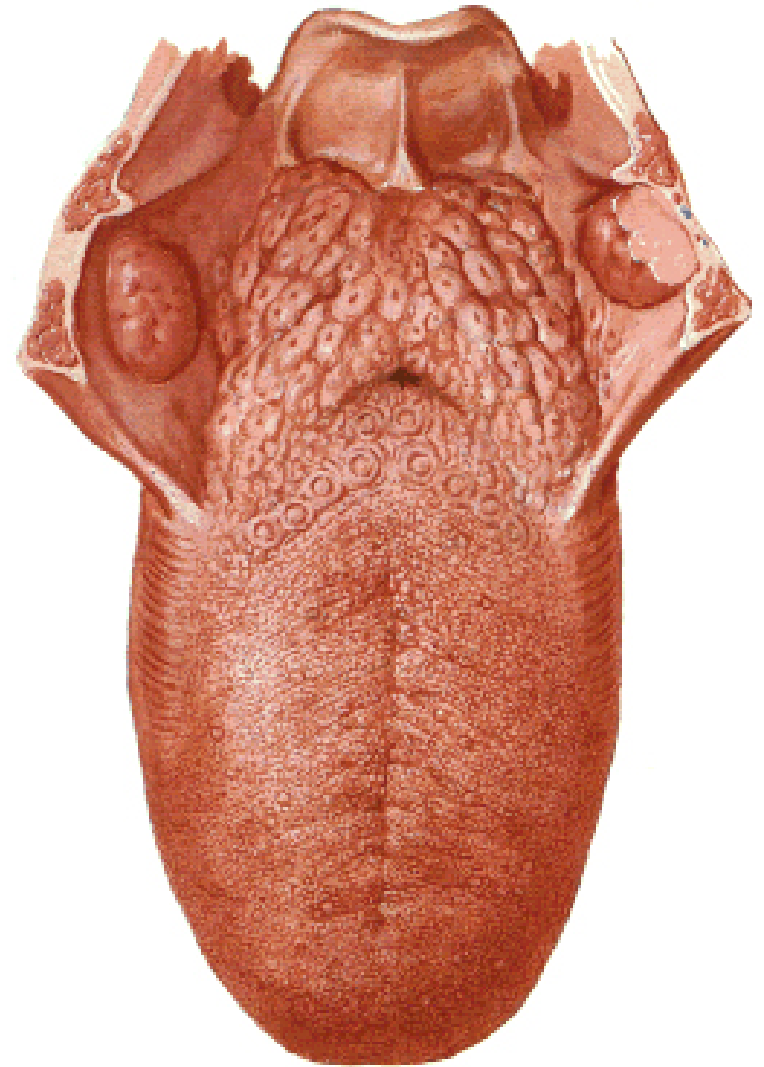


Sectioned below lingula of mandible

Tongue

Dorsum

- Mucous memb. Devoid of papilla
- Separated from underlying muscles by a loose sub mucous coat which contain mucous and serous glands and numerous lymphoid follicles(Lingual Tonsil)



Tongue – Inferior surface

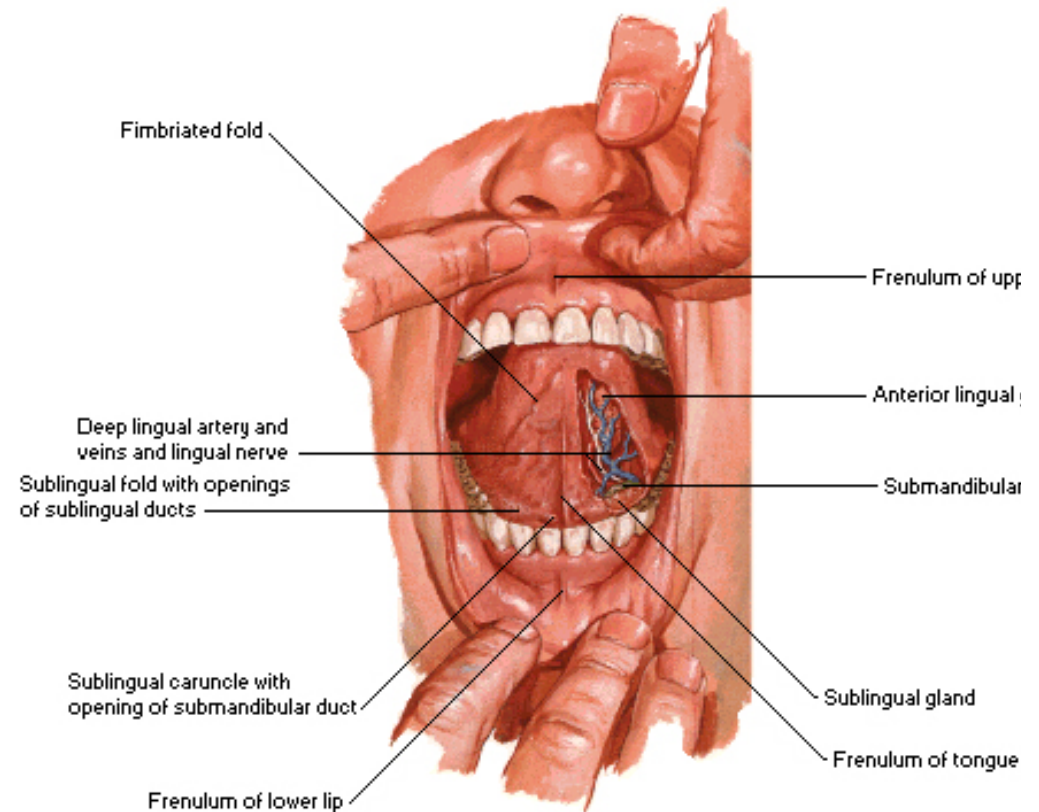
- Reflected on floor of mouth
- Covered by mucous memb.
- devoid of Papillae

Inspection of Oral Cavity

Sublingual Region - Anterior Vestibule

Features

- (Frenulum) Median fold connecting tongue to floor
- Applied – Tongue Tie
- Sublingual papilla
- Deep lingual veins prominence



Tongue - Musculature

- Tongue divided into two symmetrical halves by a median fibrous septum
- Each half contain striated muscles arranged in two groups
- Extrinsic & Intrinsic



Tongue - Musculature

Extrinsic – Five Pairs

Connect to

- Genio-glossus (mandible)
- Hyo-glossus (Hyoid)
- Chondro-glossus
- Stylo-glossus (Styloid process)
- Palato-glossus (Palate)

Alter position of tongue

Tongue - Musculature

Intrinsic muscles –

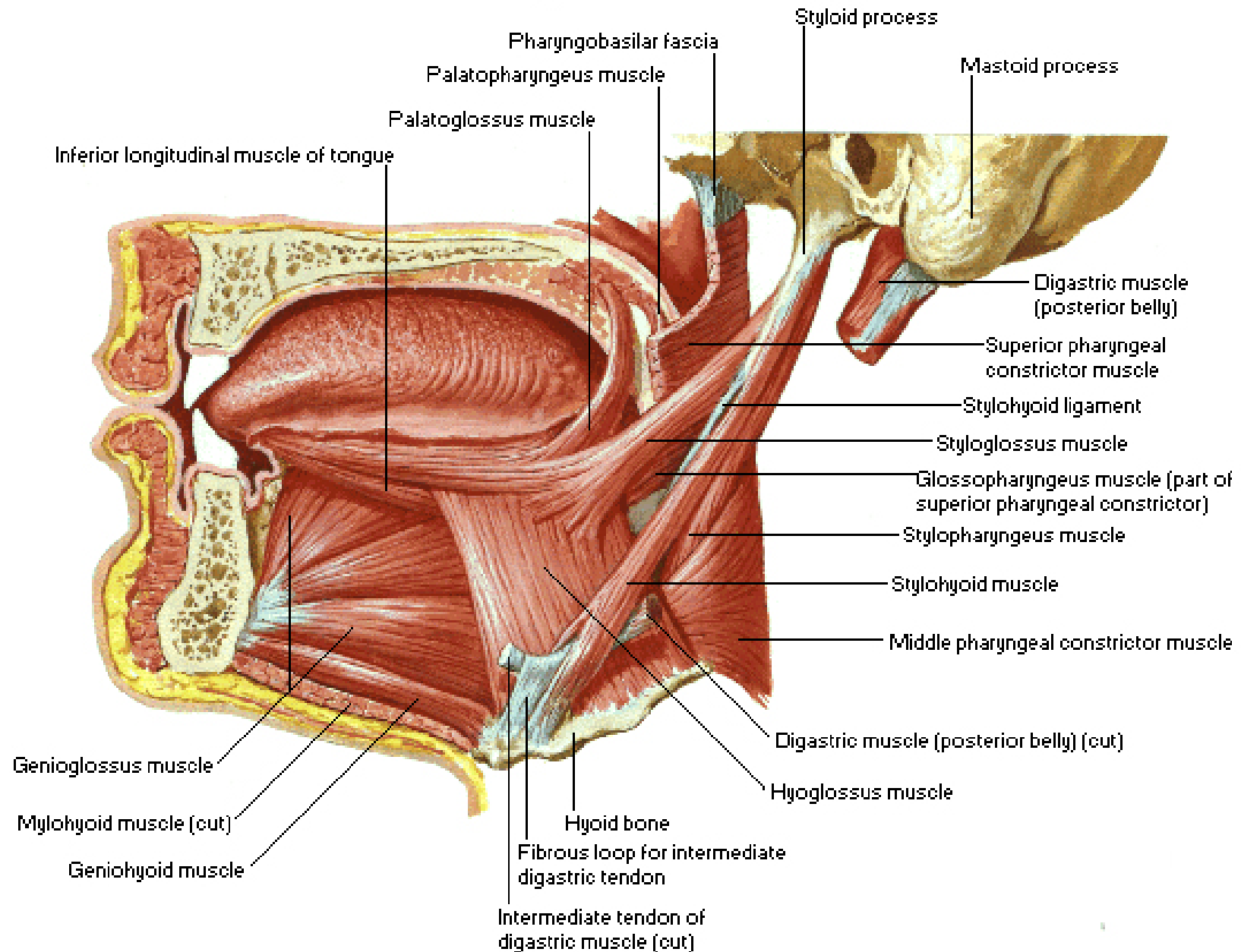
occupy upper part & are Attached to submucous fibrous layer and to median fibrous septum

- Superior Longitudinal
- Inferior Longitudinal
- Transverse muscle
- Vertical muscle

Alter shape of Tongue

Muscles of Tongue

Sagittal Section



Tongue - Musculature

Genioglossus

- Fan shaped , form main bulk of tongue

Origin – Sup. Genial tubercles of mandible

Insertion

- **Lowest fibers** – to body of hyoid
- **Intermediate** – pass deep to hyoglossus and are continuous with middle constrictor of pharynx
- **Upper** – turn forward and upward from root to apex

Action -Protrude tip of tongue and make dorsal surface concave

Hyoglossus

- Quadrilateral muscle

Origin

- Upper surface of greater cornu and partly from body of hyoid
- Passes upward & forward under cover of mylohyoid

Insertion

side of tongue b/w styloglossus laterally and
inferior longitudinal muscle medially

Action

Depresses sides of tongue , make dorsal surface

Convex

Chondroglossus

detached part of hyoglossus, separated by genioglossus

Originate from lesser cornu & attached to side of tongue

Styloglossus

Arise from tip of styloid process & stylomandibular ligament

Passes downward and forward

Inserted to side of tongue

Oblique fibers interdigitate with hyoglossus

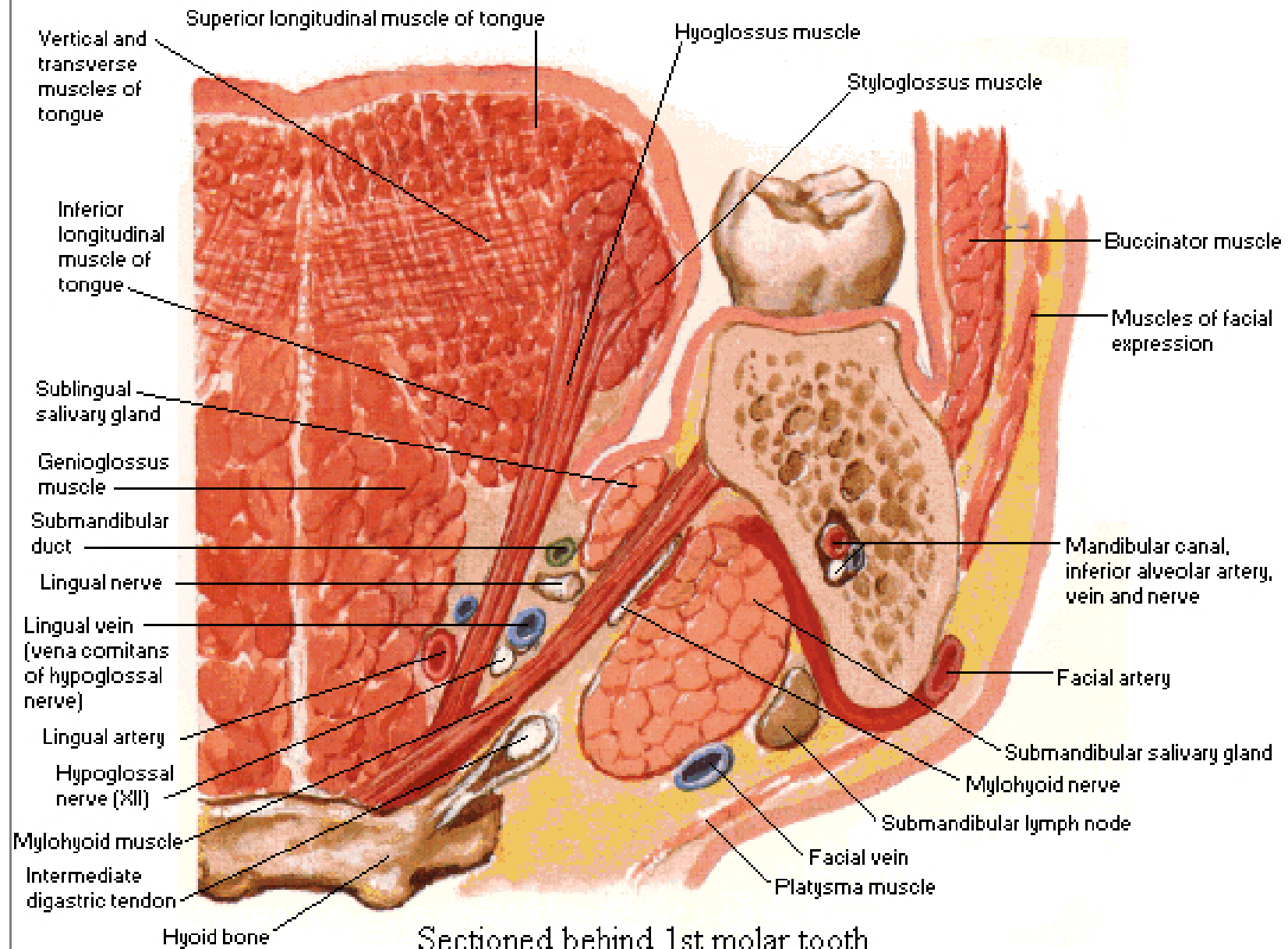
Longitudinal fibres continue with inf. Longitudinal muscle

Action – retracts tongue backward & upward

Antagonist in action to genioglossus

Tongue and Mouth

Frontal Section - Anterior View



Muscles altering shape of tongue

Making dorsum concave

- Genioglossus , Sup. Longitudinal , Vertical , Styloglossus

Making dorsum Convex

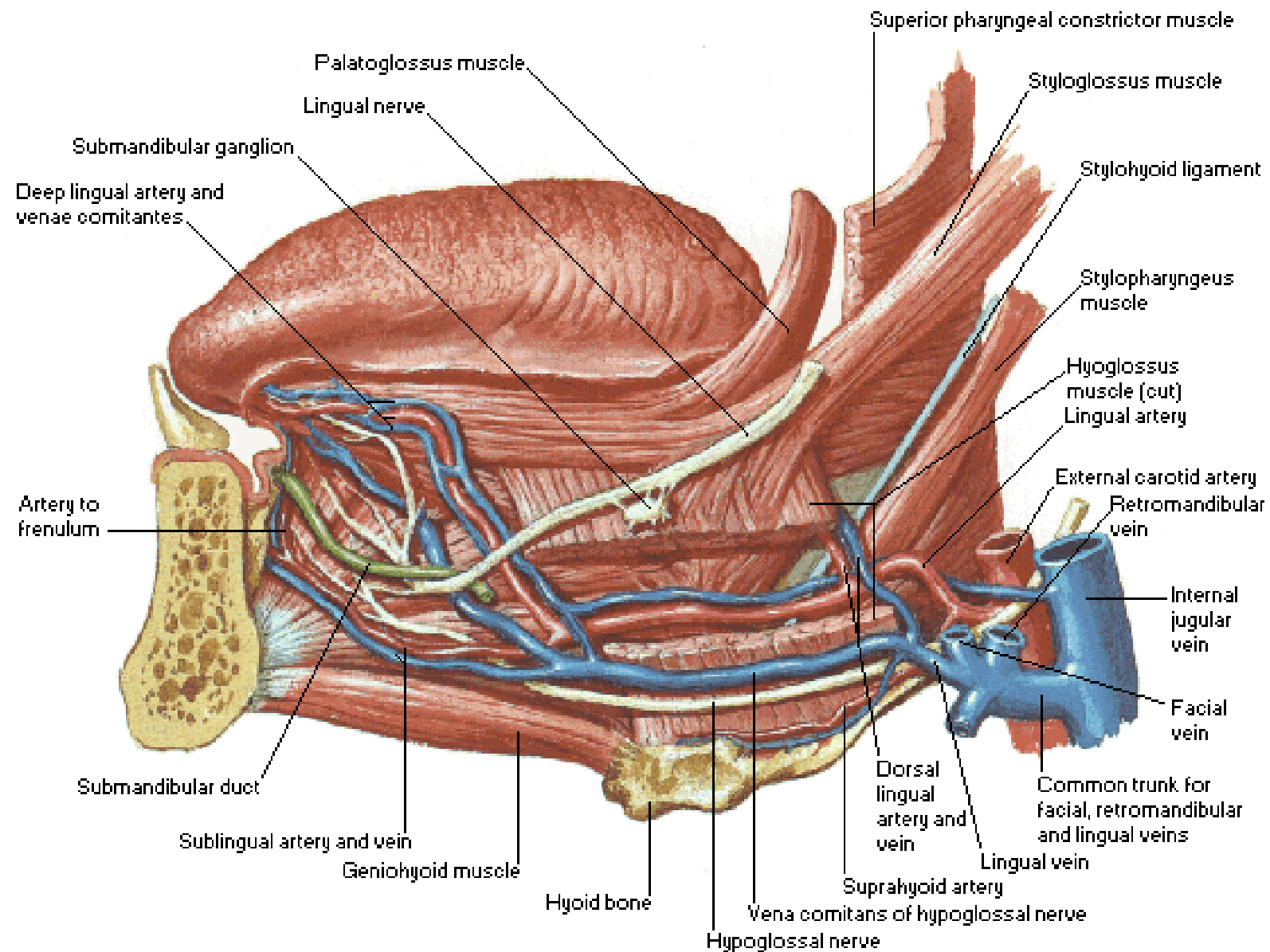
- Hyoglossus, Inferior Longitudinal

Shortening of tongue

- Superior, inferior longitudinal , vertical

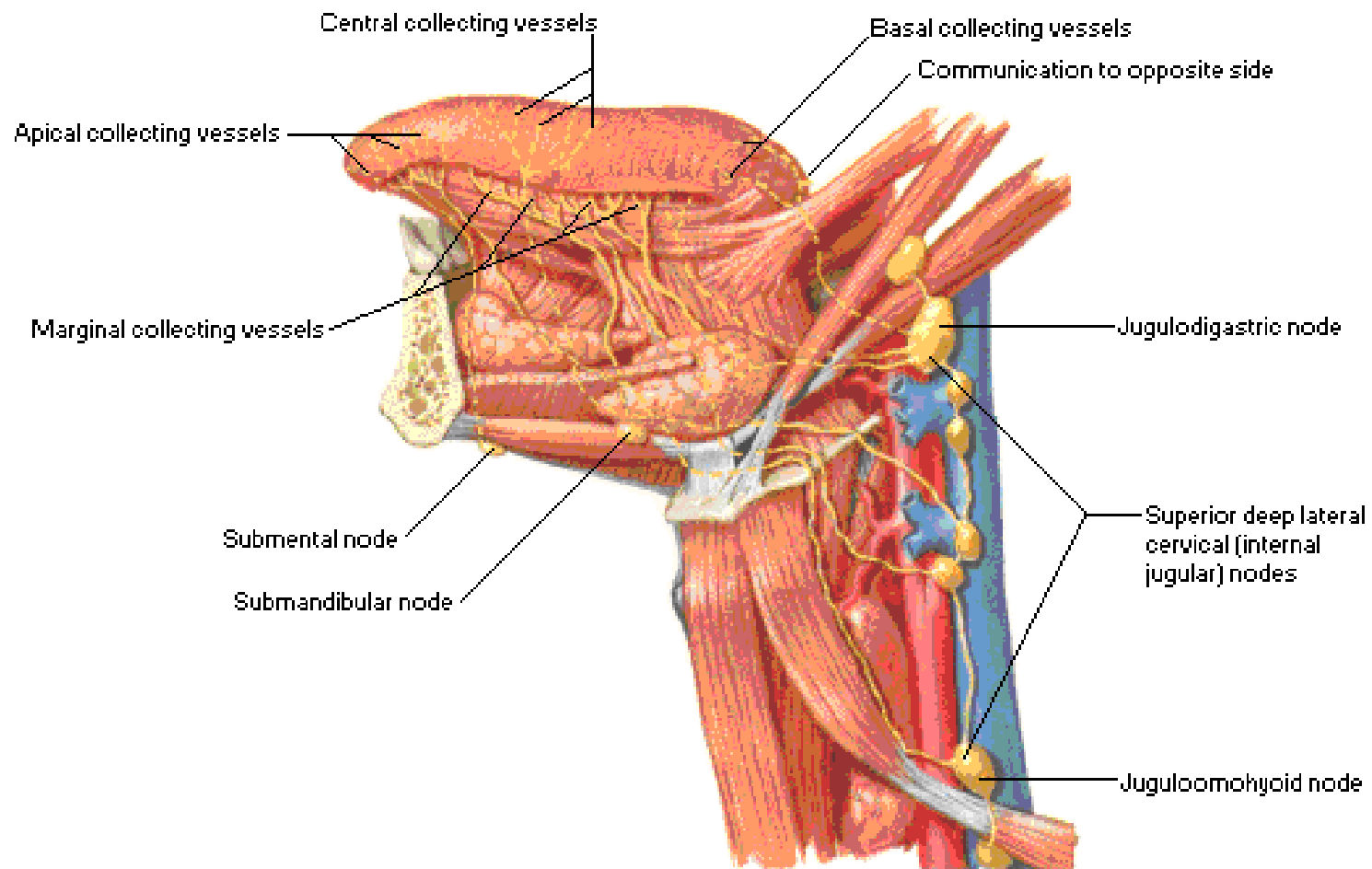
Muscles Elongating

- Transverse







Lymphatic Drainage of Tongue

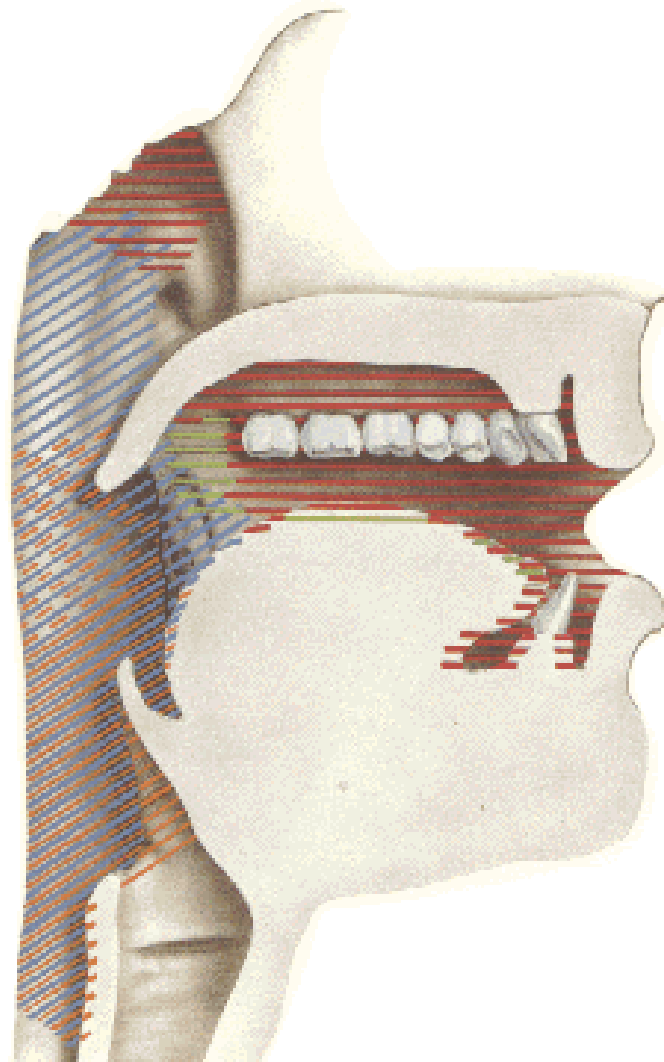
Lateral View



Afferent Innervation of Mouth and Pharynx

Lateral View

Trigeminal nerve (V) 
Glossopharyngeal nerve (IX) 
Vagus nerve (X) 
Facial nerve (VII) 



Tongue – Congenital Anomalies

- Aglossia
- Hemiglossia
- Lingual Thyroid
- Thyro-Glossal cyst
- Tounge –Tie (ankylo-glossia)
- Bifid Tounge