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

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 1/3
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
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 velvaty appearance

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

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
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 mylohoid

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, seperated by genoiglossus
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
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
Tongue – Congenital Anomalies

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