Gross Anatomy

Mouth

- Rostral oral fissure to the caudal isthmus faucium marked by the palatoglossal arches
- Division
  - ❖ By the teeth and gums
    - Oral vestibule
    - Oral cavity proper
  - ❖ Diastema – the space between the incisors / canines and premolars in some species
  - ❖ Interdental spaces

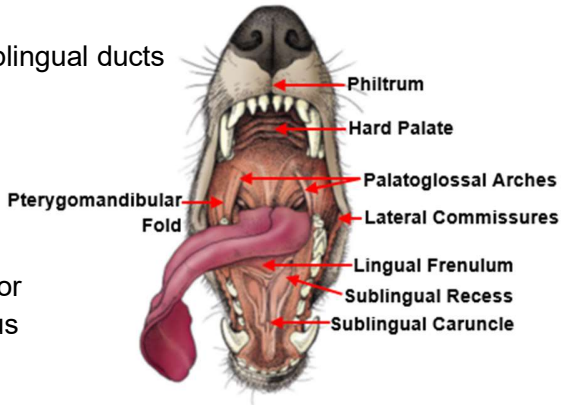
Oral Vestibule

- **Lips and Cheeks**
  - ❖ Tactile hairs and modified skin
  - ❖ *Philtrum* – vertical groove down the median upper lip
  - ❖ Cheeks – commissure of the lips to the pterygomandibular fold
- *Labial frenulum*
- **Gingiva –** mucosa covering the roots of the teeth and attaching them to the periosteum
- **Gingival sulcus –** crevice between the tooths attachment and the gum

Oral Cavity

Sublingual

- **Sublingual caruncle –** opening of the mandibular and sublingual ducts
- Median lingual frenulum ➔ sublingual recess ➔ gingiva

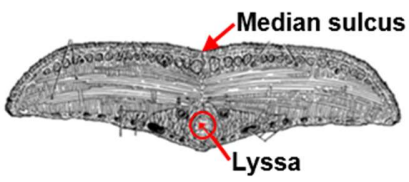


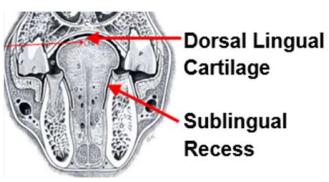
Tongue

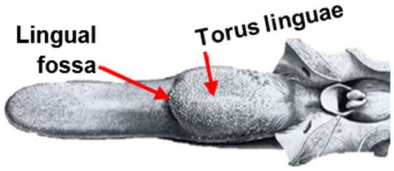
- Divisions
  - ❖ Apex – flattened, free part
  - ❖ Body – attached to the mandible and oral cavity floor
  - ❖ Root (oropharynx) – attached to the hyoid apparatus
- Extrinsic and intrinsic muscle covered in papillae

Variation

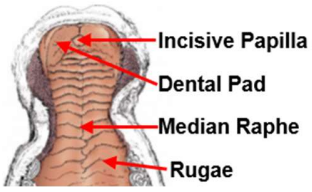
- **Carnivores**
  - ❖ *Lyssa* – rod-like supporting structure (muscle + dense CT + adipose) towards the ventral apex
  - ❖ *Median sulcus* – dog: due to CT extending dorsally from the lyssa
- **Ruminants**
  - ❖ *Torus linguae* – raised section of the dorsal root
  - ❖ *Lingual fossa* – rostral depression
- **Horses –** torus linguae with dorsal lingual cartilage







Hard Palate



- Bone covered by mucosa arranged in rugae with a median raphe
- Variation
  - ❖ *Dental pad* – ruminants: 'cushion' above the lower incisors
  - ❖ *Incisive papilla* – not horses: 'lump' at the opening of the incisive duct

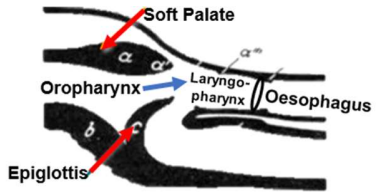
Papillae

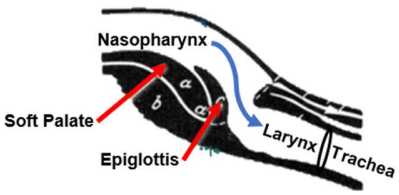
Taste Buds – clusters of epithelial taste cells that extend from the BM to the epithelial surface where apices converge at a taste pore

		Carnivores	Ruminants	Other
Filiform	• Keratinised, pointed papillae with caudally directed tips • Location – dorsal surface	• Cat – caudal keratinised spin • Dog – ≥ 2 apex	Several smaller papillae project from the main papilla	*Horse* –thread like
Fungiform	• Non-keratinised and mushroom-like with **taste buds** • Location – among filiform	Many taste buds	• Cattle – few • Goat – many	Few
Vallate	• Keratinised, flat, round papillae surrounded by a sulcus ('moat') ❖ Wall – **taste buds** ❖ Sulcus – serous gland ducts • Location – 'V' rostral to the root			
Conical	• Keratinised, pointed papillae larger than filiform papillae • Location – dorsal root	Cats – all over	Buccal papillae and lips	*Pig* – contain lymphoid tissue (lingual tonsil)
Foliate	• Poorly keratinised mucosal folds perpendicular to the long axis ❖ Folds – **taste buds** ❖ Sulcus – serous gland ducts • Location – caudo-lateral tongue	Indistinct	Absent	Rabbit – well developed
Lenticular	Location – torus linguae (ruminants only)			
Marginal	Location – rostro-lateral tongue of neonates			

Pharynx

Digestion





- Oral cavity proper – hard palate
- Oropharynx – soft palate
- Intrapharyngeal ostium
  - ❖ Crossover of the tracts
  - ❖ Laterally bound by the palatopharyngeal arches
- Laryngopharynx
  - ❖ Carnivores – annular folds at the caudal limit
  - ❖ *Piriform recess* – 'gutters' lateral to the epiglottis
  - ❖ *Pharyngeal diverticulum* – pigs: dorsal 'pouch'
- Oesophagus

Respiration – nasal cavity ➔ nasopharynx ➔ intrapharyngeal ostium ➔ larynx ➔ trachea