

Digestive System

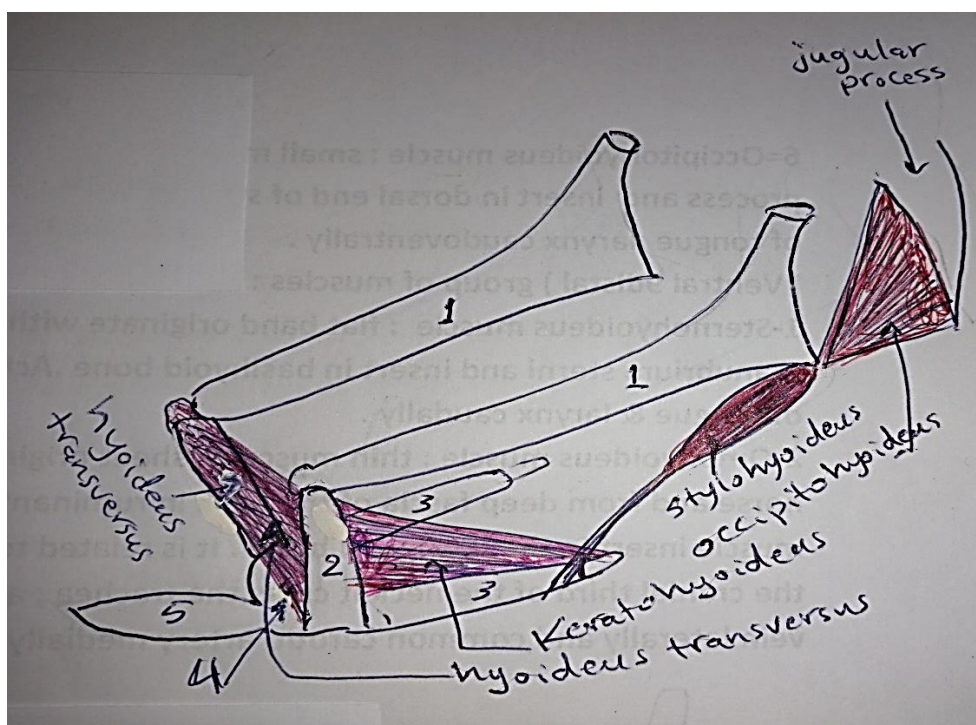
4=Keratohyoideus muscle: thin muscular plate under cover of hyoglossus, occupy the angle between the keratohyoid and thyrohyoid bones. It originates from the rostral border of thyrohyoid and insert in caudal border of keratohyoid and stylohyoid.

Action: move the larynx rostradorsally.

5=Hyoideus transversus: small muscles connect the two keratohyoids, connected by indistinct median tendon.

6=Occipitohyoideus muscle: small muscle originate from the paracondylar (jugular) process and insert in dorsal end of stylohyoid bone.

Action: move stylohyoid, root of tongue, larynx caudoventrally

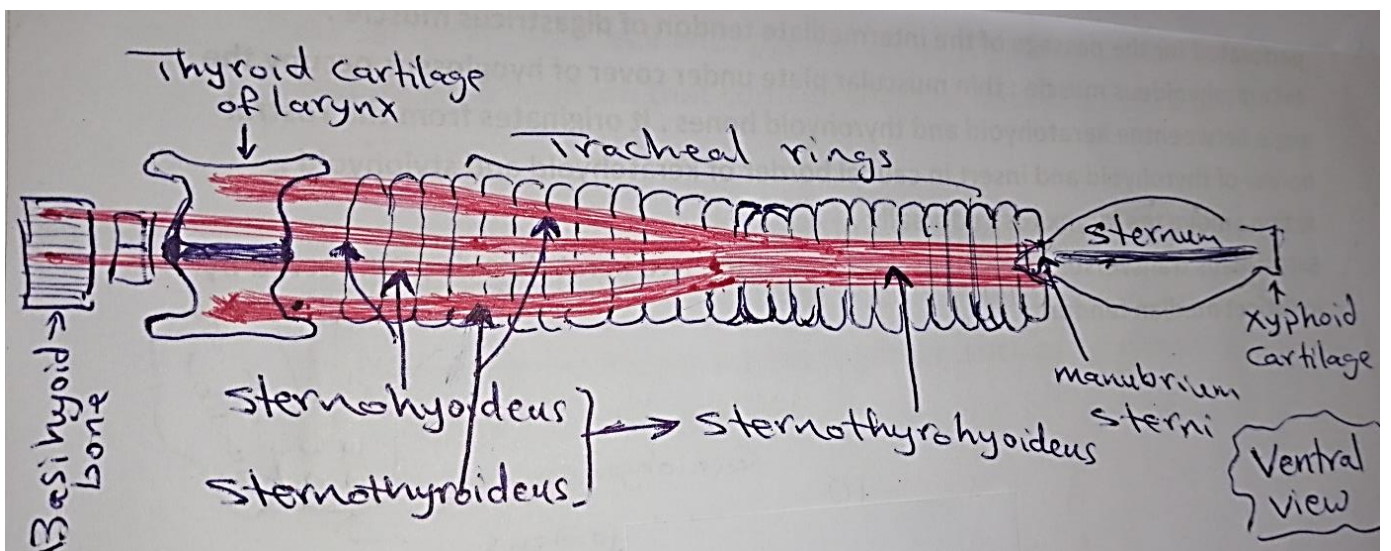
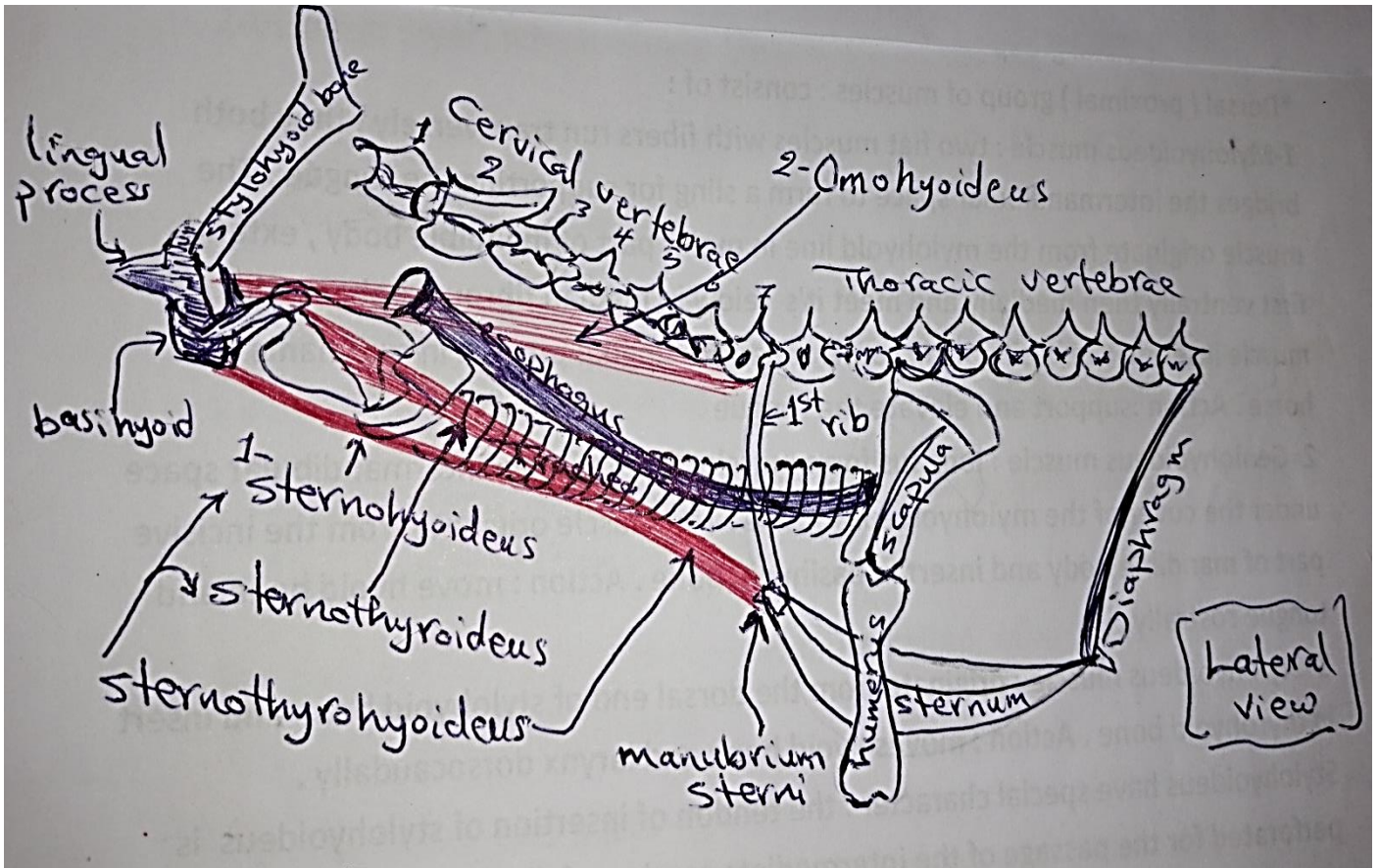


*Ventral (distal) group of muscles:

1-Sternohyoideus muscle: flat band originate with sternothyroideus from the manubrium sterni and insert in basihyoid bone .Action: pulls the hyoid bone, root of tongue & larynx caudally.

2-Omohyoideus muscle: thin muscular sheet originate from subscapular fascia in the horse and from deep fascia of the neck in ruminants (it's absent in carnivora).

The muscle insert in the basihyoid bone. It is related to brachiocephalicus laterally. In the cranial third of the neck it cross the trachea, and pass between external jugular vein laterally and common carotid artery medially.



The salivary glands: Classify into:

1/Minor (small) salivary glands which include: labial, buccal, lingual salivary glands. They have local importance; provide the necessary moisture to their area.

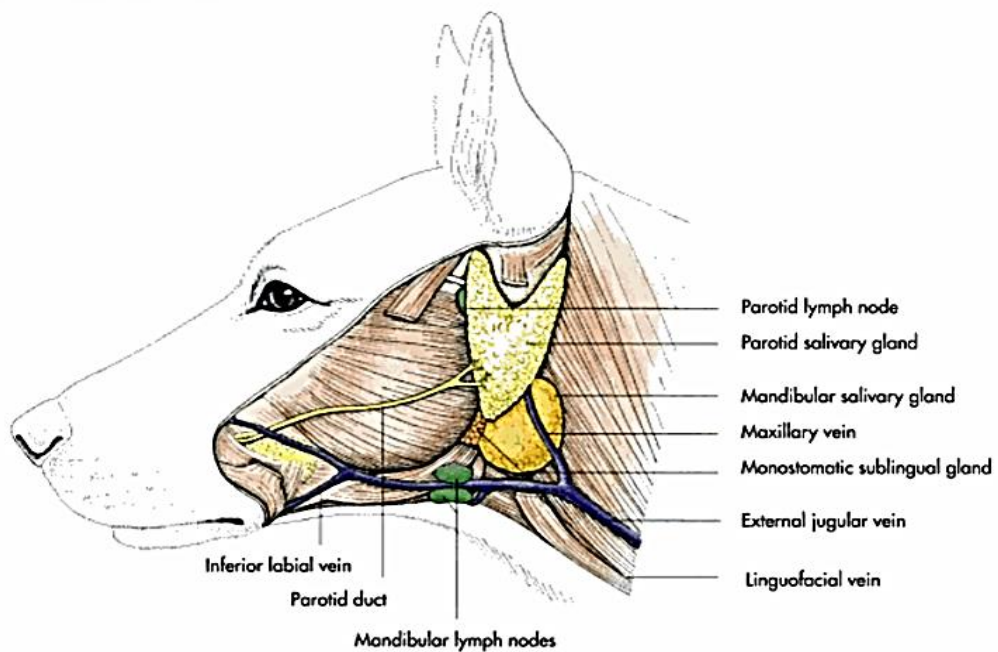
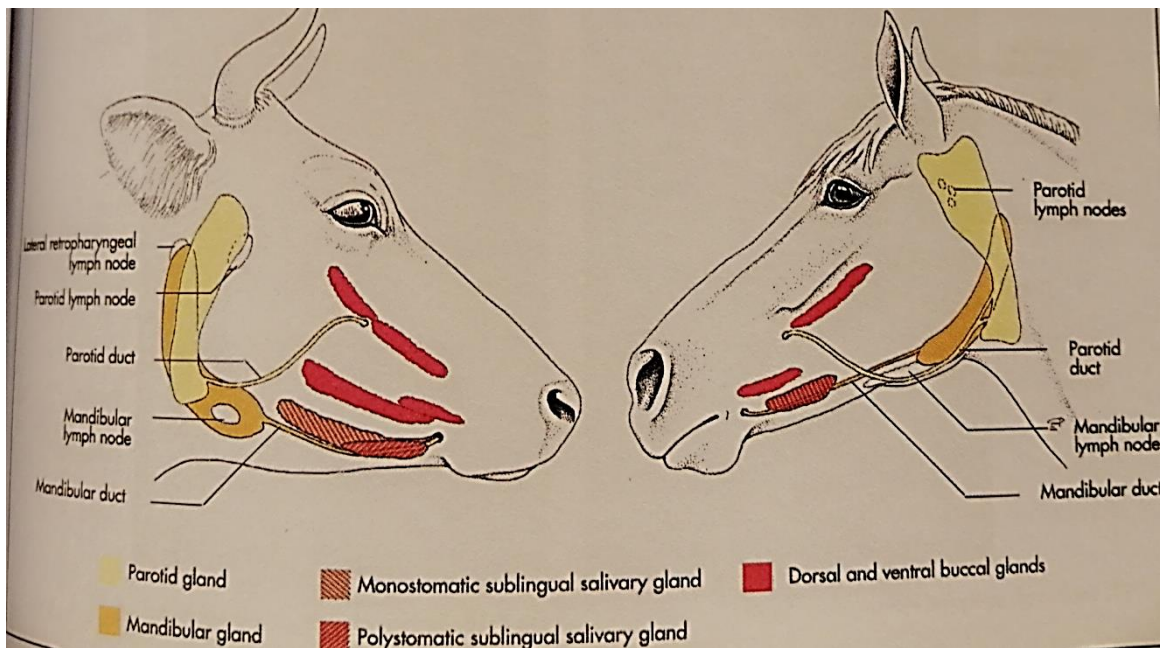
2/Major (large) salivary glands which include: parotid, mandibular, sublingual salivary glands. They have general importance, their secretion (saliva) is serous or mucous or mixed, produced in large quantities (40-50 liter/day).

Function of the saliva:

1-Saliva mixed with food and aids in formation of the bolus.

2-Saliva act as a lubricant during the swallowing.

3-Saliva initiate the hydrolysis of the starch in the mouth by the ptyalin Enzyme.



Point of comparison	Horse	Cattle	Sheep	Dog
Parotid salivary gland Shape	Large quadrilateral. Its dorsal end concave, embrace base of ear, while its ventral end occupy the angle between lingofacial and maxillary veins	Long narrow triangular. Its dorsal end is thick lie rostral to base of ear. Its ventral end extend to the angle of mandible	Large rectangular. Its dorsal end concave, embrace ear base while its ventral end occupy the angle between lingofacial and maxillary vein	Small triangular. Its dorsal end deeply notched by ear base. Its ventral end directed ventrally.
Relation-ship to mandibular salivary gland	Coverd mandibular Salivary gland Completely.	Covered mandibular Salivary gland Partially.	Contact mandibular salivary gland.	Covered the dorsal part of mandibular salivary gland.
Parotid duct	Runs along the medial surface of mandible and winds around the ventral border of mandible with the facial vessels to gain the lateral surface, then pierce the cheek to open into buccal vestibule in parotid papilla		Pass over the lateral wall of the masseter muscle and open in the buccal vestibule in parotid papilla	
Position of parotid papilla	Opposite to 3 rd upper molar tooth	Opposite to 5 th upper molar tooth	Opposite to 4 th upper molar tooth	Opposite to 3 rd upper molar tooth
Mandibular salivary gland shape	Long, narrow, curved (crescentic in shape) with thick concave dorsal border and convex ventral border.	Large, long, curved lie along mandible angle. Its pointed dorsal end near atlas wing, its large ventral end in intermandibular space touch its fellow.	Irregularly quadrilateral with rounded angle, lie caudal and medial to mandibular angle.	Oval (globular) larger than parotid lie caudal to mandible. The ramus is between lingofacial and maxillary veins
Mandibular duct	Emerge from the concave border of the gland	From the middle of concave rostral border of the gland	From the middle of the lateral surface of the gland	From the middle of the medial surface of the gland
Sublingual salivary gland	Polystomatic sublingual salivary gland only	Polystomatic sublingual salivary gland present dorsocaudal to monostomatic sublingual salivary gland		Polystomatic sublingual salivary gland present rostrals to monostomatic sublingual salivary gland

Salivary glands / species variation

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