

(in red: doctors notes)

Muscles of the tongue (1):

Muscles	Intrinsic	Extrinsic
Origin	Inside the tongue	Outside the tongue
Insertion	Inside the tongue	Inside the tongue, their insertion blends together, and the palatoglossus inserts at side of tongue
Attachment	Confined to tongue with no bony attachment	Attached to bones and the soft palate
Nerve supply	Hypoglossal nerve	Hypoglossal nerve, except palatoglossus: accessory nerve through vagus
Action	Alter the shape of the tongue	Movements of the tongue: protrusion, retraction, depression, retraction and elevation

Muscles of the tongue (2):

Muscle	Genioglossus	Hyoglossus	Styloglossus	Palatoglossus
Origin	Superior genial spine of mandible	Body and greater cornu (horn) of hyoid bone	Styloid process of temporal bone	Palatine aponeurosis
Insertion	Blend with each other			Side of tongue
Action	Protrudes apex of tongue through mouth	Depresses tongue	Draws tongue upward and backward	Pulls roots of tongue upward and backward, narrows oropharyngeal isthmus
Nerve supply	Hypoglossal nerve			Accessory nerve through vagus

Muscles of the soft palate:

Muscle	Levator veli palatini	Tensor veli palatini	Palatopharyngeus	Musculus uvulae
Origin	Petrous part of temporal bone, auditory tube	Spine of sphenoid, auditory tube	Palatine aponeurosis	Posterior border of hard palate
Insertion	Palatine aponeurosis	With muscle of other side, forms palatine aponeurosis	Posterior border of thyroid cartilage	Mucous membrane of uvula
Innervation	Pharyngeal plexus	Nerve to medial pterygoid from mandibular nerve	Pharyngeal plexus	Pharyngeal plexus
Action	Raises soft palate	Tenses soft palate	Elevates wall of pharynx, pulls palatopharyngeal folds medially	Elevates uvula

Salivary glands:

Gland	Parotid	Submandibular	Sublingual
Secretion	Serous (serous acini)	Mixed: serous and mucous	Mostly mucous, very little serous
Gland Capsule	Surrounded by a capsule made of connective tissue, it divides the gland into lobes and lobules, and it contains the nerve supply, blood supply and duct		
Location	lies in a deep hollow below the external auditory meatus, behind the ramus of the mandible and in front of the sternocleidomastoid muscle	lies beneath the lower border of the body of the mandible (under the mandible)	lies beneath the mucous membrane (sublingual fold) of the floor of the mouth, close to the frenulum of the tongue (under the tongue)
Duct	emerges from the anterior border of the gland, passes forward over the lateral surface of the masseter (anteriorly across its external surface), enters the vestibule of the mouth upon a small papilla opposite the upper second molar tooth (by turning medially to penetrate the buccinator of the cheek and opening into the oral cavity adjacent to the crown of the 2 nd upper molar)	emerges from the anterior end of the deep part of the gland, runs forward beneath the mucous membrane of the mouth, opens into the mouth on a small papilla (lingual papilla), which is situated at the side of the frenulum of the tongue	ducts (8 to 20 in number) open into the mouth on the summit of the sublingual fold
Parasympathetic secretomotor nerve supply	Medulla oblongata > inferior salivary nucleus > glossopharyngeal nerve > tympanic branch > lesser petrosal nerve > otic ganglion > auriculotemporal nerve	Medulla oblongata > superior salivary nucleus > facial nerve > geniculate ganglion > chorda tympani > infratemporal fossa > chorda tympani joins lingual nerve > submandibular ganglion > fibers directly to the gland or through lingual nerve (no mixing of two nerves)	
Sympathetic nerve supply	Superior cervical ganglia > passes otic ganglion (without synapsing) > reaches gland through arteries: external carotid artery and its terminal branches; maxillary and superficial temporal arteries	through the blood supply: external carotid artery and its branches; lingual artery and a branch from the facial artery	
Sensory nerve supply	A branch from the mandibular nerve	Lingual nerve (a branch from the mandibular nerve)	

Bissan Abo Halaqa

