



ANATOMY

DONE BY : Volunteer

FASCIA OF THE NECK :

Superficial fascia	Contents :		
	Platysma	Superficial veins	Cutaneous branches of cervical plexus
	subcutaneous muscle <ul style="list-style-type: none"> • It is supplied by the facial nerve (cervical branch) • It is one of the muscles of facial expression (depresses mandible & angle of the mouth) 	– External jugular veins – Anterior jugular veins	--
Deep fascia	It is condensed to form the following four layers:		
	Investing layer	Pretracheal fascia	Prevertebral fascia
	<ul style="list-style-type: none"> • It surrounds the neck like a Collar. • Invest the sternomastoid muscles and trapezius. Invest the parotid and submandibular gland, its thickening forms stylomandibular ligament between the two glands 	<ul style="list-style-type: none"> • It lies anterior to the trachea & attached to the thyroid cartilage. • Encloses viscera of neck: pharynx, larynx, trachea, esophagus. • It invest thyroid gland and parathyroid glands. 	<ul style="list-style-type: none"> • Lies anterior to bodies of cervical vertebrae and prevertebral muscles. • Forms the floor of posterior triangle
			Carotid sheath <p>It is a condensation of fibro-areolar tissue, surrounds common & internal carotid arteries, internal jugular vein & vagus nerve.</p> <ul style="list-style-type: none"> • Ansa cervicalis is embedded in its anterior wall. • Sympathetic chain lies behind the sheath.
	Thyroid gland & its swelling moves with deglutition		

TRIANGLES OF THE NECK :

Sternomastoid muscle:

▪ Actions :	One muscle bends the head to its own side & turns face to opposite side.
▪ Lesion :	Both muscles acting together pull the head forwards & flex the neck.
▪ Nerve supply	1. Motor → Spinal accessory 2. Proprioceptive → C2,3
▪ Torticollis of sternomastoid	<ul style="list-style-type: none"> ▪ congenital as a result of excessive stretching of sternomastoid during a difficult labour. ▪ Spasmodic due to repeated inflammations (myositis)

ACCESSORY NERVE (XI):

formed of 2 separate parts spinal & cranial

Cranial Part	<p>Exit from brain: (Medulla) groove between olive and inferior cerebellar peduncle below vagus nerve. It runs to jugular foramen where it unites with spinal part.</p> <p>Exit from skull: Through jugular foramen with vagus and glossopharyngeal nerves. After its exit from jugular foramen, it separates from spinal part and unites with vagus. It is distributed to pharynx, palate and larynx through pharyngeal and recurrent laryngeal branches of vagus</p>
Spinal Part	<p>Axons of nerve cells in spinal accessory nucleus (found in upper 5 cervical segments). Ascend and enter cranial cavity through foramen magnum. Joins cranial root as they pass to jugular foramen. Separates from cranial root and supplies sternomastoid and trapezius</p>

The Neck is divided by sternomastoid muscle into two Triangles : Posterior triangle and Anterior triangle.

Posterior triangle			
Boundaries	Anterior	posterior border of sternomastoid	
	Posterior	anterior border of trapezius	
	Base	clavicle	
	Apex	meeting of sternomastoid & trapezius.	
	Roof	▪ Skin ▪ superficial fascia containing (platysma) ▪ The investing layer of deep fascia of neck	
	Floor	Muscular floor 3 muscles 1. Scalenus medius 2. Levator scapulae 3. Splenius capitis((All muscles are covered by prevertebral fascia))	
	Contents	muscle	Inferior belly of omohyoid It divides the posterior triangle into : Large occipital triangle (above it) Small supra -clavicular triangle (below it)
Lymph Nodes		Along posterior border of sternomastoid: • Supraclavicular L.N. • Occipital L.N.	
Nerves		Roots & trunks of brachi al plexus Four cutaneous branches of cervical plexus Spinal accessory nerve	
Arteris			
		In the lower part	At the apex
		1. 3rd part of subclavian artery 2. Suprascapular artery 3. Transverse cervical artery	3rd part of occipital artery
Veins	1. Subclavian vein 2. Suprascapar vein 3. Transverse cervical vein 4. Lower part of external jugular v		

Anterior triangle									
Definition :	A large triangular space on each side of the neck situated in front of sternomastoid muscle The triangle is inverted with its apex down its base up								
Boundaries	<table border="1"> <tr> <td>Apex</td><td>down manubrium sterni</td></tr> <tr> <td>Base</td><td>up by the lower border of the body of mandible, and a line extending from the angle of mandible to the mastoid process.</td></tr> <tr> <td>Anterior</td><td>midline of the neck from chin to manubrium sterni</td></tr> <tr> <td>Posterior</td><td>sternocleidomastoid. Its anterior margin</td></tr> </table>	Apex	down manubrium sterni	Base	up by the lower border of the body of mandible, and a line extending from the angle of mandible to the mastoid process.	Anterior	midline of the neck from chin to manubrium sterni	Posterior	sternocleidomastoid. Its anterior margin
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Division of the Anterior triangle	divided by Y shaped hyoid bone . -3 muscles attached to it (2 digastric + superior belly of omohyoid) into 4 triangles on each side: 1. Digastric triangle 2. Carotid triangle 3. Muscular triangle 4. ½ submental triangle								

	1. Digastric triangle		
Boundaries	Anteriorly	Anterior belly of digastric muscle	
	Posteriorly	Posterior belly of digastric and stylohyoid muscles.	
	Superiorly (base)	Inferior border of mandible and a line drawn from angle of mandible to mastoid process.	
	Roof	1-Skin 2-Superficial fascia, 3-deep fascia (<i>investing layer</i>), which splits to enclose submandibular salivary gland	
	Floor	1. Mylohyoid and 2. Hyoglossus muscles.	
Contents	Glands and lymph nodes	1-Submandibular Gland. and submandibular LN 2-Parotid Gland	
	Nerves	Cranial	1- vagus nerve x 2- spinal accessory XI 3- hypoglossal nerve XII
		Muscula	Nerve to mylohyoid
	Vessels	ECA, ICA, IJV, Facial artery , Jugular vein	

	2- Submental triangle	
Definiton	A median triangle that is formed by meeting of the two triangles superiorly between the chin and hyoid bone	
Boundaries	on right side	Anterior belly of digastric
	on left side	Anterior belly of digastric
	inferiorly	Hyoid bone
	Floor	2 mylohyoid muscles meeting at mylohyoid raphe
Contents	1. Submental arteries 2. Submental veins 3. Submental lymph nodes	

	3- Carotid triangle			
Boundarie	Superiorly	Posterior belly of the digastric		
	Anteriorly	Superior belly of omohyoid.		
	Posteriorl	Anterior border of sternomastoid		
	Roof	1. Skin 2. Superfisial fascia 3. Investing layer of the deep fascia		
	Floor	Ant: Hyoglossus and thyrohoid ms. Post: pharyngeal wall middle and inferior constrictor muscles		
Contents	Arteries	ICA, ECA, CCA . Carotid sinus 5 Branches of ECA : a)Superior thyroid b) Ascending pharyngeal c) Lingual d)Facial e) Occipital		
	veins	Internal jugular veins (IJV) and 4 tributaries 1- pharyngeal veins 2- lingual vein 3- common facial vein 4- superior thyroid vein		
	Carotid sheath	with its vascular and nervous contents		
	LN	Deep cervical lymph nodes / situated along the IJV		
	Nerves	Within the carotid sheath		Last 3 cranial ns X , XI, XII.
		Anterior to the carotid sheath		Ansa cervicalis
Posterior to the carotid sheath		Sympathetic ch		

4- Muscular Triangle		
Boundaries	Anteriorly	median line of neck
	Postero-superiorly	Superior belly of omohyoid
	Postero-inferiorly	Anterior border of sternomastoid
	Roof	Skin, superficial fascia & investing deep cervical fascia
	Floor	Pre-tracheal fascia
Contents	The infrahyoid muscles : Lie under hyoid bone	
	• Arranged into 2 layers:	
	Superficial	1. sternohyoid Arise from the posterior surface of manubrium sterni to the lower border of hyoid bone
		2. omohyoid Has 2 bellies: superior & inferior <ul style="list-style-type: none"> • Origin of superior belly from hyoid bone • Origin of inferior belly from scapula • Insertion → both bellies join an intermediate tendon kept in position by a fibrous loop connecting it to clavicle
	Deep	1. sternothyroid Arise from the manubrium sterni to thyroid cartilage
		2. thyrohyoid Arise thyroid cartilage to the hyoid bone
	<ul style="list-style-type: none"> • All infrahyoid muscles are supplied by ansa cervicalis C1,2,3, except thyrohyoid which is supplied directly by <u>C1 joining hypoglossal n</u> • All infrahyoid muscles depress the hyoid bone ONLY except the Thyrohyoid <u>CAN</u> elevate larynx also. 	