

Neck 1 + 2 + 3

- 1- The Region of the body that lies btw lower margin of the mandible above (C7-T1) and the suprasternal notch + upper border of clavicle below \rightarrow Neck
- 2- Ms. of the Neck \rightarrow ① Sternocleidomastoid \rightarrow ② Scalenus ms
③ Infrahyoid \rightarrow ④ Oropharyngeal \rightarrow ⑤ Platysma "superficial"
- 3- Sternocleidomastoid \rightarrow Origin \rightarrow medial third of clavicle + manubrium sterni "has 2 heads" insertion \rightarrow Superior nuchal line + mastoid process Nerve supply \rightarrow Spinal Root of Accessory Nerve C2+C3 Action \rightarrow 2 ms together \rightarrow Extend the head + Flex Neck
- 4- We can feel carotid pulse in the \rightarrow Anterior to the middle third of sternocleidomastoid sensory cutaneous branches of cervical plexus emerge at the post. border For local anaesthesia \leftarrow of sternocleidomastoid.
- 5- Now, About Accessory Nerve \rightarrow leave the skull through Jugular Foramen bears 2 Root \rightarrow Spinal \rightarrow supply trapezius + cranial joins with vagus
- 6- scalenus Anterior \rightarrow origin \rightarrow C3-C6
 \rightarrow insertion \rightarrow First Rib
 \rightarrow Nerve supply \rightarrow cervical plexus
 \rightarrow Action \rightarrow Elevate First Rib + lateral Flexion of the cervical spine
- 7- scalenus medius \rightarrow origin \rightarrow C2-C7
 \rightarrow insertion \rightarrow First Rib
 \rightarrow Nerve supply \rightarrow cervical plexus
 \rightarrow Action \rightarrow Elevate 1st Rib + laterally Flex cervical spine
- 8- scalenus posterior \rightarrow origin \rightarrow C4-C6
 \rightarrow insertion \rightarrow Second Rib
 \rightarrow Nerve supply \rightarrow cervical plexus
 \rightarrow Action \rightarrow Elevate 2nd Rib + lateral Flex cervical spine
- 9- which ms. descends vertically from vertebral column to First Rib? \rightarrow scalenus Anterior
- 10- Unilateral contraction \rightarrow lateral Flexion \rightarrow bending to the side
- 11- Bilateral Contraction \rightarrow ventral Flexion \rightarrow bending to the front
- 12- Brachial plexus lies btw \rightarrow scalenus Anterior + scalenus medius
- 13- which ms divides the subclavian artery into 3 parts \rightarrow
- 14- Bones of the Neck \rightarrow 1- cervical vertebrae 2- Hyoid bone.
- 15- Which bone is a mobile single bone found in the midline of the neck below the mandible \rightarrow hyoid bone
Note \rightarrow Not articulate with another structure
- 16- hyoid bone Attached to the skull by \rightarrow stylohyoid ligament
- 17- hyoid bone Attached to the thyroid cartilage by \rightarrow thyrohyoid mem
- 18- Note \rightarrow hyoid bone forms the base of the tongue.

20- ms. superior to hyoid bone → "suprahyoid ms"

① mylohyoid

② Geniohyoid

③ Digastric

④ stylohyoid

↳ Action

21- ms. inferior to hyoid bone → "infrahyoid ms"

① omohyoid

② sternothyroid

③ thyrohyoid

④ sternohyoid

↳ Action

22- All infrahyoid ms. supplied by Ansa cervicalis (C₁, C₂, C₃)

Except thyrohyoid supply by C₁

↳ ① sternohyoid → origin → sternoclavicular joint + manubrium sterni

→ insertion → Body of hyoid bone

→ Action → depresses of hyoid bone

Note → sternohyoid is the most superficial of infrahyoid ms

② omohyoid → origin of superior belly → Body of hyoid

origin of inferior belly → scapula

insertion → intermediate tendon → held to clavical + first rib

Action → Depresses hyoid bone

③ sternothyroid → origin → manubrium sterni

insertion → thyroid cartilage

Action → Depresses the larynx

④ thyrohyoid → origin → thyroid cartilage

insertion → Body of hyoid

Action → Depresses the hyoid bone + elevate the larynx

23- All suprahyoid ms. involved in swallowing + movement of the

larynx

① stylohyoid → origin → styloid process

→ insertion → hyoid bone

→ Nerve supply → Facial Nerve

→ Action → Elevate hyoid bone

② Digastric ms → Anterior belly origin → digastric fossa

Note....

N. supply → Nerve to mylohyoid From mandibular.

Fth CN ← via the stylomastoid foramen ← posterior belly origin → mastoid notch

Leave skull through stylomastoid foramen

N. supply → Facial Nerve

↳ Near to mastoid notch insertion → Intermediate tendon

Action → depresses the mandible or elevates hyoid bone

③ mylohyoid → origin → mylohyoid line in mandible

insertion → Body of hyoid bone + fibrous raphe

N. supply → Nerve to mylohyoid (From mandibular n)

Action → Depresses the mandible + elevate hyoid bone

Note → Mylohyoid Raphe → where the both ms meet + inserts into body of hyoid.

Neck 1 + 2 + 3

→ Genio = Mentum = Chin

① Geniohyoid → origin → inf. mental spine of Mandible

insertion → Body of hyoid

N. Supply → First Cervical Nerve → cervical plexus

Action → Elevate hyoid Bone

* thin layer of the Fascia contains → platysma, cutaneous Nerve, superficial V. superficial lymph Nodes

* superficial veins *

① External jugular vein

Start → behind the Angle of mandible

End → middle of clavicle

formed by union of post. auricular vein

with post. division of Petromandibular

then descends vertically across

Sternocleidomastoid ans → pierces deep fascia that called jugular arch.

then drains into subclavian vein

② Anterior jugular vein

Start → Below the chin

Runs down the Neck behind

midline, above suprasternal

Notch → "the 2 sides of veins

united by transverse trunk

→ Retromandibular vein → Formed by union of Maxillary v + superficial temporal

at the level of Parotid Gland it divides into Ant. + post.

Anterior division unit with Facial Nerve → Drains IJV

post. division unit with post. auricular vein → drains Subclavian

* Cutaneous Nerve of the Neck *

Note → the First cervical Nerve has No cutaneous Branch.

Note → cervical plexus formed by Anti Ramii (C1-C4)

Branches → Cutaneous Nerve (superior + inferior roots of) → For infrayoid ms
phrenic Nerve, Ansa cervicalis.

* subcutaneous visible in posterior triangle

Note → C1 + hypoglossal Nerve → joins together to Give Nerve to Geniohyoid and to thyrohyoid

C2 → Lesser occipital

C3 → C2 + C3 → Great Auricular + transverse cervical

C4 → C3 + C4 → Subclavicular

Note ① → Subclavicular → medial → medial End of Clavicle

intermediate → cross middle of Clavicle

lateral → lateral End of Clavicle

② sensory cutaneous → emerge at the post. border of sternocleidomastoid.

Neck 1+2+3

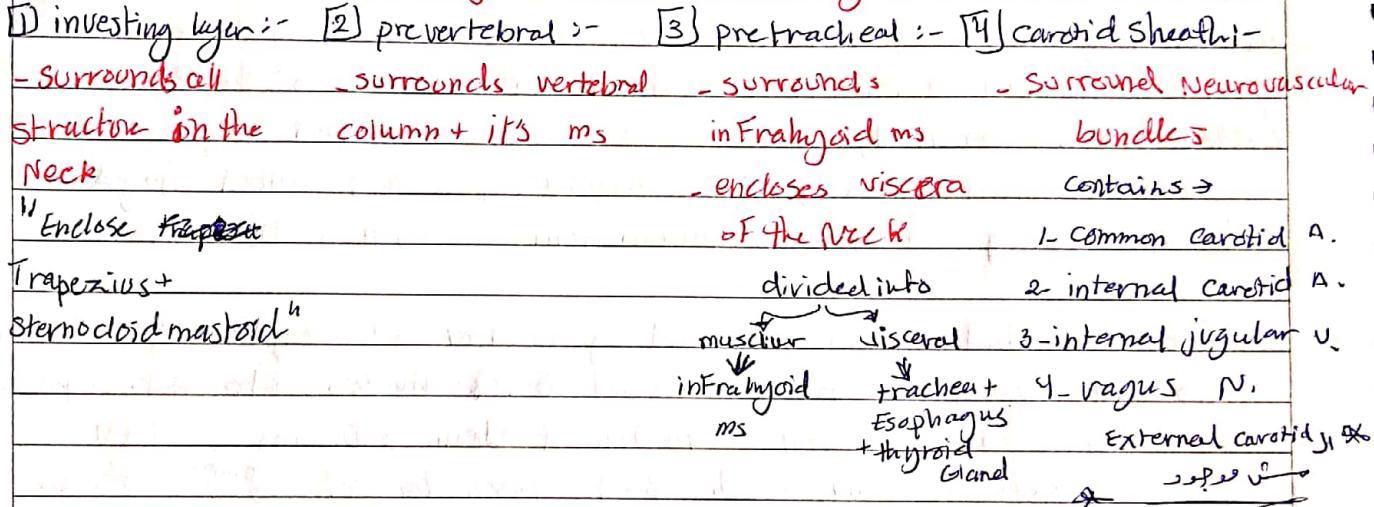
* Note → supraclavicular Nerve associated with Gallbladder
→ Ansa Cervicalis → as we said before, its supply ~~dissect~~
all infrahyoid ms Except thyrohyoid by Cr

Deep Fascia of the Neck

⇒ Neck compartment →

- | | | |
|---------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------|
| [1] visceral compartment | [2] vertebral compartment | [3] Two vascular compartments |
| - part of digestive +
Respiratory system | - cervical vertebrae
- spinal cord
- cervical Nerves
- vertebral ms. | - that contain major
Br + vagus Nerve
"Laterally" |
| "Anteriorly" | "posteriorly" | |

⇒ Deep Cervical Fascia → Organized into several layers



Important Notes →

* Pretracheal layer post. to the pharynx is called → **Buccopharyngeal fascia**

* Potential space bounded by the buccopharyngeal fascia + post to the

Retropharyngeal space → pharynx + Esophagus

* Pretracheal layer + prevertebral layer continue inferiorly into the thoracic cavity.

* Infection in pretracheal space → spread inferiorly to superior mediastinum
↳ spread anteriorly to pericardium

* Fascial spaces → potential spaces → consist largely of fatty areolar tissue
Lymph nodes + tissue

* Right common carotid Artery ~~arises~~ arises from brachiocephalic A

* Left common carotid Artery arises from Aorta in sup. mediastinum

Runs upward through the neck under the cover of sternocleidomastoid
+ at level of thyroid cartilage it's divide to External + internal Carotid A.

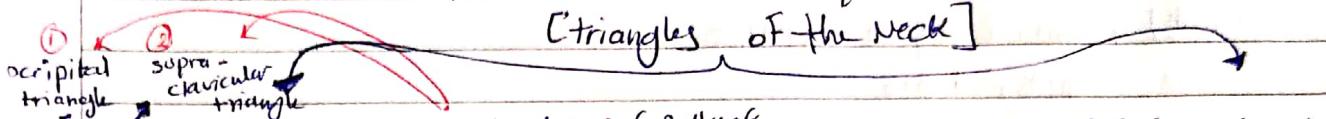
* Internal jugular vein → Closely Related to the deep cervical lymph nodes

Neck 2 - Final (1+2+3)

1. Side of the Neck →

- (1) midline → lower border of the mandible → Line b/w Angle of Mandible + mastoid process
- (2) Clavicle ← Anterior border of Trapezius ← Superior nuchal line

2. Which ms divides the Neck into Ant. + post. → Sternocleidomastoid ms



Posterior triangle → divides by inf. belly of omohyoid to

lateral aspect of the Neck in direct continuity with upper limb

Anterior triangle

① Boundaries

↳ Post. border of sternocleidomastoid ms

↳ Ant. border of trapezius ms

↳ middle third of clavicle

↳ Apex of occipital bone

① Boundaries

↳ Superiorly → Body of the mandible

↳ Post. → Sternocleidomastoid ms

② Divided into

↳ Carotid triangle → its contents

- CCA - ECA - ICA - IJV

- 10th, 11th, 12th CN - Ansae cervicalis

② Floor

ms. of prevertebral fascia

Boundaries :-

Post.

Belly of digastric

③ Roof

Superior → Lateral →

Investing layer of cervical fascia

Stemocleidomastoid

Anterior → Superior belly of omohyoid

Posterior → Superior belly of omohyoid

④ Contents :-

5 veins

Anterior

- EJV - Jugular vein

Subscapular vein

Subclavian vein

Transverse cervical vein

↳ Submandibular triangle → contents

- Facial V + A - Submandibular Gland

- Submandibular Lymph Nodes

Boundaries :-

Superior → Body of the mandible

Anterior → Ant. belly of digastric

Posterior → Post. belly of digastric

4 Arteries

↳ Muscular triangle → contents

- Larynx - pharynx - trachea

- Esophagus - Infrahyoid ms

- Thyroid + parathyroid

Boundaries :-

Superior → hyoid bone

Medially → midline

Superolateral → sup. Belly of omohyoid

Infralateral

Sup. → Stemocleidomastoid

3 Nerves

- Brachial plexus (trunk)

- Accessory nerve

Branch of cervical plexus

2 muscles

inFerior Belly of omohyoid

↳ Which divide this triangle into 2 triangles

1- occipital triangle 2- supraclavicular (subclavicular)

↳ Next Page

Submental triangle →

Neck 14 2 43

↳ Submental triangle → contents

- underneath the chin
- content submental lymph nodes

Boundaries:-

inferiorly → Hyoid Bone

medially → midline

Laterally → Ant. Belly of digastric

Floor → Mylohyoid ms

deep lymph nodes of the Face + scalp → Form Ring around the head
superficial ←

- 1- Submandibular Nodes
- 2- Submental Nodes
- 3- Mastoid Nodes
- 4- pre-Auricular / parotid Nodes
- 5- Occipital Nodes

→ Superficial cervical nodes →

↳ collections of lymph nodes along the External jugular vein on superficial surface of sternocleidomastoid. / vertical along superficial veins

superficial vein = Ant. jugular vein

→ Deep cervical nodes → median Group → Pretracheal, para tracheal

↓ Retropharyngeal, prelaryngeal

Lateral Group

↳ upper + lower deep cervical = " along internal jugular vein at the side of the neck."

↳ intermediate tendon of omohyoid divides the deep cervical LN. to upper + lower

Note → The intermediate tendon of omohyoid ms. divides the deep cervical lymph nodes into upper + lower group

Jugulo-digastric node → where post. Belly of digastric cross IJV

↳ Receive lymphatic drainage from tonsils + tongue

Jugulo-omohyoid node → inferior to the intermediate tendon of omohyoid.

↳ Receive lymphatic drainage from tongue omohyoid.

If enlarged = tonsillitis



Carotid pulse → in carotid triangle, under the angle of the mandible.