

Skin and fascia of the neck

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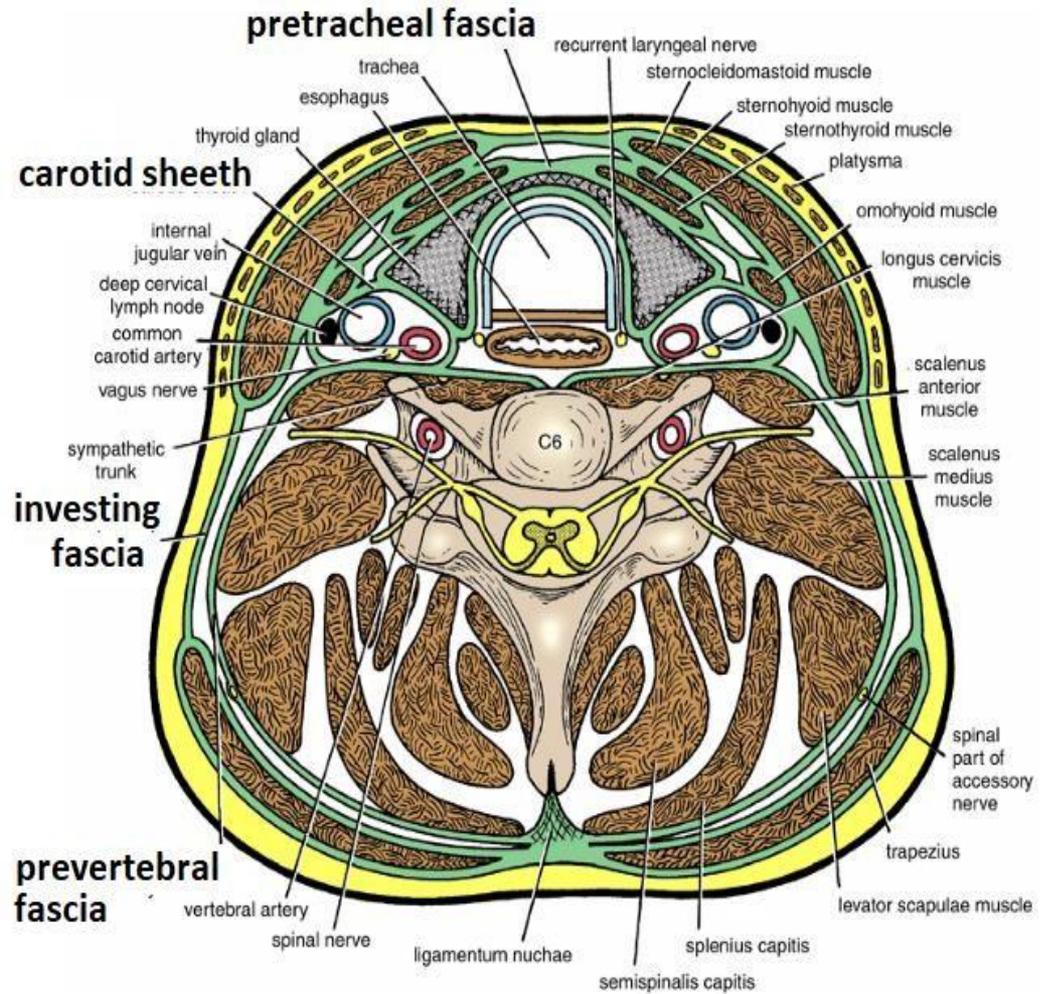
Lecture ILOS & Objectives:

By the end of this lecture the student should be able to:

- 1. Define the layers of the neck.**
- 2. Define contents of superficial fascia of the neck.**
- 3. Describe nerves , vessels, muscles , lymphatics in the superficial fascia of the neck.**
- 4. Identify the deep cervical fascia.**

Superficial Fascia of the Neck

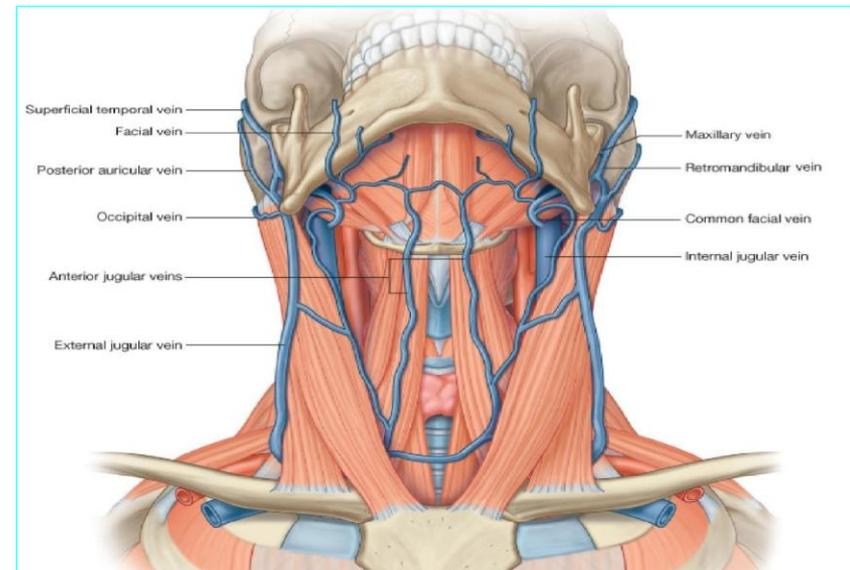
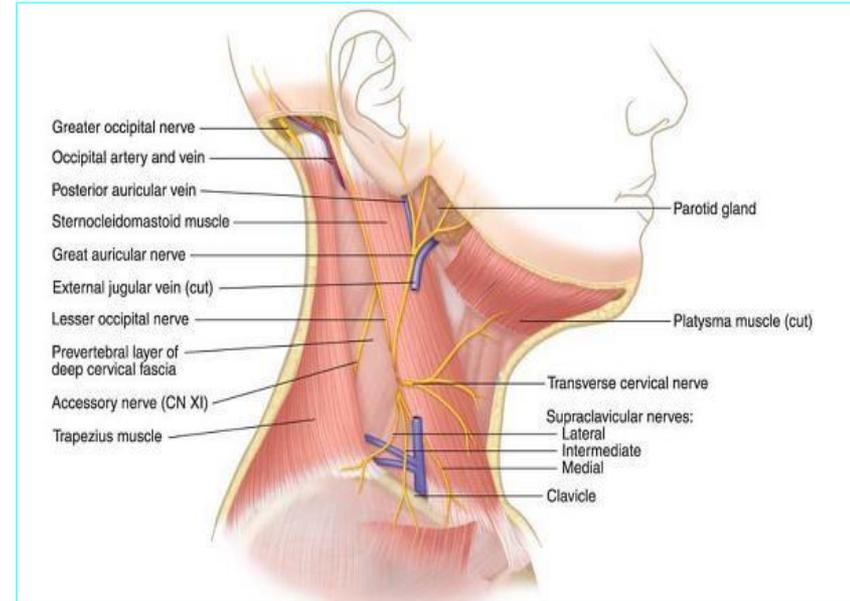
Superficial fascia (Subcutaneous tissue) is the thin layer deeper to the skin



Superficial Fascia of the Neck

Contents:

- Cutaneous Nerves
- Superficial vessels
- Platysma muscle
- Superficial Lymph nodes



Cutaneous Nerves

- **Great auricular C2,3:**

Supplies angle of mandible and parotid gland and lower 1/3 of both sides of auricle

- **Lesser occipital C2:**

Supplies upper 2/3 of medial surface of auricle and lateral part of occipital region of scalp

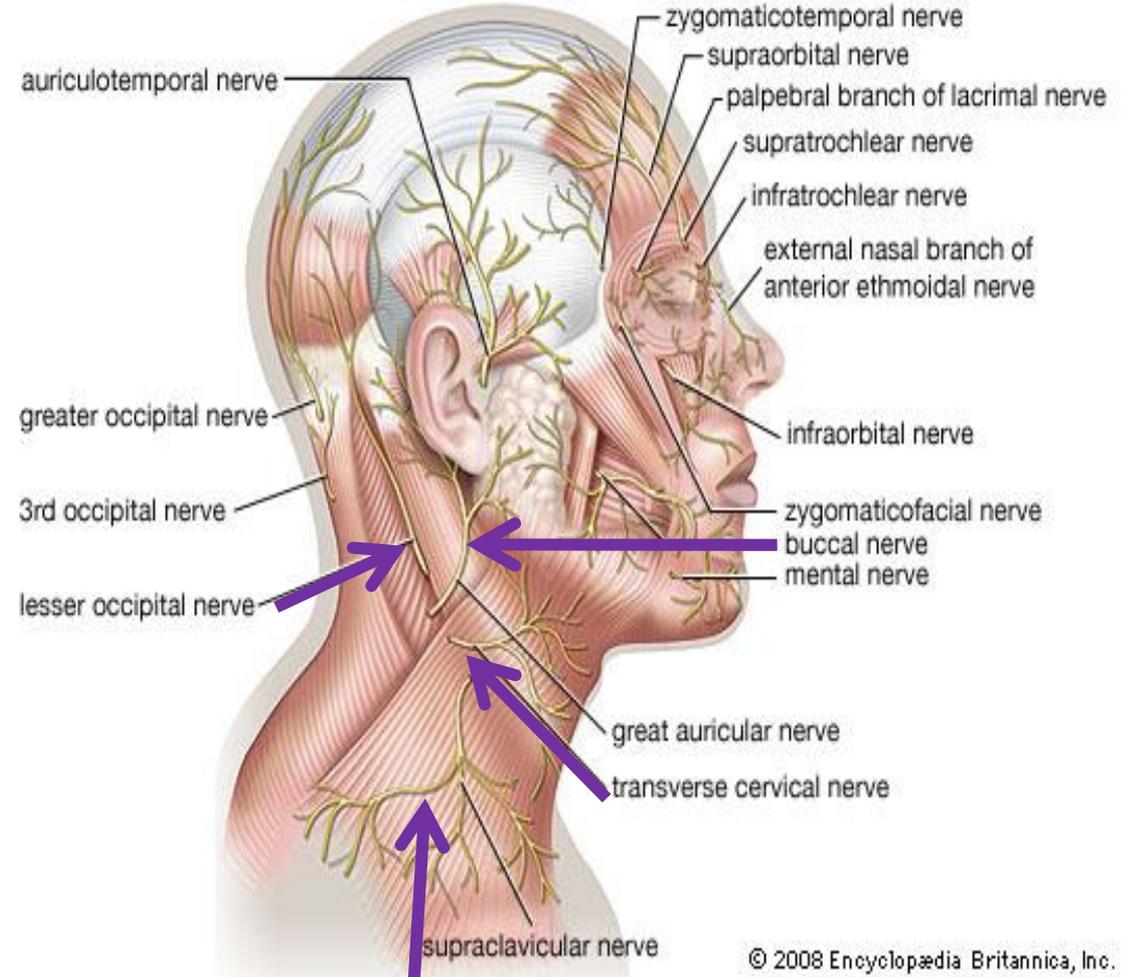
- **Transverse cervical (cutaneous) C2,3:**

Supplies skin of front and lateral surfaces of neck

- **Supraclavicular C3,4:**

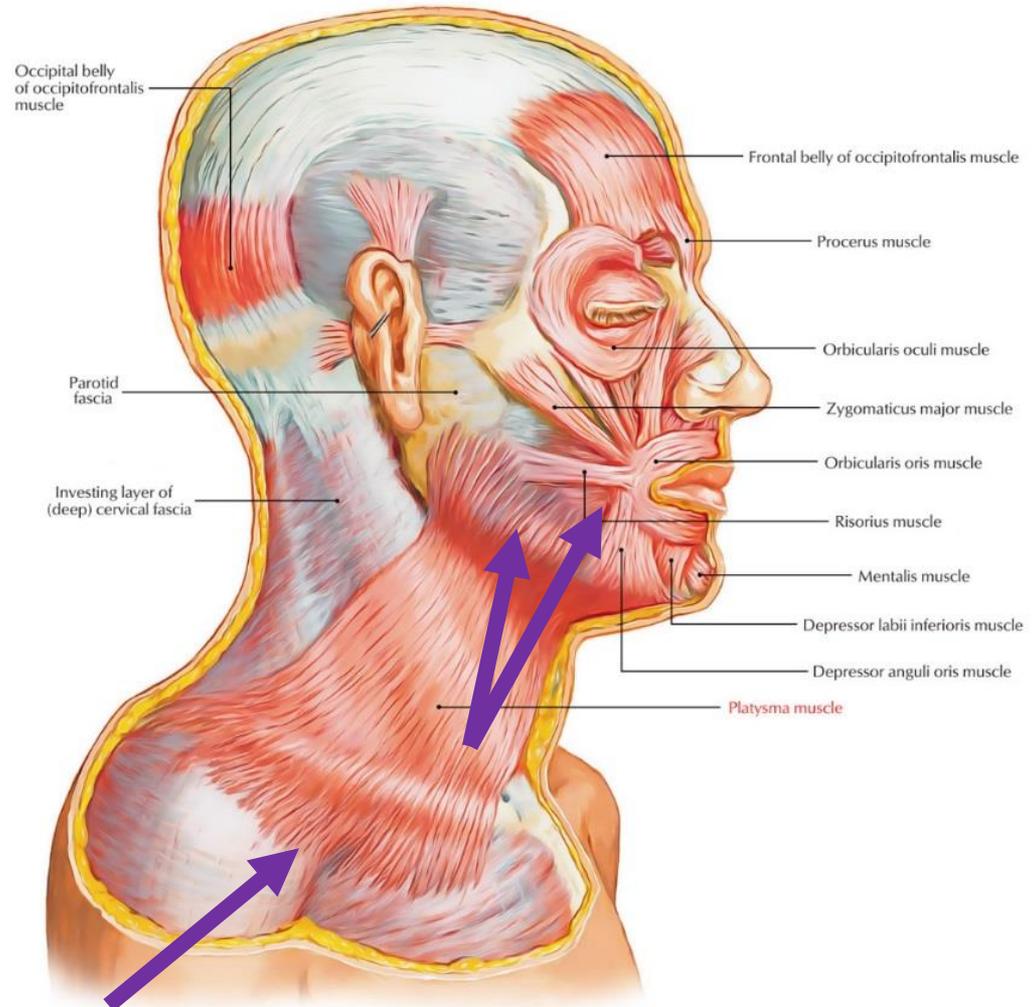
Supplies skin of shoulder region and upper half of deltoid muscle.

Cutaneous nerves of head and neck



Platysma Muscle

- **Origin:** From deep fascia covering pectoral region.
- **Insertion:** into body of mandible and angle of mouth
- **Nerve Supply:**
Facial n. (cervical branch)
- **Action:** Depression of mandible and angle of mouth.



Superficial Veins

External Jugular Vein

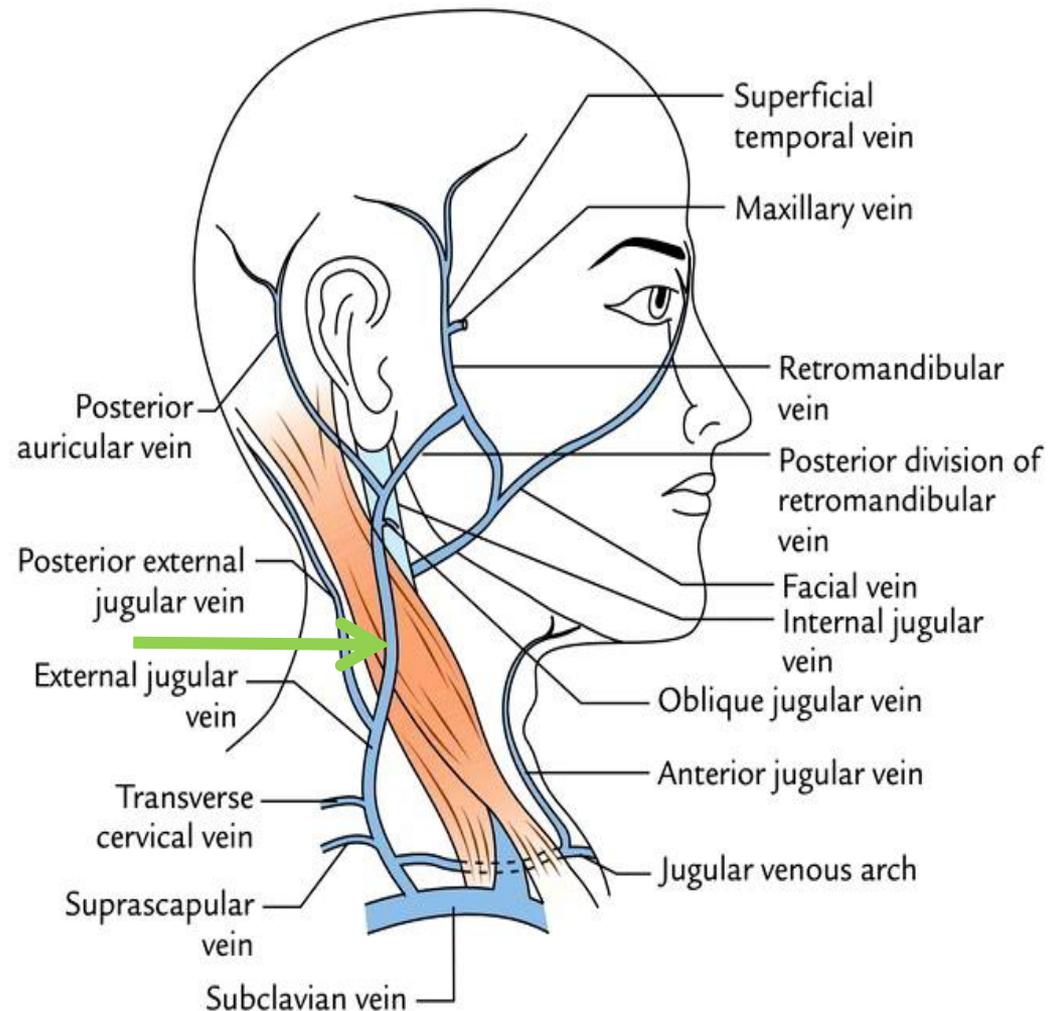
•Formation:

It begins behind angle of mandible by union of:

- Posterior auricular vein
- Posterior division of posterior facial vein

•End:

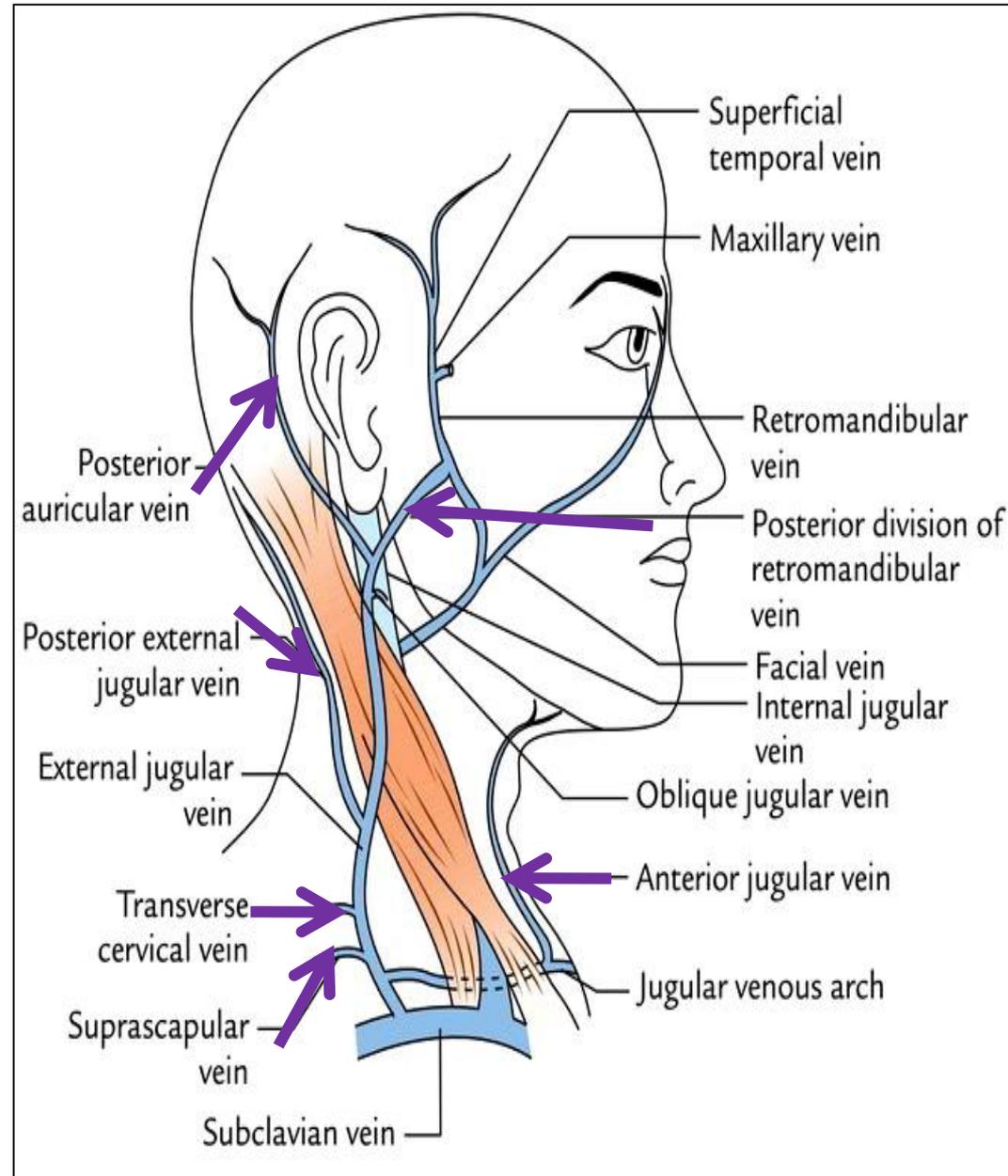
- in subclavian vein.



External Jugular Vein

Tributaries:

- **Posterior auricular vein.**
- **Posterior division of posterior Facial vein.**
- **Posterior external jugular vein.**
- **Transverse cervical vein.**
- **Suprascapular vein.**
- **Anterior jugular vein.**



Surface Anatomy of external jugular vein:

It is drawn by joining the following 2 points:

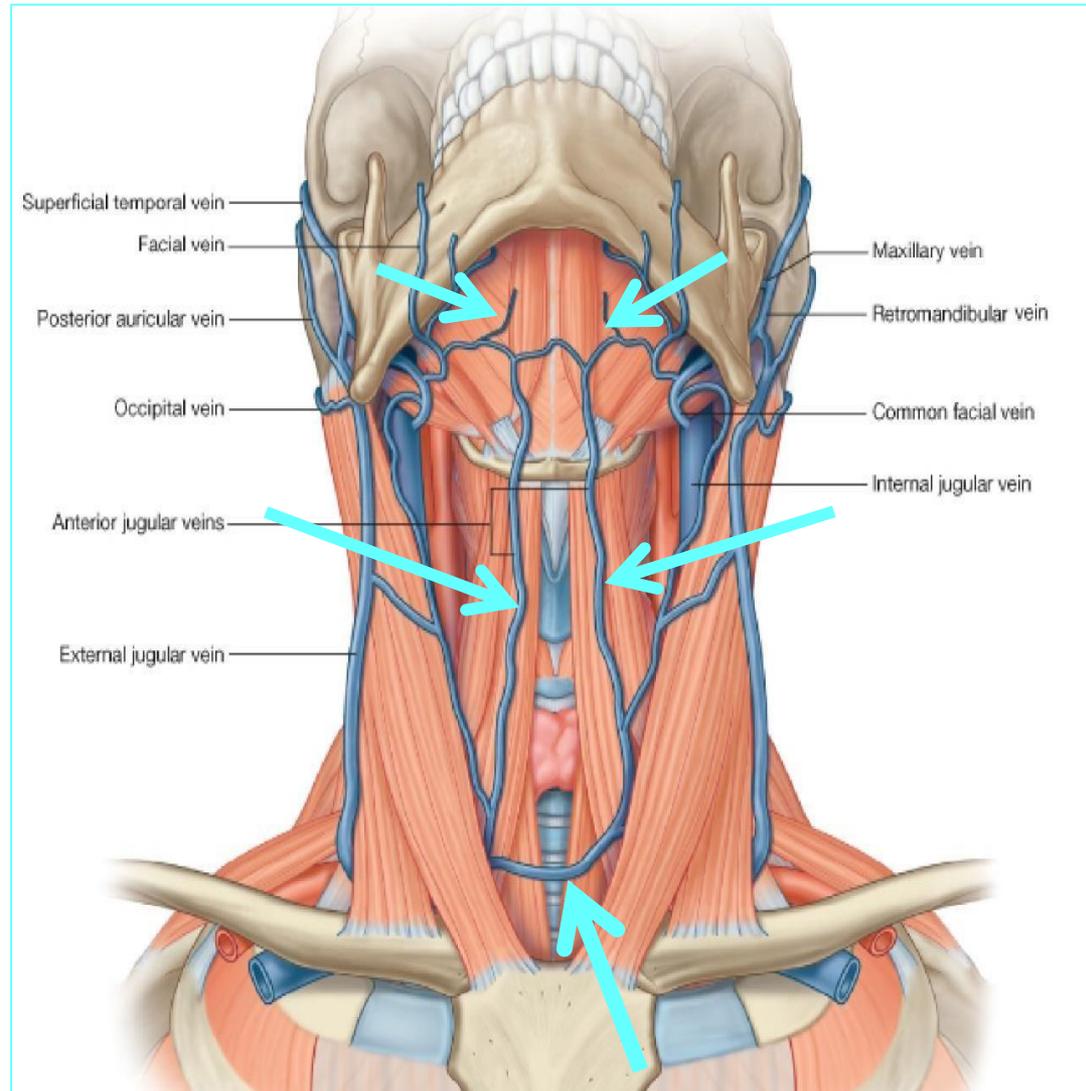
1. A point little below and behind the angle of the mandible.

A point at the middle of clavicle just lateral to the posterior border of the sternomastoid

Superficial Veins

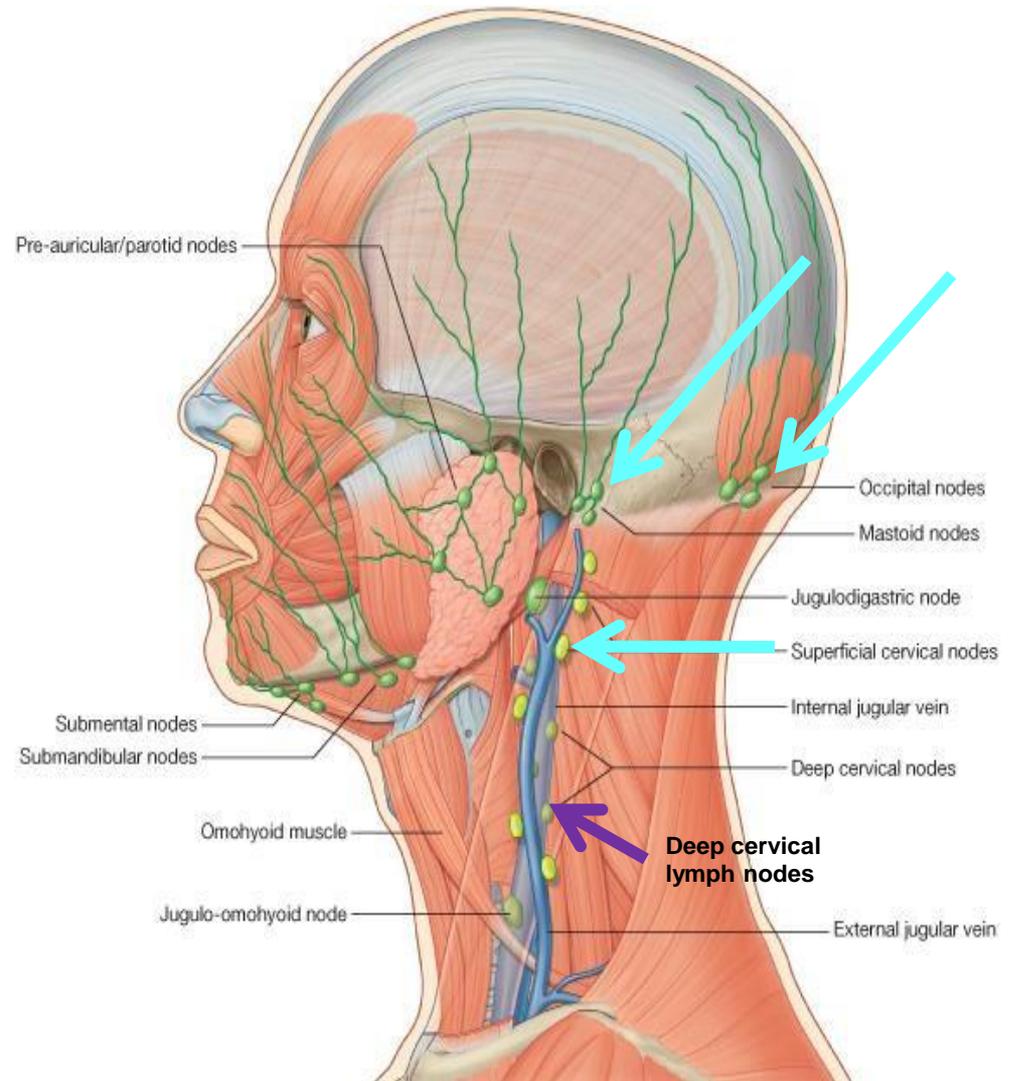
Anterior Jugular Vein

- Begins below the chin by the union of small veins.
- Descends in front of neck close to the sides of midline down to the suprasternal notch where it connects the vein of the other side forming the jugular arch.
- It then bends sharply to the lateral side deep to the sternomastoid to drain into the external jugular vein.



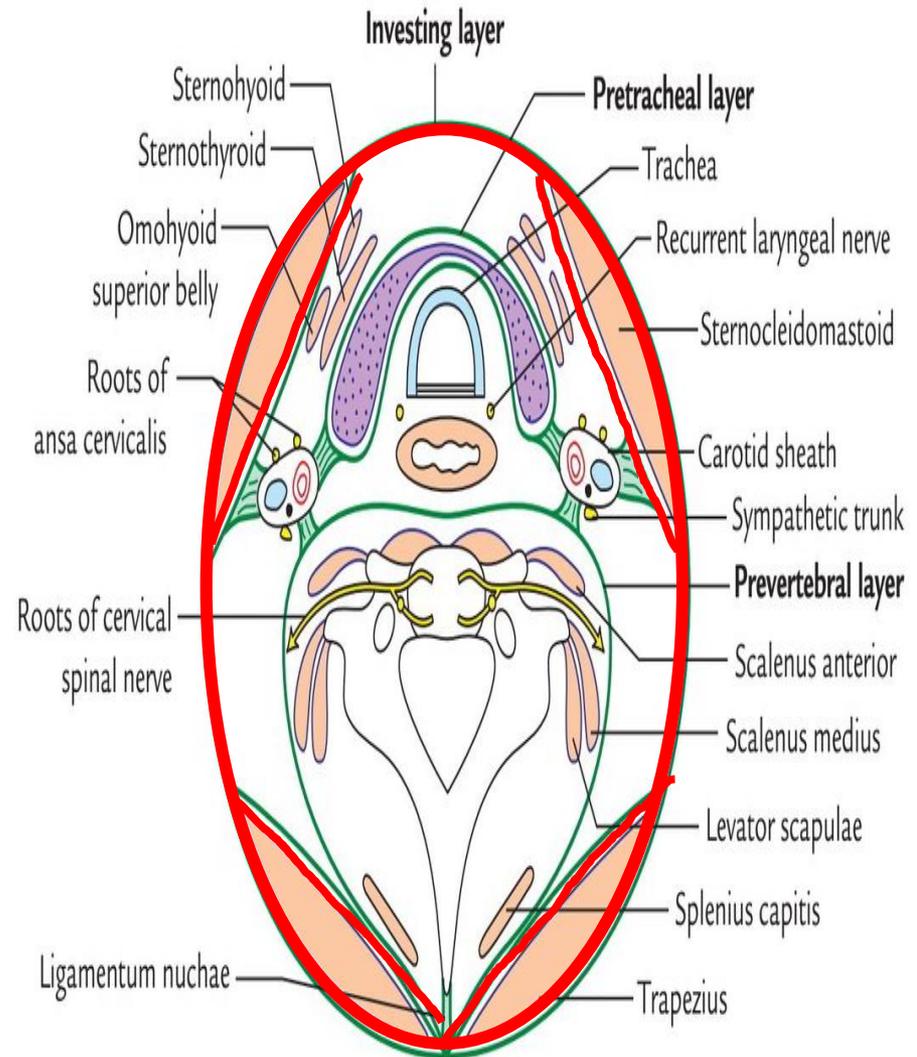
Superficial Cervical Lymph Nodes

- Lie along external jugular vein.
- Afferent: receive vessels from occipital and mastoid nodes.
- Efferent: drain into deep cervical lymph nodes.



Deep Cervical Fascia

- **Investing:**
- **surrounds the whole neck and splits to enclose sternomastoid and trapezius**



Deep Cervical Fascia

• Investing:

Roofs the anterior and posterior triangles of the neck.

Attachments :

Superiorly: to

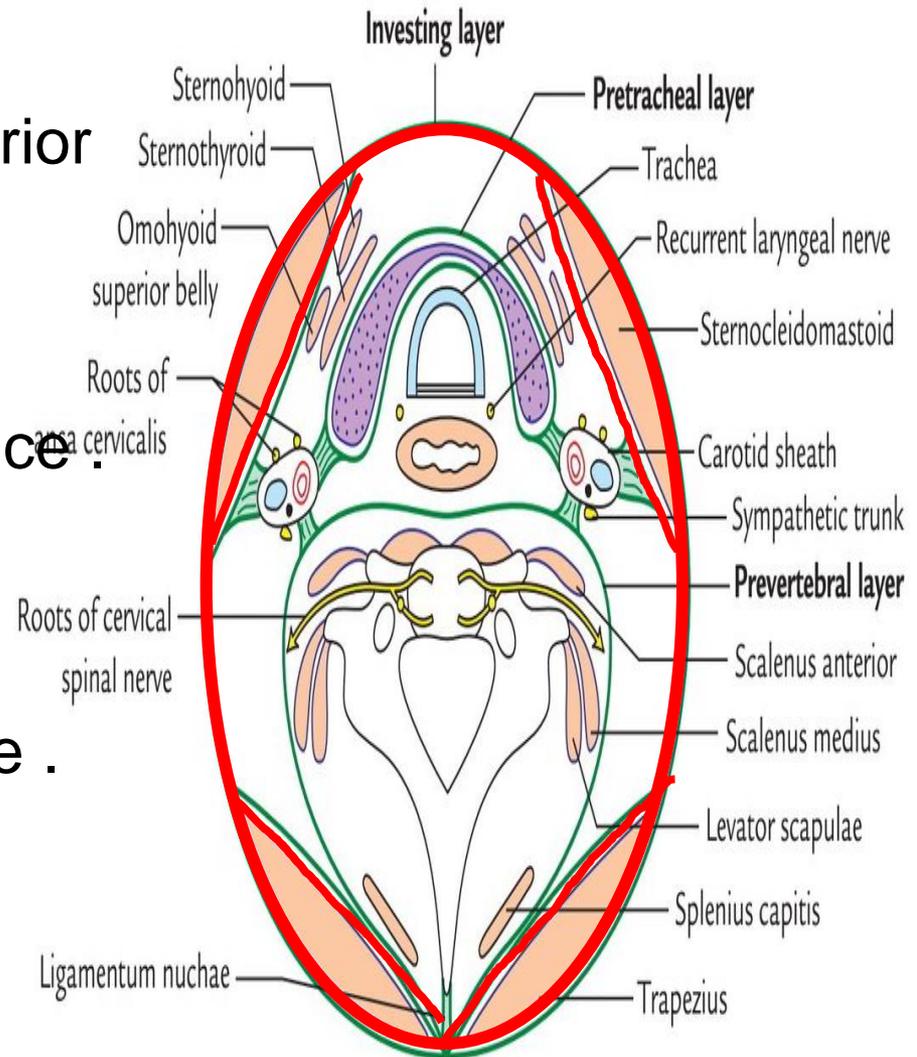
External occipital protuberance .

Superior nuchal line .

Mastoid process .

Zygomatic arch .

Lower border of the mandible .



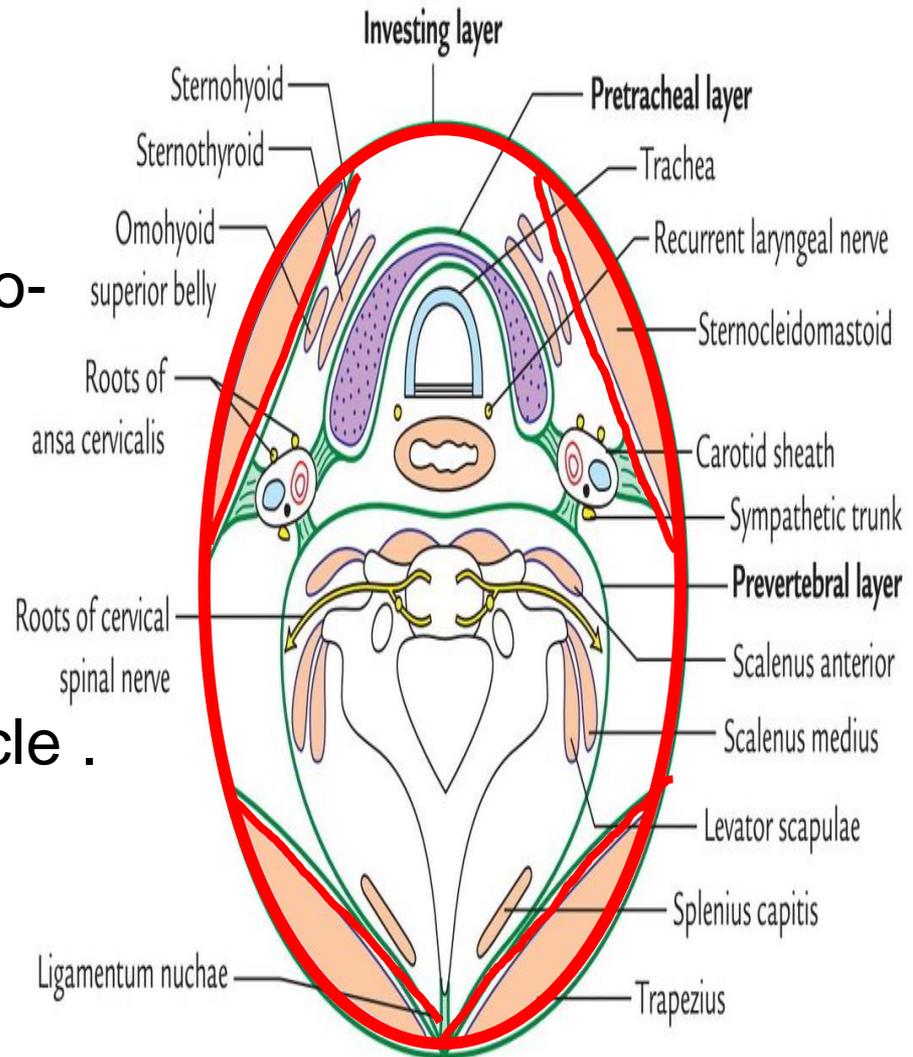
• Investing: Deep Cervical Fascia

Sides

- It splits to enclose submandibular gland and parotid gland .
- It is condensed to form stylo-mandibular ligament .

Inferiorly: to

The front and back of the manubrium sterni .
Front and back of the clavicle .



Deep Cervical Fascia

• Investing:

Anteriorly :

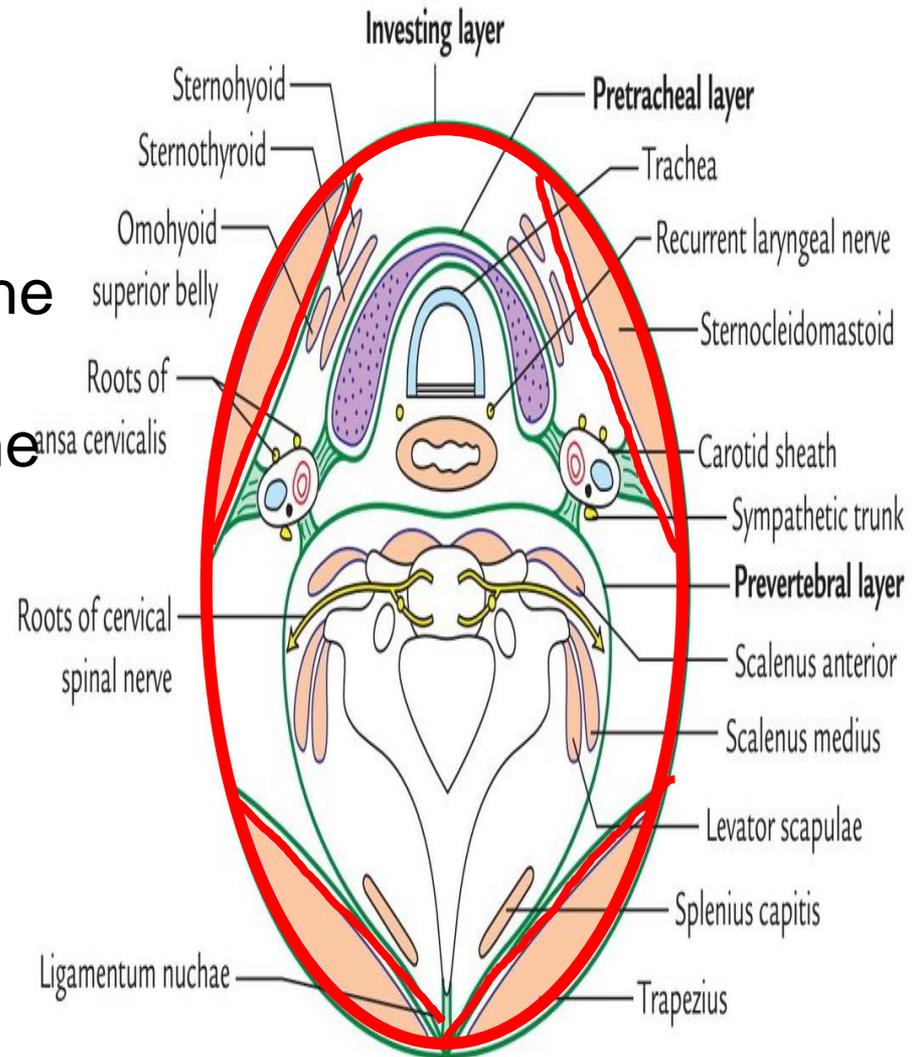
It is continuous with that of the opposite side at the midline .

It gets adherent to hyoid bone and symphysis menti .

Posteriorly: to

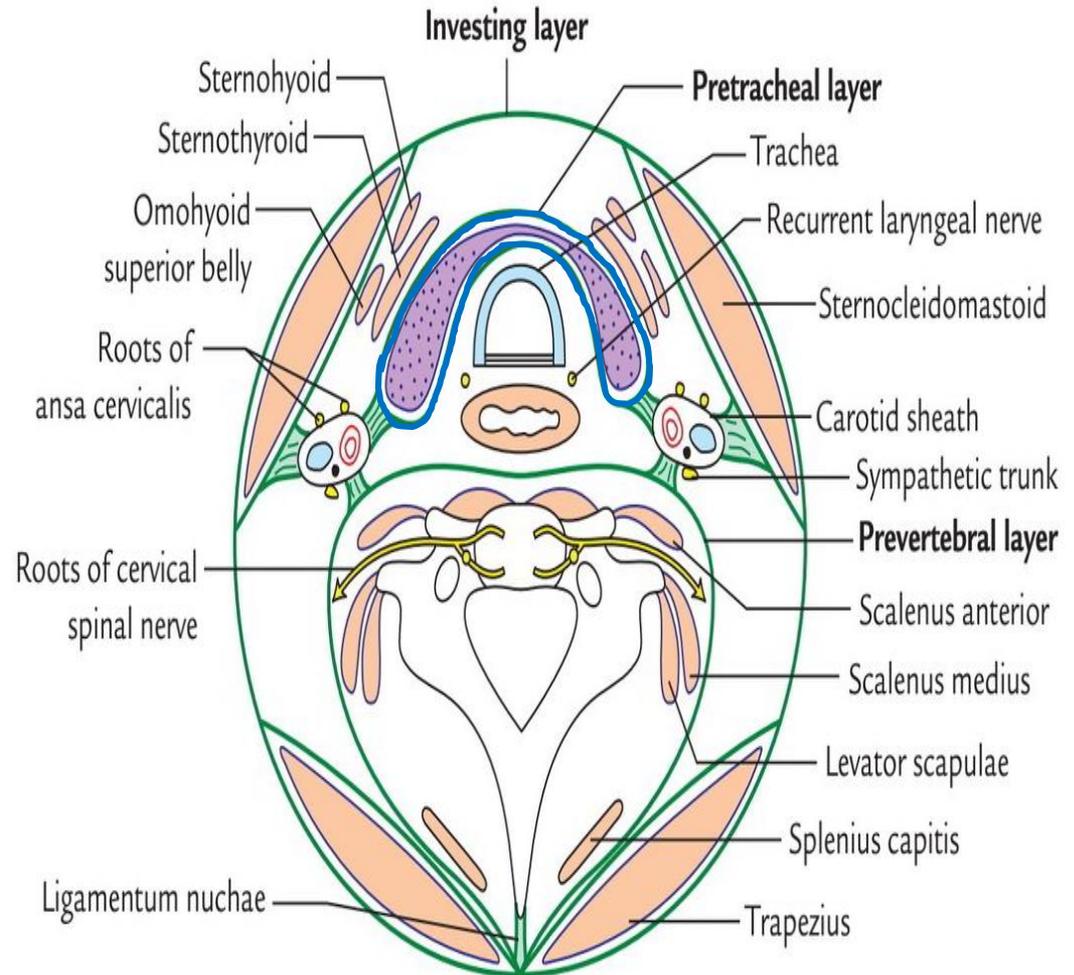
Ligamentum nuchae .

Spine of the 7th cervical vertebra .



Deep Cervical Fascia

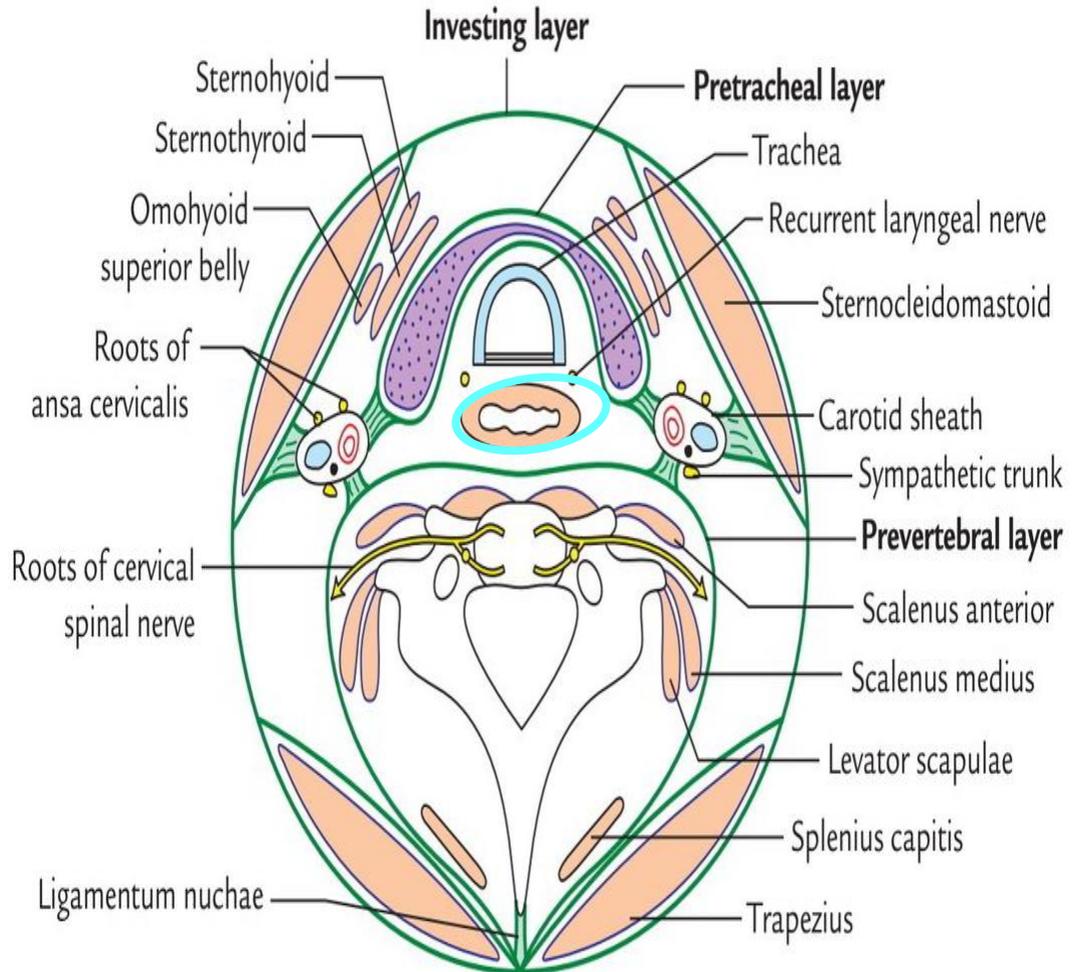
- **Pretracheal:**
- **covers front and sides of trachea and encloses the thyroid and parathyroid glands and infrahyoid muscles.**



Deep Cervical Fascia

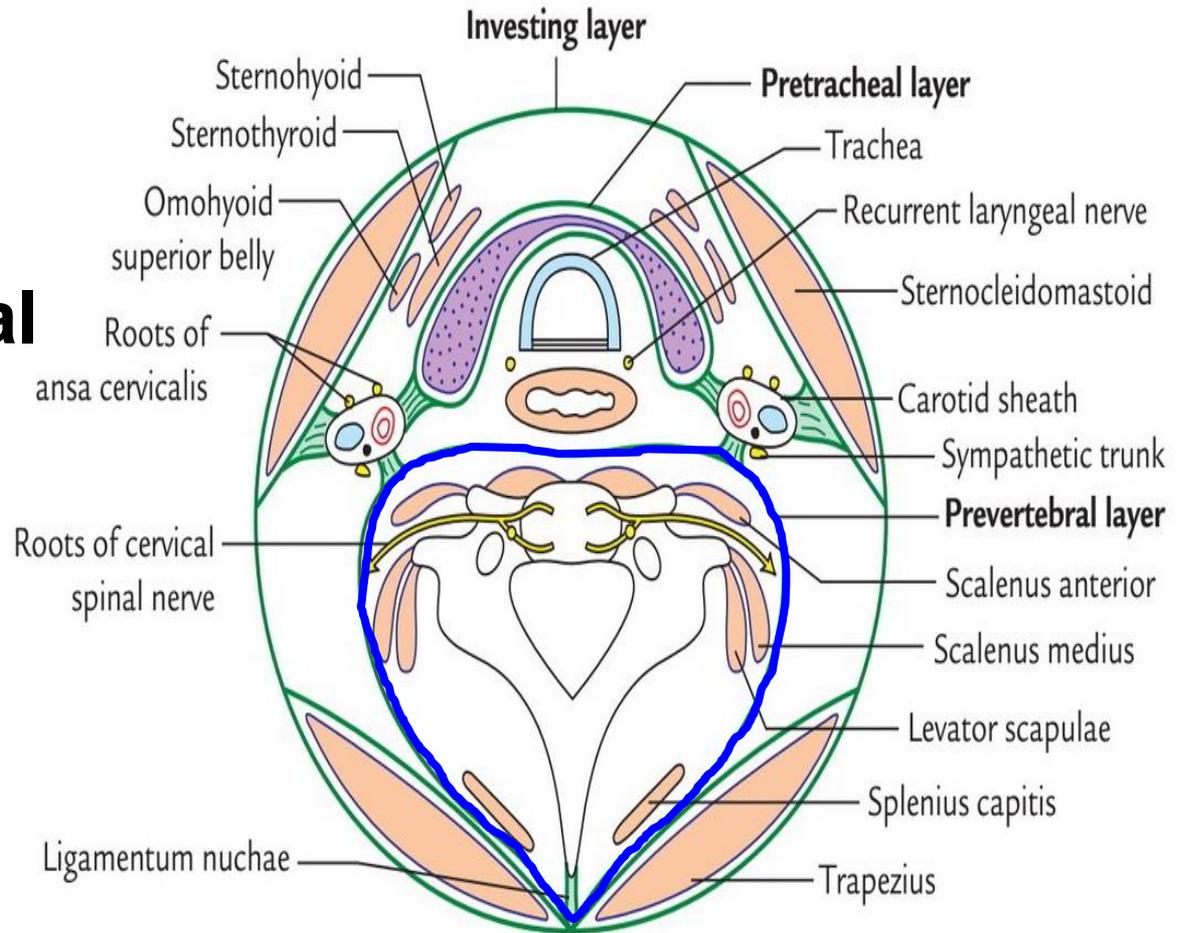
Buccopharyngeal fascia:

Covers the constrictor muscles of pharynx



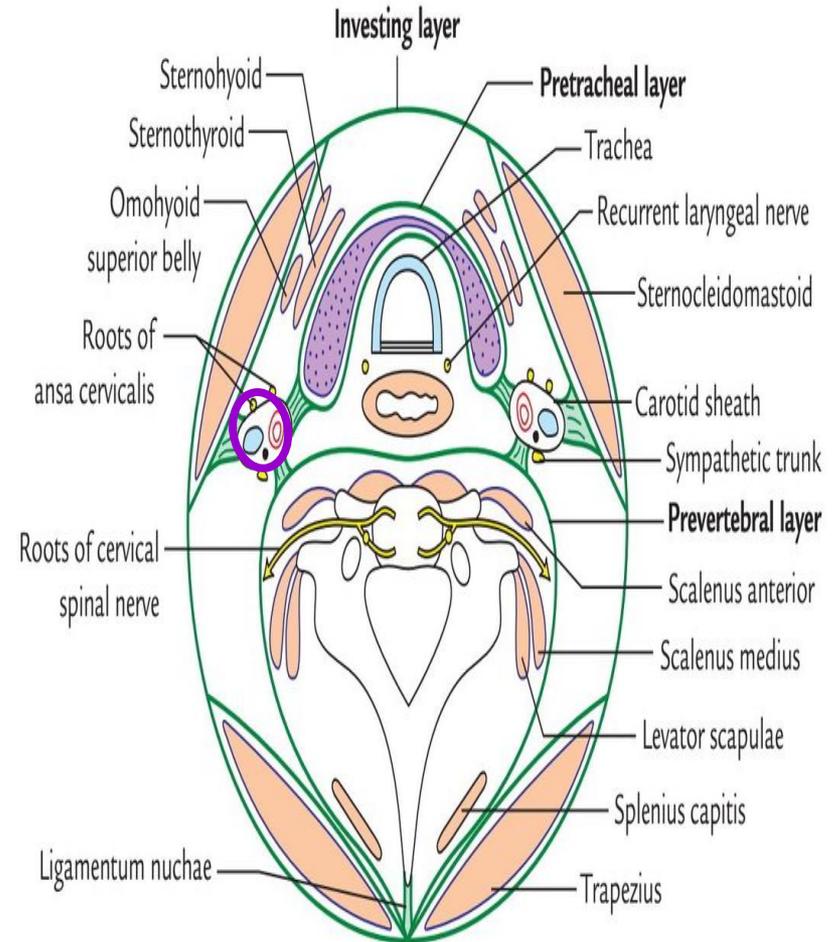
Deep Cervical Fascia

- **Prevertebral:**
- **lies in front of the prevertebral muscles and the vertebral column.**



Deep Cervical Fascia

- **Carotid sheath:**
condensation of investing, pretracheal and prevertebral layers
- It extends from the base of the skull to the root of the neck.
- It **encloses** the following:
 - **Medially:** Common and internal carotid arteries.
 - **Laterally:** Internal jugular vein.
 - **Behind and between:** Vagus nerve



Clinical Significance of the Deep cervical Fascia:

Among the more important spaces are

- The visceral (Pretracheal)
- Retropharyngeal
- Submandibular
- masticatory spaces.

It is possible for blood, pus, or air in the retropharyngeal space to spread downward into the thorax

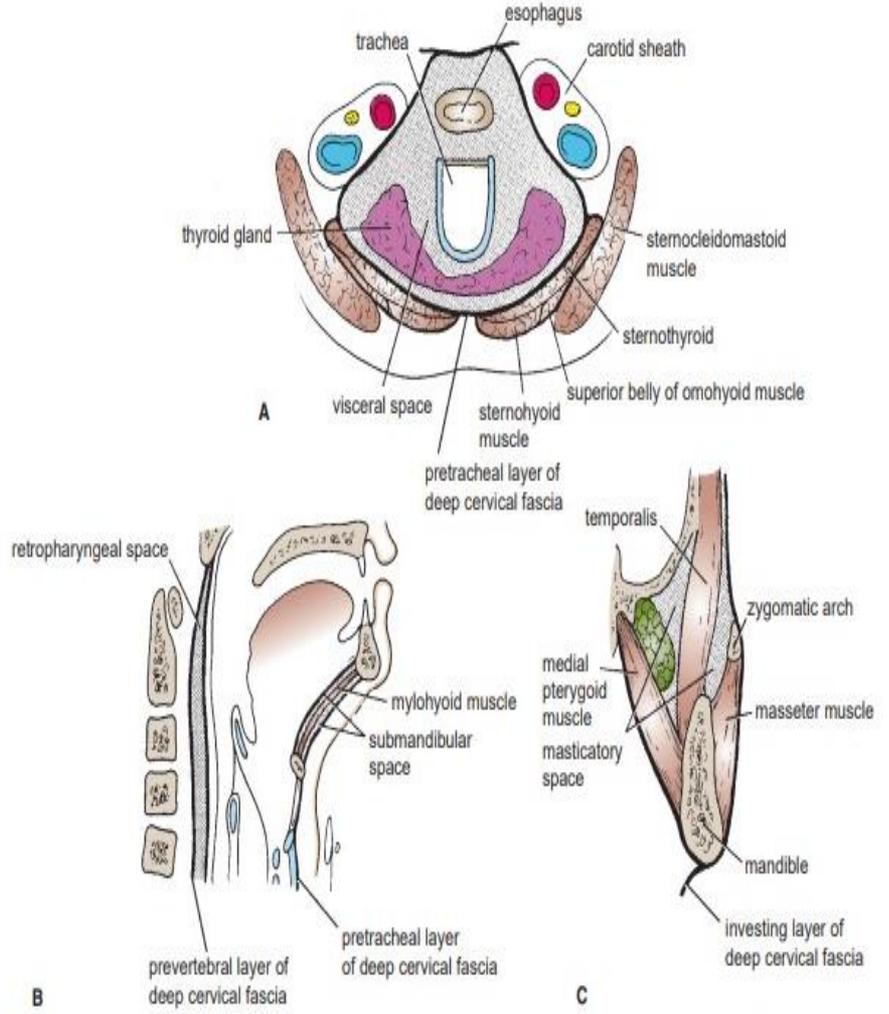
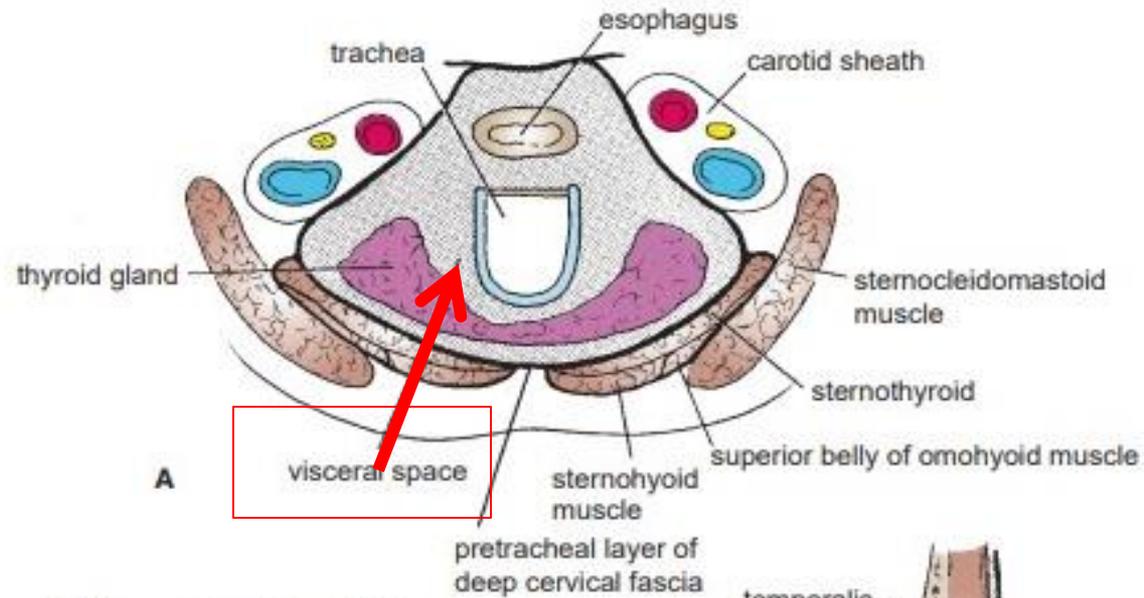


FIGURE 11.58 **A.** Cross section of the neck showing the visceral space. **B.** Sagittal section of the neck showing the positions of the retropharyngeal and submandibular spaces. **C.** Vertical section of the body of the mandible close to the angle showing the masticatory space.



retropharyngeal space

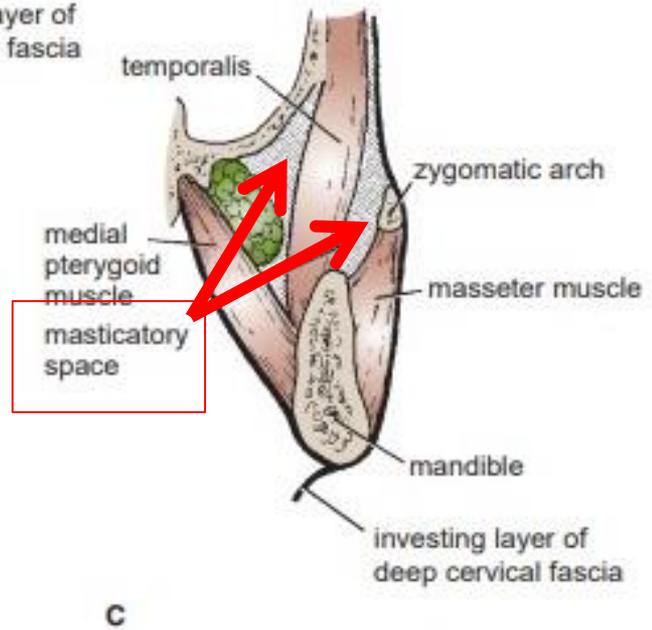
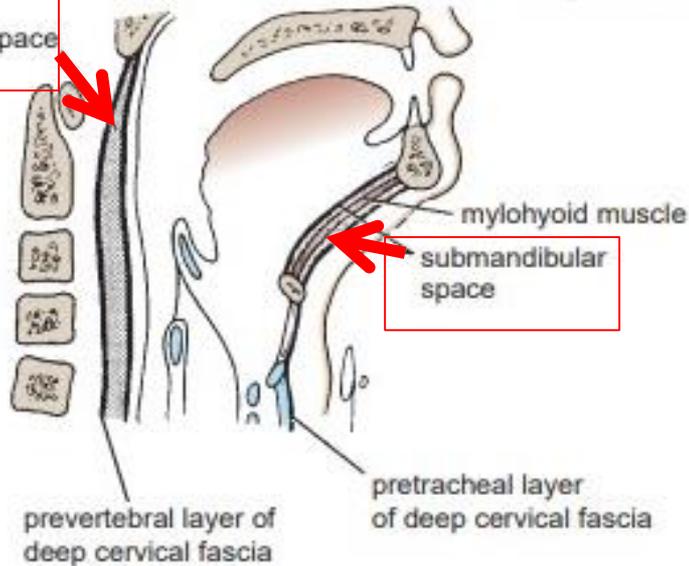


FIGURE 11.58 **A.** Cross section of the neck showing the visceral space. **B.** Sagittal section of the neck showing the positions of the retropharyngeal and submandibular spaces. **C.** Vertical section of the body of the mandible close to the angle showing the masticatory space.

Dental infections most commonly involve the lower molar teeth

The infection spreads medially from the mandible into the submandibular and masticatory spaces and pushes the tongue forward and upward.

Further spread downward may involve the visceral (pretracheal) space and lead to edema of the vocal cords and airway obstruction.

Ludwig's angina is an acute infection of the submandibular fascial space and is commonly secondary to dental infection.

REFERENCES

- **Snell`s clinical anatomy by regions ,Tenth Edition**
- **Gray`s Anatomy for students, Third Edition**
- **Grant`s Atlas of Anatomy**

Thank
you

