

DEEP CERVICAL FASCIA

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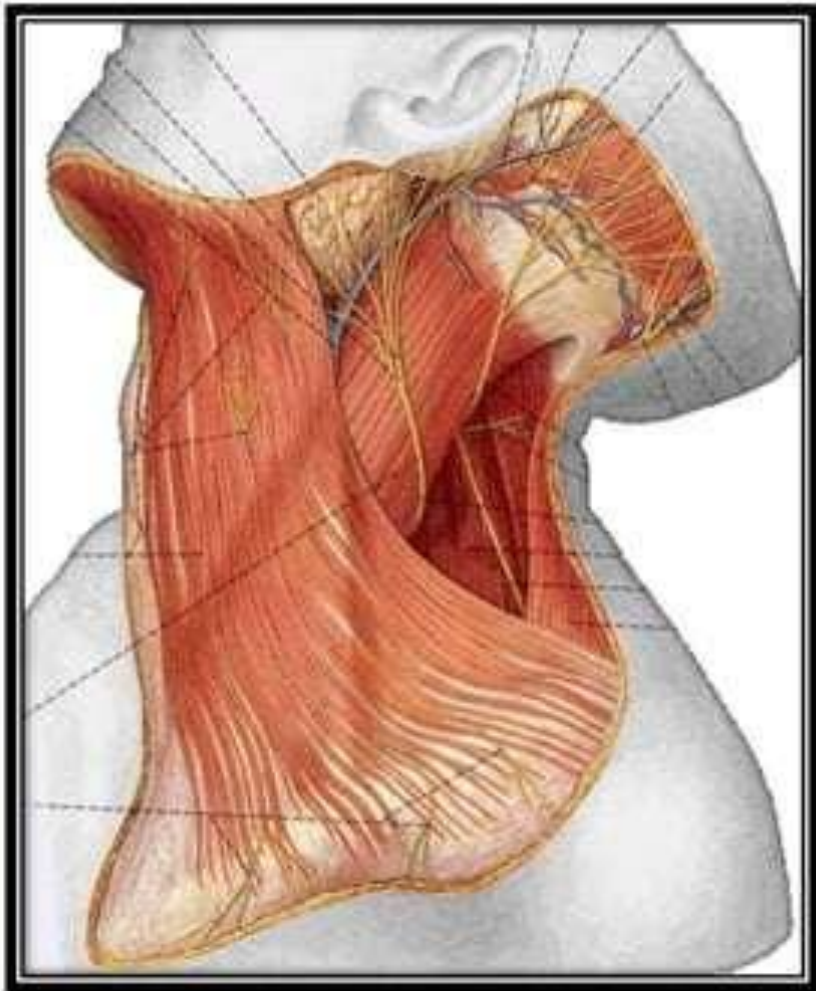
ANJORA, DURG, CHHATTISHGARH

INTRODUCTION

- FASCIA MEANS FIBROUS CONNECTIVE TISSUE WHICH BINDS TOGETHER VARIOUS STRUCTURES OF THE BODY
- **ALWAYS OF 2 TYPES- SUPERFICIAL FASCIA & DEEP FASCIA**
- **SUPERFICIAL FASCIA IS SUBCUTANEOUS- PRESENT JUST BELOW THE SKIN**
 - **DEEP FASCIA IS PRESENT AROUND MUSCLES BLOOD VESSELS & ORGANS OF THE BODY**

DEEP CERVICAL FASCIA

- ❖ DEEP FASCIA AROUND THE NECK IS KNOWN AS **DEEP CERVICAL FASCIA OR FASCIA COLLI** AS IT FORMS A COLLAR AROUND THE NECK
- ❖ **LIES DEEP TO PLATYSMA MUSCLE IN THE INTERVAL B/W MUSCLES, VESSELS & ORGANS OF THE CERVICAL REGION**
- ❖ **GIVES VARIOUS EXTENSIONS OR LAMINAE AROUND VARIOUS**



MODIFICATIONS/ LAMINAE/EXTENSIONS OF DEEP CERVICAL FASCIA

- HAS 7 MODIFICATIONS

1. INVESTING LAYER
2. PRETRACHEAL LAYER
3. PREVERTEBRAL LAYER
4. CAROTID SHEATH
5. BUCCOPHARYNGEAL FASCIA
6. TEMPORAL FASCIA
7. PHARYNGOBASILAR FASCIA

FASCIA OF NECK

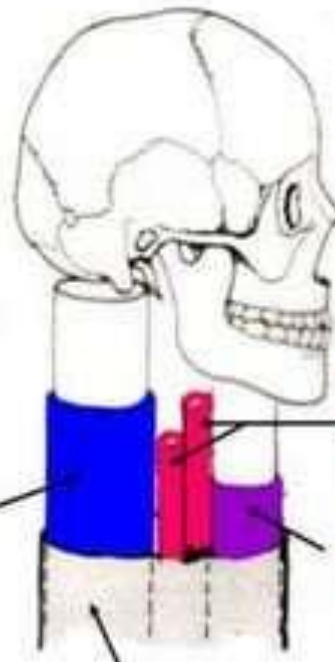
B. Deep Cervical fascia- one layer surrounds neck, other layers form tubes (names poorly chosen)

2. Prevertebral Layer

4. Carotid sheath

3. Pre-tracheal layer

1. Investing layer



INVESTING LAYER

- ATTACHMENTS

- ABOVE- EXTERNAL OCCIPITAL PROTUBERANCE, MASTOID PROCESS, EXTERNAL ACOUSTIC MEATUS, BASE OF THE MANDIBLE
- BELOW- SPINE OF SCAPULA, ACROMION PROCESS, CLAVICLE, MANUBRIUM STERNI
- FRONT- HYOID BONE & CONTINUOUS WITH THE FASCIA OF THE FASCIA OF THE OPPOSITE SIDE
- BEHIND- 7TH CERVICAL VERTEBRA, LIGAMENTUM NUCHAE

INVESTING LAYER

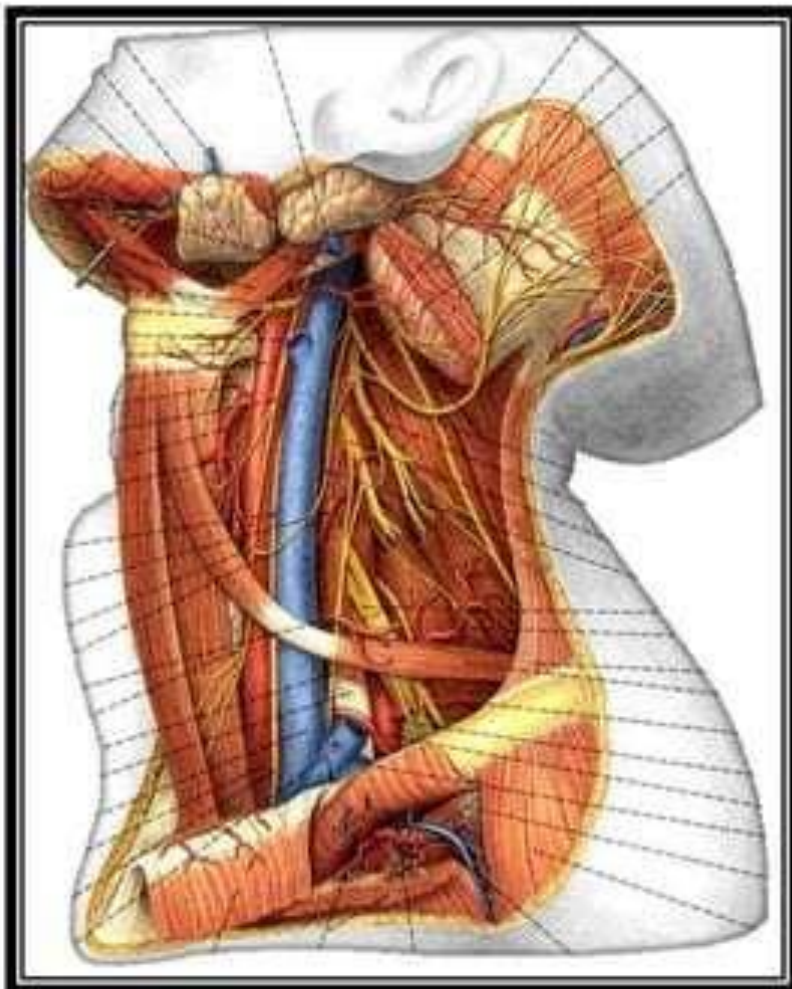
- TRACINGS

- HORIZONTAL TRACING-

- ENCLOSSES 2 MUSCLES- TRAPEZIUS & STERNOCLEIDOMASTOID
- FORMS INTERMEDIAE FOR DIGASTRIC & OMOHYOID MUSCLES
- FORMS ROOF OF 2 TRIANGLE- ANTERIOR & POSTERIOR
- GIVES 2 LAMINA FOR PRETRACHEAL & PREVERTEBRAL FASCIA

- VERTICAL TRACING

- ENCLOSSES 2 GLAND- PAROTID & SUBMANDIBULAR SALIVARY GLAND



FASCIA OF NECK

↑
NOSE

Carotid Sheath

Pretracheal layer

Prevertebral layer

1. Investing layer of deep cervical fascia- surrounds neck, splits around sternocleid., trap, supra & infrahyoid
2. Prevertebral Layer- surrounds vert. column & muscles back of neck, prevertebral, lateral vertebral and suboccipital m.
3. Pretracheal Layer- surrounds trachea, esophag. & thyroid continues to mediastinum
4. Carotid Sheath- surrounds common & int carotid, int jugular and X (not: Symp. Chain)

Retropharyngeal Space- between PreTrach & Pre Vert layers - infection from head (tonsillitis) can spread to mediastinum

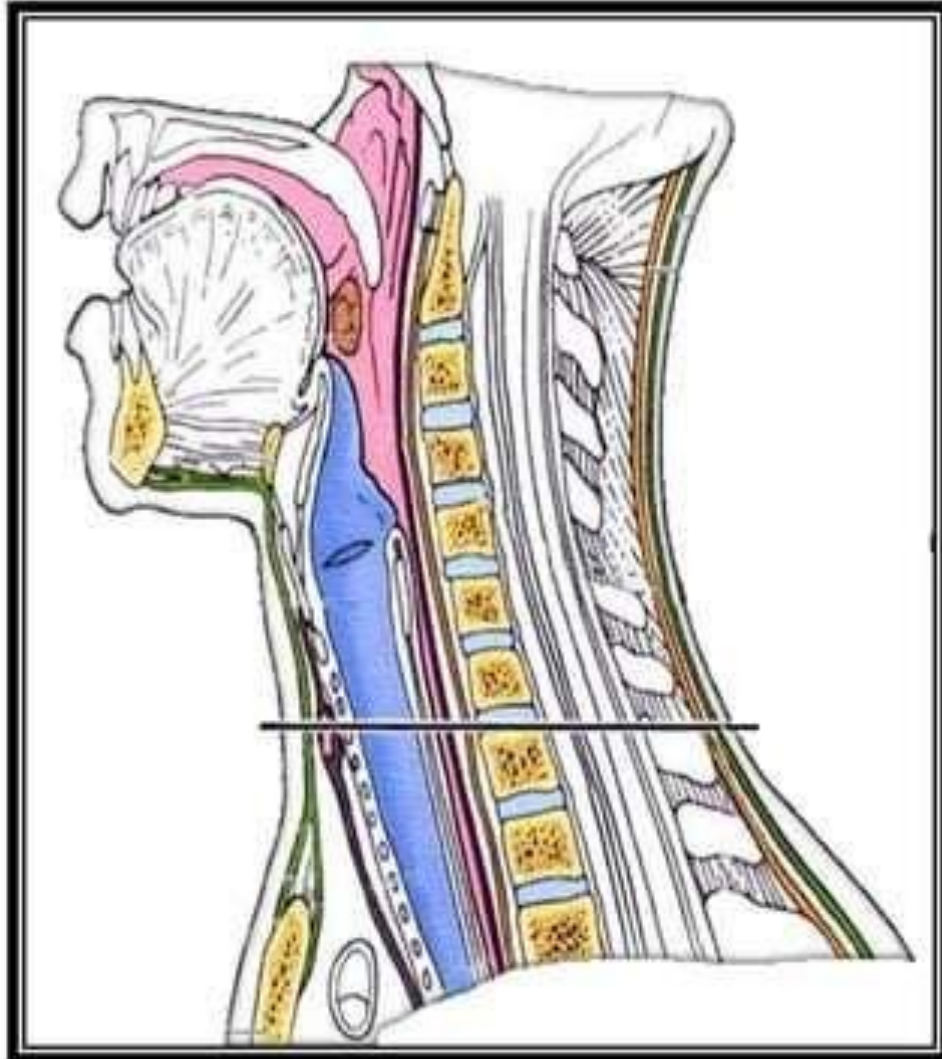
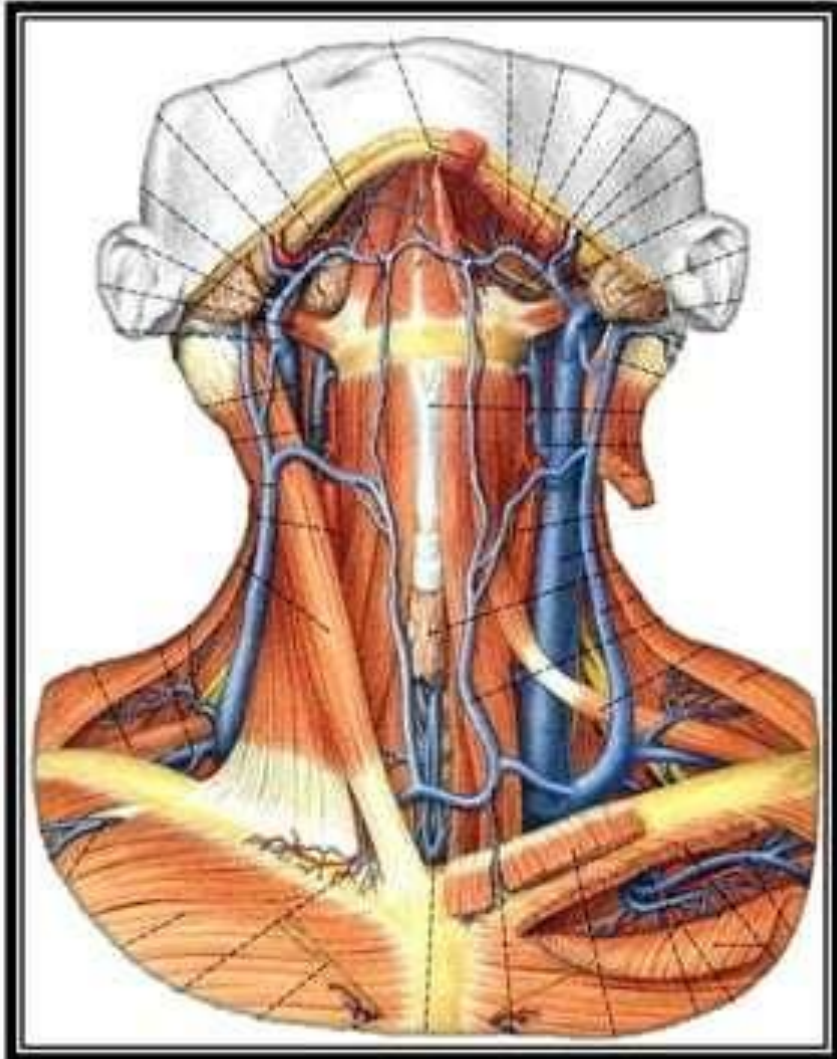
SUPRASTERNAL SPACE

- FORMED BY SPLITTING OF INVESTING LAYER OF DEEP CERVICAL FASCIA AT THE UPPER BORDER OF STERNUM WHICH GETS ATTACHED TO ANTERIOR & POSTERIOR BORDER OF SUPRA-STERNAL NOTCH

- ENCLOSES A SPACE KNOWN AS SUPRA-STERNAL SPACE OR SPACE OF BURNS

- CONTENT OF THE SPACE

INTER-CLAVICULAR LIGAMENT, STERNAL HEAD OF STERNOCLEIDOMASTOID MUSCLE, JUGULAR VENOUS ARCH. LOOSE AREOLAR TISSUE



SUPRACLAVICULAR SPACE

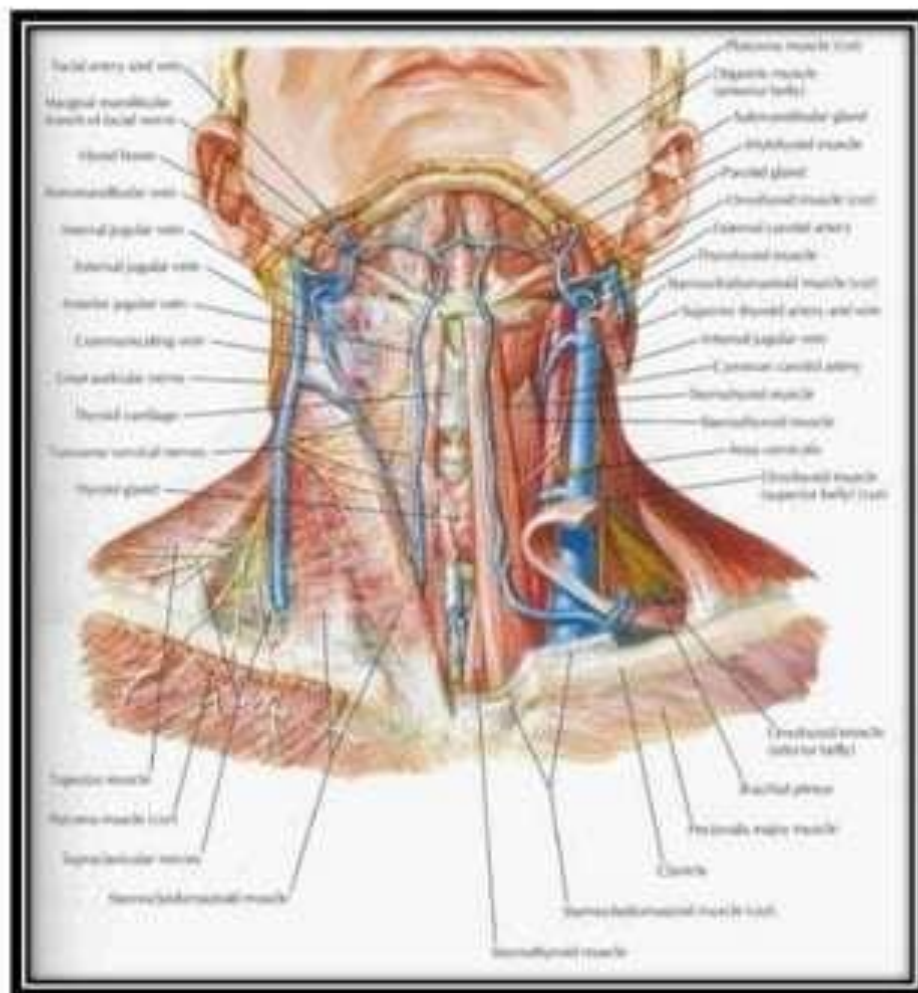
- FORMED BY SPLITTING OF INVESTING LAYER OF DEEP CERVICAL FASCIA AT MIDDLE 3RD OF CLAVICLE & GETS ATTACHED TO ANTERIOR & POSTERIOR BORDER OF UPPER SURFACE OF CLAVICLE
 - ENCLOSES A SPACE KNOWN AS SUPRACLAVICULAR SPACE
 - CONTENT OF THE SPACE
- SUPRACLAVICULAR NERVES, EXTERNAL JUGULAR VEIN

CLINICAL ANATOMY

- **BECAUSE OF THE PRESENCE OF THICK TOUGH PAROTIDO-MASSEERIC FASCIA WHICH COVERS THE PAROTID GLAND SWELLINGS OF THE PAROTID GLAND (MUMPS, PAROTITIS) ARE VERY PAINFULL**

PRETRACHEAL FASCIA

- IT IS ONE OF THE LAMINA OF DEEP CERVICAL FASCIA THAT ARISES DEEP TO STERNOCLEIDOMASTOID MUSCLE
- HORIZONTALLY THE FASCIA ENCLOSES THE THYROID GLAND & THEN BECOMES CONTINUOUS WITH THE FASCIA OF THE OPPOSITE SIDE
- VERTICALLY THE FASCIA IS ATTACHED TO HYOID BONE & THEN DOWNWARDS IT ENCLOSES THYROID GLAND & RUNS DOWNWARDS & FINALLY GETS ATTACHED TO PERICARDIUM OF THE HEART

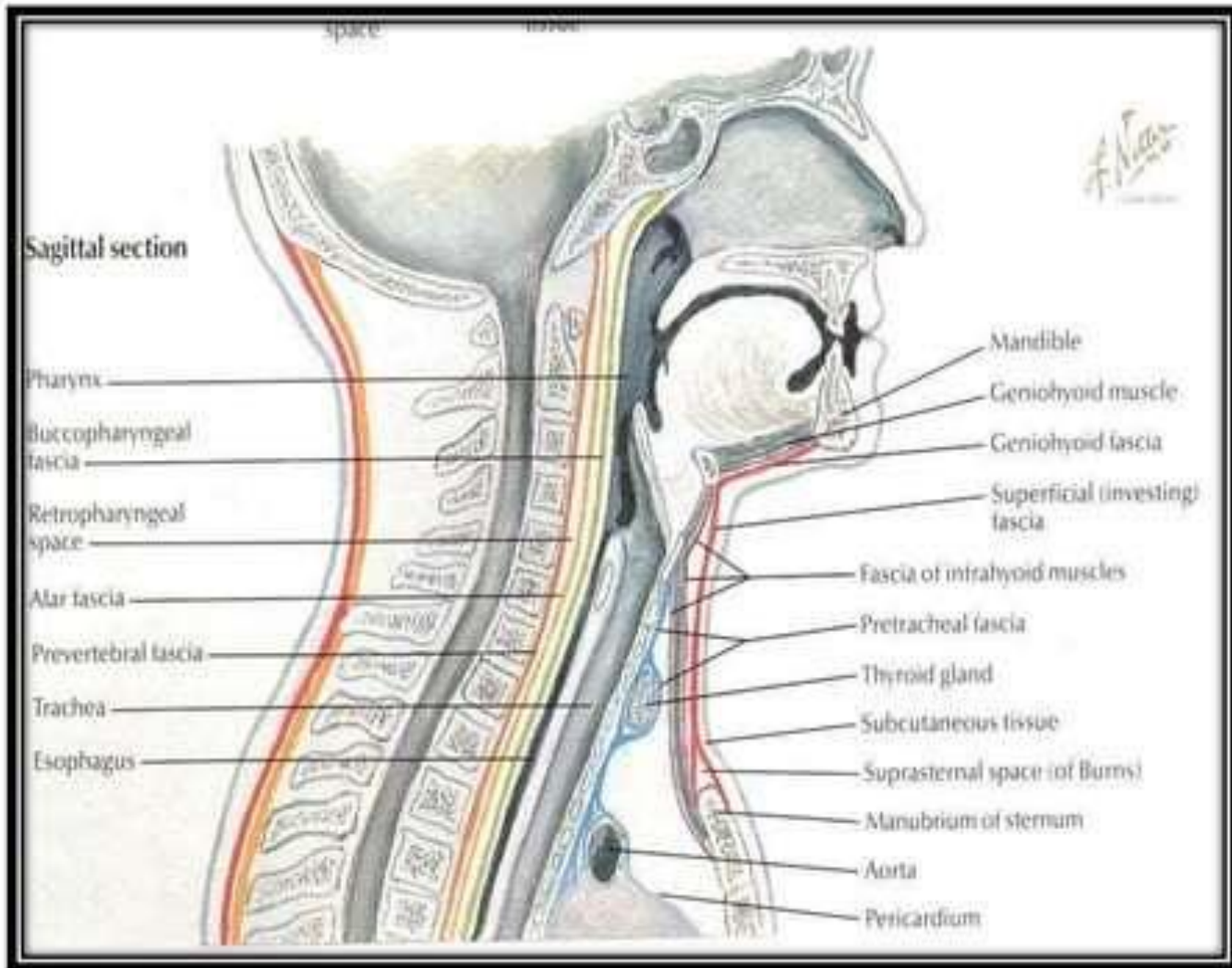


CLINICAL ANATOMY

- ❑ THE FASCIA FORMS THE OUTER FALSE CAPSULE OF THYROID GLAND, POSTERIOR PART OF WHICH IS THIN & NOT WELL DEFINED. HENCE THYROID SWELLINGS GROWS POSTERIORLY & MAY COMPRESS THE OESOPHAGUS CAUSING DYSPHAGIA
- ❑ THYROID GLAND MOVES WITH DEGLUTITION AS THE POSTERIOR ASPECT OF THE GLAND IS ATTACHED TO THE CRICOID CARTILAGE BY A THICKENING OF PRETRACHEAL FASCIA KNOWN AS LIGAMENT OF BERRY OR SUSPENSORY LIGAMENT OF THYROID GLAND
- ❑ DURING THYROID SURGERIES THE LIGAMENT OF BERRY HAS TO BE CUT TO MOBILISE THE THYROID GLAND
- ❑ ENLARGEMENT OF THYROID GLAND LEADS TO EMBARRASMENT OF THE HEART AS THE LOWER EXTENSION OF PRETRACHEA; FASCIA IS PERICARDIUM

PREVERTEBRAL FASCIA

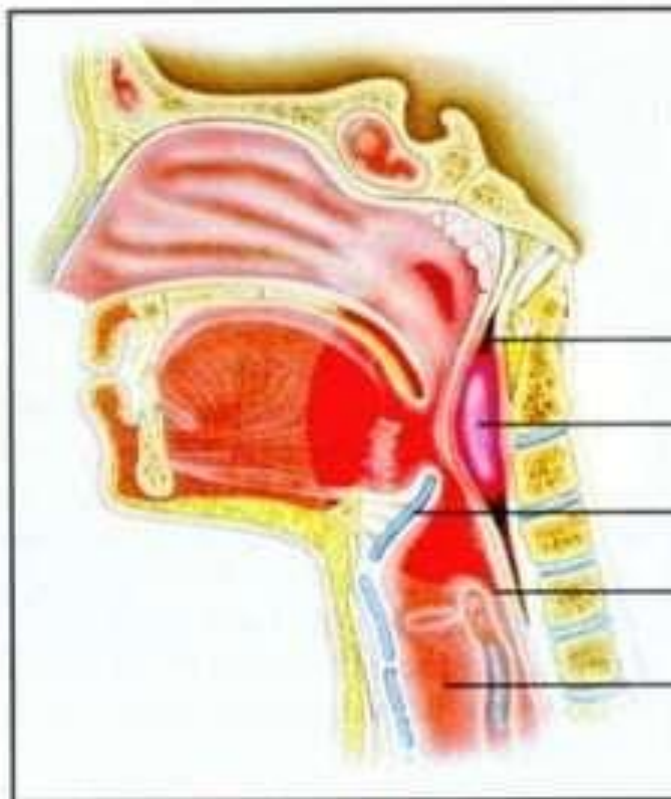
- IT IS ONE OF THE LAMINA OF DEEP CERVICAL FASCIA THAT ARISES DEEP TO STERNOCLEIDOMASTOID MUSCLE
- LIES IN FRONT OF CERVICAL VERTEBRAE & MUSCLES IN FRONT OF IT
- HORIZONTALLY IT FORMS THE FLOOR OF THE POSTERIOR TRIANGLE & FINALLY EXTENDS UPTO AXILLA AS AXILLARY SHEATH ENCLOSING THE AXILLARY VESSELS AND NERVES



CLINICAL ANATOMY

- **DUE THE EXTENSION OF PREVERTEBRAL FASCIA AS AXILLARY FASCIA INFECTIONS OF VEREBRAE-CARIES SPINE (TUBERCULOSIS OF VERTEBRAE) MAY LEAD TO SPREAD OF PUS TO THE AXILLA, THE PUS MAY ALSO POIN AS AN ABSESS IN THE REGION OF THE POSTERIOR TRIANGLE**
- **PREVERTEBRAL FASCIA FORMS THE POSTERIOR WALL OF RETROPHARYNGEAL SPACE**
- **RETROPHARYNGEAL ABSESS CAUSES DYSPHAGIA**

RETROPHARYNGEAL ABSCESS



Infection in retropharyngeal space can spread unimpeded to mediastinum

Retropharyngeal space

Abscess

Epiglottis

Esophagus

Trachea

CAROTID SHEATH

- IT IS A FASCIAL SHEATH SITUATED DEEP TO STERNOCLEIDOMASTOID MUSCLE ON EACH OF THE FRONT OF THE NECK

• FORMATION

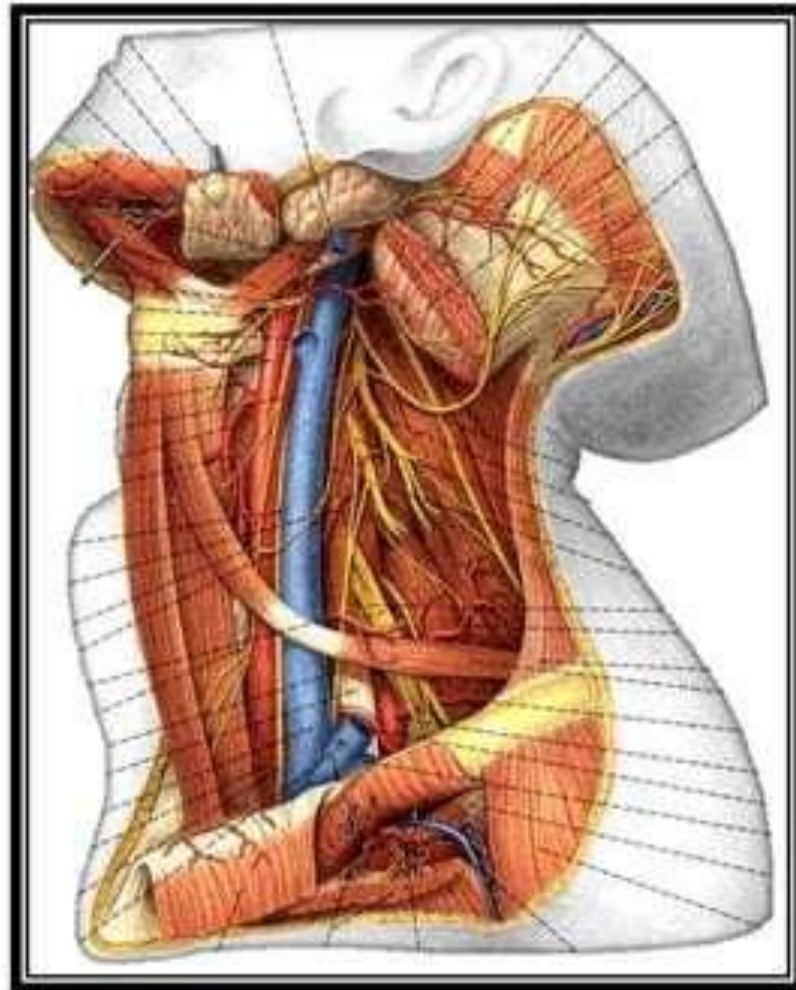
ANTERIOR WALL- BY PRETRACHEAL LAYER OF DEEP CERVICAL FASCIA
POSTERIOR WALL- BY PREVERTEBRAL LAYER OF DEEP CERVICAL FASCIA

• CONTENTS

- INTERNAL JUGULAR VEIN Laterally, COMMON CAROTID ARTERY (IN THE LOWER PART) & INTERNAL CAROTID ARTERY (IN THE UPPER PART) Medially, VAGUS NERVE IN B/W THEM IN A POSTERIOR PLANE

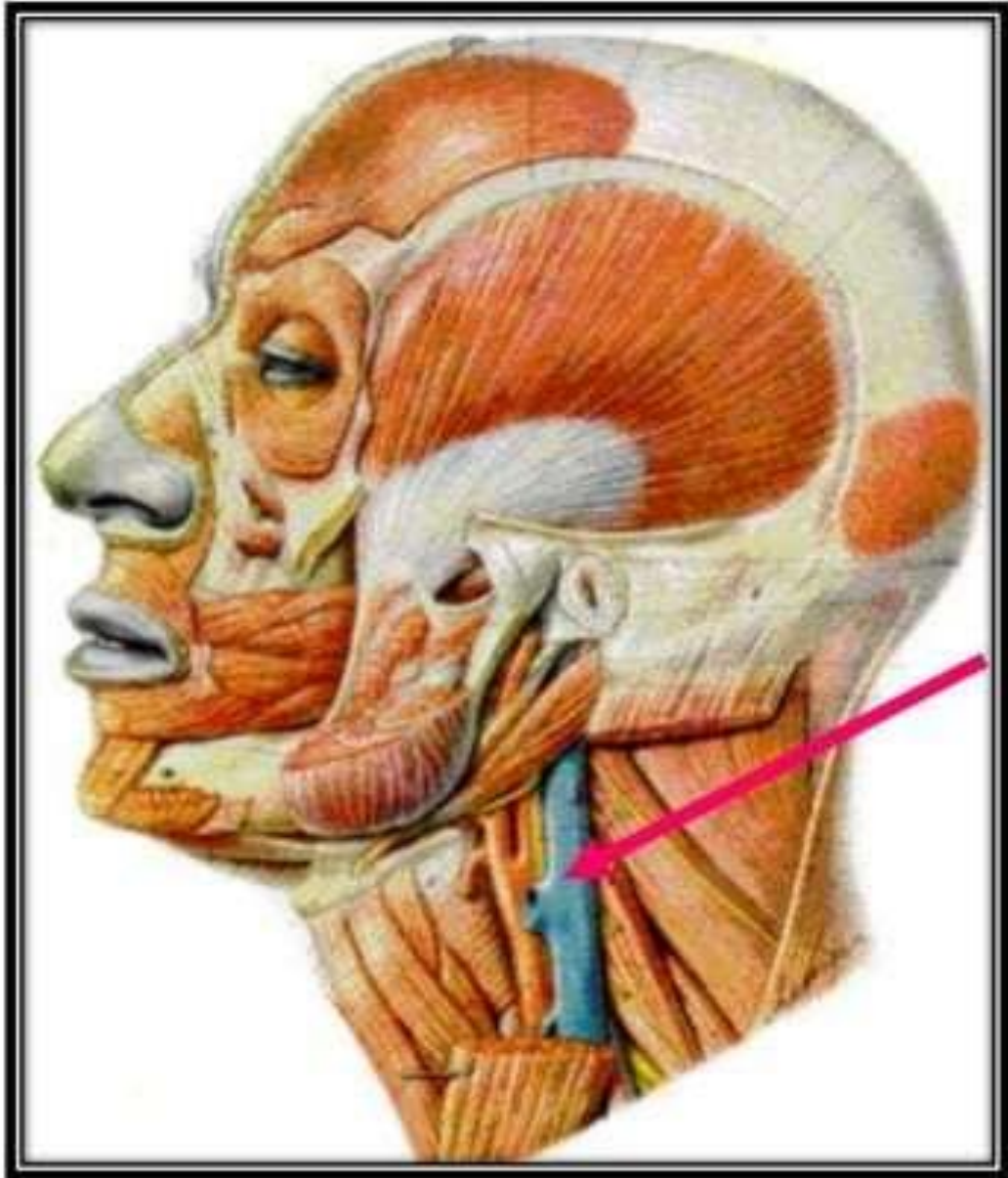
• RELATIONS

- ANTERIORLY- ANSA CERVICALIS
- POSTERIORLY – SYMPATHETIC TRUNK



THE PHARYNGEAL FASCIA IS SEPARATED INTO TWO LAYERS WHICH SANDWICH THE PHARYNGEAL MUSCLES B/W THEM-A THIN LAYER (buccopharyngeal fascia) COATS THE OUTSIDE OF THE MUSCULAR PART OF THE WALL;
A MUCH THICKER LAYER (pharyngobasilar fascia) LINES THE INNER SURFACE.

TEMPORAL FASCIA- THICK FIBROUS SHEET WHICH COVERS TEMPORALIS MUSCLE & FORMS THE ROOF OF





THANK YOU