

#1 Deep cervical fascia (Deep cervical fascia)

3 layers, from exterior to interior =

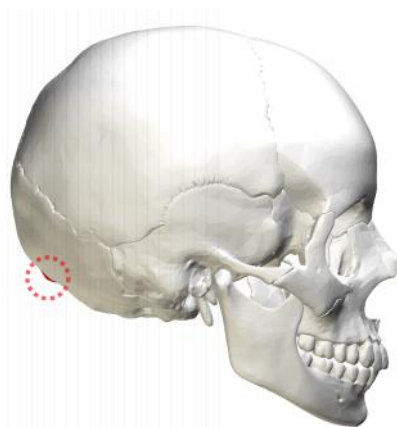
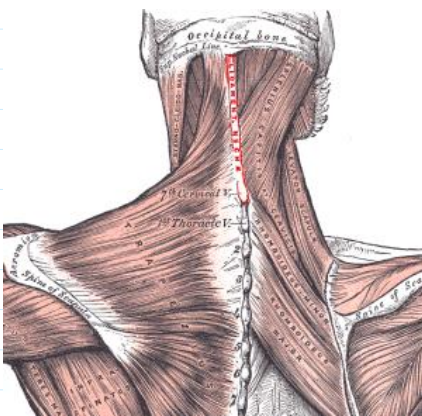
1. Investing layer
2. Pretracheal layer
3. Prevertebral layer

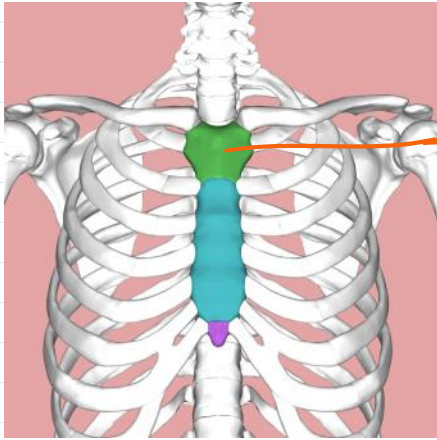
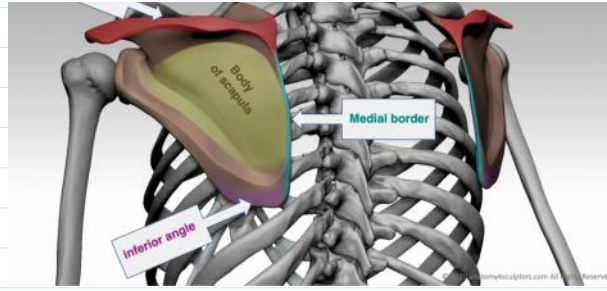
= Investing layer of Deep cervical fascia

- lies deep to subcutaneous tissue & platysma and surrounds the neck completely like a collar.

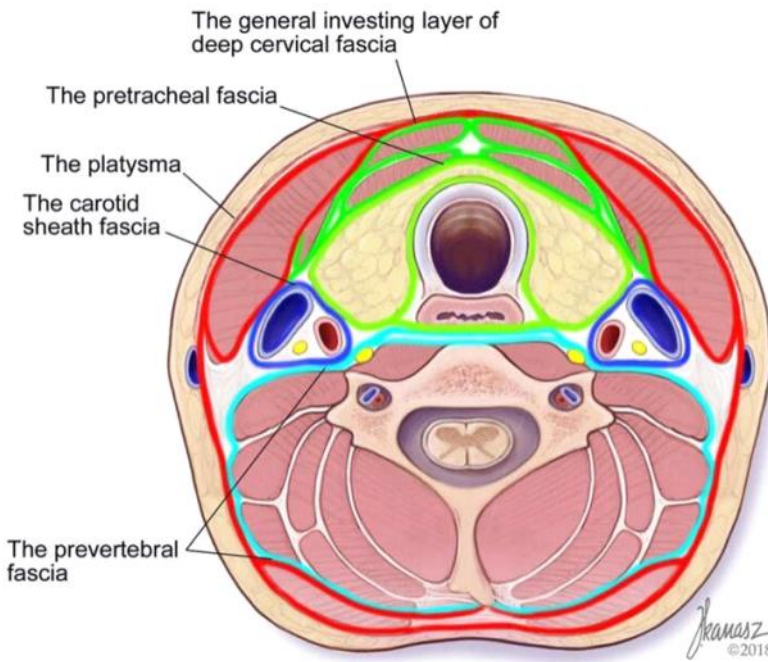
Attachments

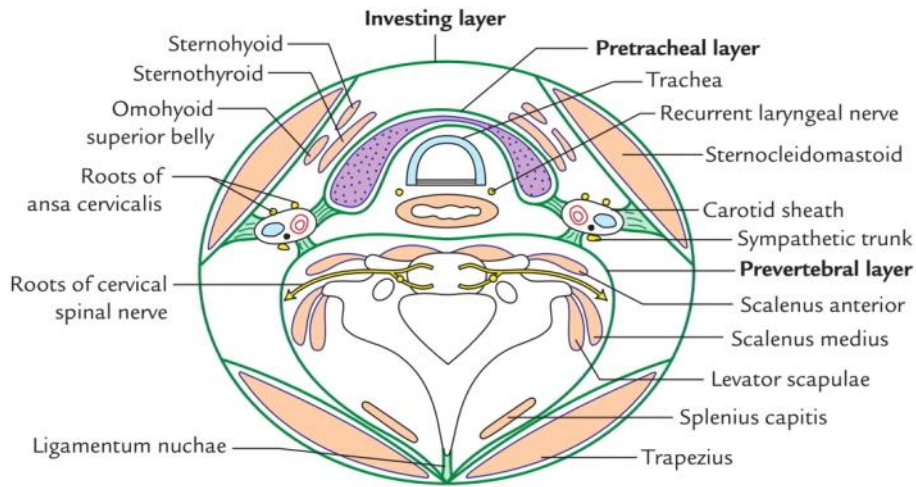
1. **Superiorly**: External occipital protuberance, superior nuchal line, mastoid process, lower border of zygomatic arch, lower border of body of mandible upto symphysis menti.
2. **Inferiorly** = Upper border of spine of scapula, acromion process of scapula, upper surface of clavicle, suprasternal notch of manubrium sterni.
3. **Posteriorly**: Ligamentum nuchae, spine of C₇ vertebra.
4. **Anteriorly**: Symphysis menti, hyoid bone, manubrium sterni.





→ Manubrium sterni





Horizontal extent of deep cervical fascia

- The fascia passes anteriorly from the ligamentum nuchae on each side and splits to enclose the trapezius.
- It reunites at the anterior border of trapezius and runs anteriorly. It splits again to enclose the sternocleidomastoid.
- At the anterior border of muscle it reunites and can be traced to the midline of neck where it proceeds to the opposite side in the same manner.

= Features of Investing layer of Deep cervical fascia

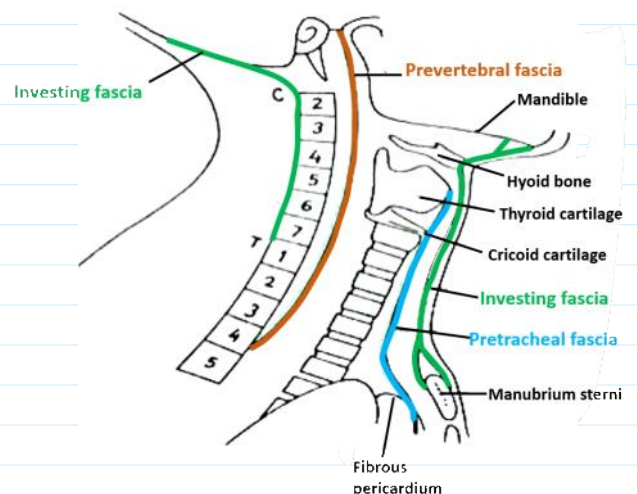
- At its inferior attachments anteriorly, the deep fascia it splits at 2 sites which encloses the following 2 spaces:-

① Suprasternal space or space of Burn's : The investing layer splits over the manubrium sterni in 2 layers.

The superficial layer is attached to anterior margin of suprasternal notch and the deep layer gets attached to the posterior margin to enclose the space.

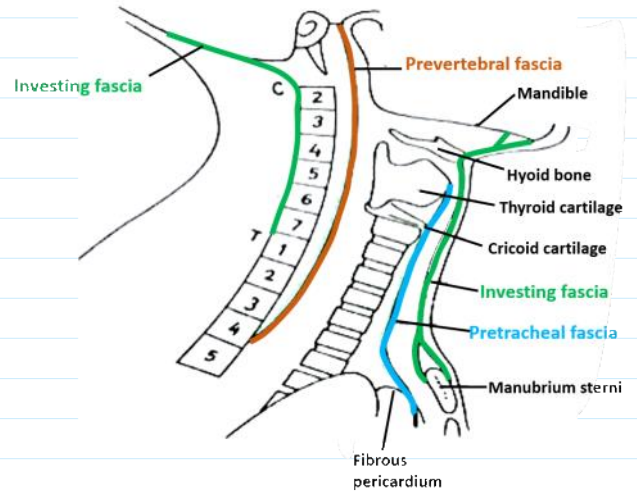
Contents =

- Sternal heads of sternocleidomastoid of both sides.
- Jugular venous arch
- Intercalicular ligament
- Occasionally, a lymph node



Contents =

- Sternal heads of sternocleidomastoid of both sides.
- Jugular venous arch
- Intersclavicular ligament
- Occasionally, a lymph node



② Supraclavicular space :- formed over the

middle third of the clavicle where the investing layer splits in two and is attached to anterior & posterior margins of upper surface of clavicle.

contents =

- Terminal part of external jugular vein.
- Supraclavicular nerves before they pierce the deep fascia.

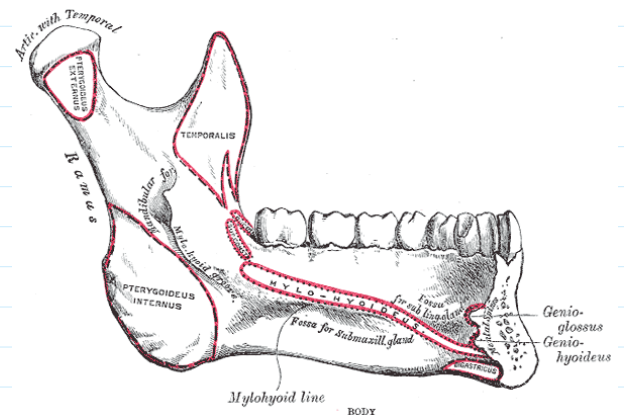
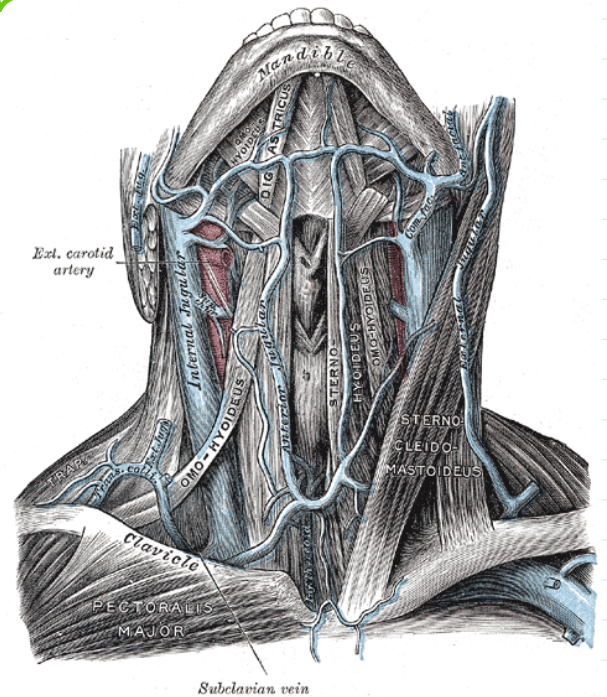
* At the upper part, the fascia splits to enclose the submandibular gland, on each side.

The superficial layer attaches to the lower border of the mandible and the deeper layer is attached to the mylohyoid line on mandible.

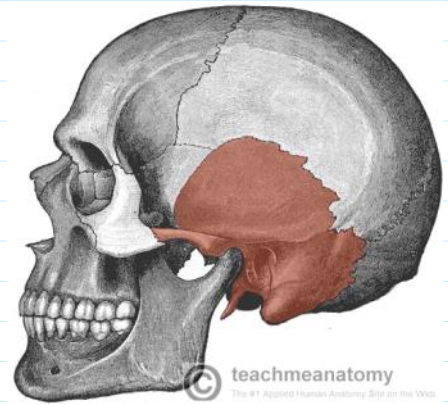
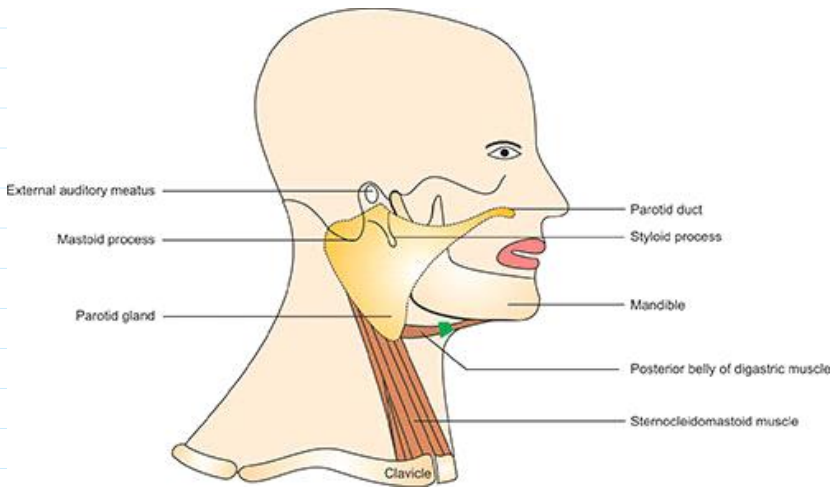
- The rest is attached to the symphysis menti anteriorly and angle of mandible posteriorly.
- The fascia can be traced upward till the zygomatic arch.

• At the lower pole of parotid gland it splits to enclose the gland.

The superficial layer is thick and merges with the fascia on masseter.



- The deep layer is thin and is attached to inferior border of tympanic part and styloid process of temporal bone.



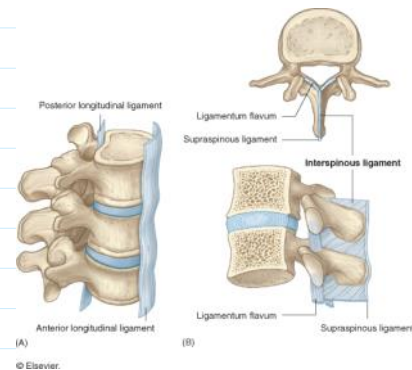
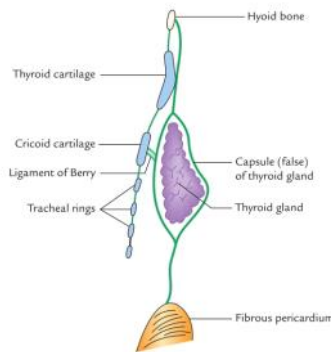
- From the tip of the styloid process to angle of mandible the fascia is thickened to form the stylomandibular ligament.

= Pretracheal fascia

↳ lies over the trachea

Extent

From above downwards



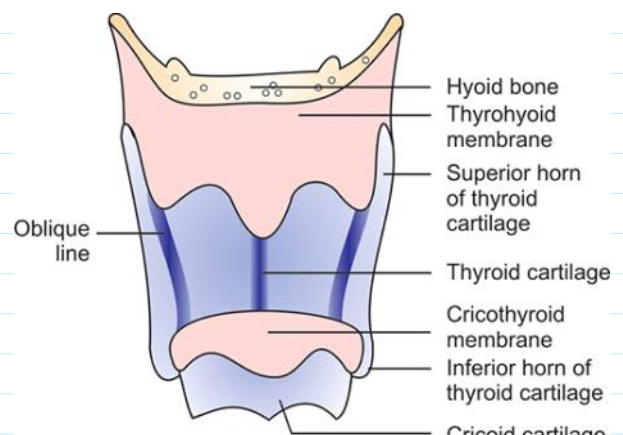
- It is attached above to the middle of the lower border of body of hyoid bone extending to the oblique line of thyroid cartilage.
- When traced below it encloses the thyroid gland, then it passes in front of trachea.
- Finally, it enters the thorax and blends with the fibrous pericardium.

From medial to lateral

- The layer covers the anterior surface of trachea and passes laterally on each side.

= Prevertebral fascia

↳ lies anterior to prevertebral muscles.



Prevertebral fascia

↳ lies anterior to prevertebral muscles.

The nerve roots of cervical and brachial plexus lie under it.

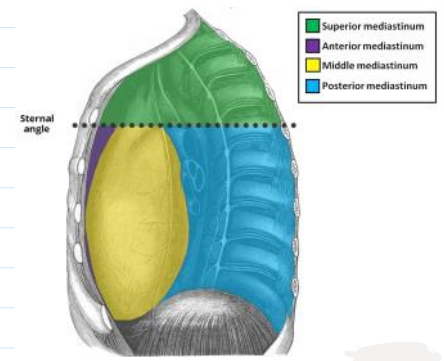
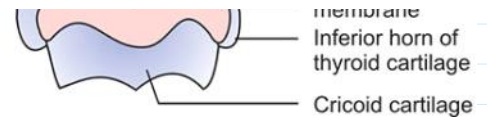
Extent

From above downwards

- it is attached to base of the skull
- it covers the pre and para vertebral muscles.
- it extends below to the superior mediastinum and it attaches to the anterior longitudinal ligament till T₄ vertebra.

From medial to lateral side

- The fascia passes anterior to prevertebral muscles and run laterally and backwards over the paravertebral muscles.
- Further posteriorly it blends with the fascia underneath the trapezius.



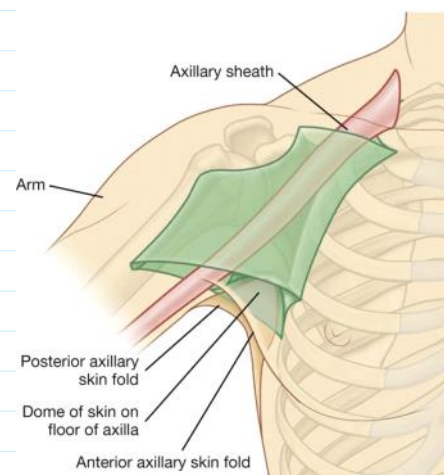
Features of Prevertebral fascia

- cervical plexus of nerves lie in it.
- In the lower part, the brachial plexus and subclavian vessels lie deep to the prevertebral fascia and carry with them a tubular extension from it into the axilla. This forms the axillary sheath which may extend upto the elbow.

Carotid sheath

- The deep cervical fascia forms a tubular sheath around the major vessels of the neck, named the carotid sheath on each side.

Extent



It extends from the base of the skull above the arch of aorta below, on each side.

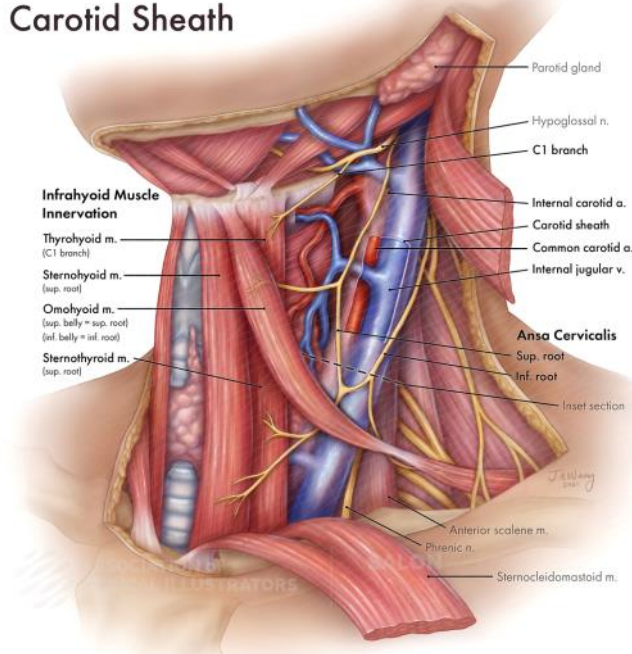
Contents of carotid sheath

1. Common carotid artery in lower part & internal carotid artery in upper part.
2. Internal jugular vein.
3. Vagus nerve in b/w & posterior to artery & internal jugular vein.

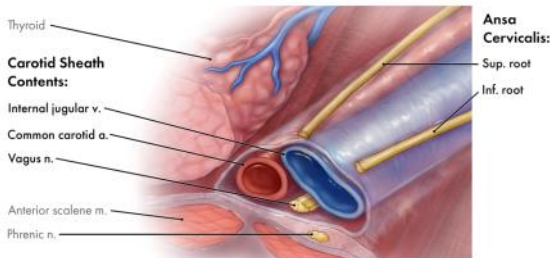
Features of carotid sheath

- It is formed by the condensation of fibro-areolar tissue and is attached to the pretracheal & prevertebral fascia.
- Ansa cervicalis is embedded in its anterior layer.
- Cervical sympathetic chain lies close to the posterior layer in front of prevertebral fascia.

Ansa Cervicalis & Carotid Sheath



Oblique View of Axial Cross Section



= Buccopharyngeal fascia.

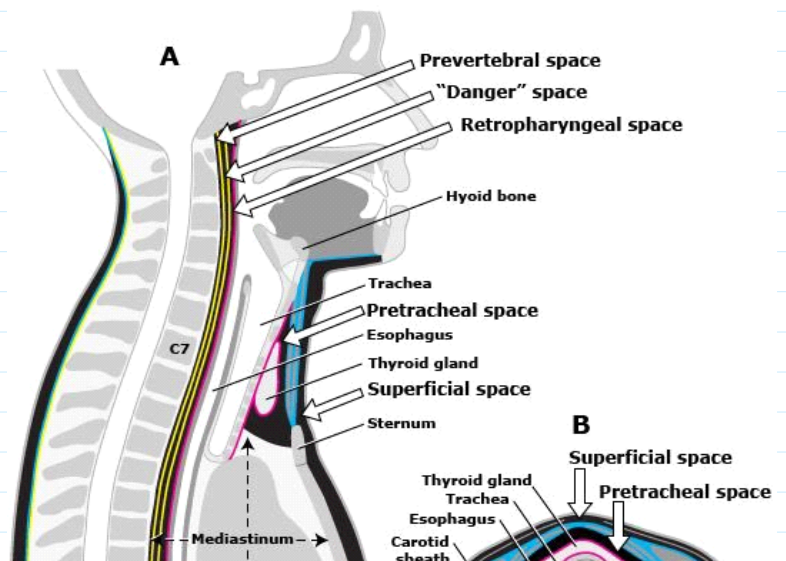
It is deep fascia covering the superior constrictor muscle of pharynx. It extends anteriorly over buccinator muscle on each side.

= Retropharyngeal space.

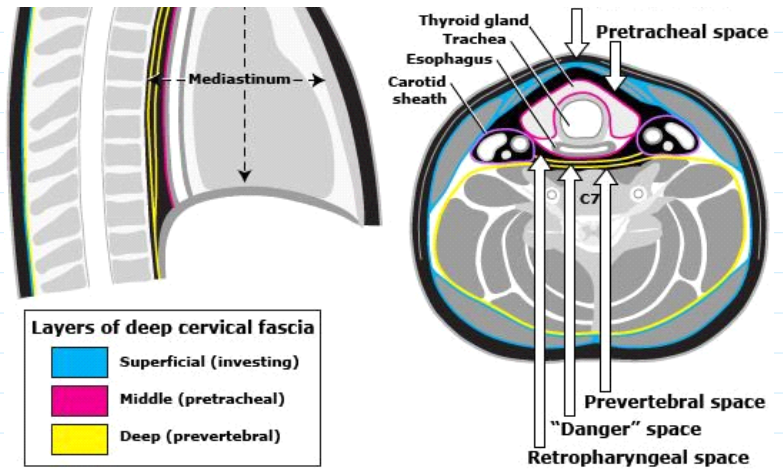
• It is the potential space present b/w the fascia covering the muscles of pharynx (buccopharyngeal fascia) and prevertebral fascia.

• On each side it is limited by the carotid sheath.

• Superiorly, the space is closed by the base of skull while inferiorly it is



◦ Superiorly, the space is closed by the base of skull while inferiorly it is continuously with superior mediastinum of thorax.



◦ The space is divided into two parts by a median fibrous septum that extends from the fibrous raphe of pharynx to the prevertebral fascia.

Contents of Retropharyngeal space

1. Loose areolar tissue.
2. Retropharyngeal lymph nodes.
3. Pharyngeal plexus of nerves & vessels.

Functions = It allows the pharynx to expand during deglutition

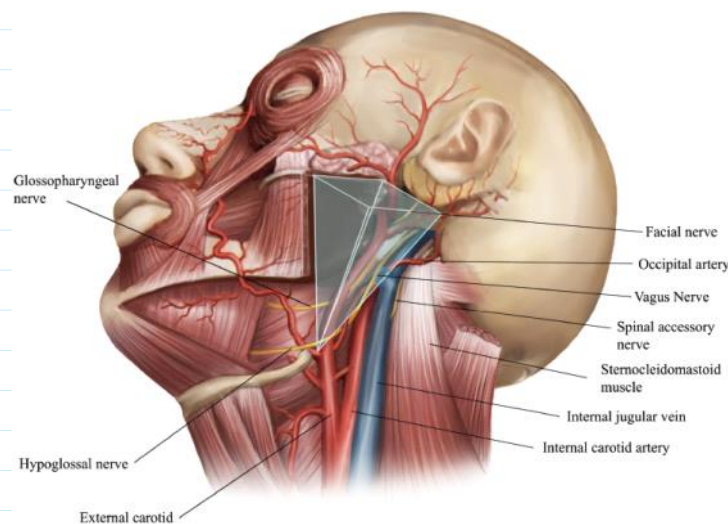
Lateral pharyngeal space

◦ It is a wedge shaped space present on either side of pharynx with a broad base above formed by base of skull and a narrow apex below extending upto the level of hyoid bone in the neck.

◦ Pharynx lies medially.

◦ It is limited laterally by medial pterygoid muscle covering the inner aspect of ramus of mandible anteriorly & parotid gland with its fascia posteriorly.

◦ It is separated from the retropharyngeal space by carotid sheath.



Contents of Lateral pharyngeal space

1. Branches of maxillary nerve
2. Branches of maxillary artery.

2. Branches of maxillary artery.

3. Fibro-fatty tissue.