

Biology 323

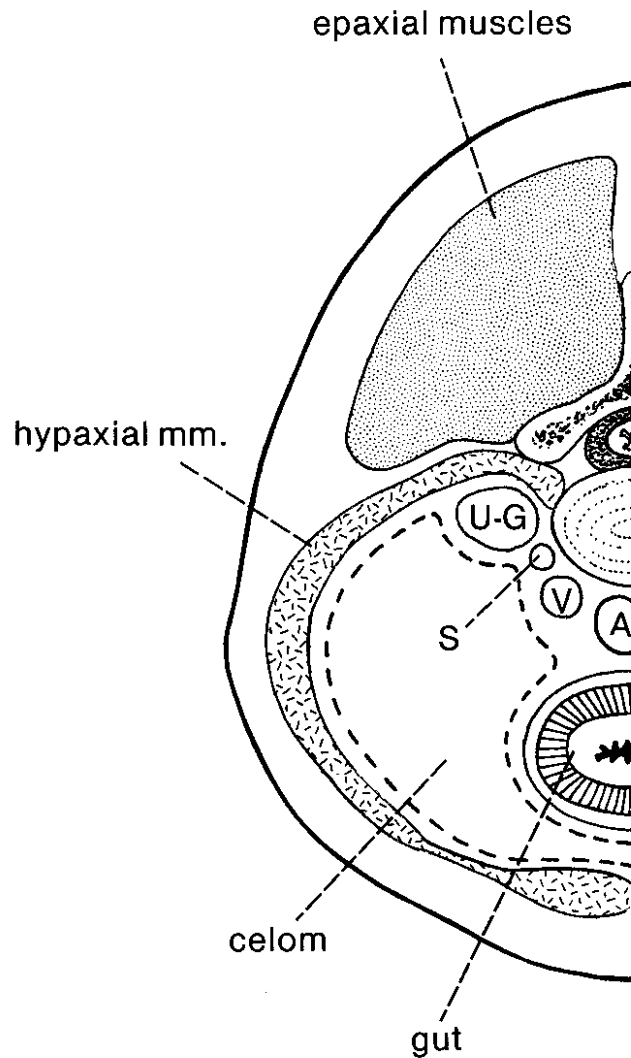
Human Anatomy for Biology Majors

Lecture 18

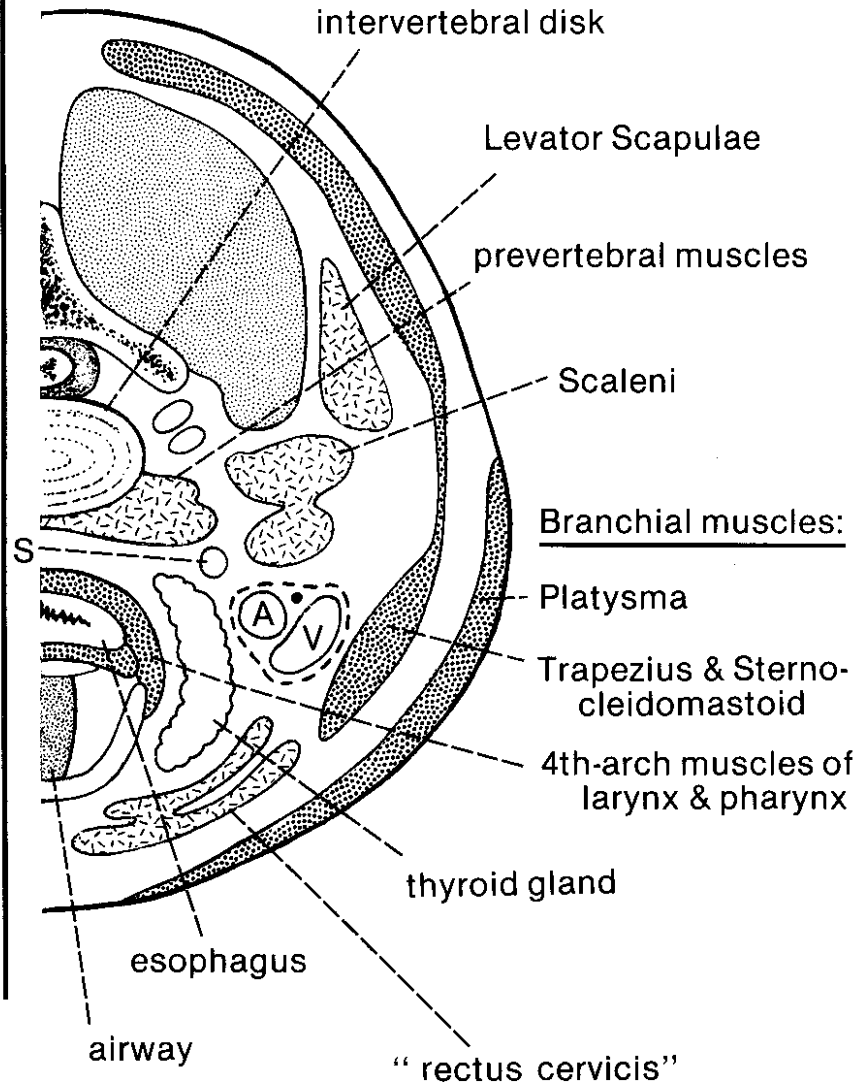
Dr. Stuart S. Sumida

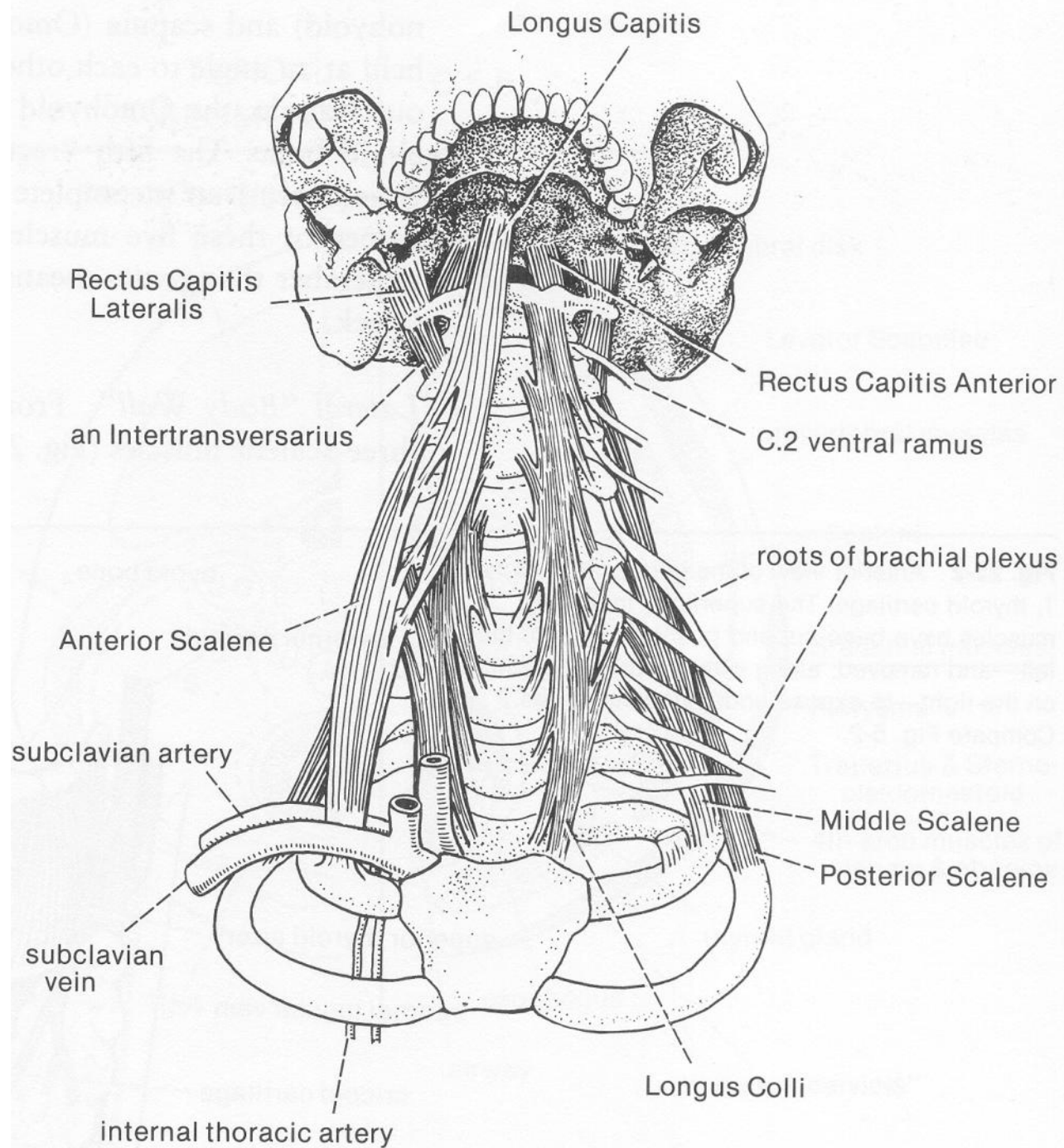
From the Head to the Neck (or was it from the body to the neck?)

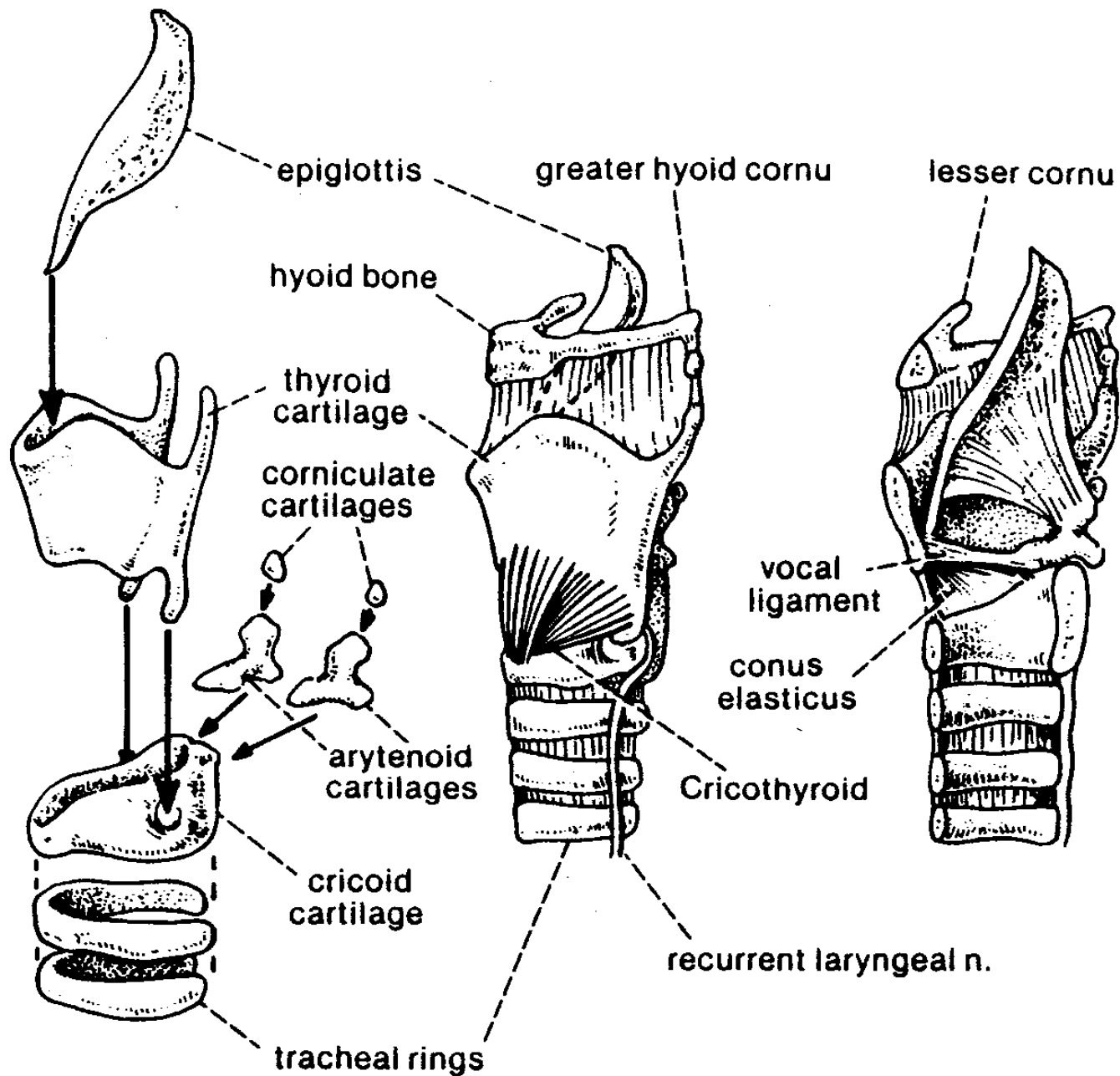
TYPICAL SEGMENT



C.5-6



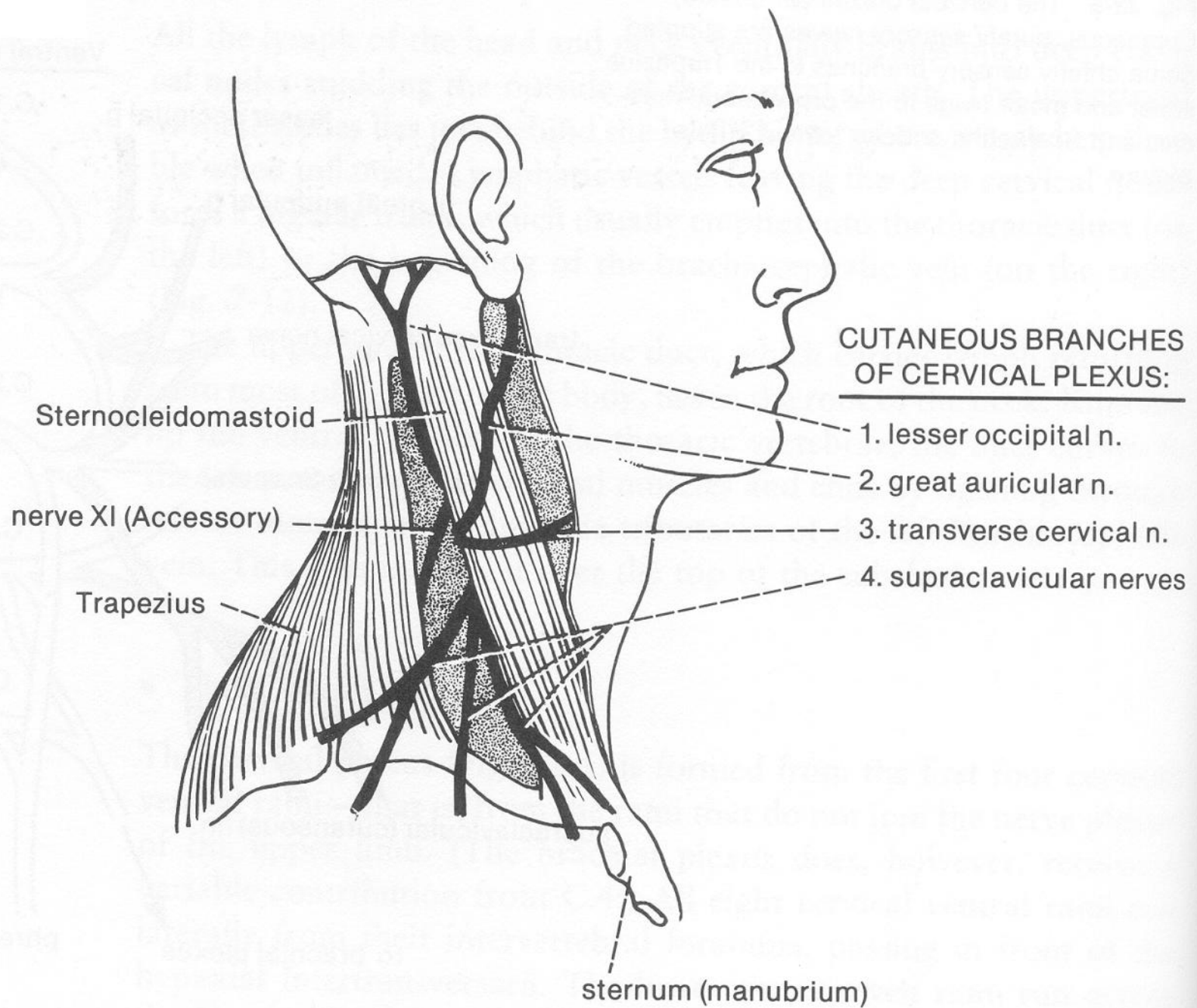


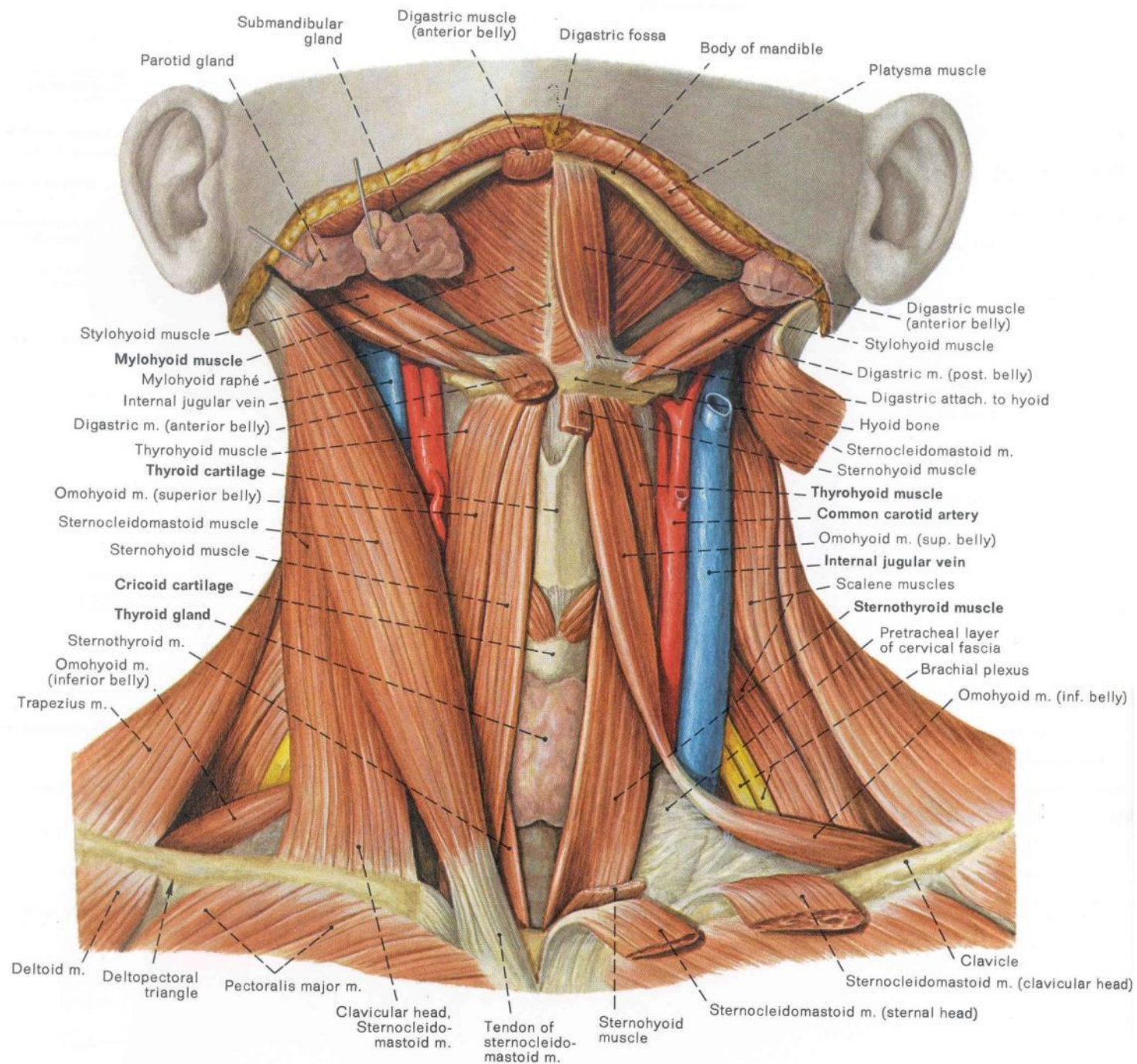


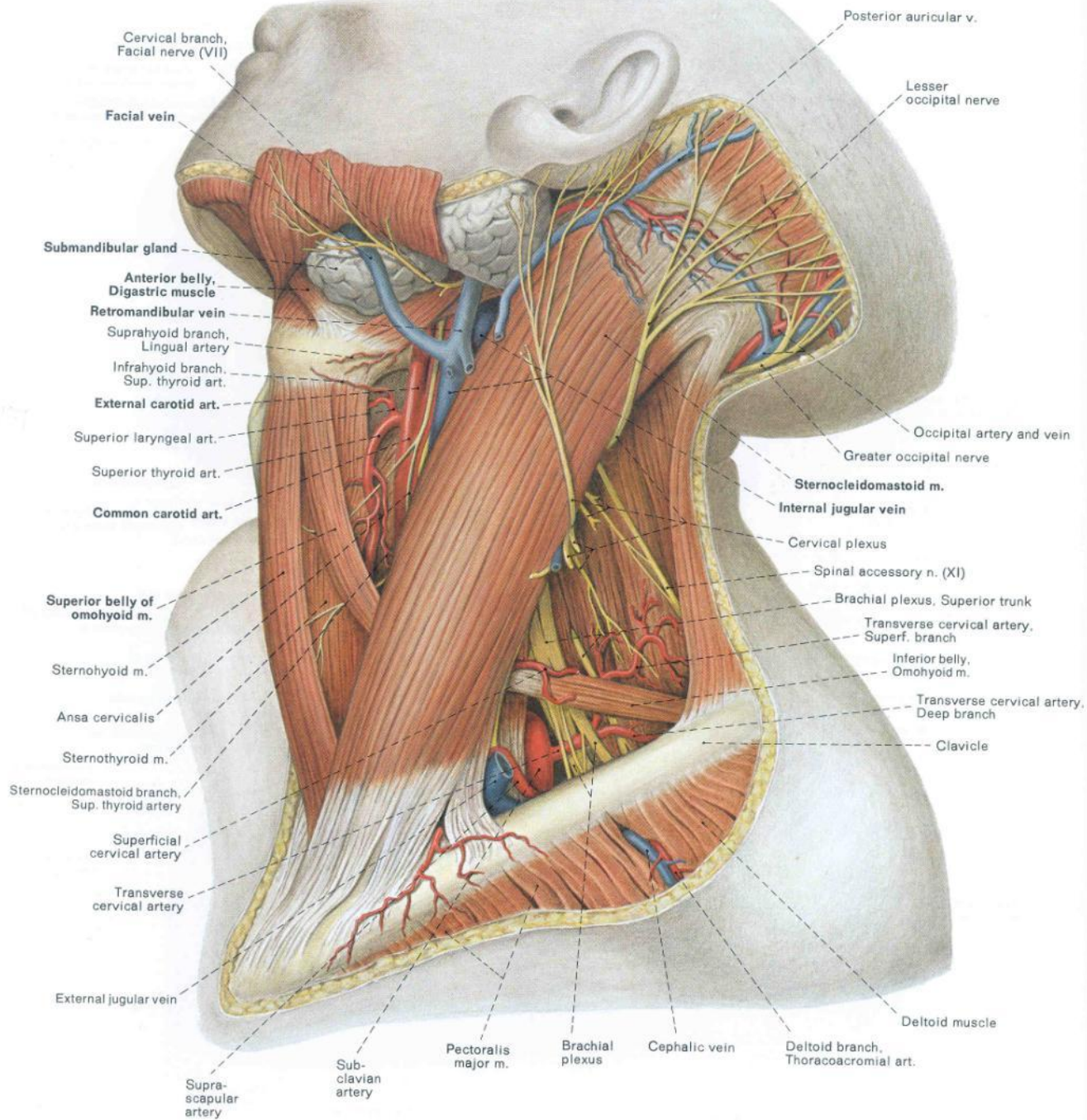
A

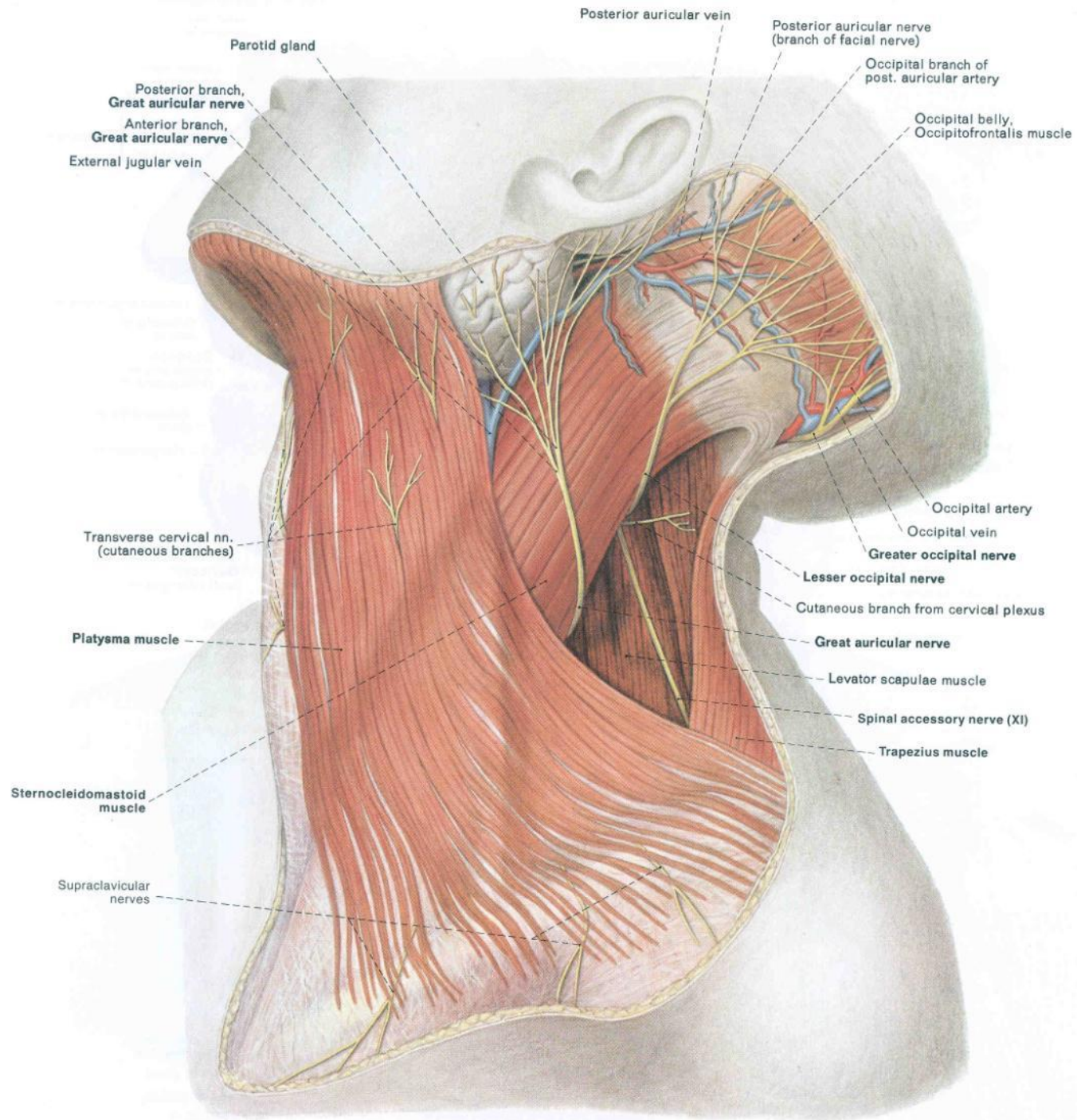
B

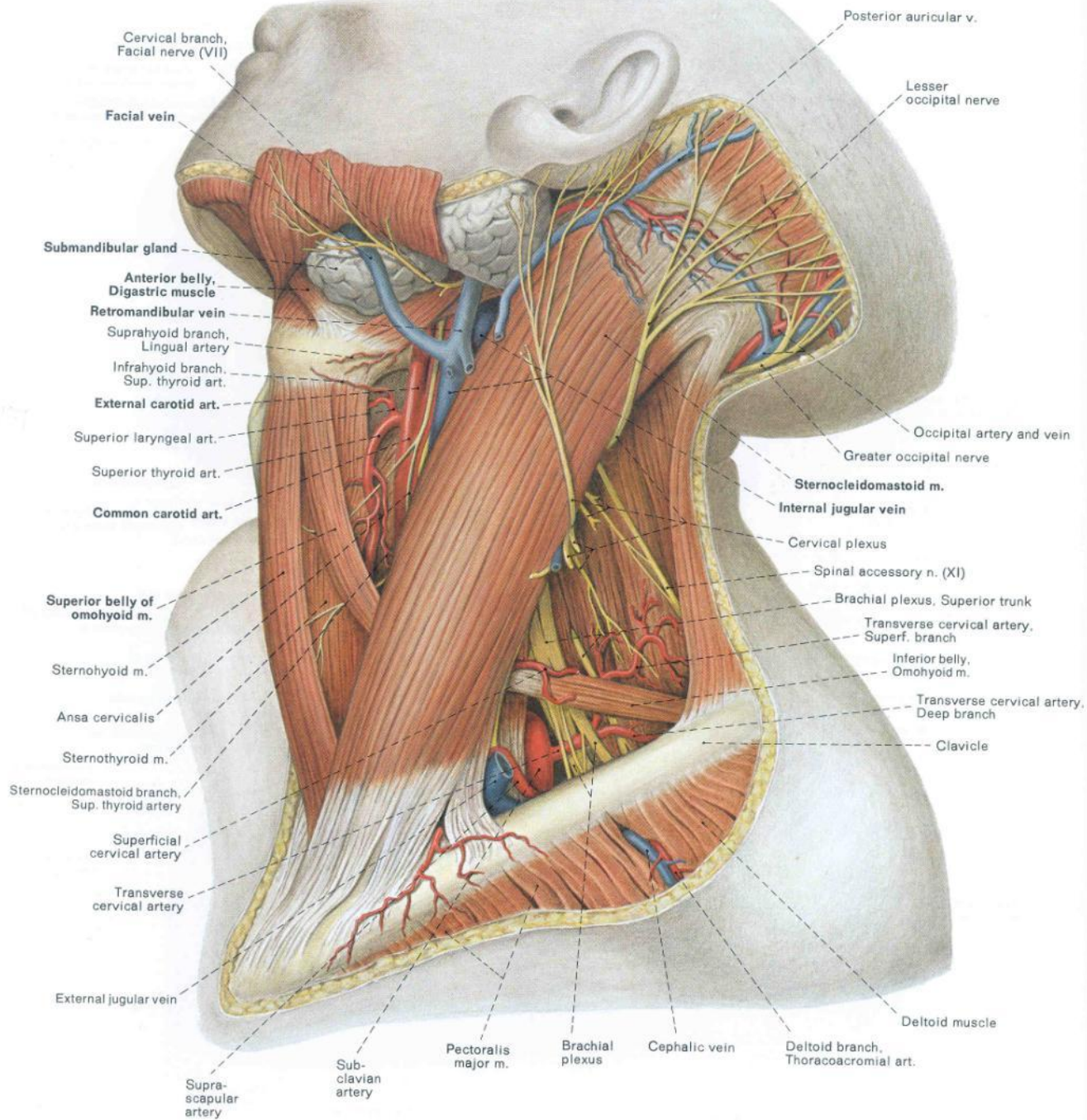
C

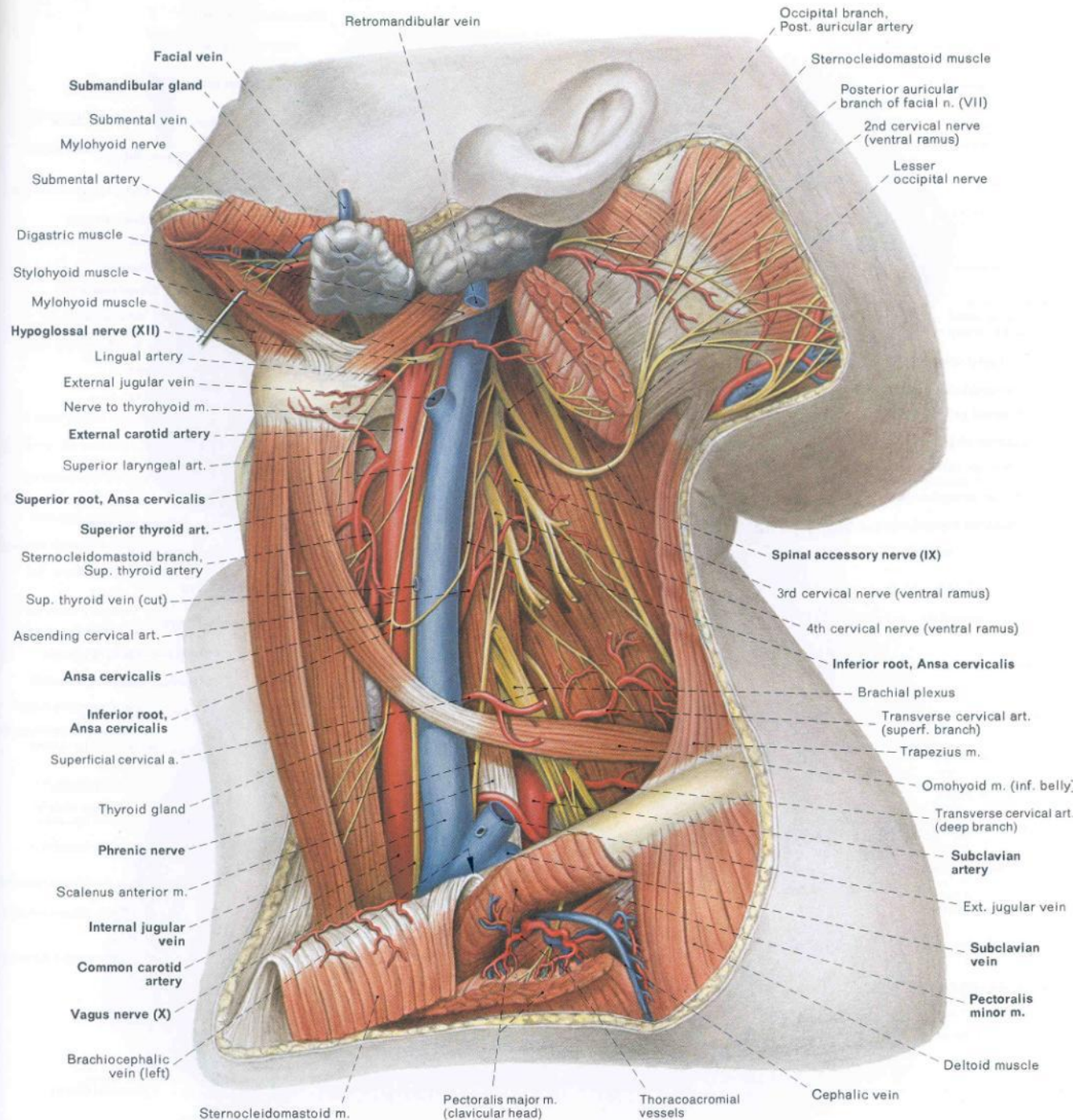


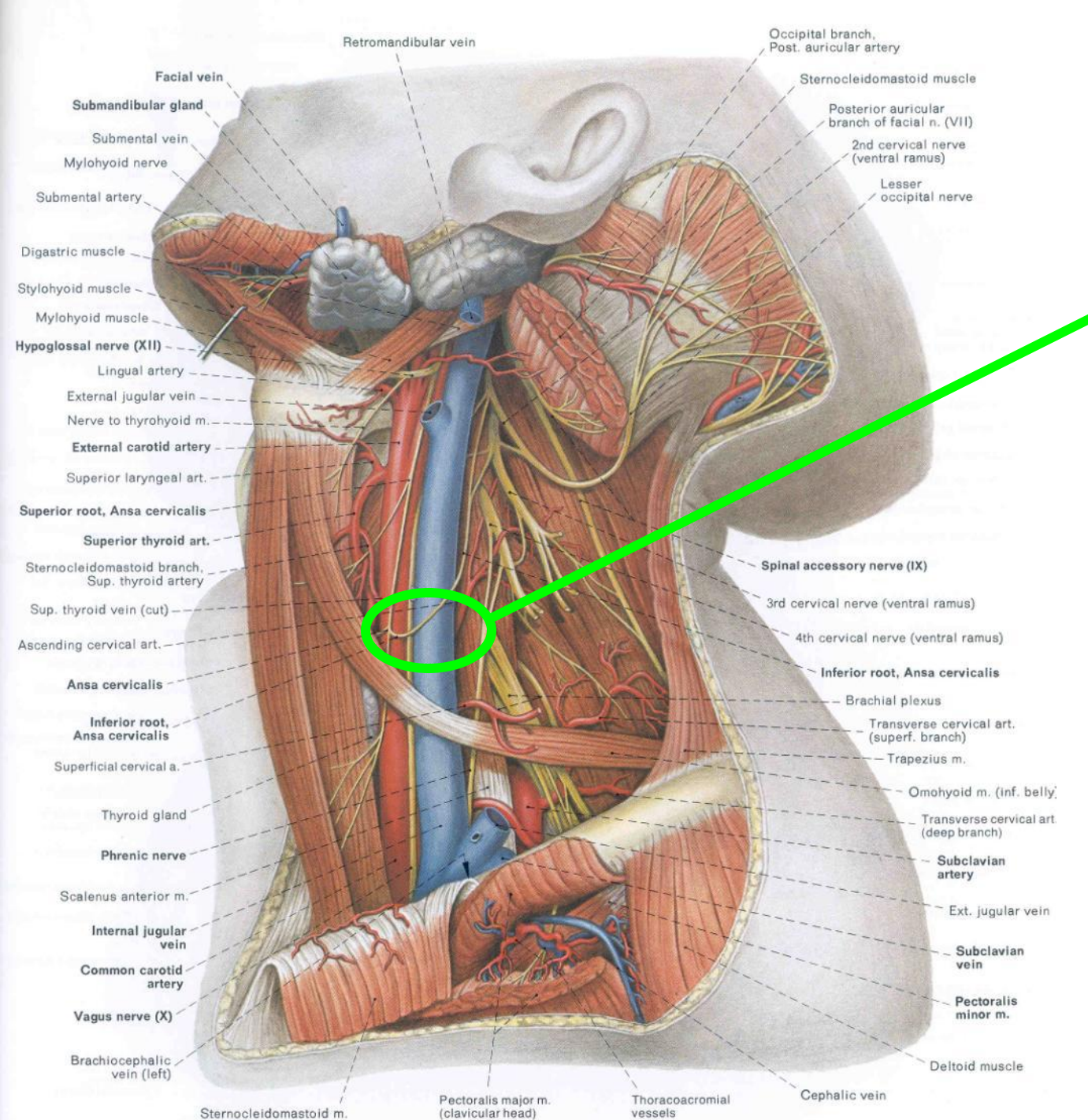








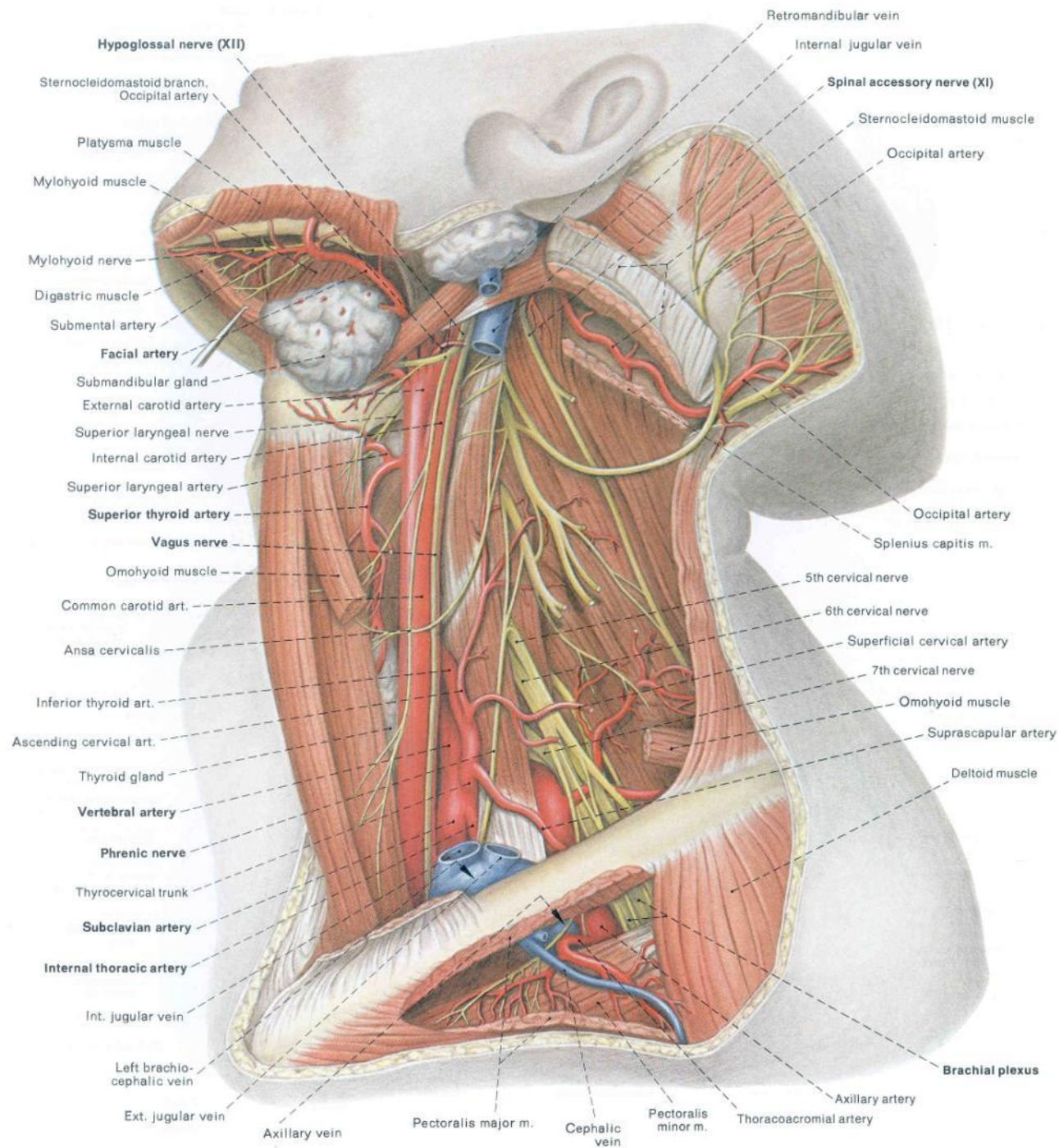


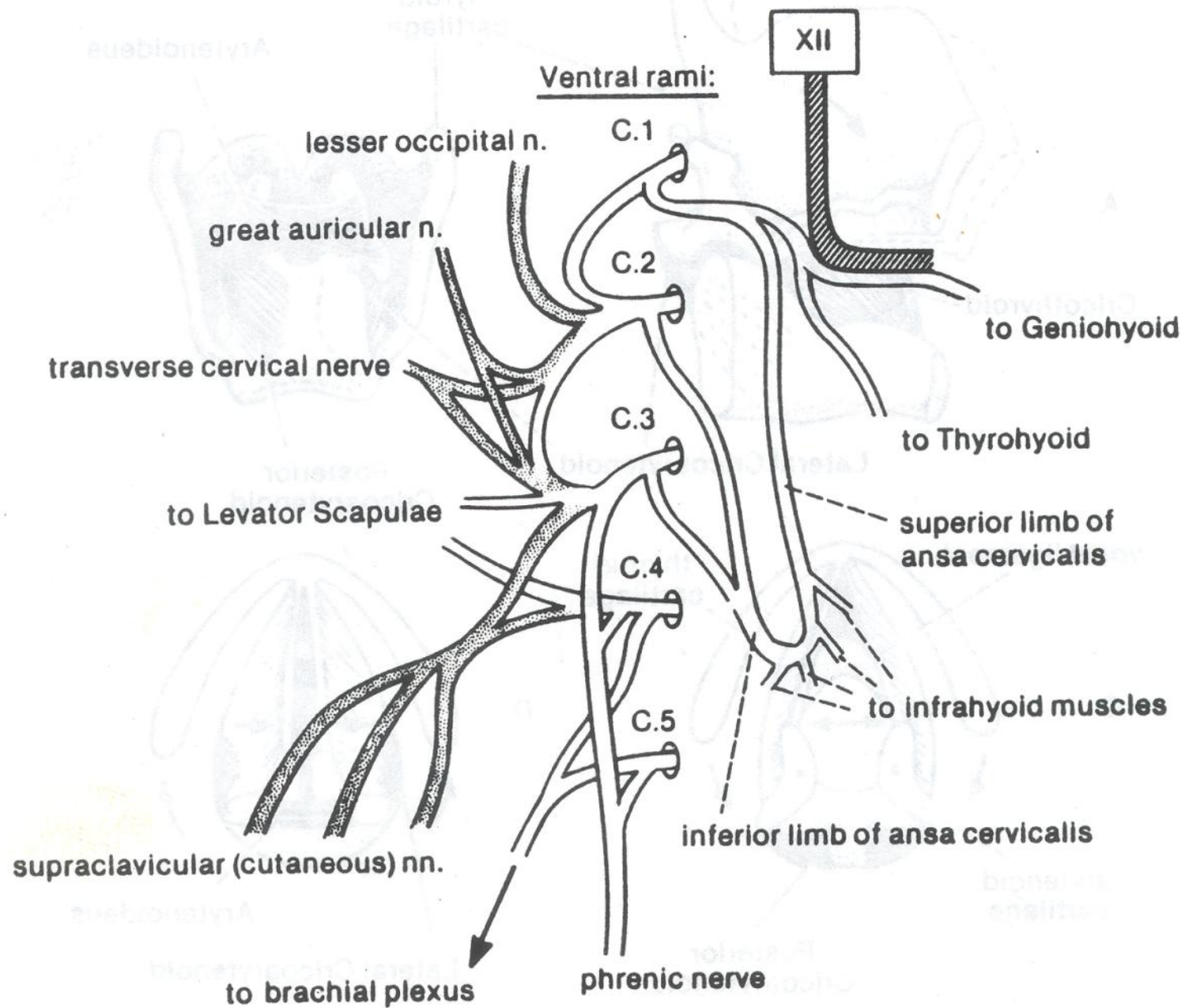


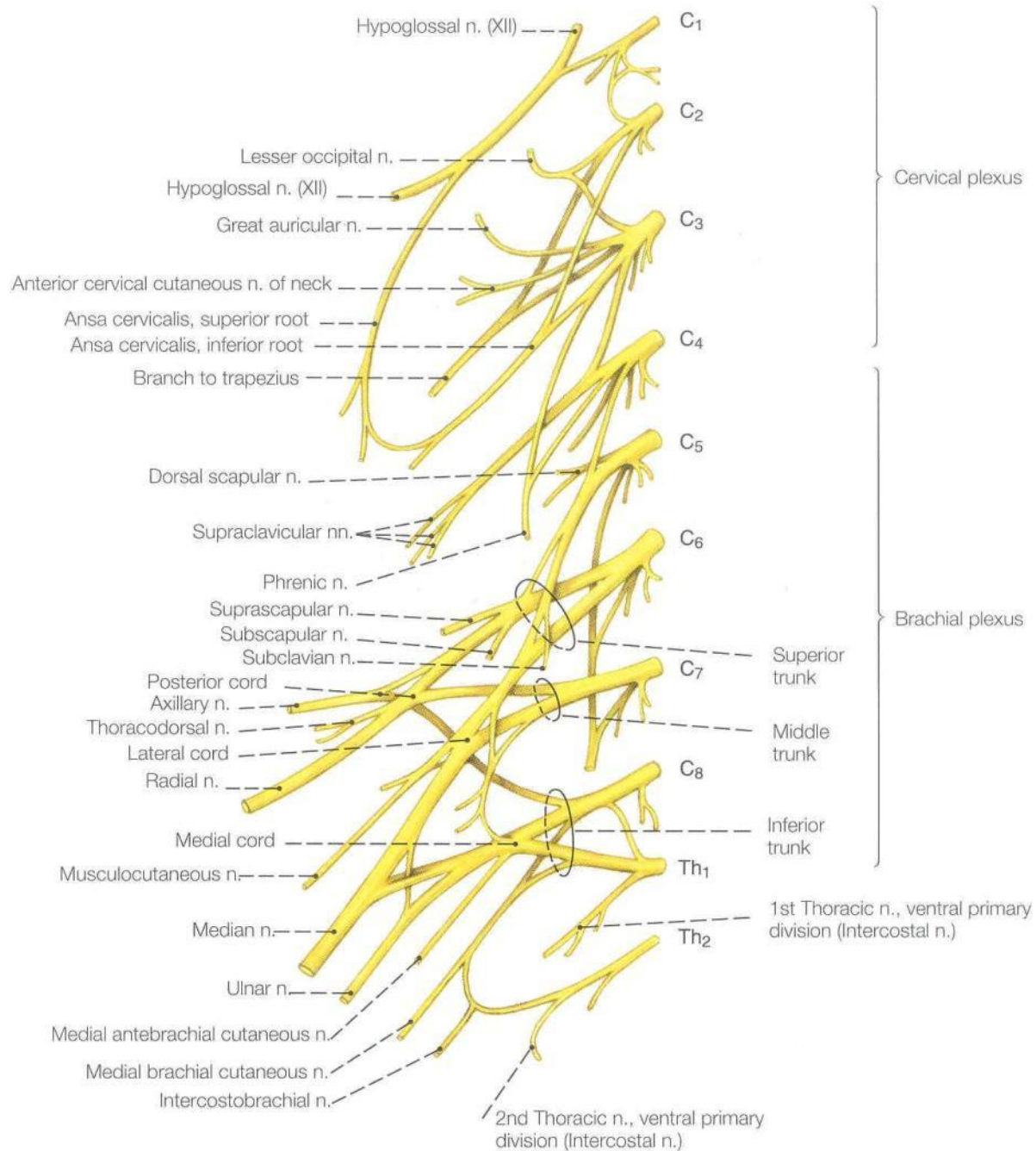
Carotid Sheath:

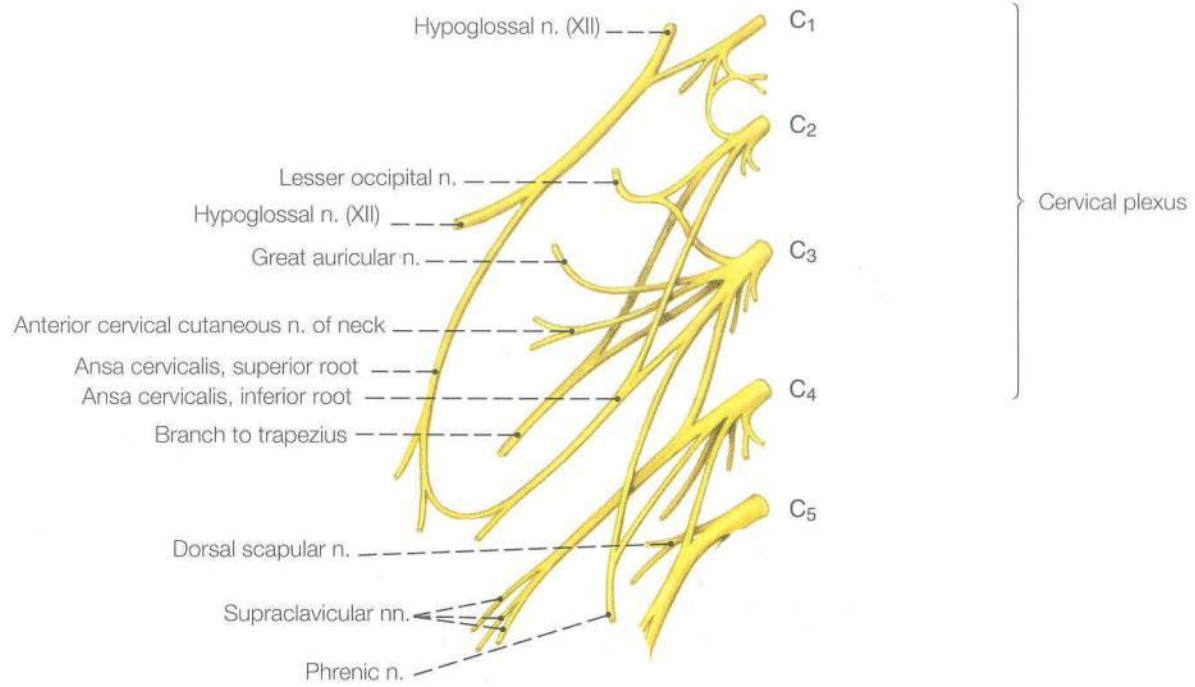
- Carotid Artery
- Jugular Vein
- Vagus Nerve

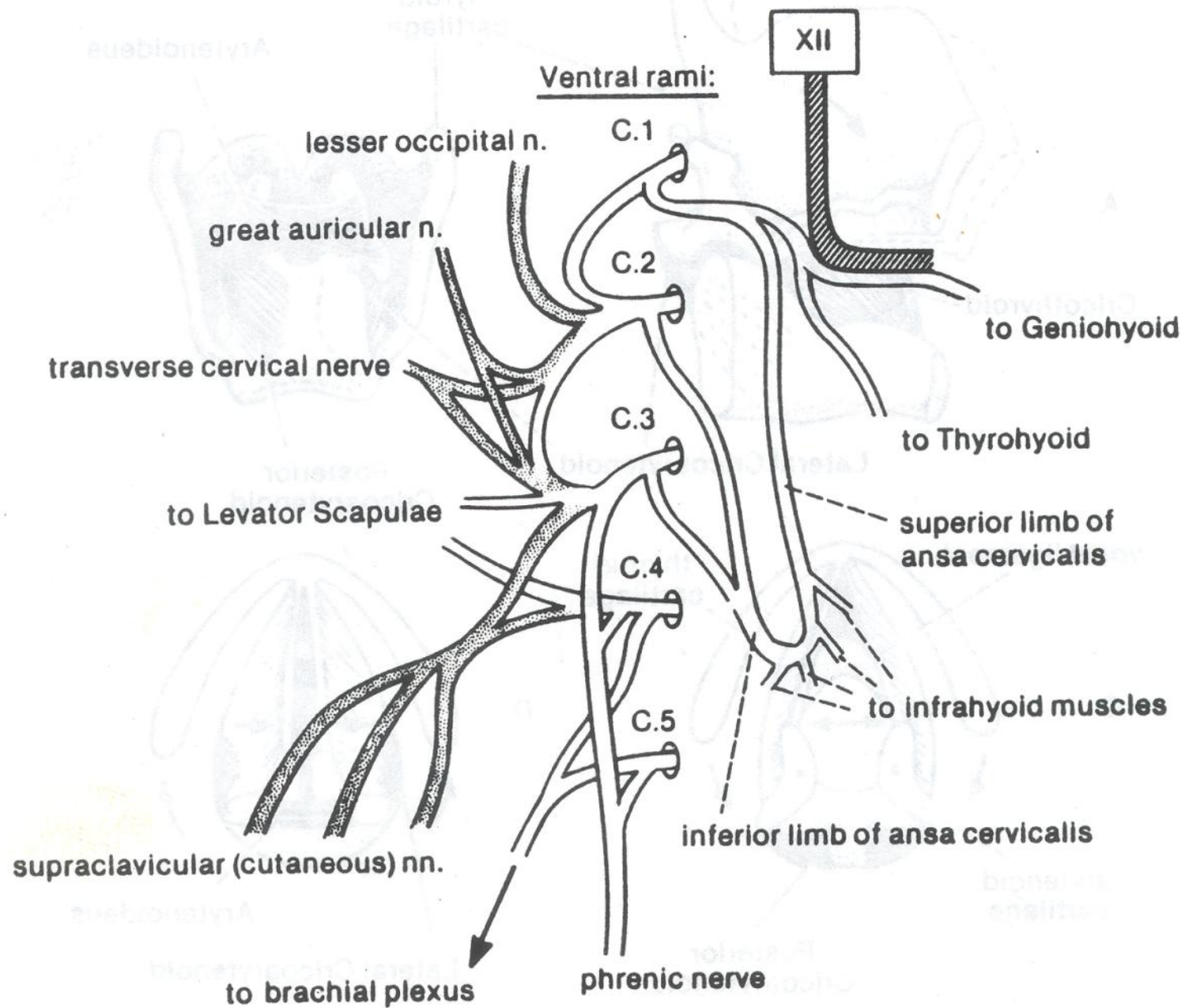
Do you remember what foramina these pass through?!

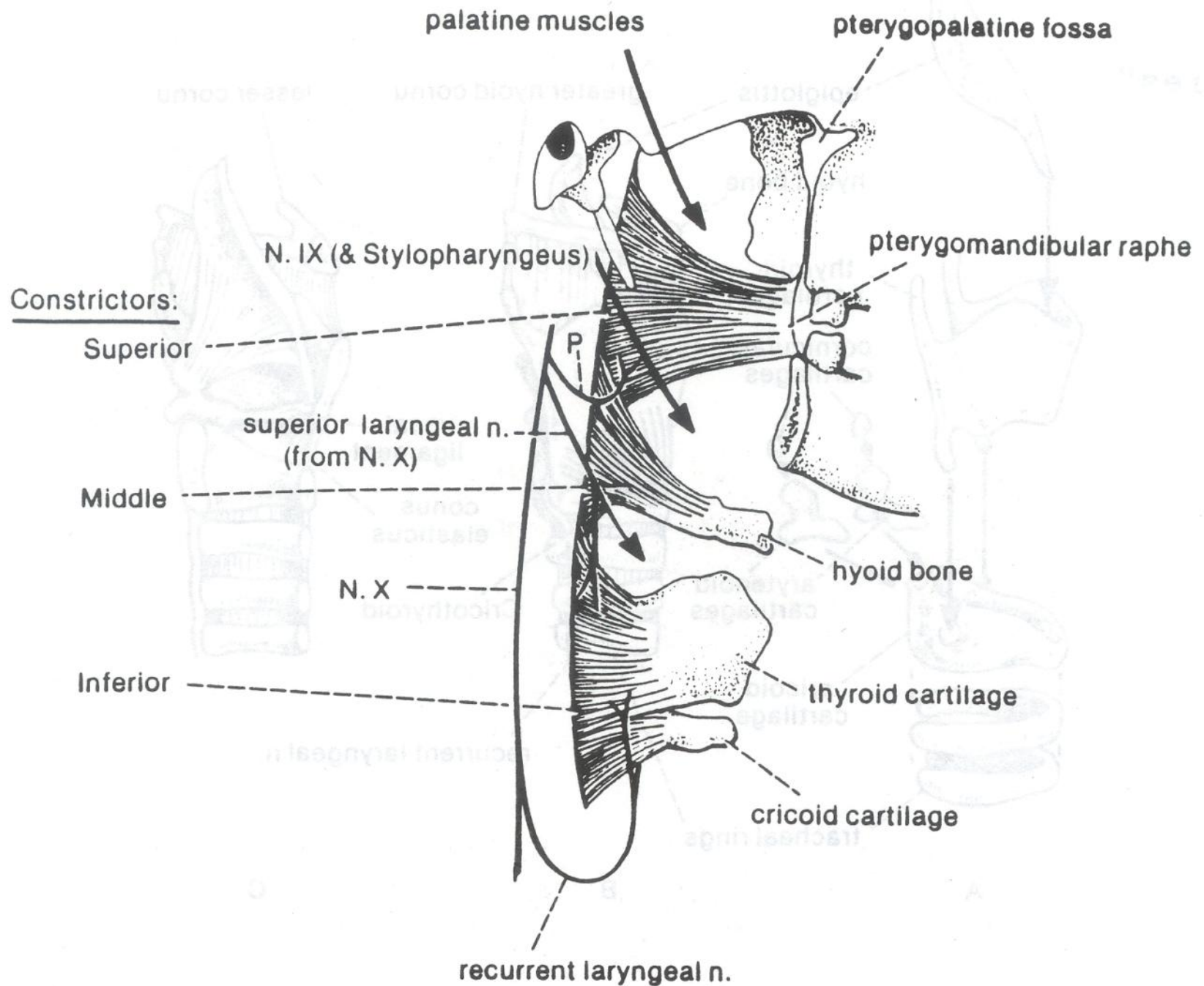


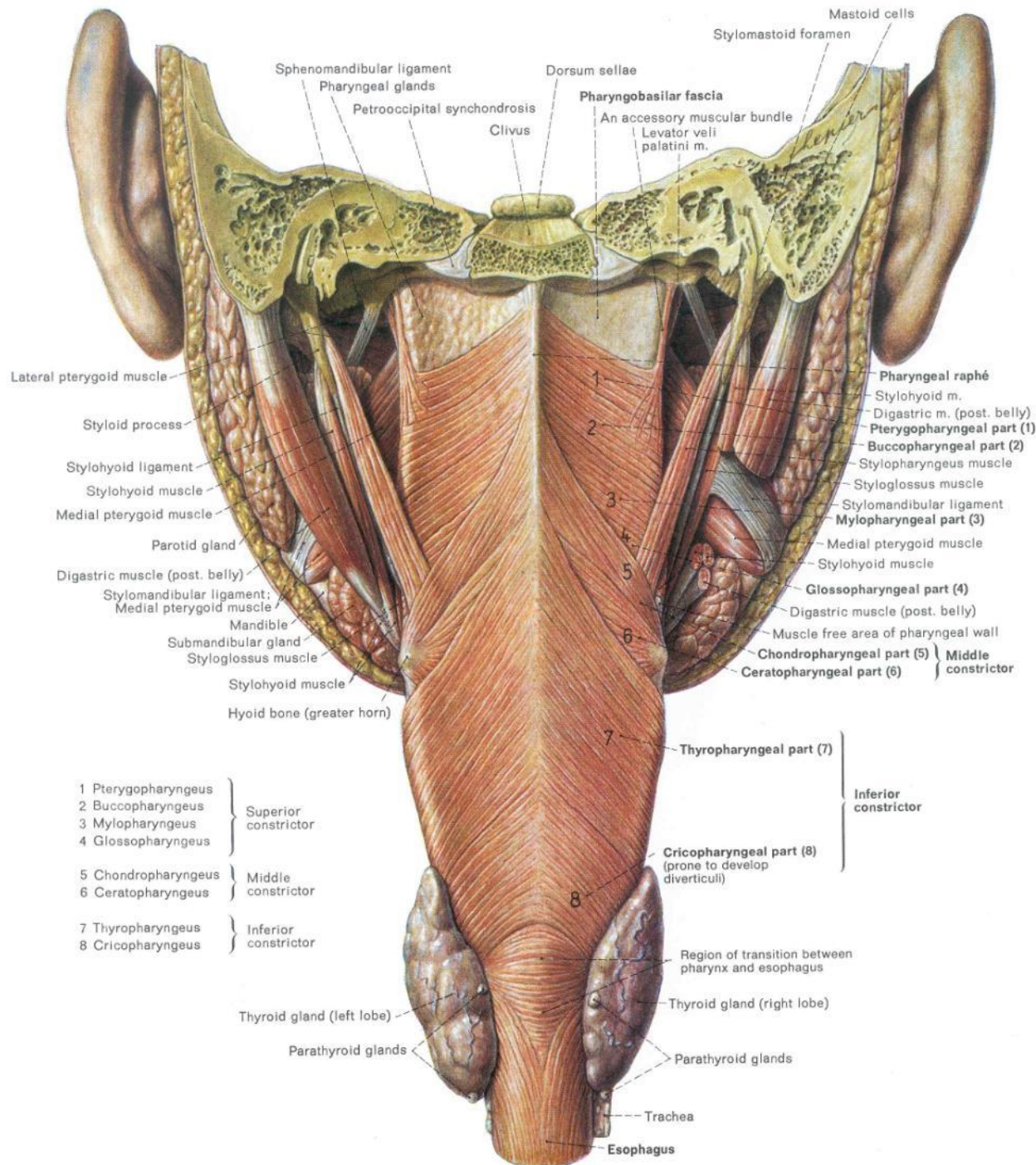


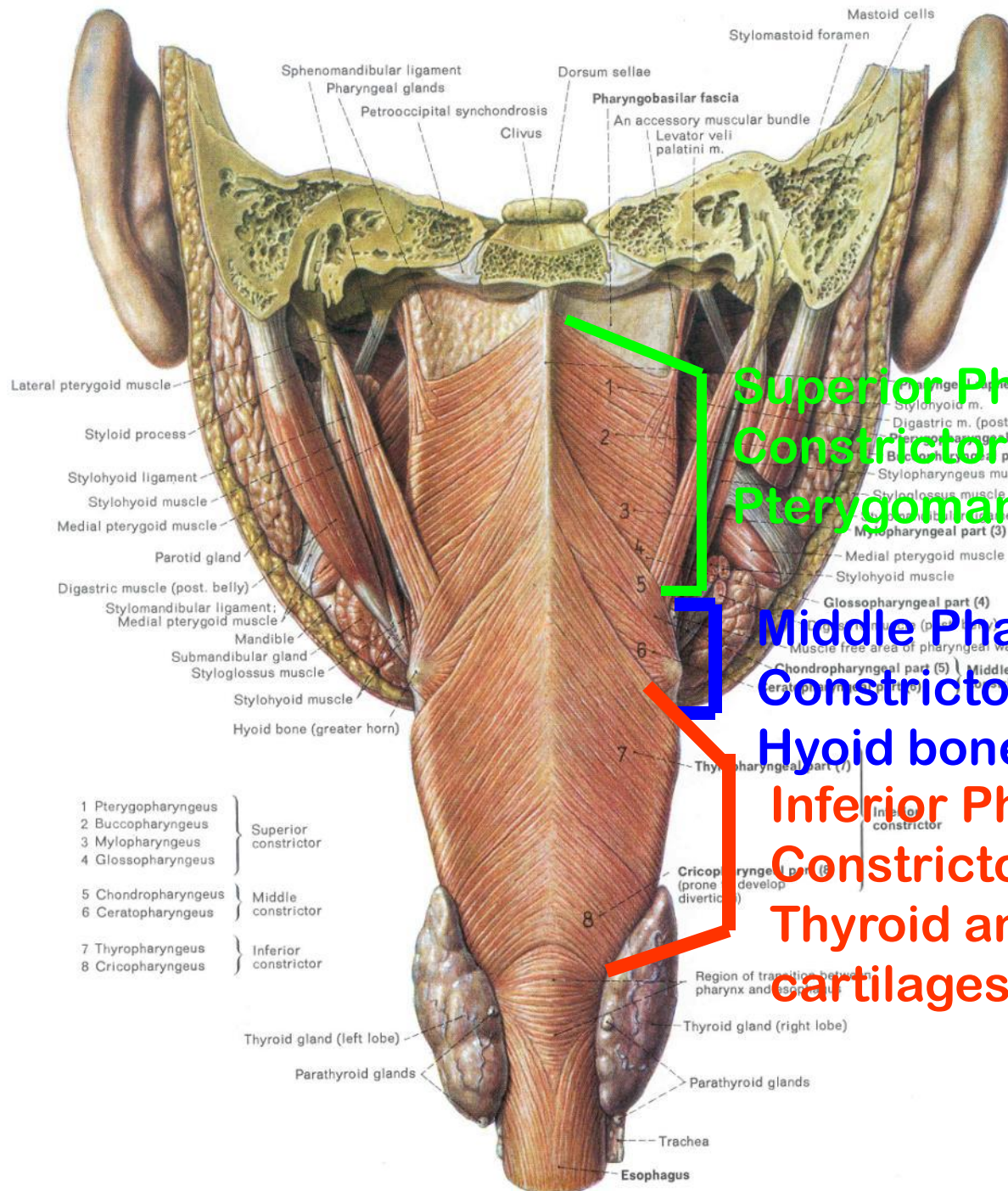








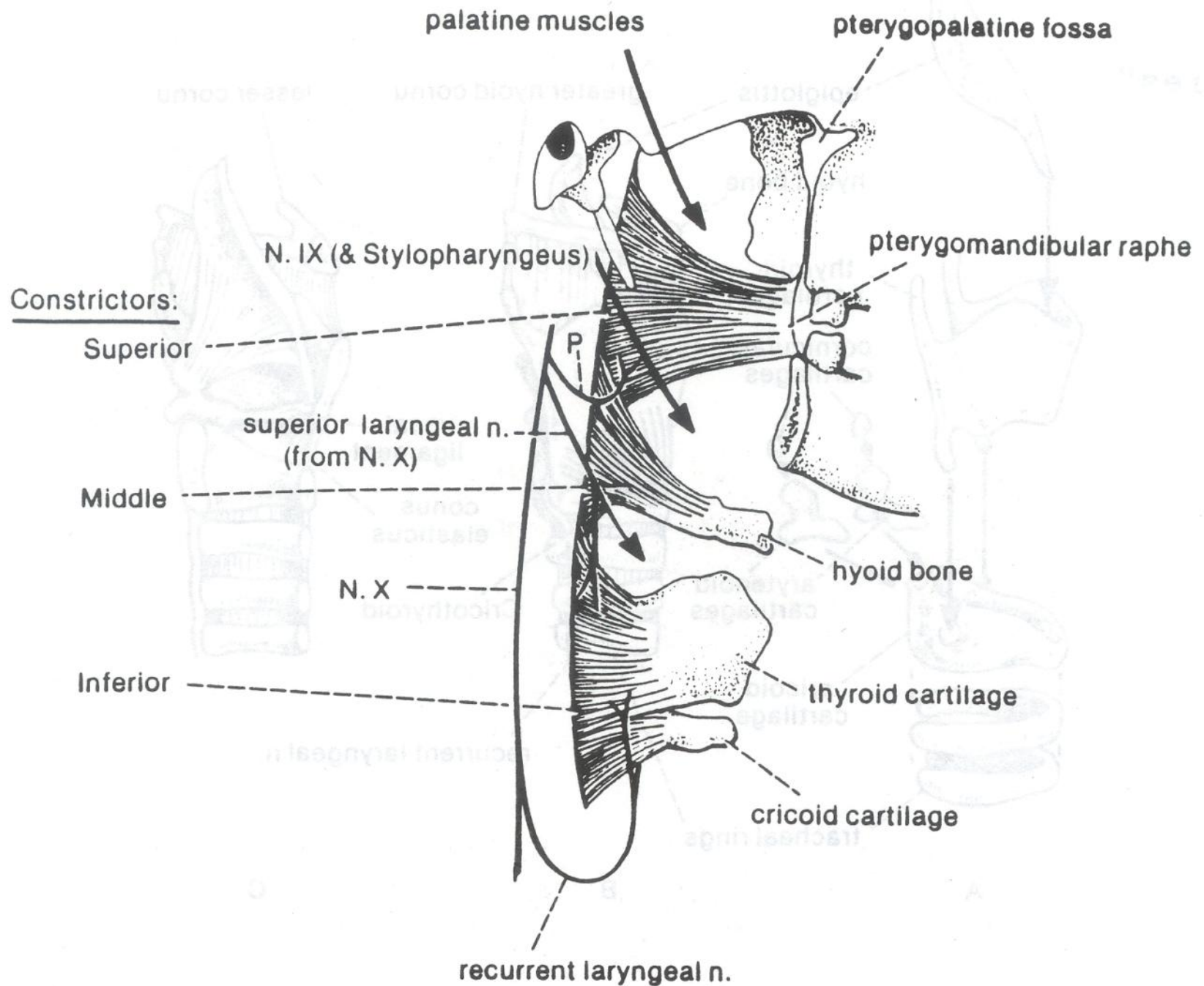


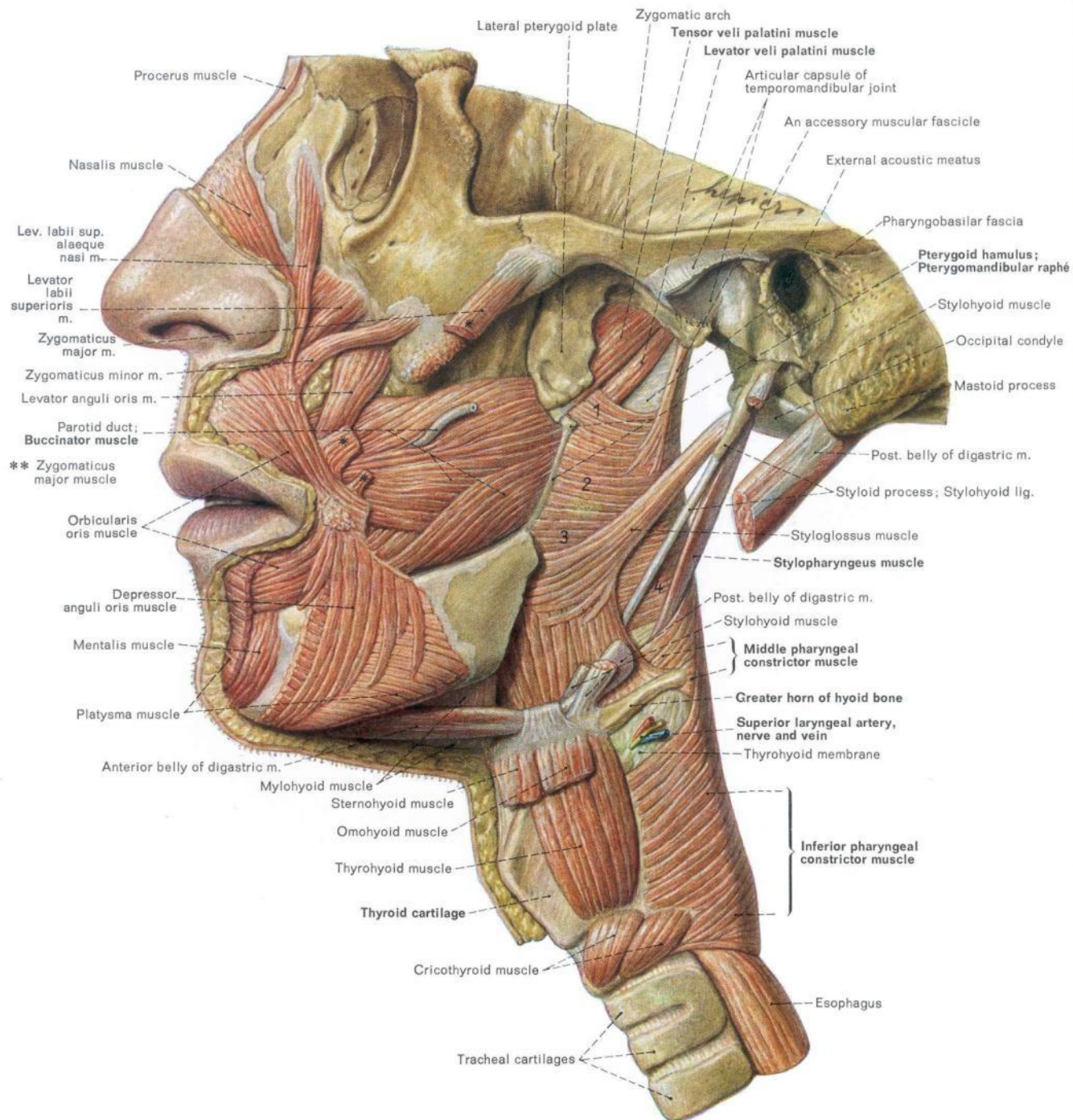


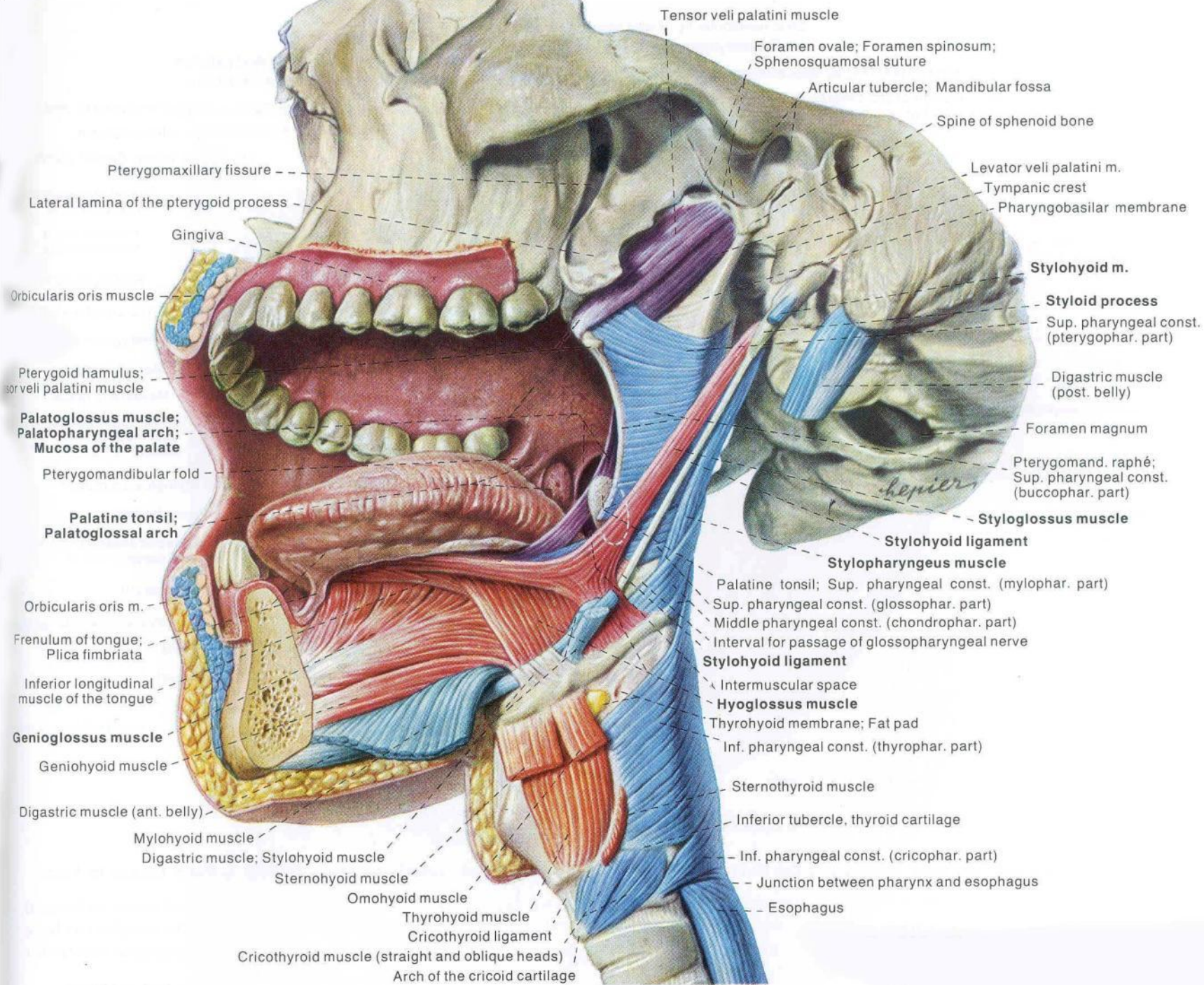
Superior Pharyngeal Constrictor (attaches to Pterygomandibular raphe)

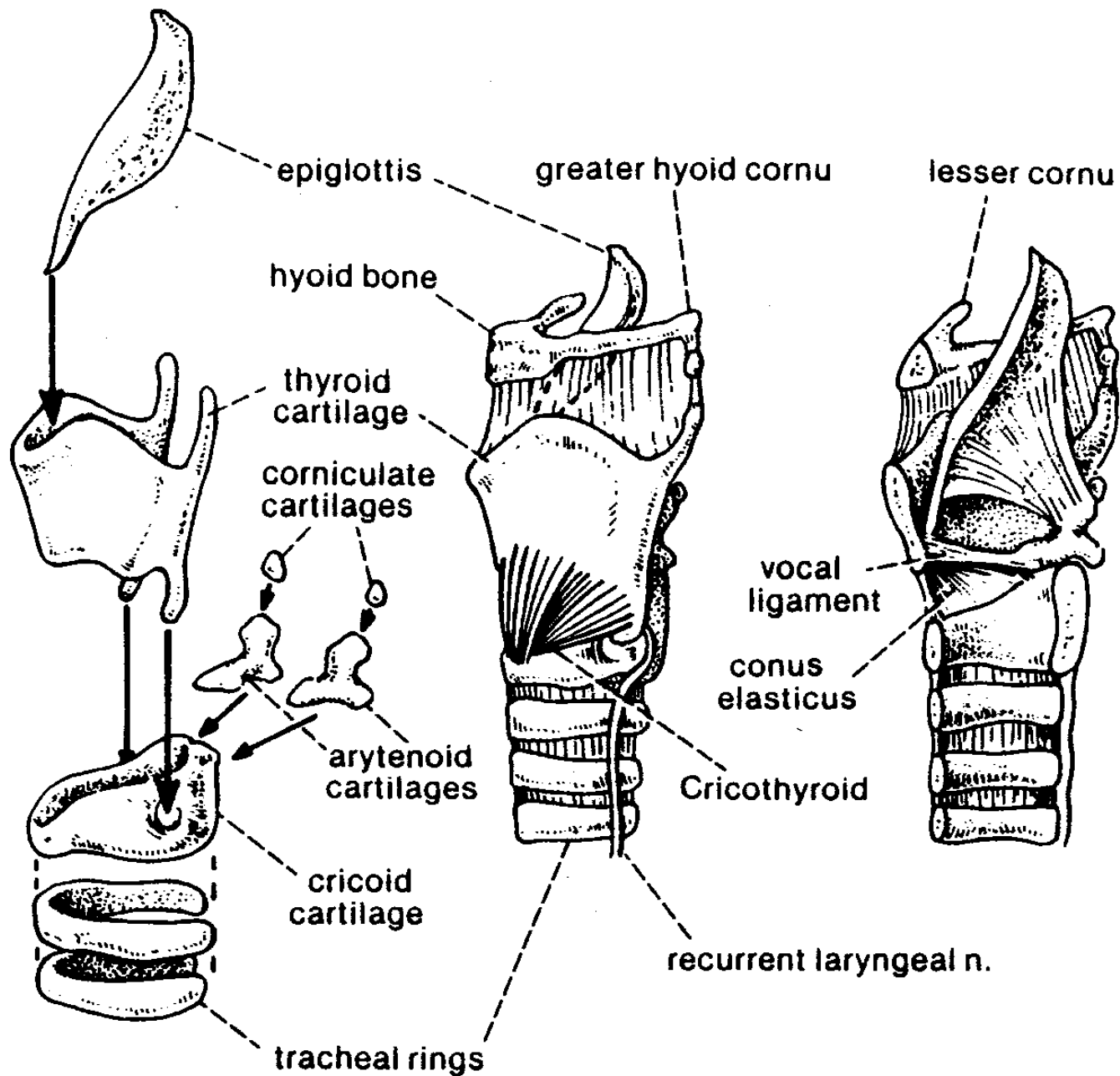
Middle Pharyngeal Constrictor (attaches to Hyoid bone)

Inferior Pharyngeal Constrictor (attaches to Thyroid and cricoid cartilages)





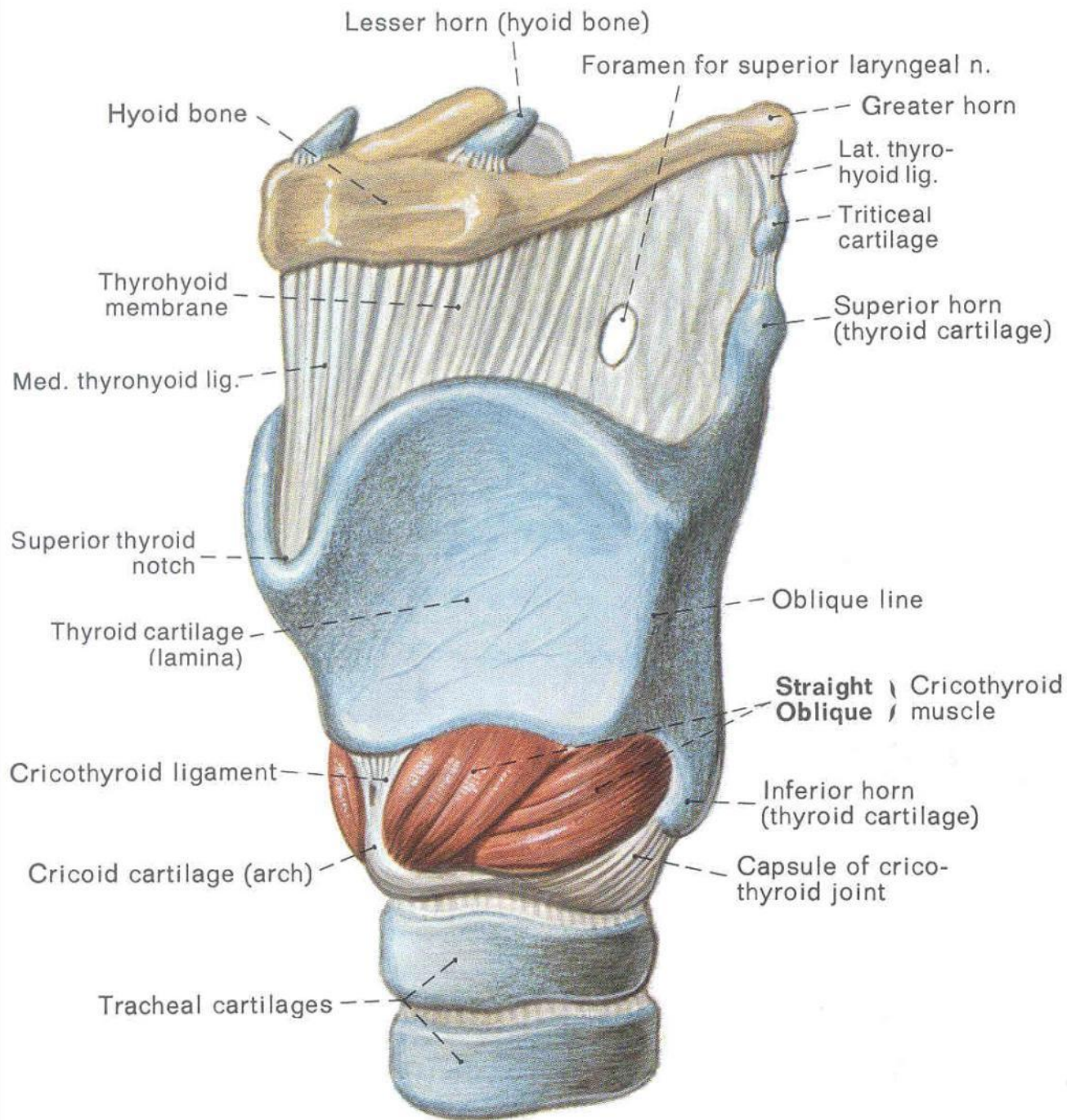


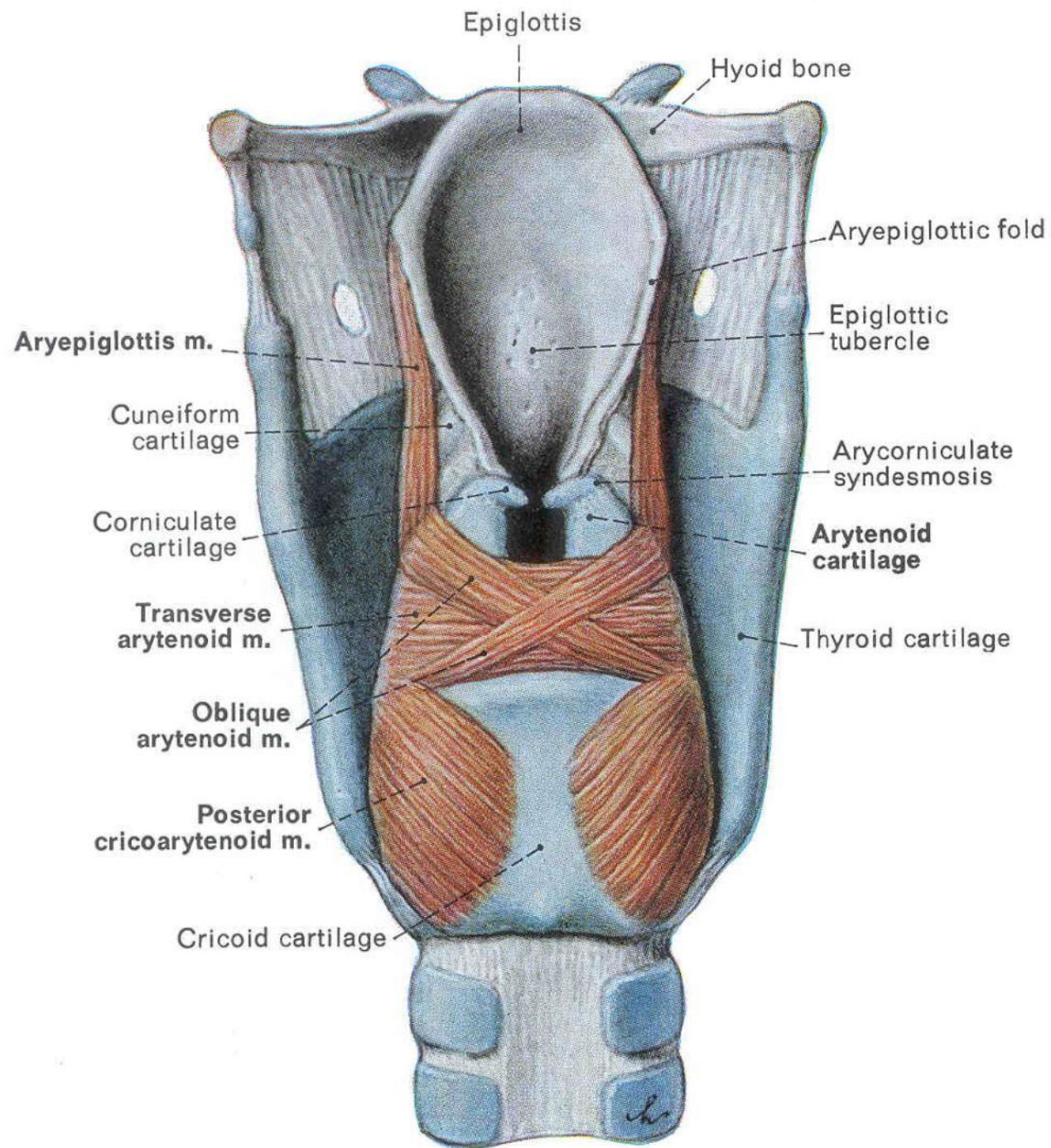


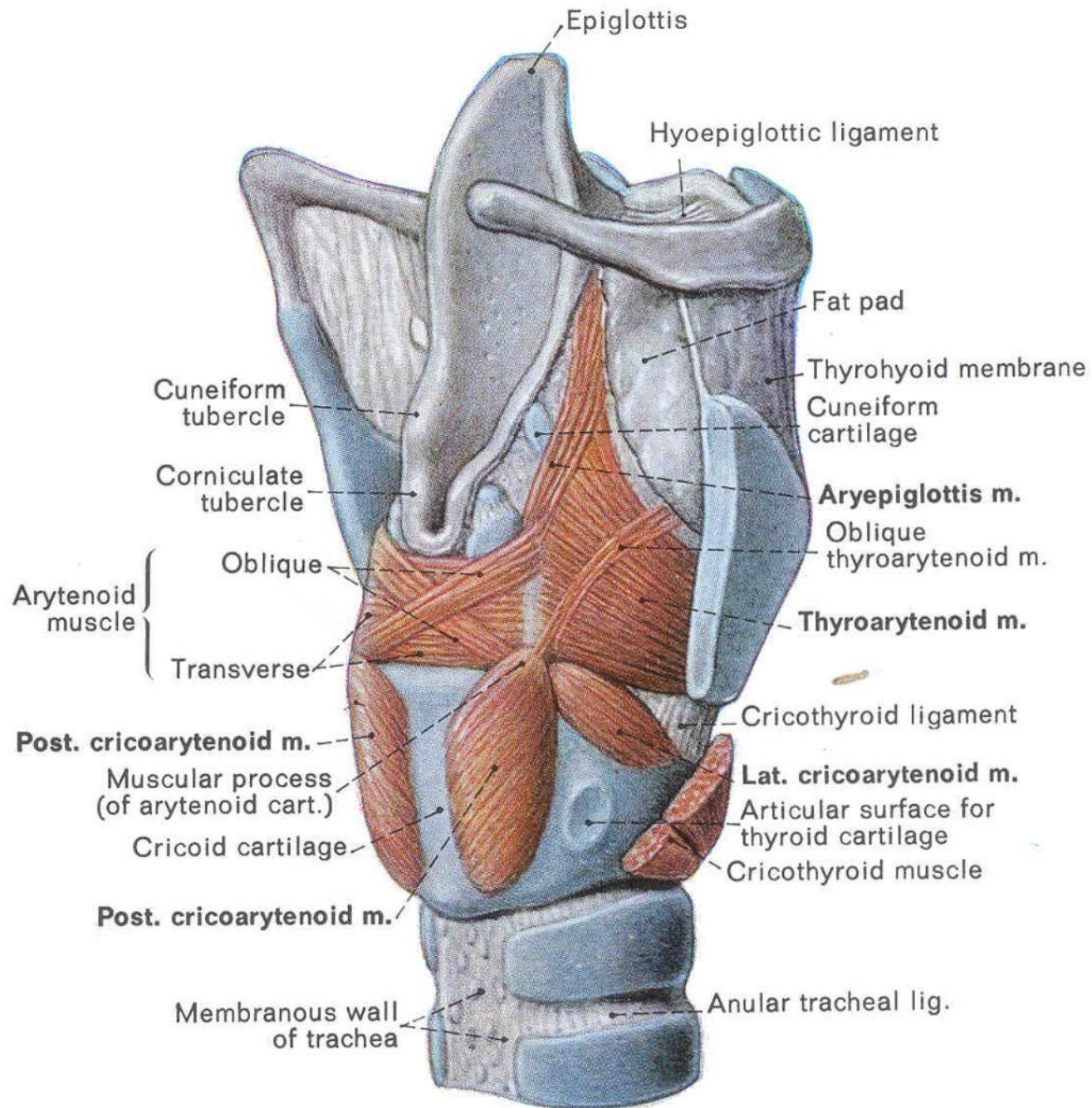
A

B

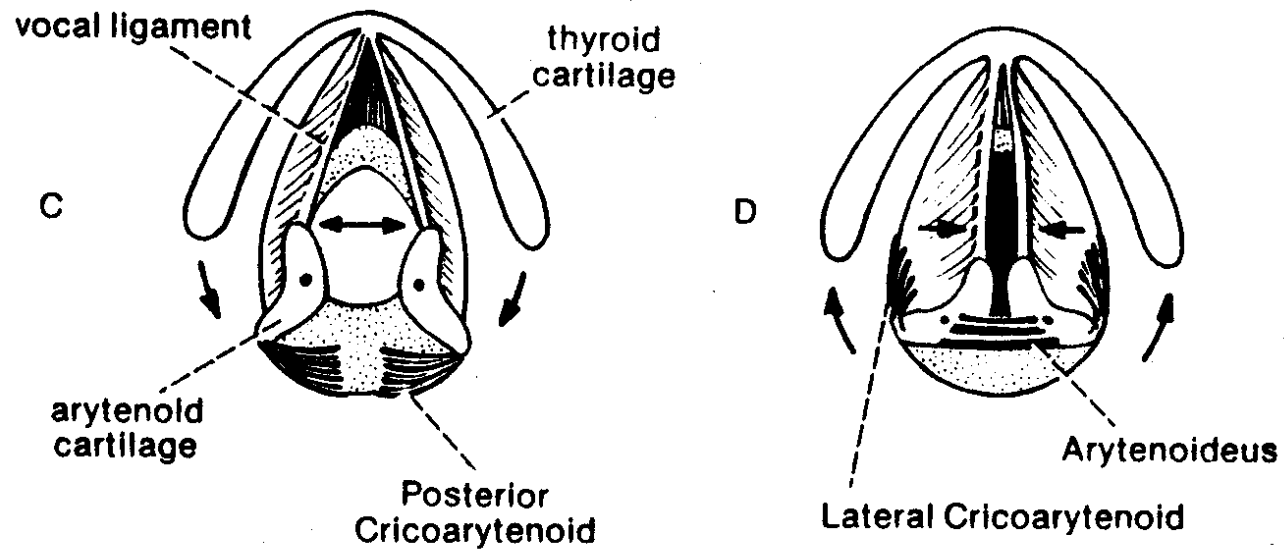
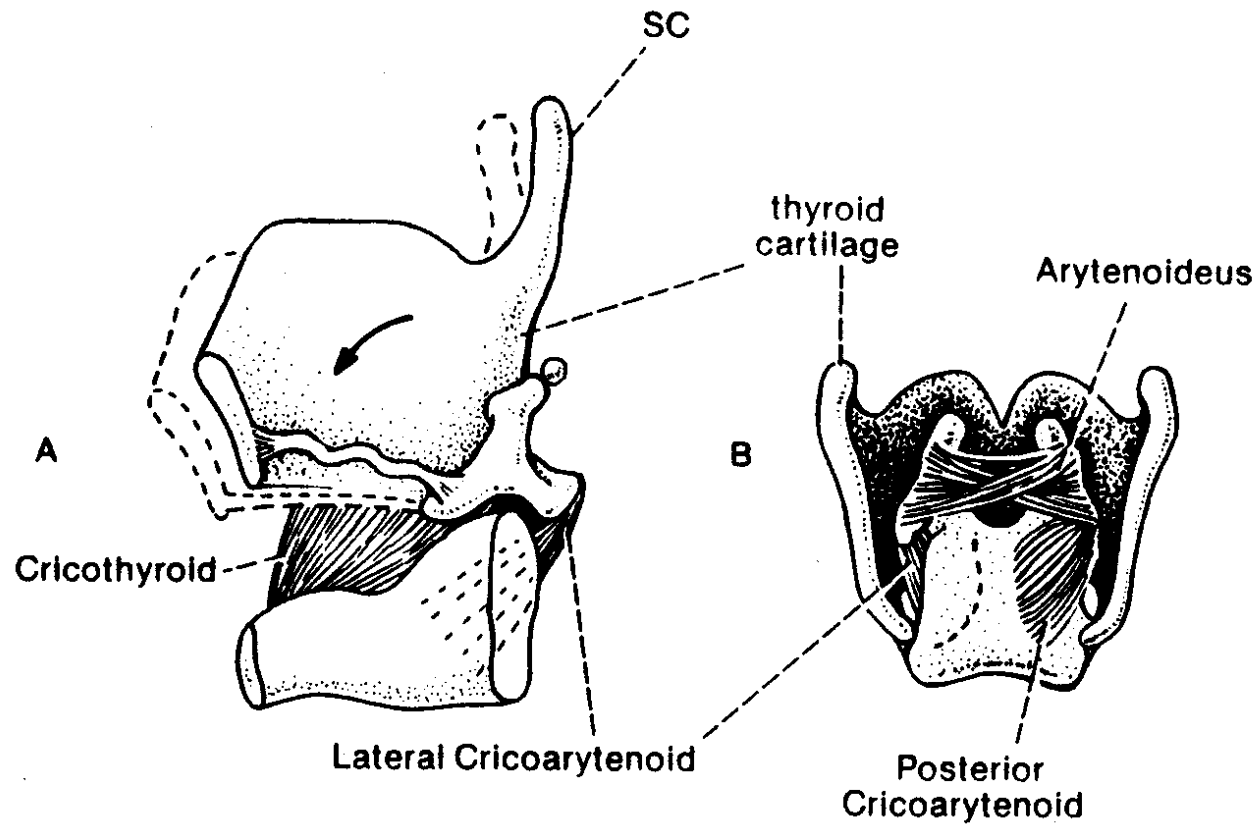
C







Phonation (Speaking)



Phonation & Articulation

1. Glottis closes

- Recurrent laryngeal nerve from CN X

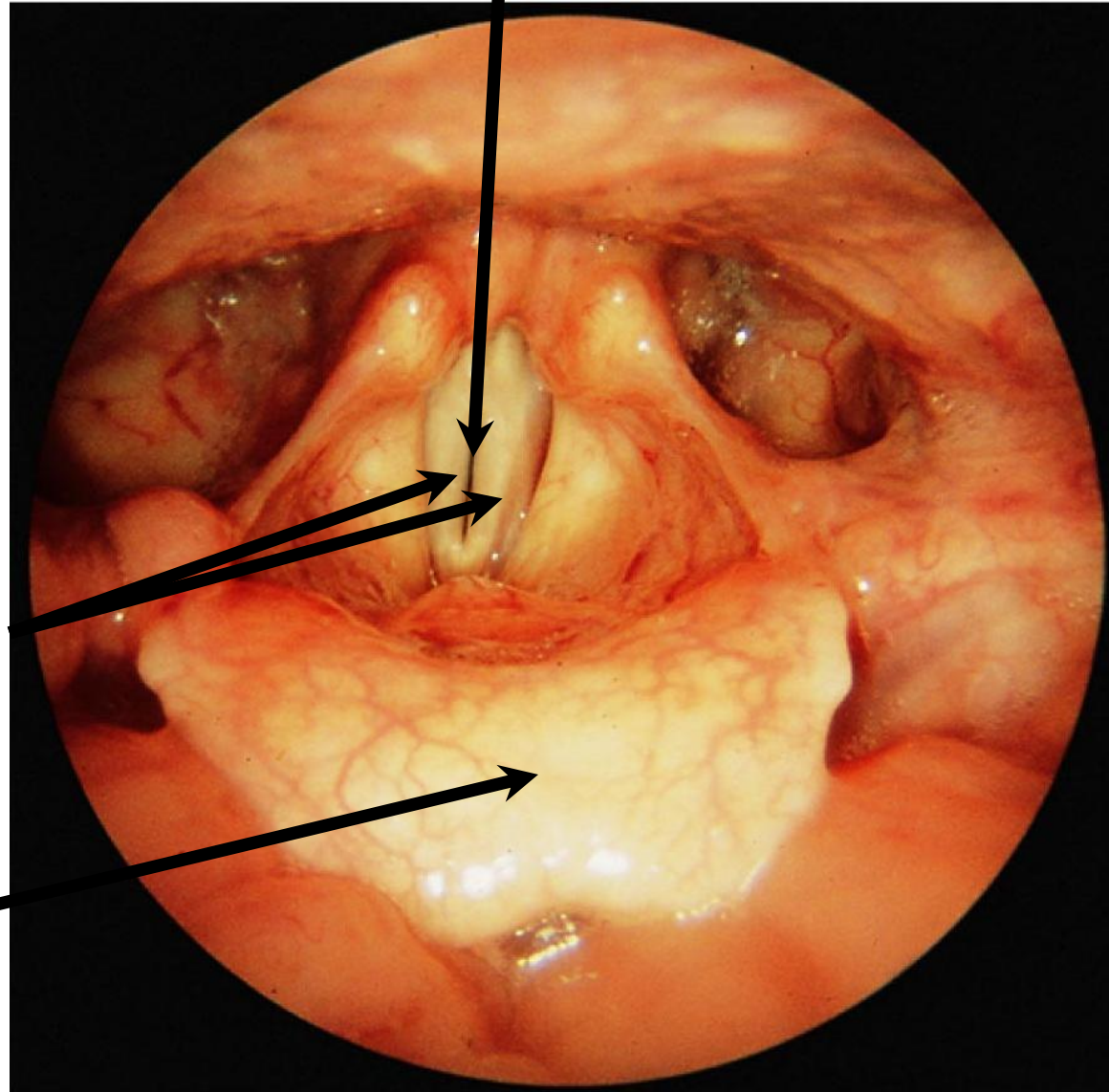
2. Air is forced through the glottis

- Vocal folds vibrate and produce a constant tone (phonation)

3. Pitch of the tone depends on:

- Diameter, length, tension of vocal folds (CN X)

Glottis
closed



Vocal folds

Epiglottis

“Strap” Muscles Aid in Phonation

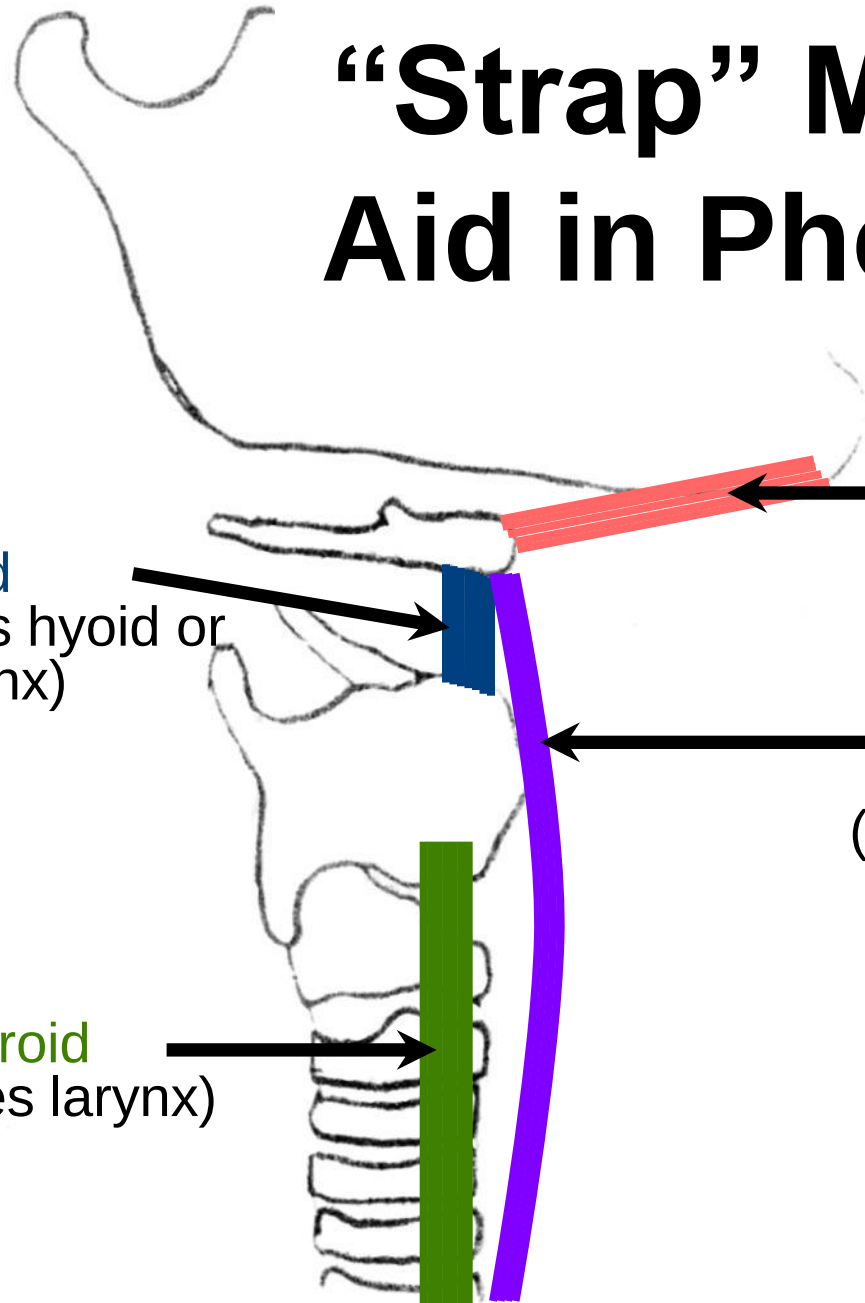
Thyrohyoid
(depresses hyoid or
raises larynx)

Geniohyoid
(elevates hyoid or
depresses jaw)

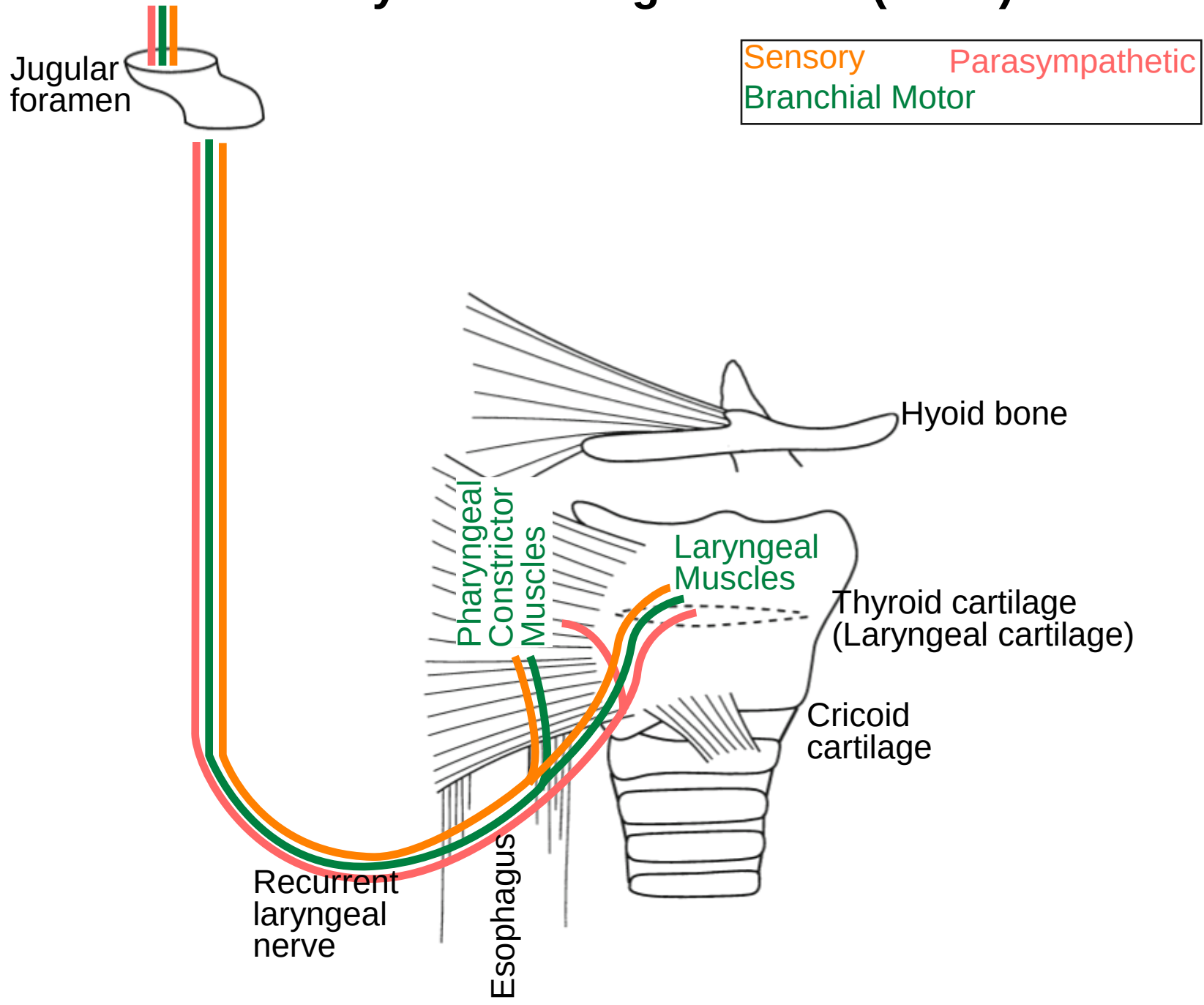
Sternohyoid
(depresses hyoid)

Sternothyroid
(depresses larynx)

Sternum



X Pathways of the Vagus Nerve (CN X)



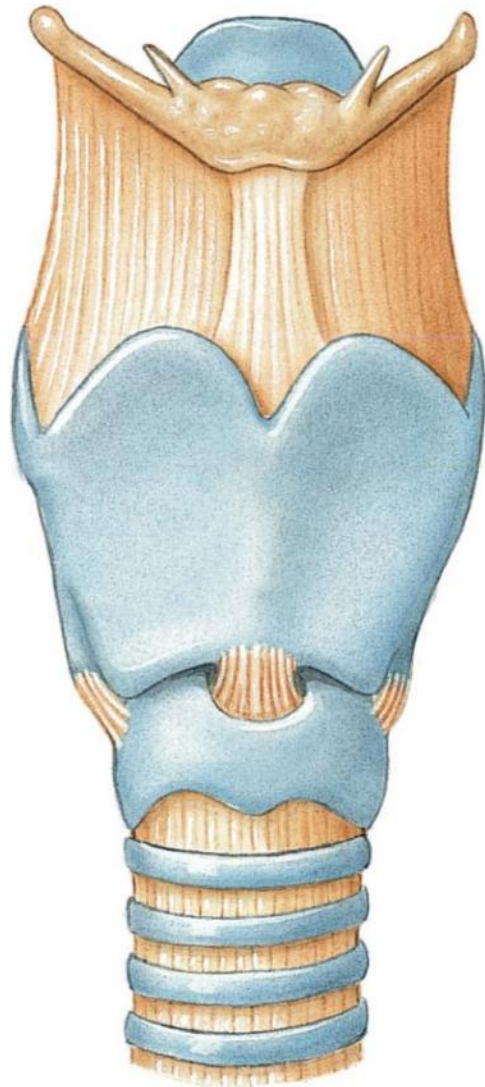
Phonation & Articulation

4. The tone is **articulated** into voice.

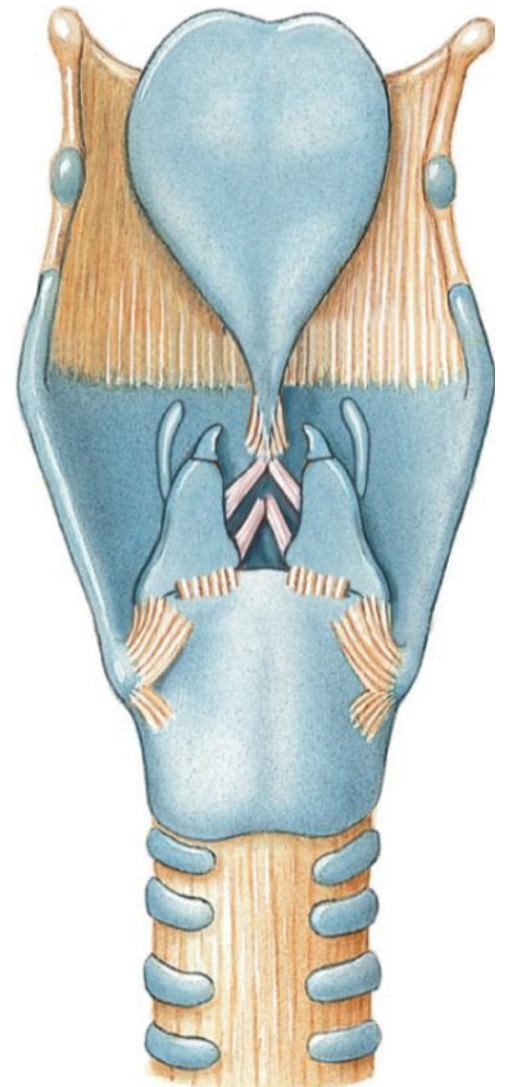
– Tone depends on:

- Size and shape of the **oropharynx** and **nasopharynx**
- Position of jaw (CN V₃), tongue (CN XII), and lips (CN VII)

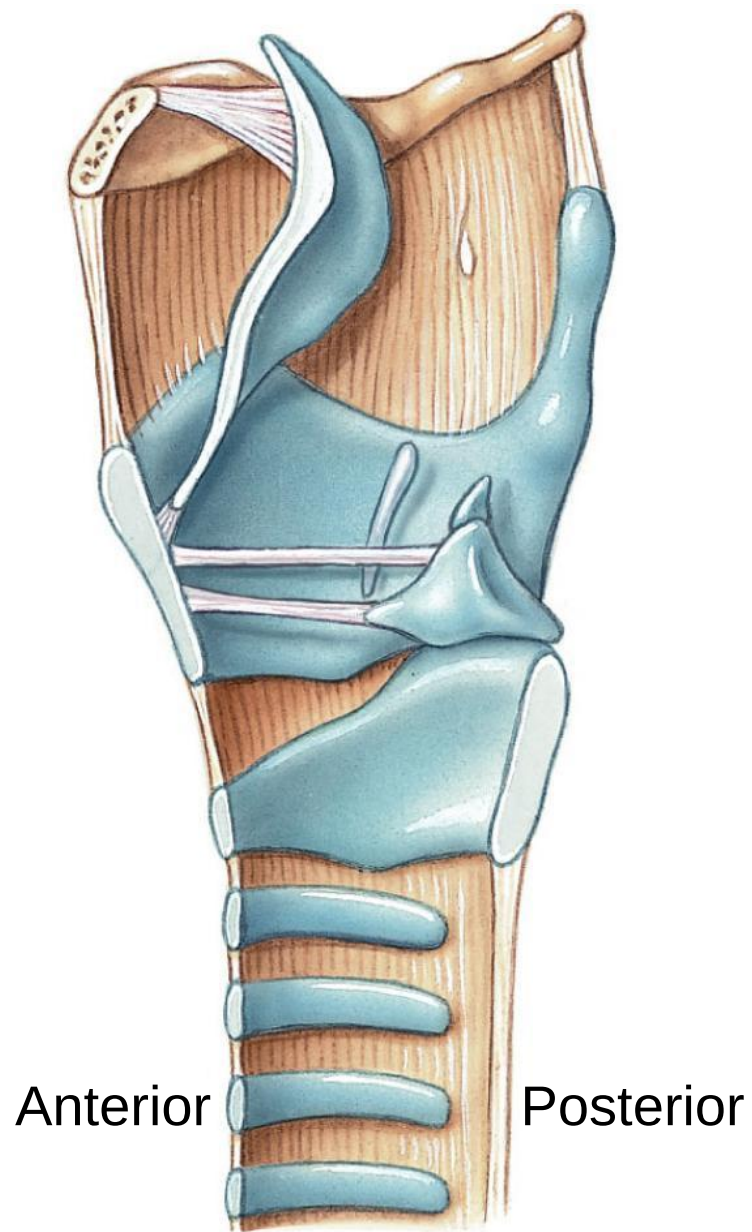
Test yourself and
identify the following
structures...



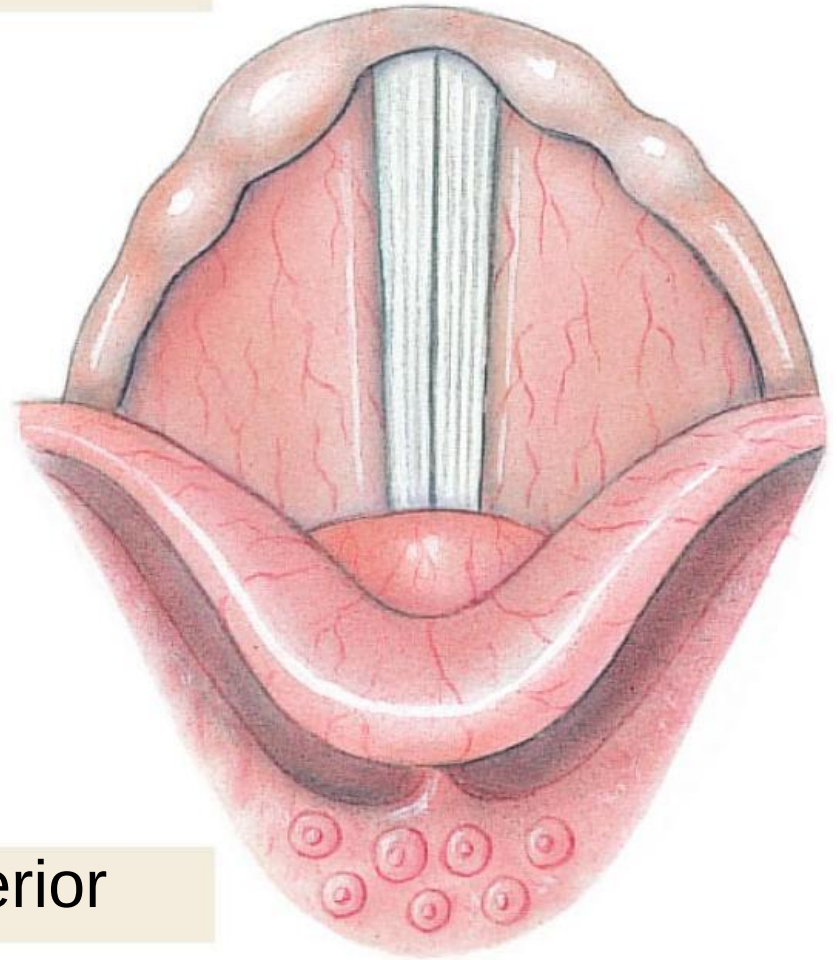
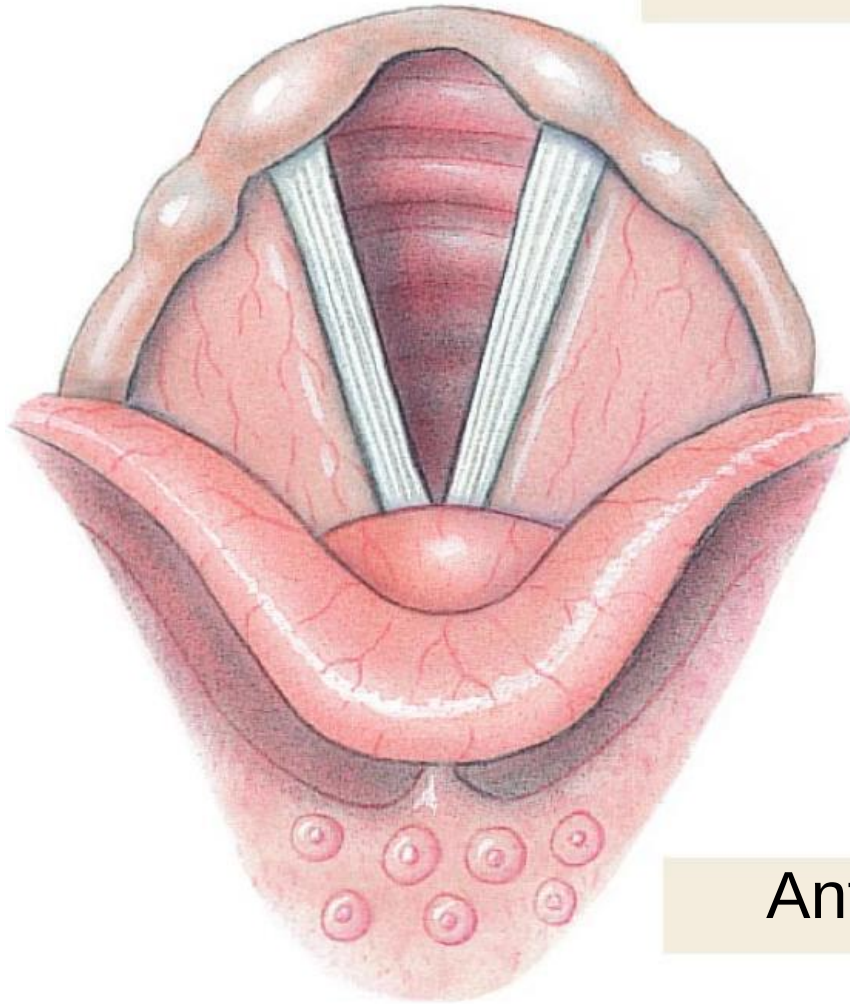
Anterior



Posterior



Posterior



Anterior