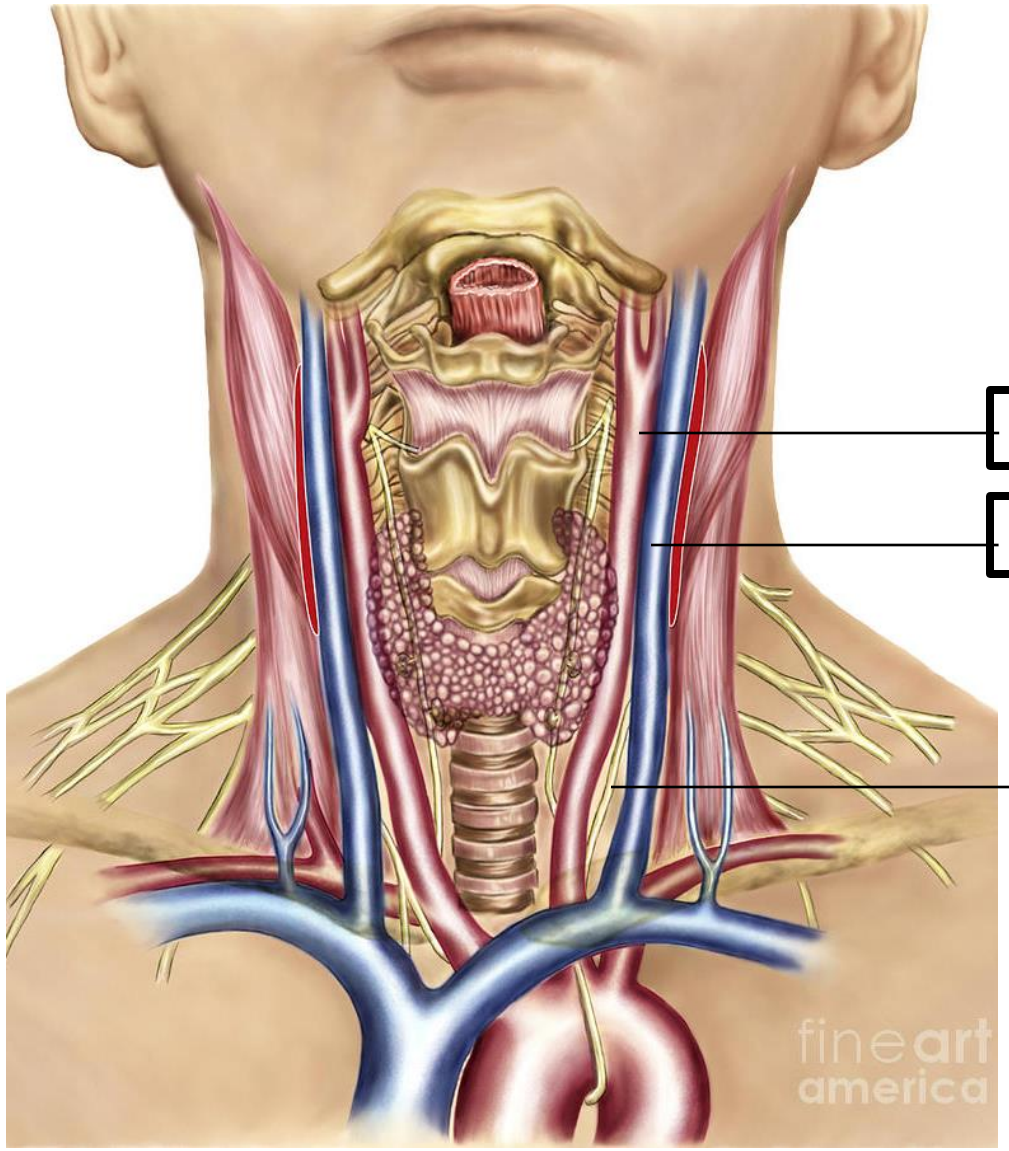
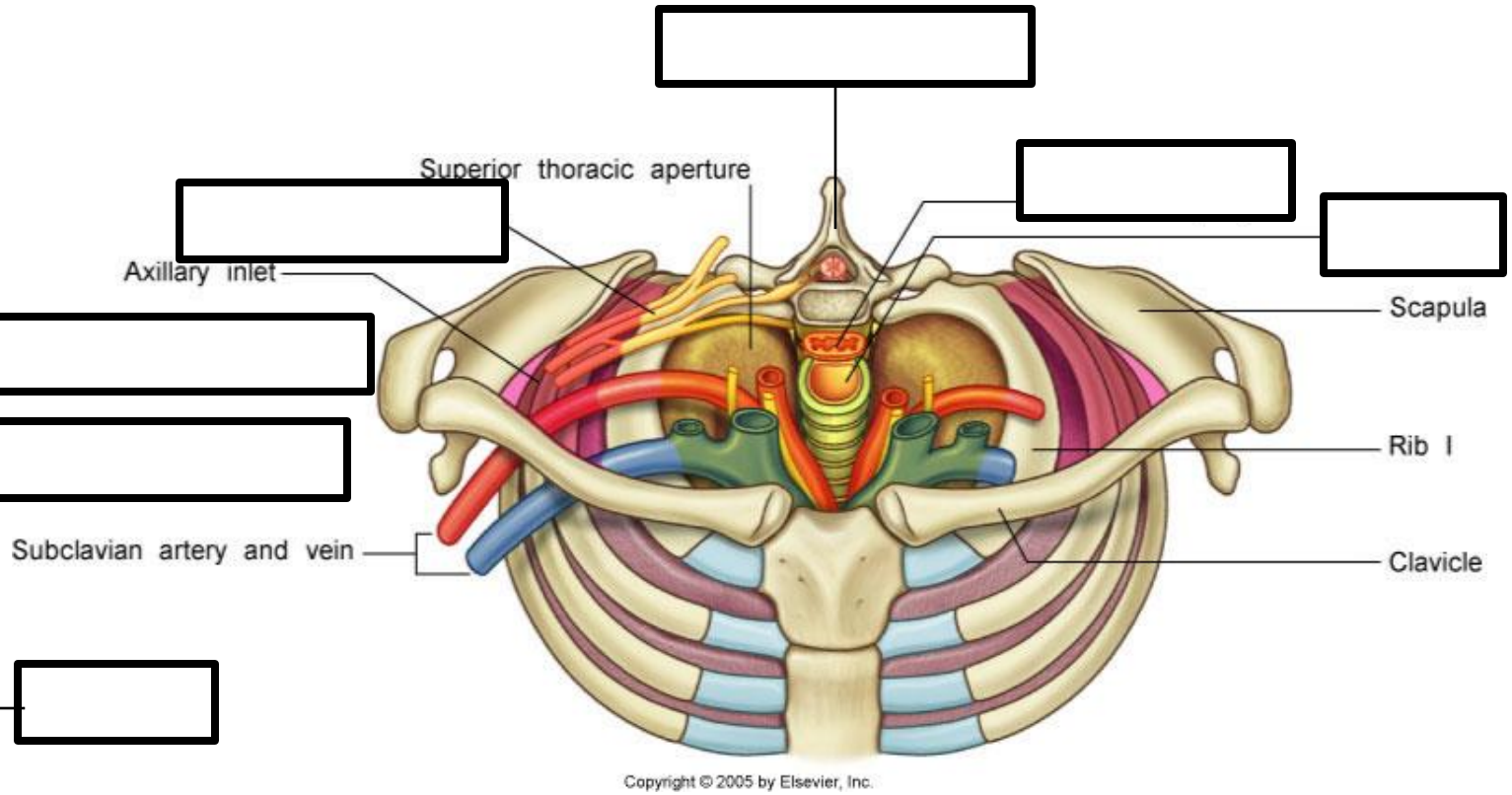
Which Structures Pass To or From the Neck?





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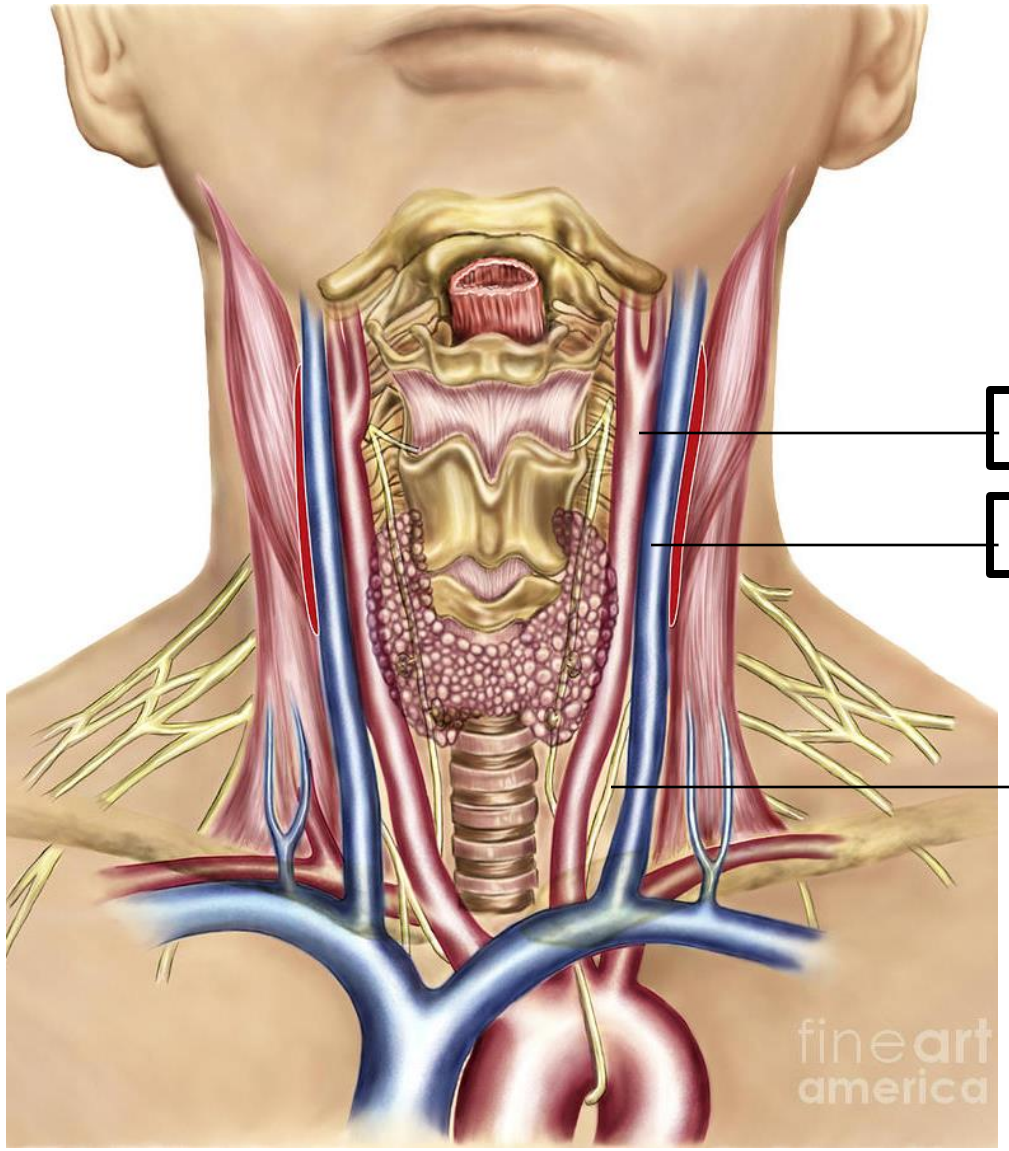
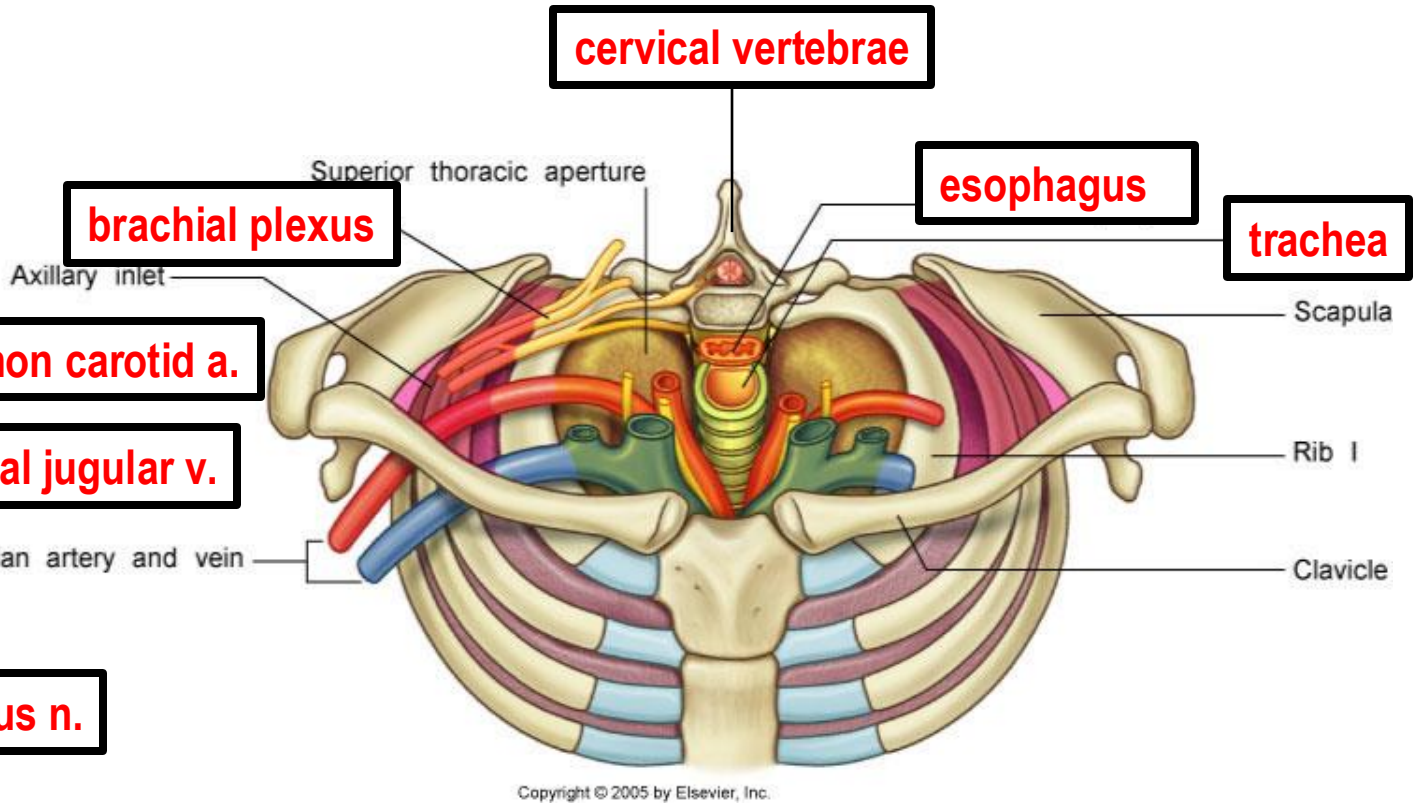
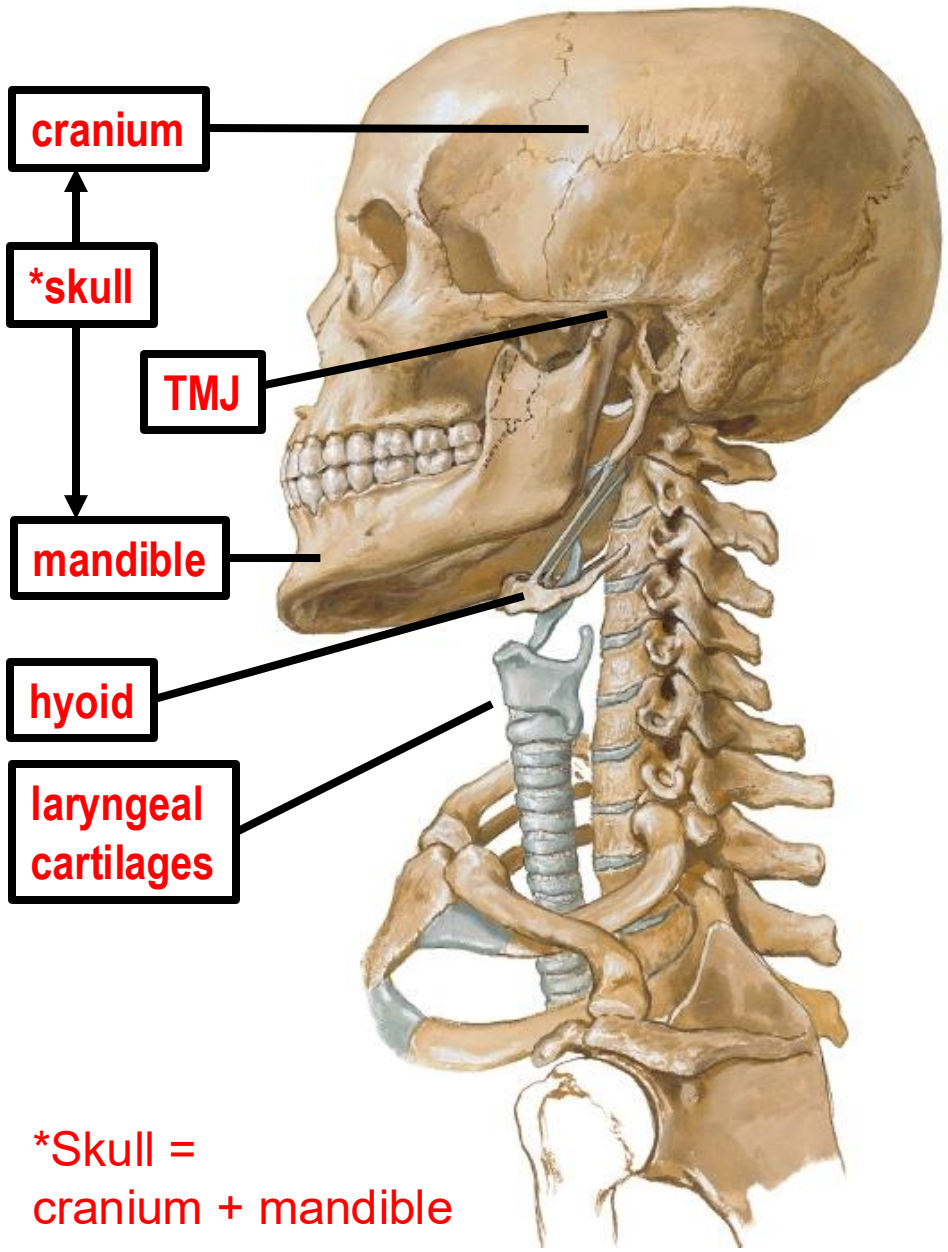




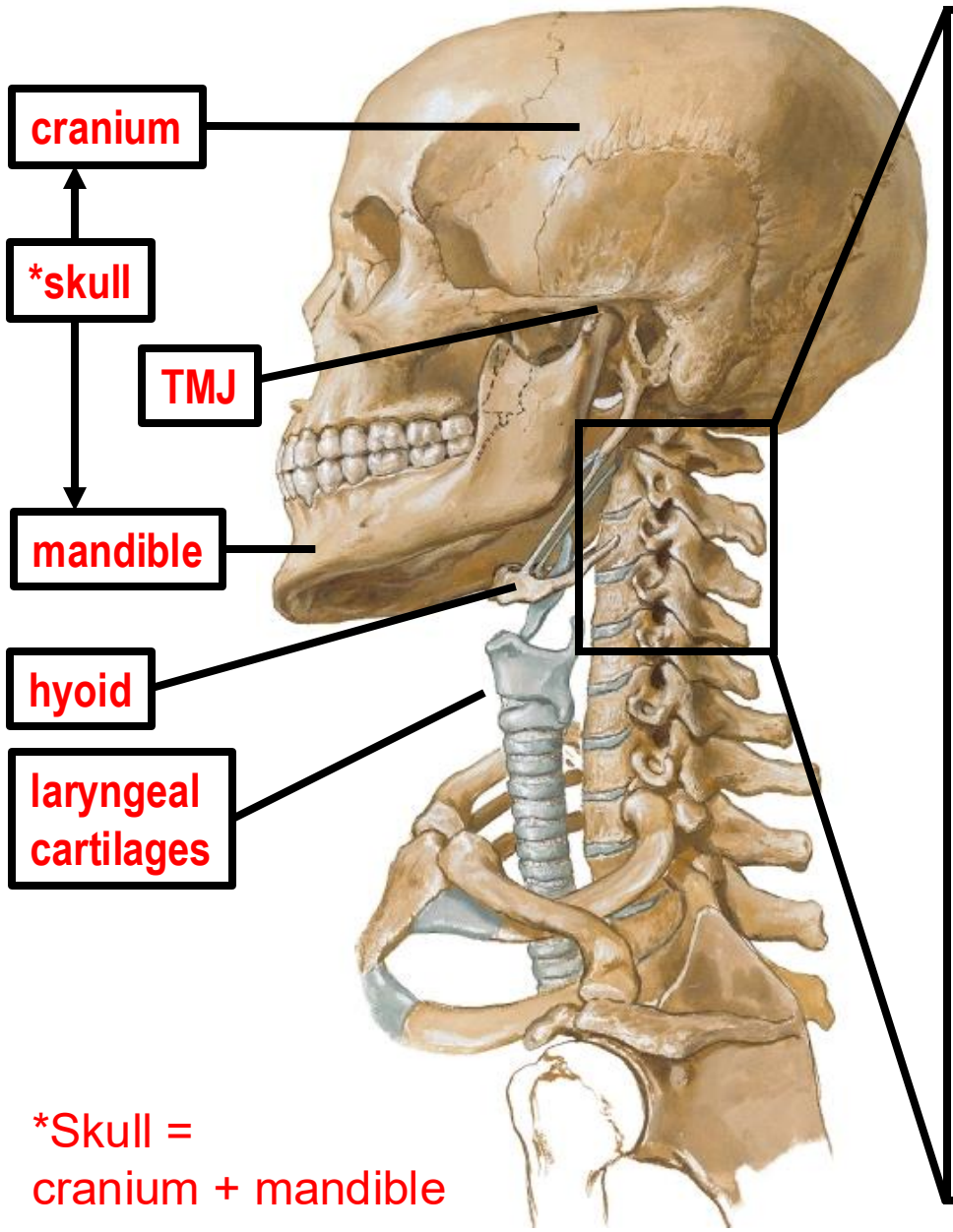
Skeletal System



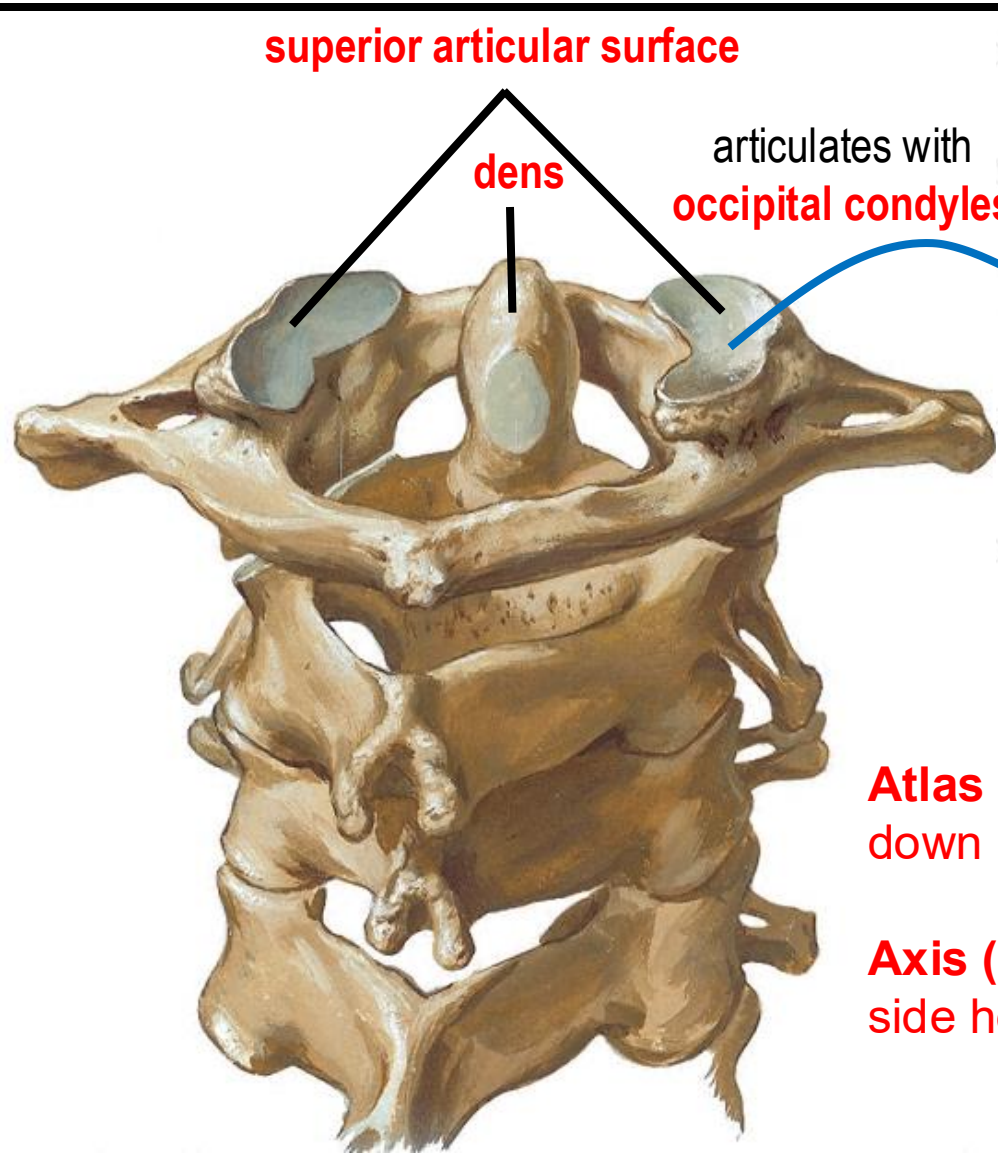
*Skull =
cranium + mandible

Source: *Netter's Anatomy Atlas*

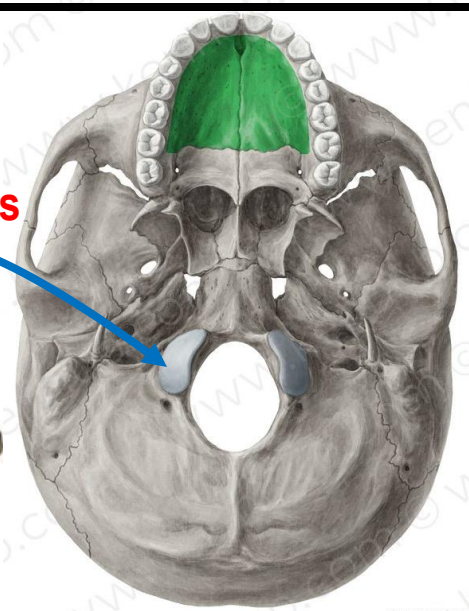
Skeletal System



*Skull = cranium + mandible



C1– 4 posterior view

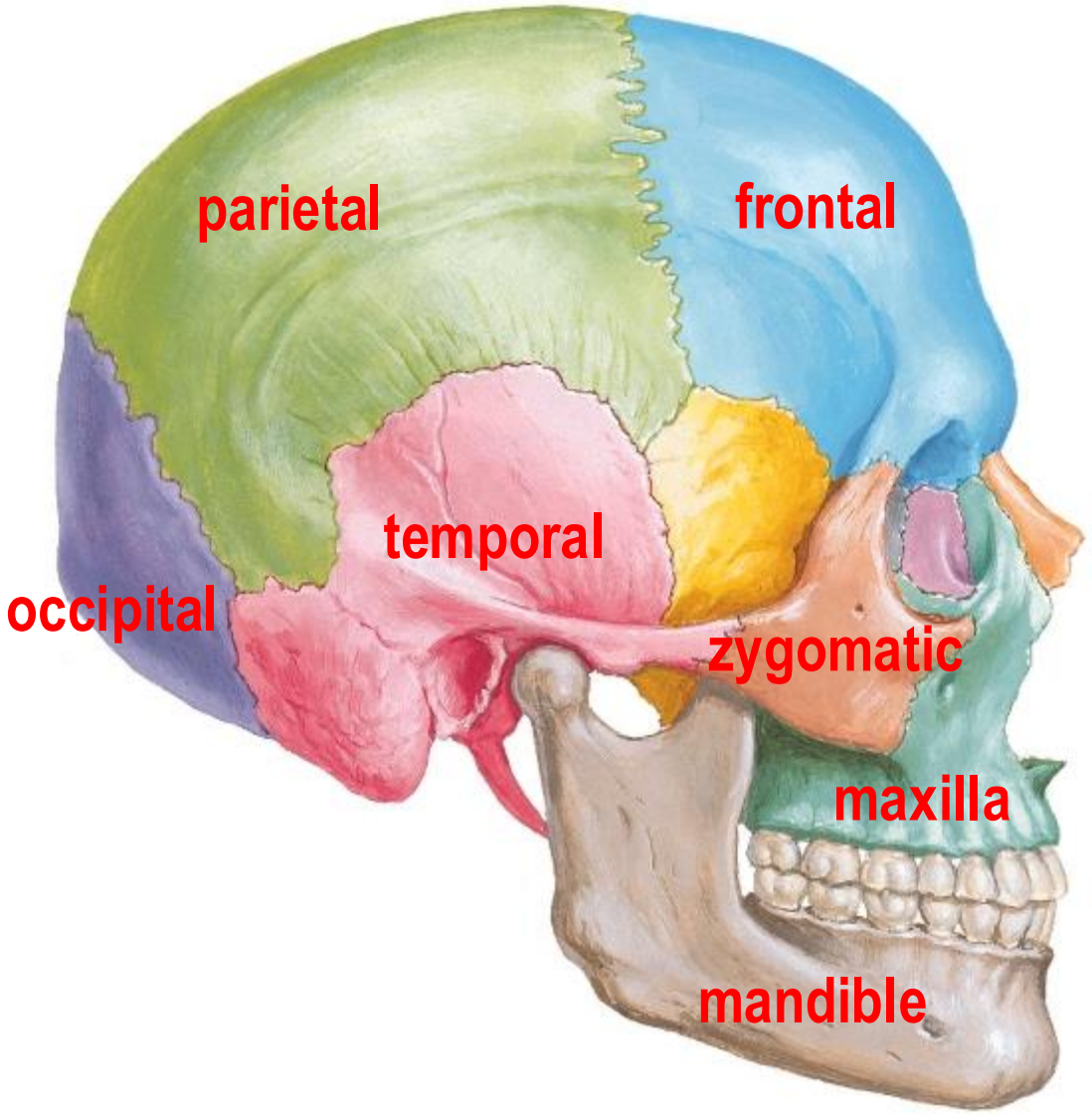


Atlas (C1): allows up and down head motion

Axis (C2): allows side-to-side head motion (swivel)

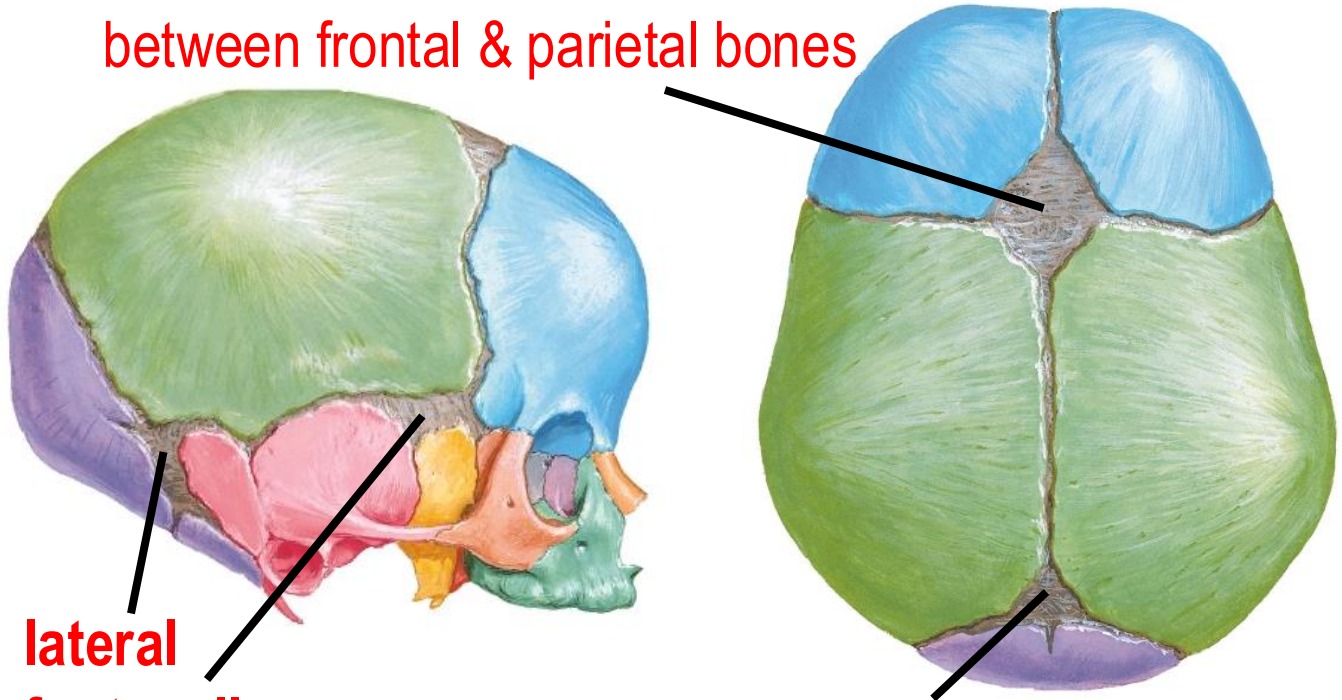
Source: *Netter's Anatomy Atlas*

Skeletal System



fontanelles: fibrous “soft spots” between cranial bones in infants

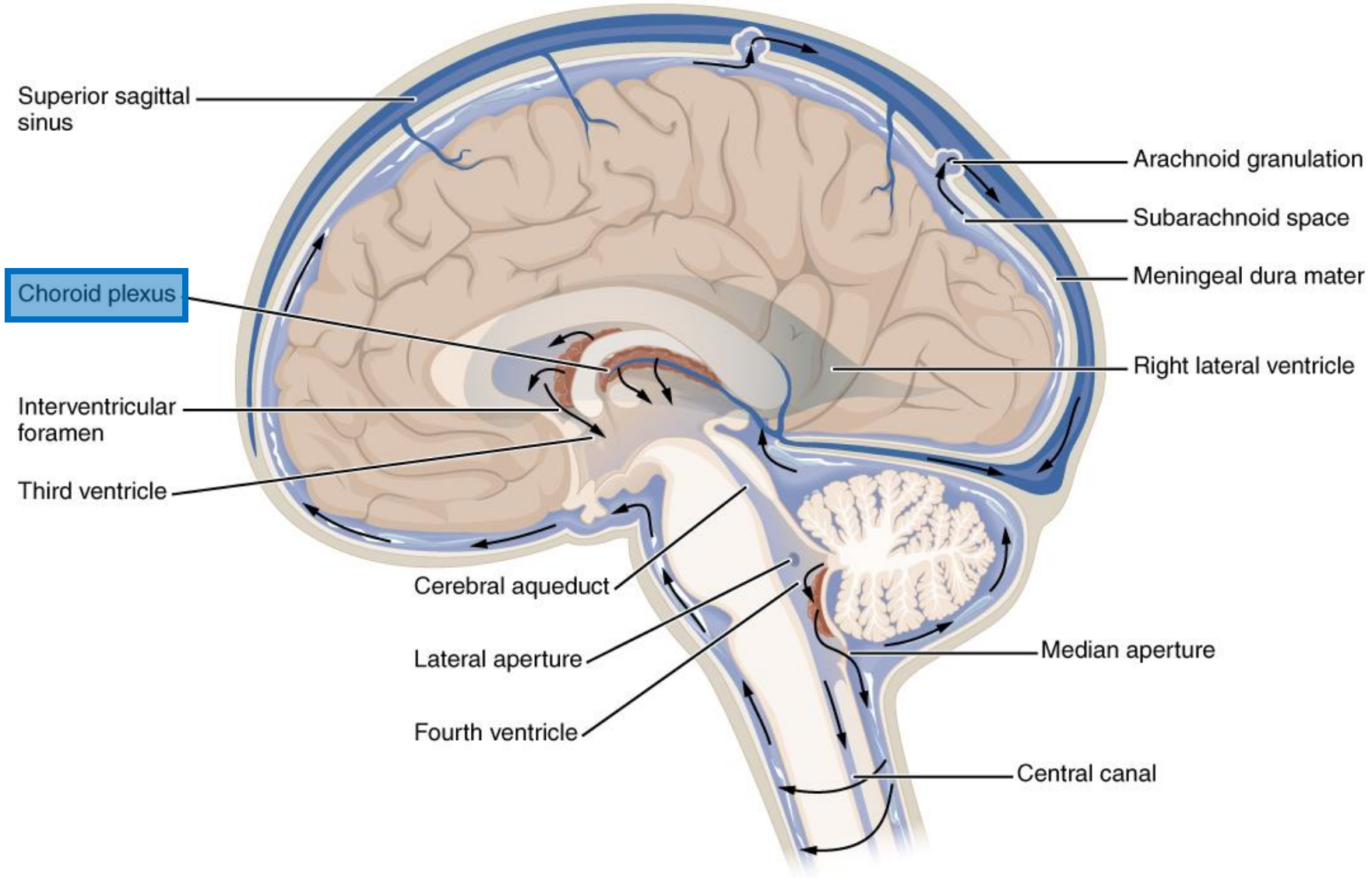
anterior fontanelle
between frontal & parietal bones



posterior fontanelle
between parietal & occipital bones

Source: *Netter’s Anatomy Atlas*

Nervous System: Brain & Spinal Cord

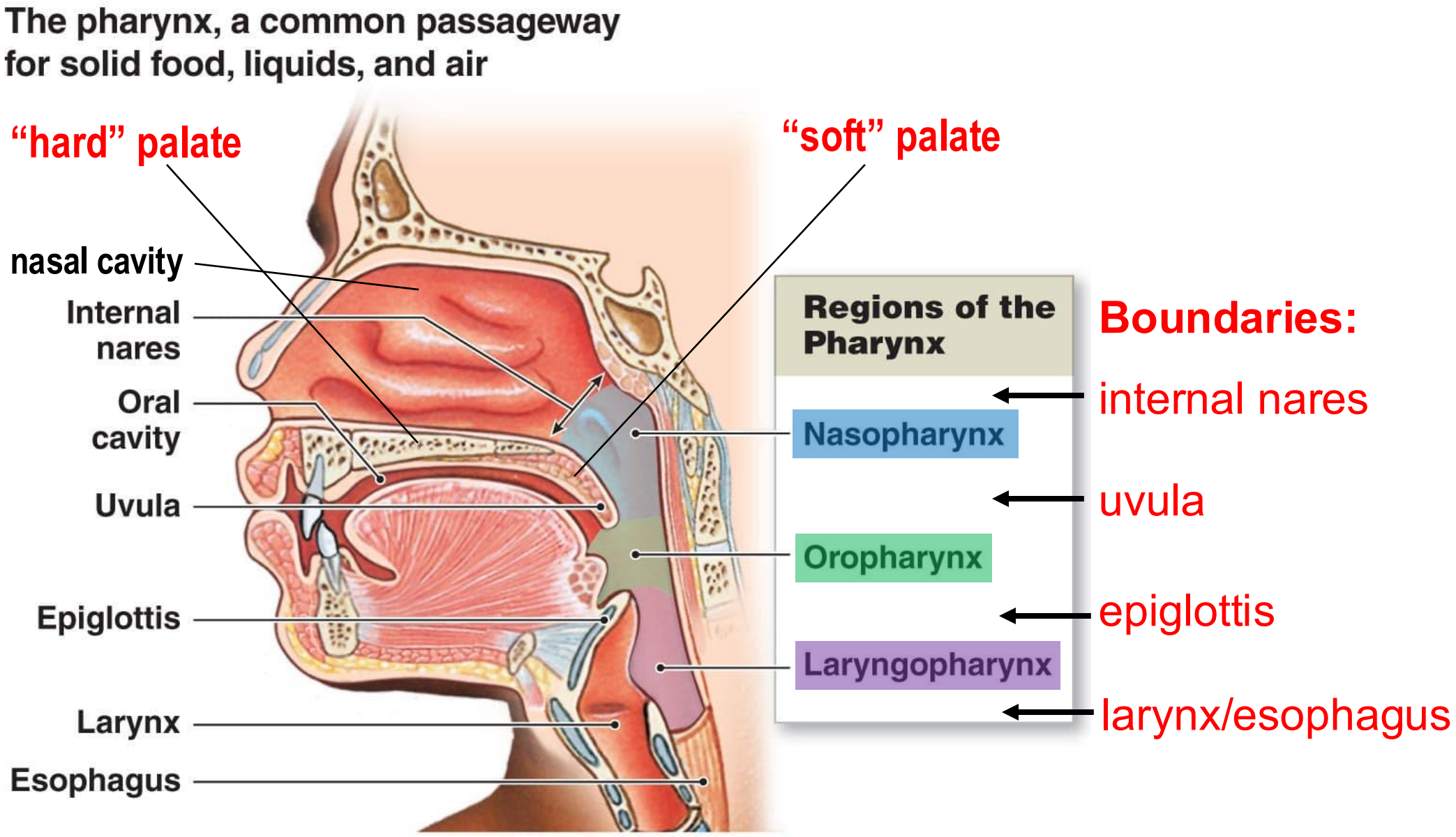


Note: Brain anatomy will be covered in detail in Neuroanatomy next semester.

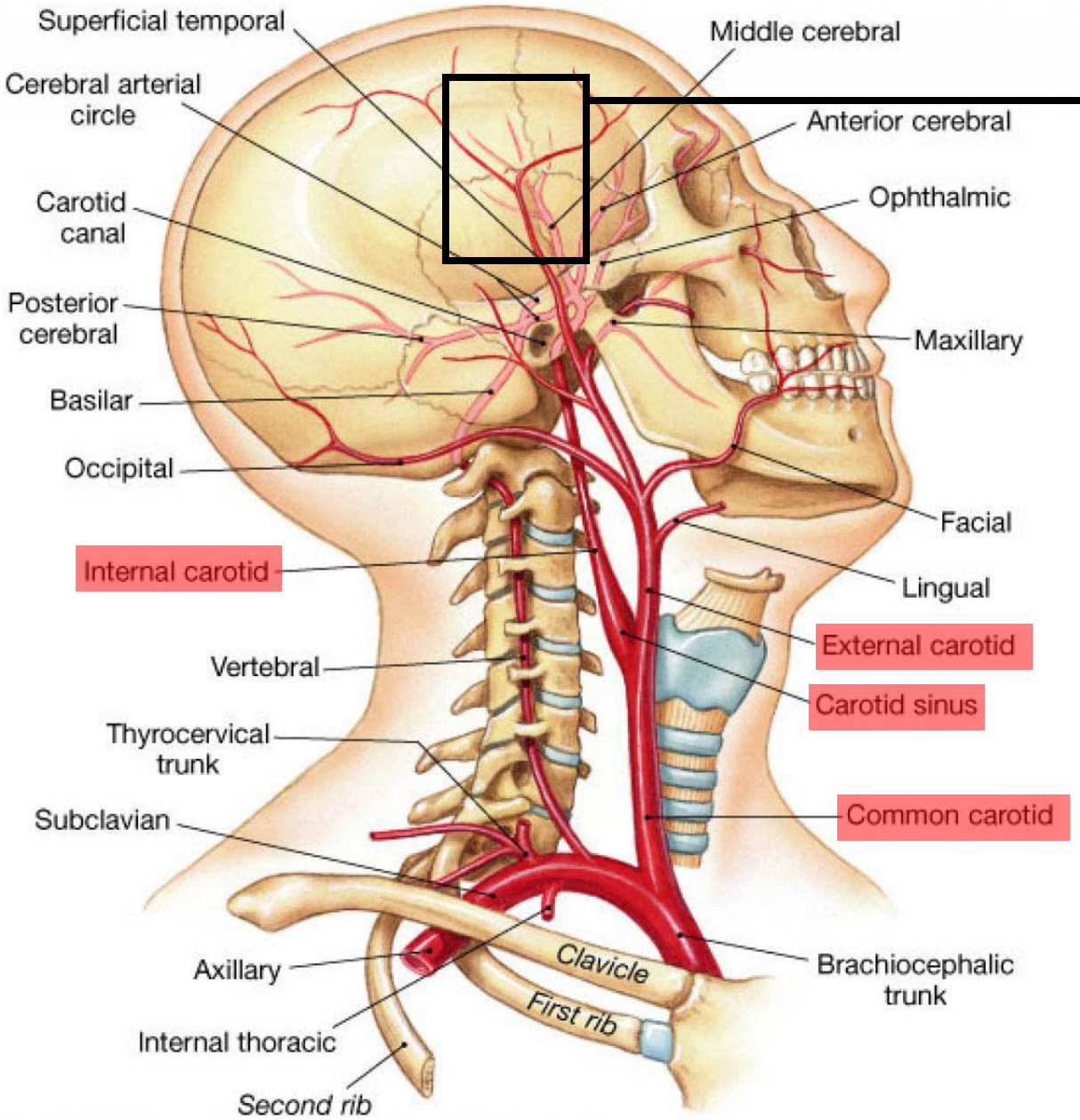
CSF produced by choroid plexus flows through brain ventricles (spaces within the brain) and subarachnoid space.

Source: examnotes.com; *OpenStax Anatomy and Physiology*

Ingestion & Respiration



⚕ Clinical Correlate ⚕ "Danger Zone" #1 (of 3)

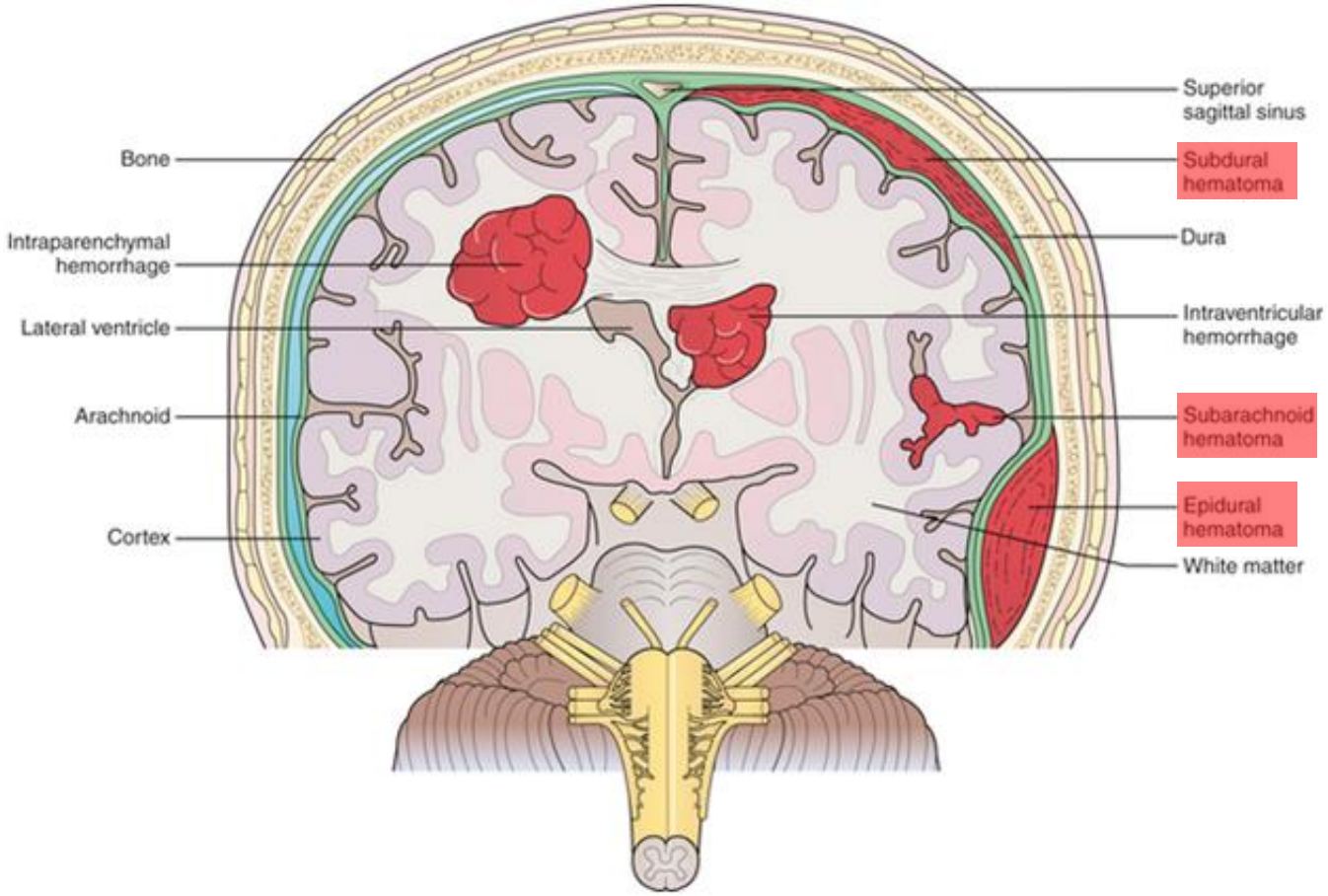


Pterion: junction of frontal, parietal, temporal, sphenoid bones; thin area overlying **middle meningeal a.**

Source: Anatomy-Medicine

⚕ Clinical Correlate ⚕ "Danger Zone" #1 (of 3)

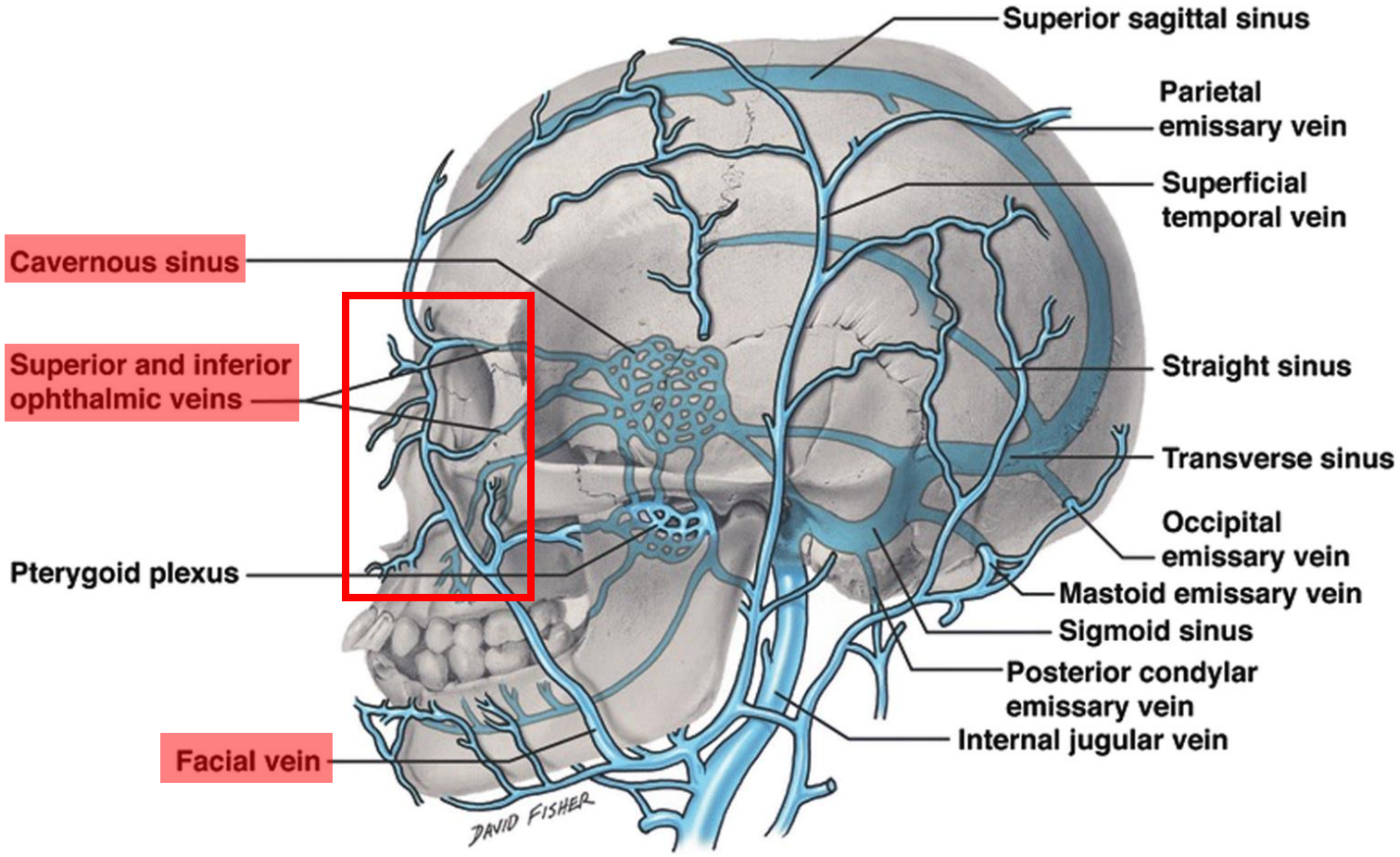
Types of Intracranial Hemorrhage/Hematoma



Intracranial hemorrhage/hematoma: Blood accumulation in the endocranial (brain) cavity, resulting in life threatening compression of the brain.

1. **Epidural hematoma:** between skull and dura mater.
2. **Subdural hematoma:** between dura mater and arachnoid mater. Common when bridging veins and sagittal sinus is torn.
3. **Subarachnoid hemorrhage:** between arachnoid mater and pia mater. Common when cerebral arteries rupture.

⚕ Clinical Correlate ⚕ "Danger Zone" #2 (of 3)



Facial vein has no valves, so blood may drain superiorly into superior & inferior ophthalmic veins and enter the cavernous sinus.

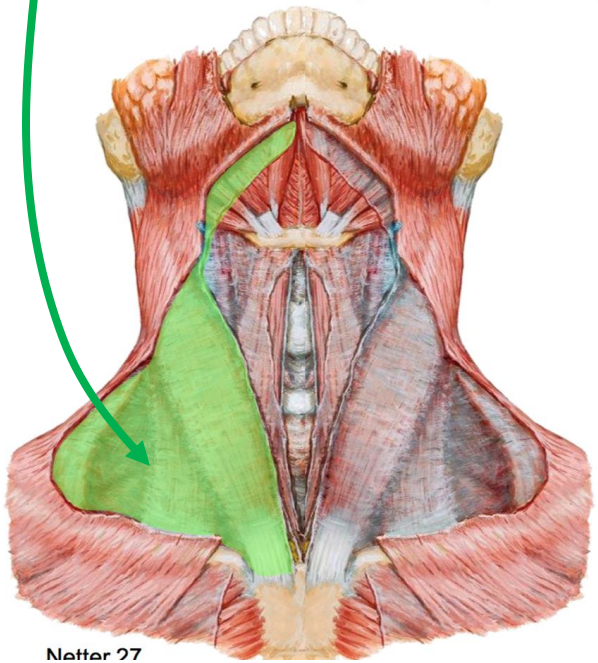
Infection around the nose (e.g., pimples, boils) can spread into cavernous sinus where important arteries and nerves are located.

Source: Lachkar et al. 2019

Cervical Fascia

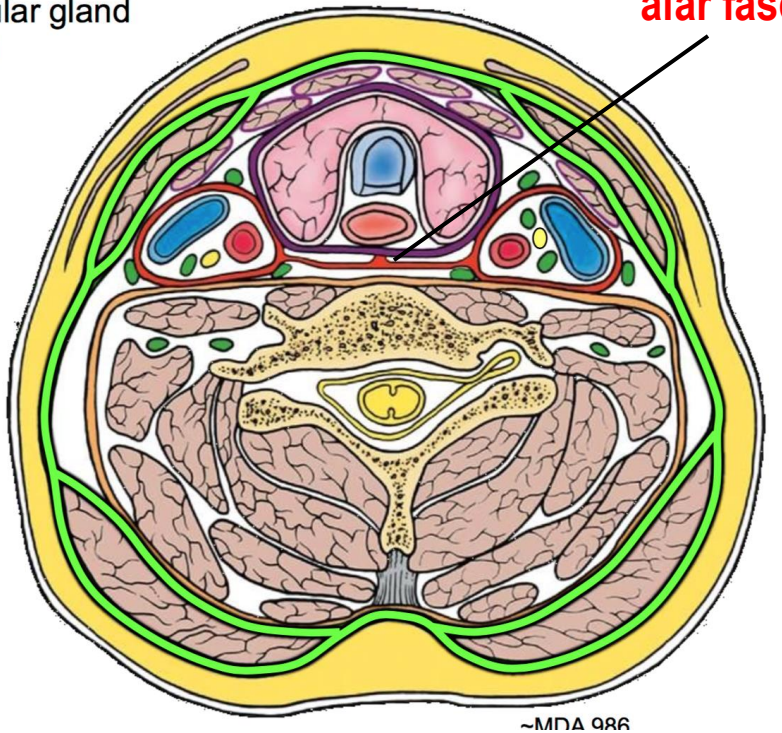
Investing Fascia

Encircles neck
Invests Trapezius and SCM, submandibular gland
Continuous with capsule of parotid gland



investing fascia
pretracheal fascia
carotid sheath
prevertebral fascia

alar fascia: connects carotid sheaths

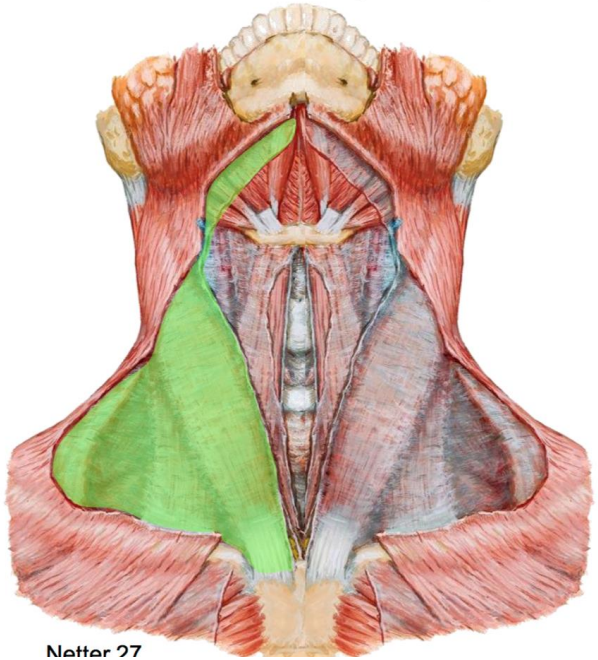


Source: *Netter's Anatomy Atlas*

⚕ Clinical Correlate ⚕ "Danger Space" #3 (of 3)

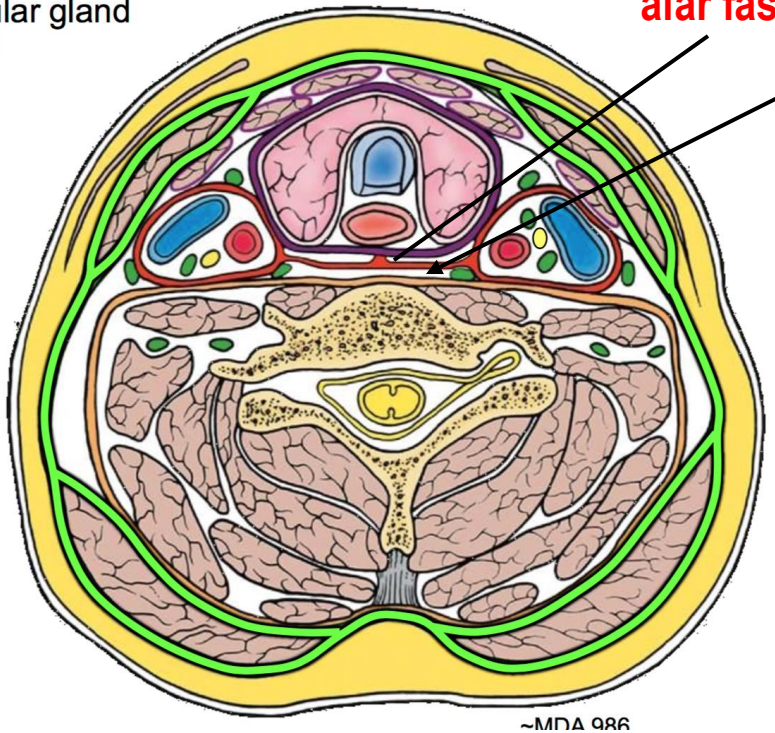
Investing Fascia

Encircles neck
Invests Trapezius and SCM, submandibular gland
Continuous with capsule of parotid gland

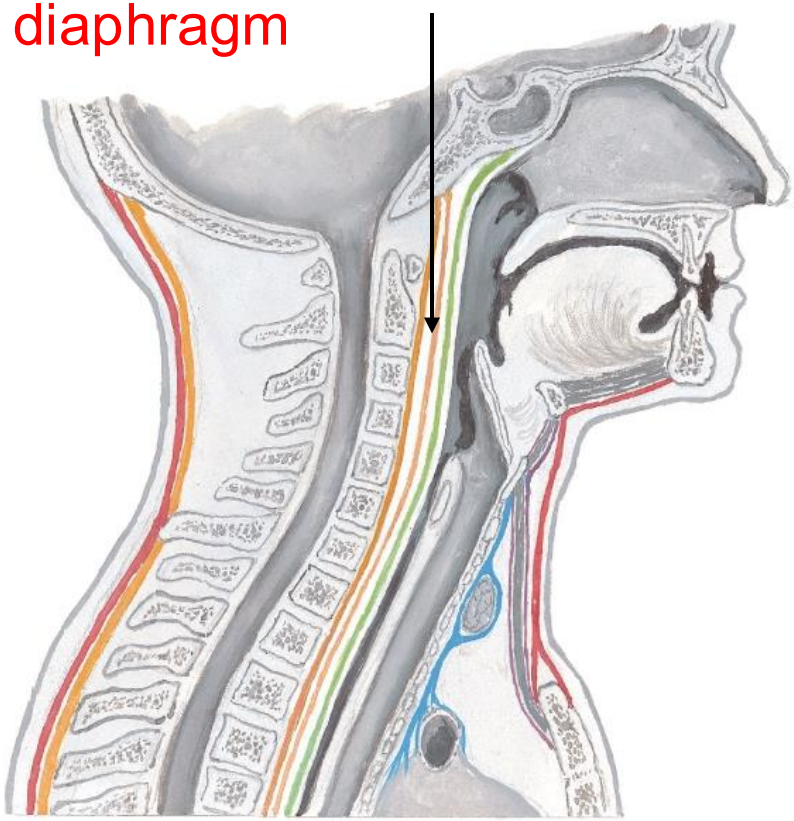


investing fascia
pretracheal fascia
carotid sheath
prevertebral fascia

alar fascia



Danger Zone: space between alar fascia and prevertebral fascia. Infections can travel down through mediastinum to diaphragm



Source: *Netter's Anatomical Atlas*

⚕ Clinical Correlate ⚕ Thyroid Gland Diseases

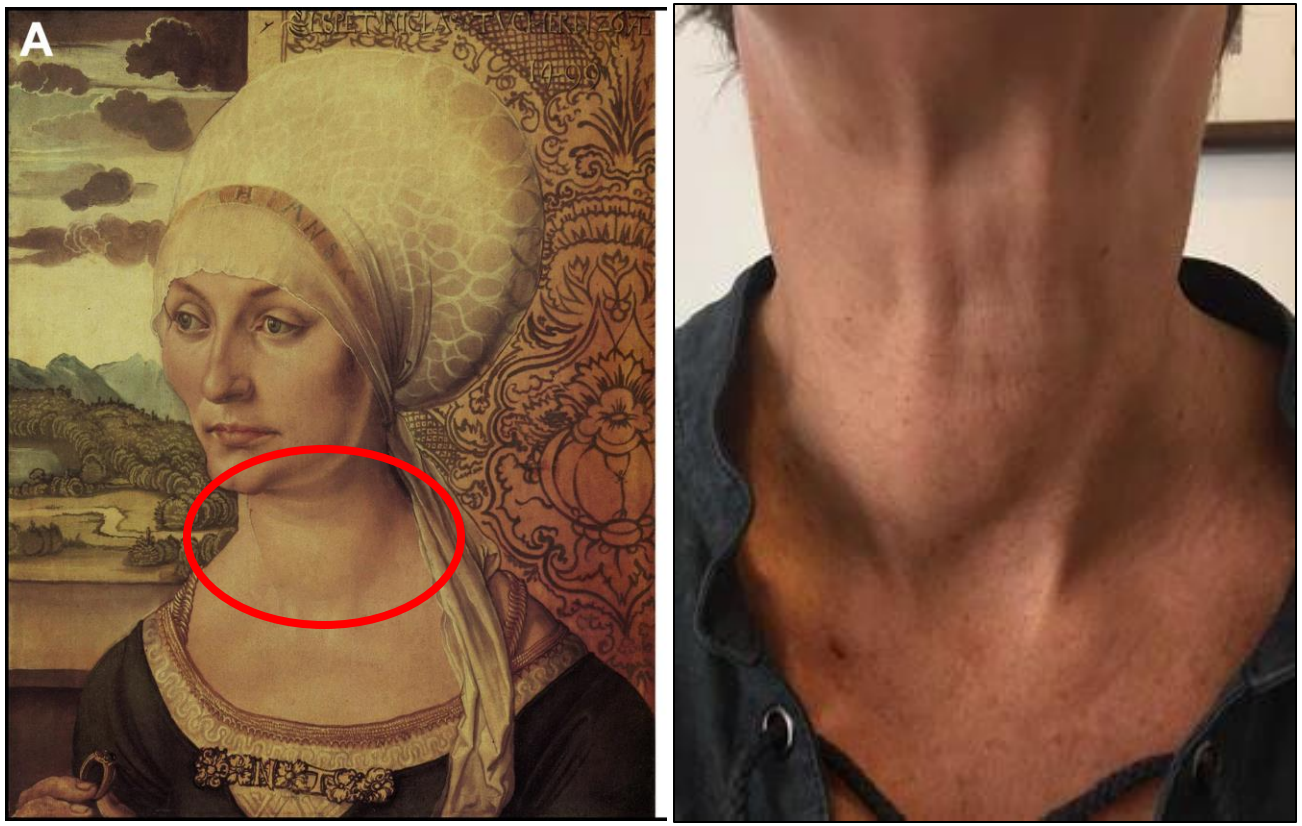
Goiter: enlargement of the thyroid gland, presented as lump on anterior aspect of the neck. Often due to iodine deficiency. Could be associated with:

Hyperthyroidism: overproduction of thyroid hormones.

Hypothyroidism: underproduction of thyroid hormones. Glands swell to try to produce more hormones.

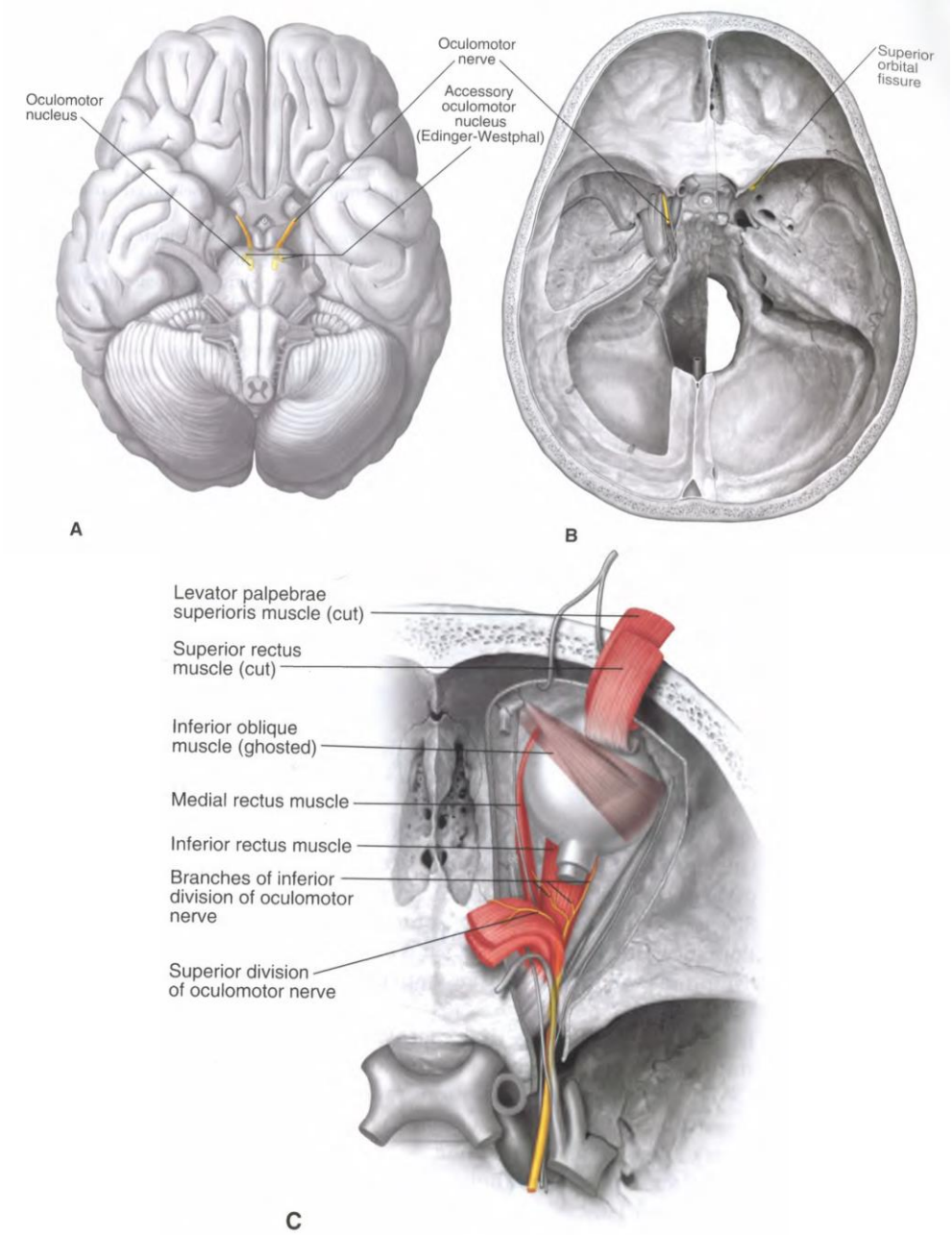
Could cause breathing/swallowing difficulties or speech loss due to compression of the trachea, larynx, esophagus, recurrent laryngeal nerve.

Goiter depicted in Renaissance paintings!



Source: Sterpetti et al. 2016; thyroidsurgery.com

CN III: Oculomotor



Fiber Type: somatic motor

Function: eye movement (superior, inferior, and medial recti, inferior oblique, and levator palpebrae superioris m.)

Additional functions to know for other lectures and for the comp exam.

Visceral motor: constriction of pupil (sphincter pupillae m.) and accommodation (ciliary m.)

Source: *Lippincott's Concise Illustrative Anatomy: Head & Neck*

Lecture Feedback

Lecture Feedback:

Click HERE

Questions:

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