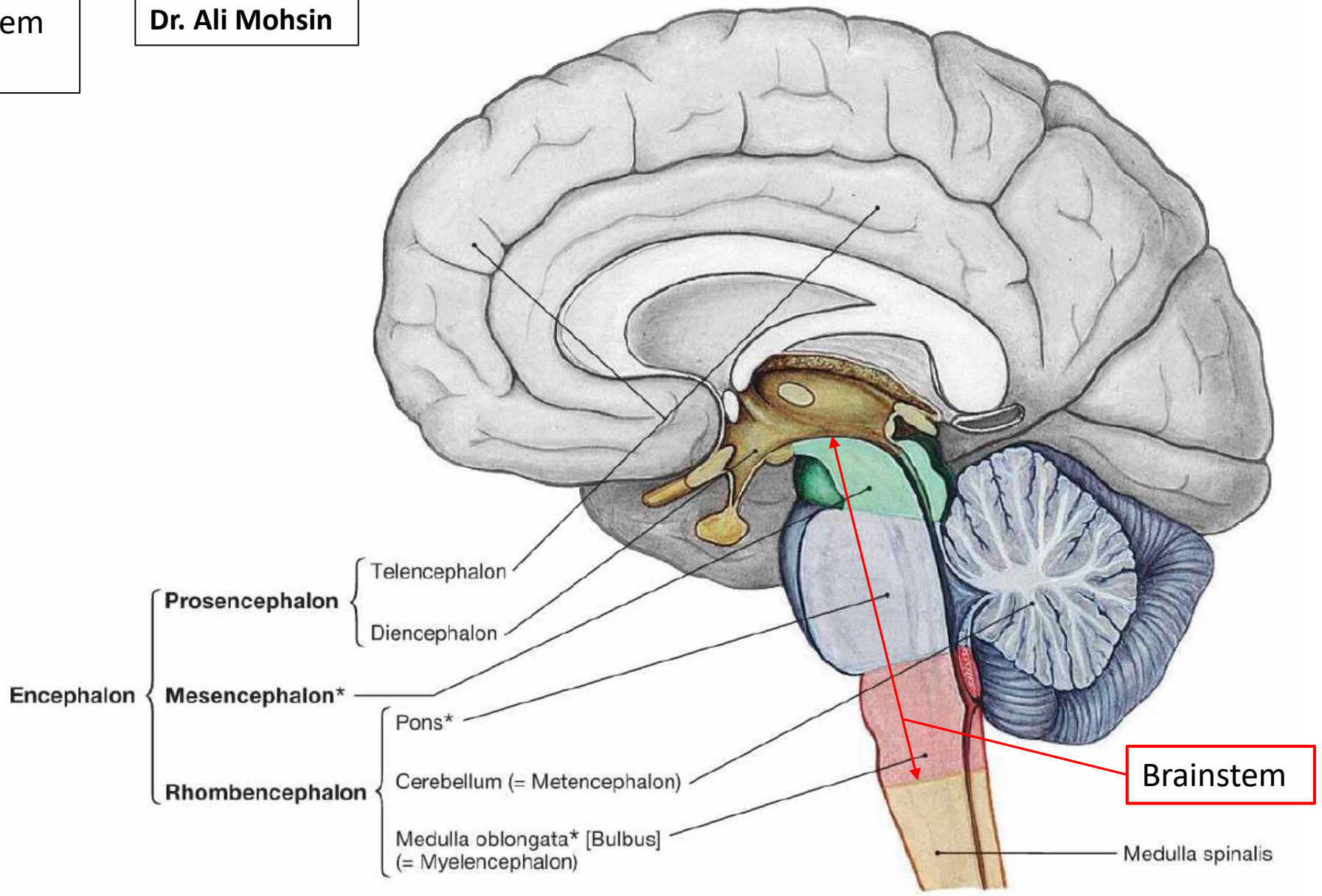
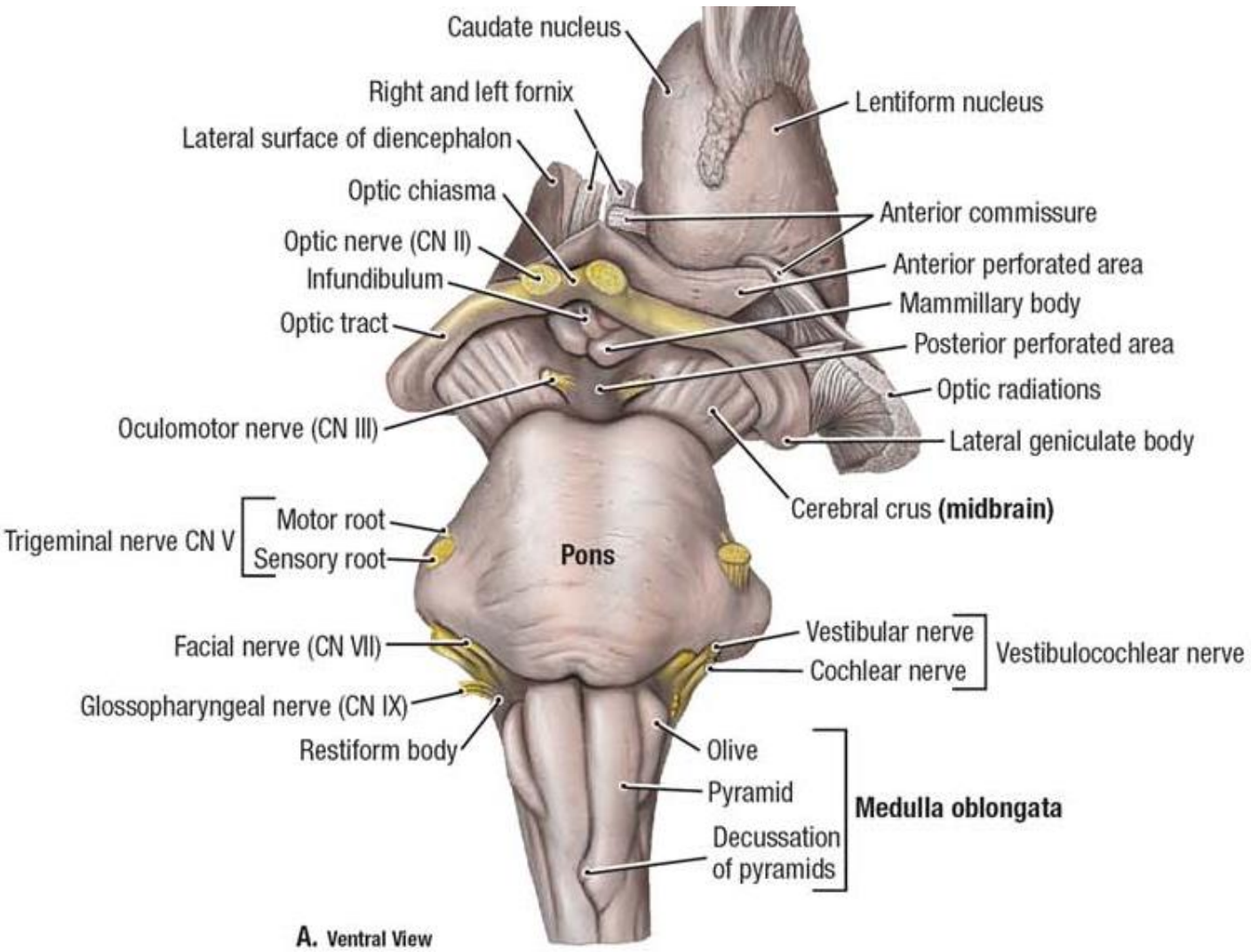
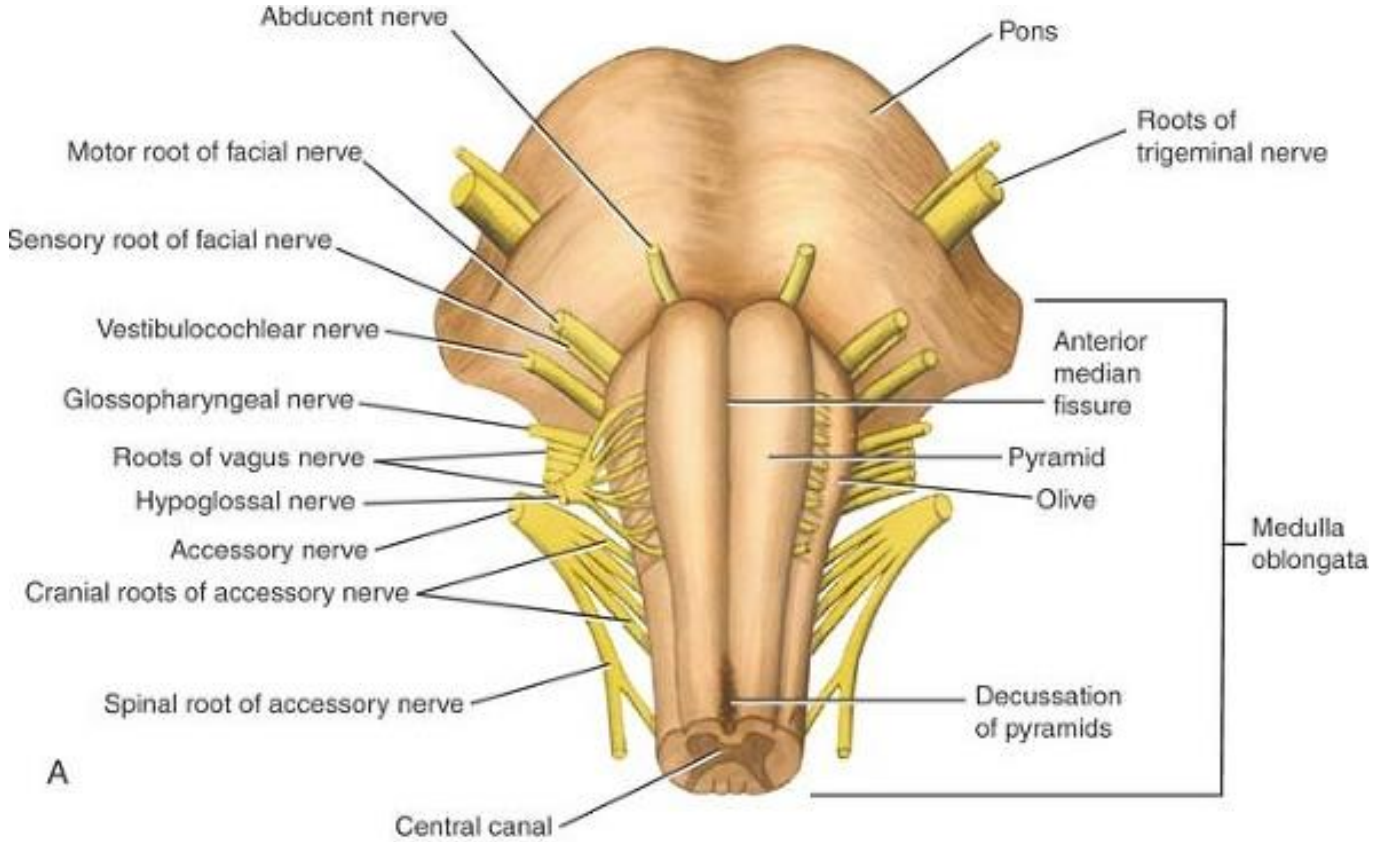
Neuroanatomy 4: Brainstem (Medulla Oblongata)

Dr. Ali Mohsin

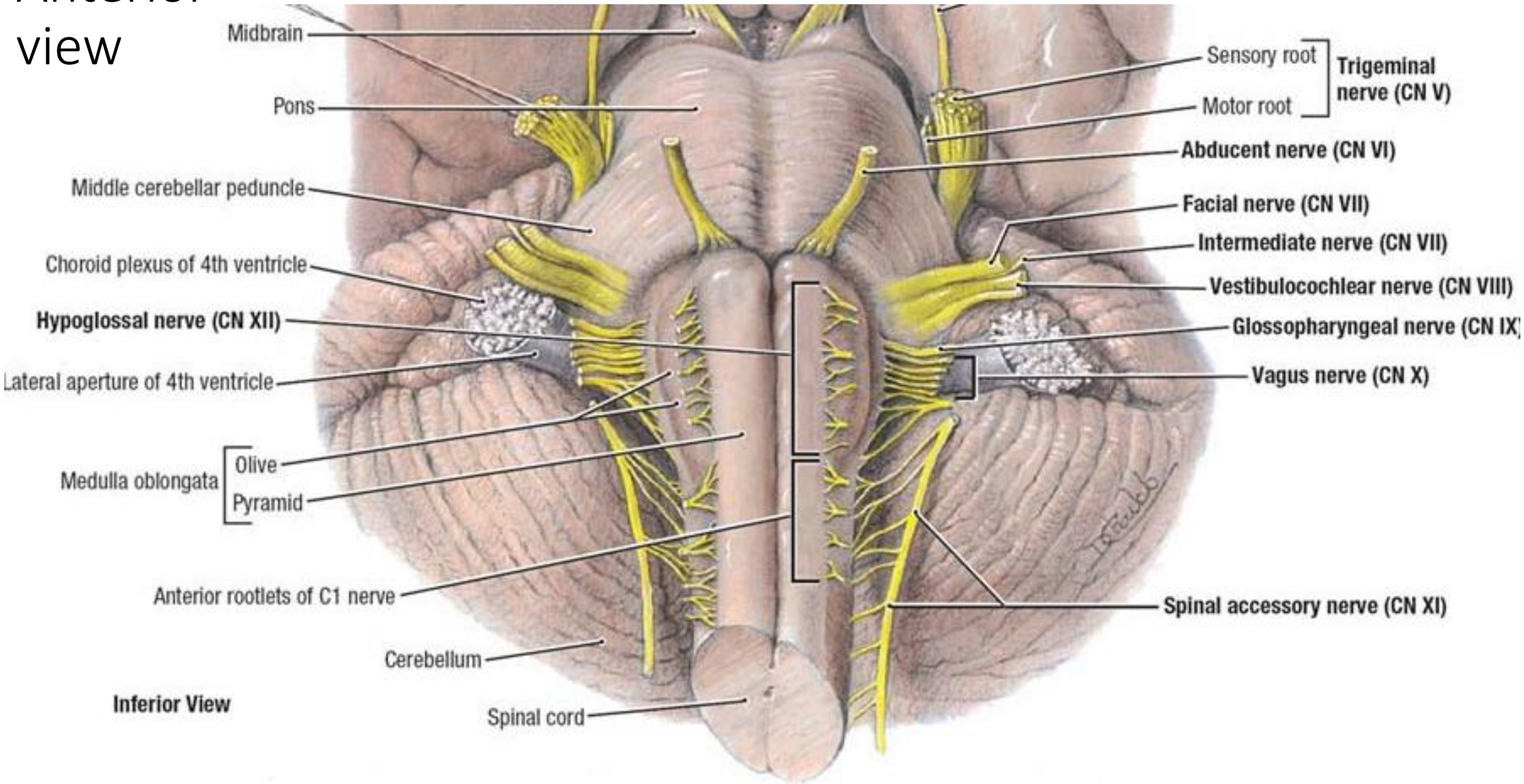


Anterior view

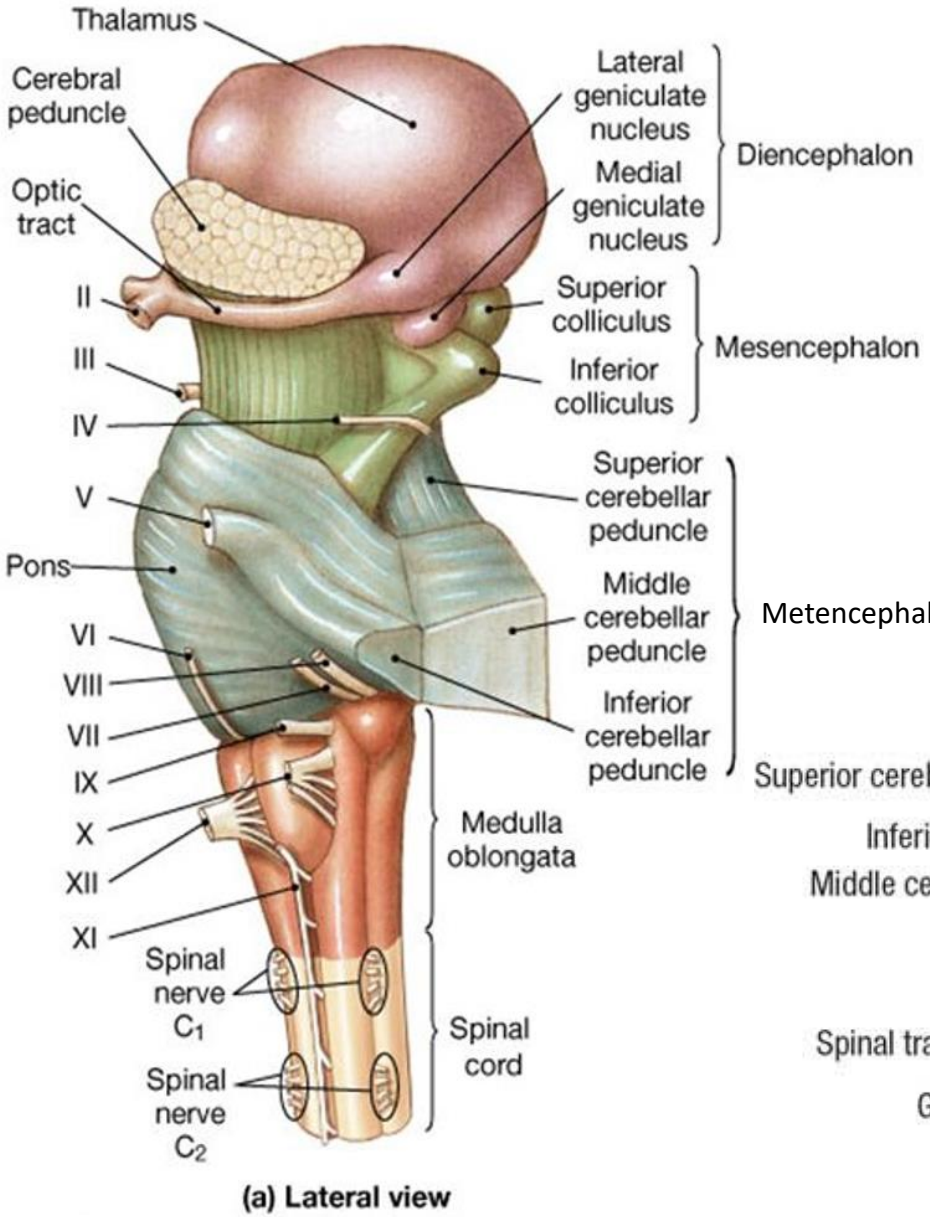




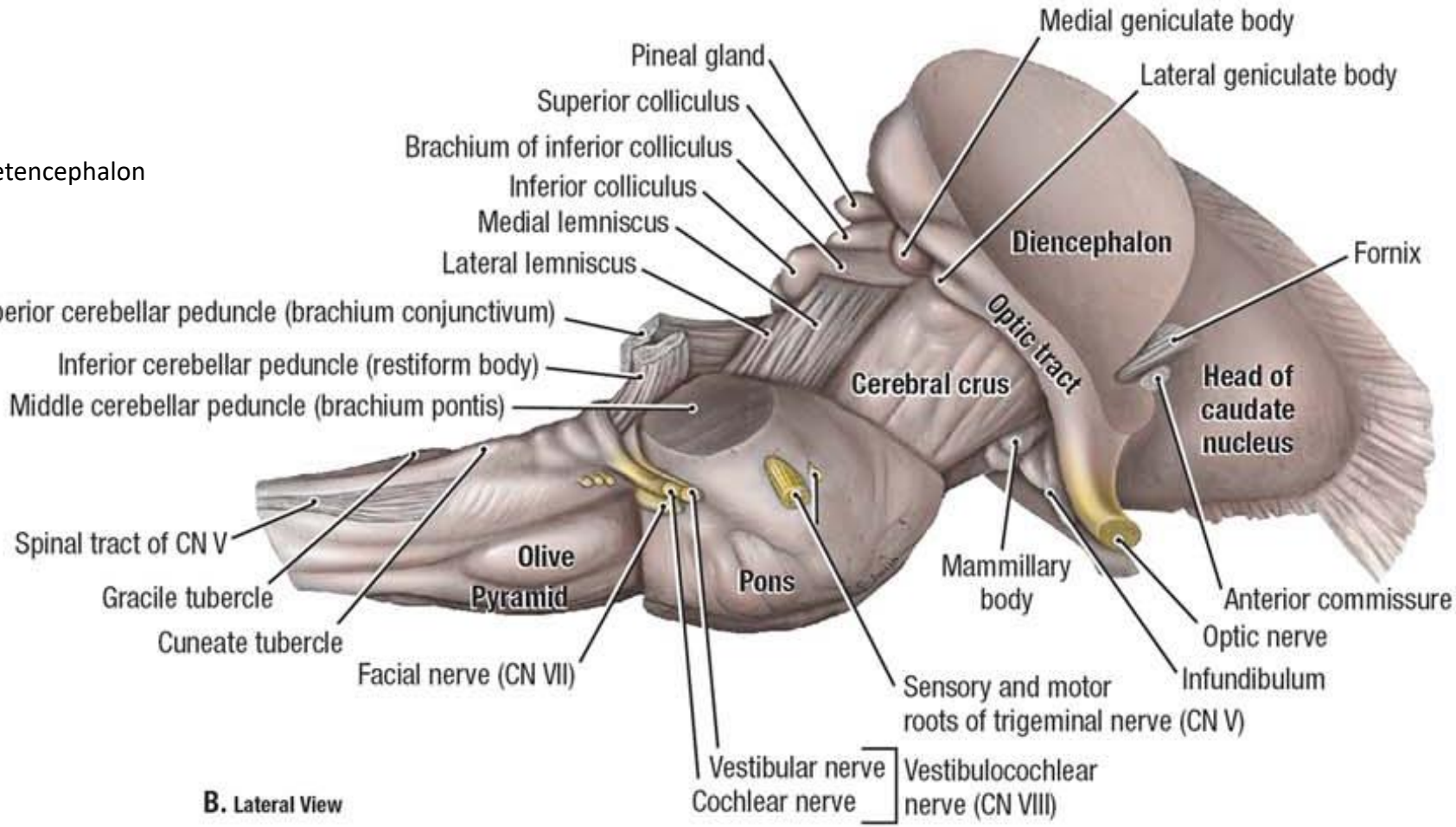
Anterior view



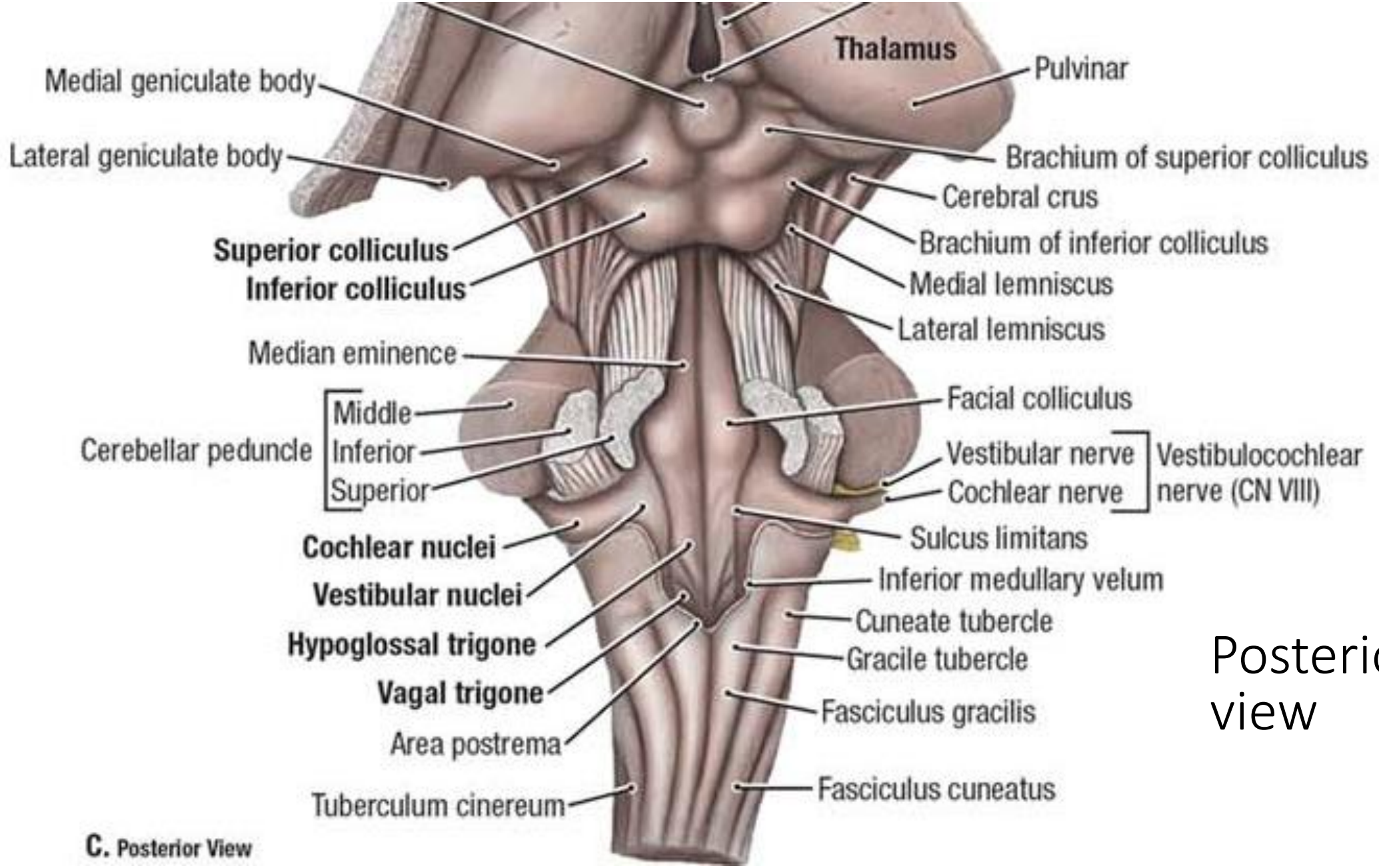
Lateral view



(a) Lateral view



B. Lateral View



Posterior view

Origin of Cranial Nerves Nuclei

Cranial Nerves		
II, VIII	←	SSA — Special somatic afferent column
V, VII, IX, X	←	GSA — General somatic afferent column
I, VII, IX, X	←	SVA — Special visceral afferent column
VII, IX, X	←	GVA — General visceral afferent column
III, VII, IX, X	←	GVE — General visceral efferent column
V, VII, IX, X, XI	←	SVE — Branchial efferent column
III, IV, VI, XII	←	GSE — Somatic efferent column

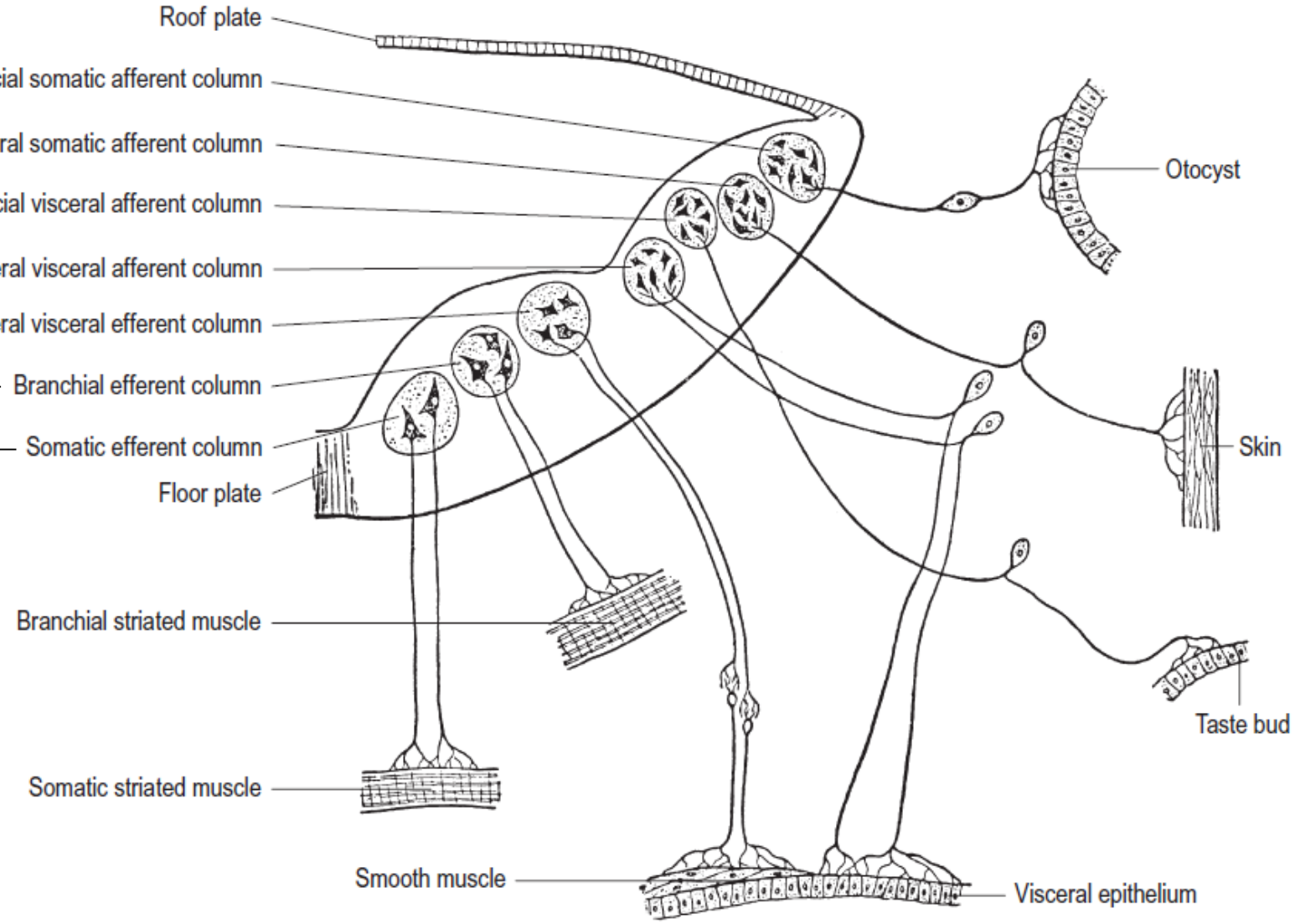
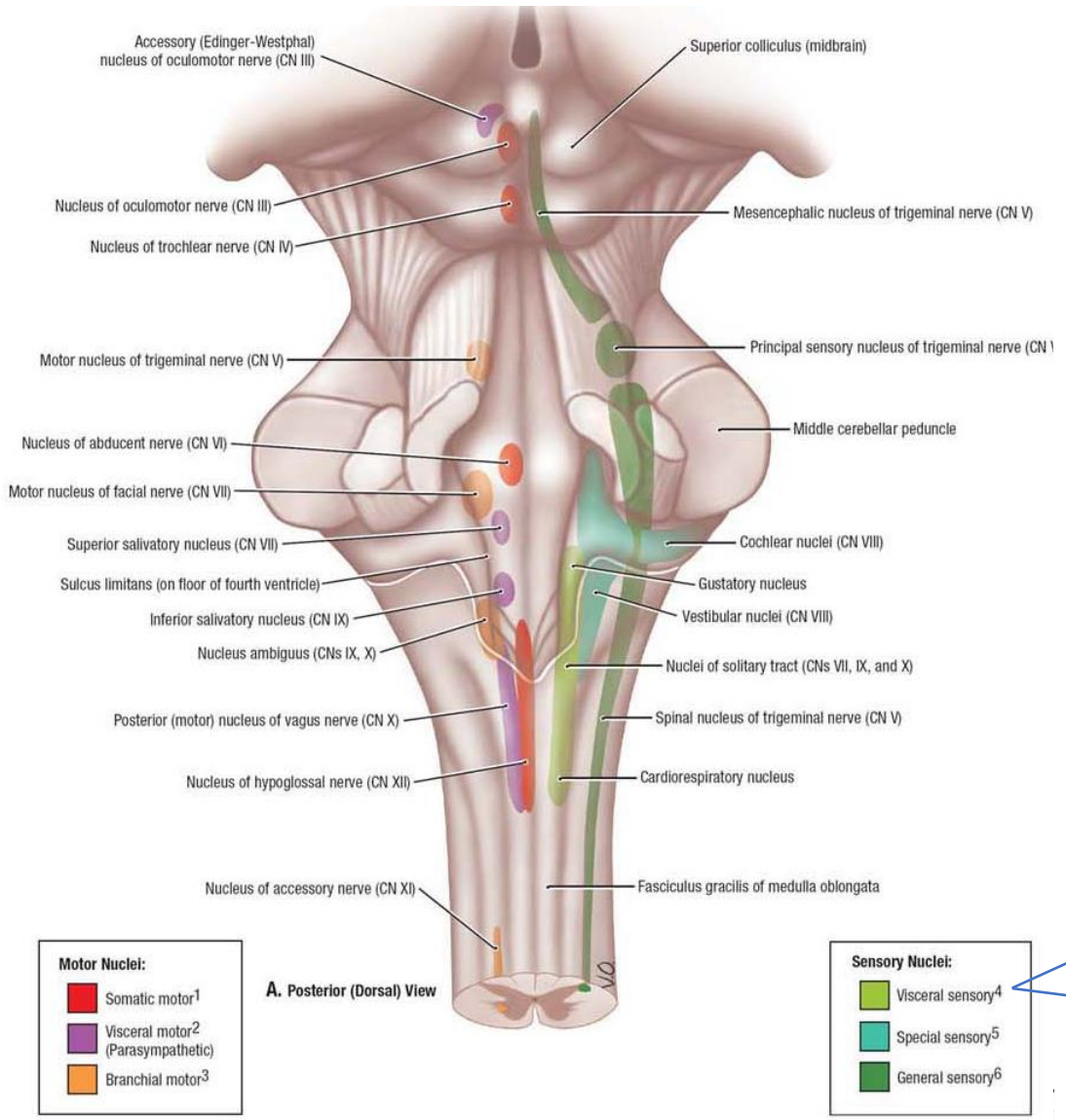
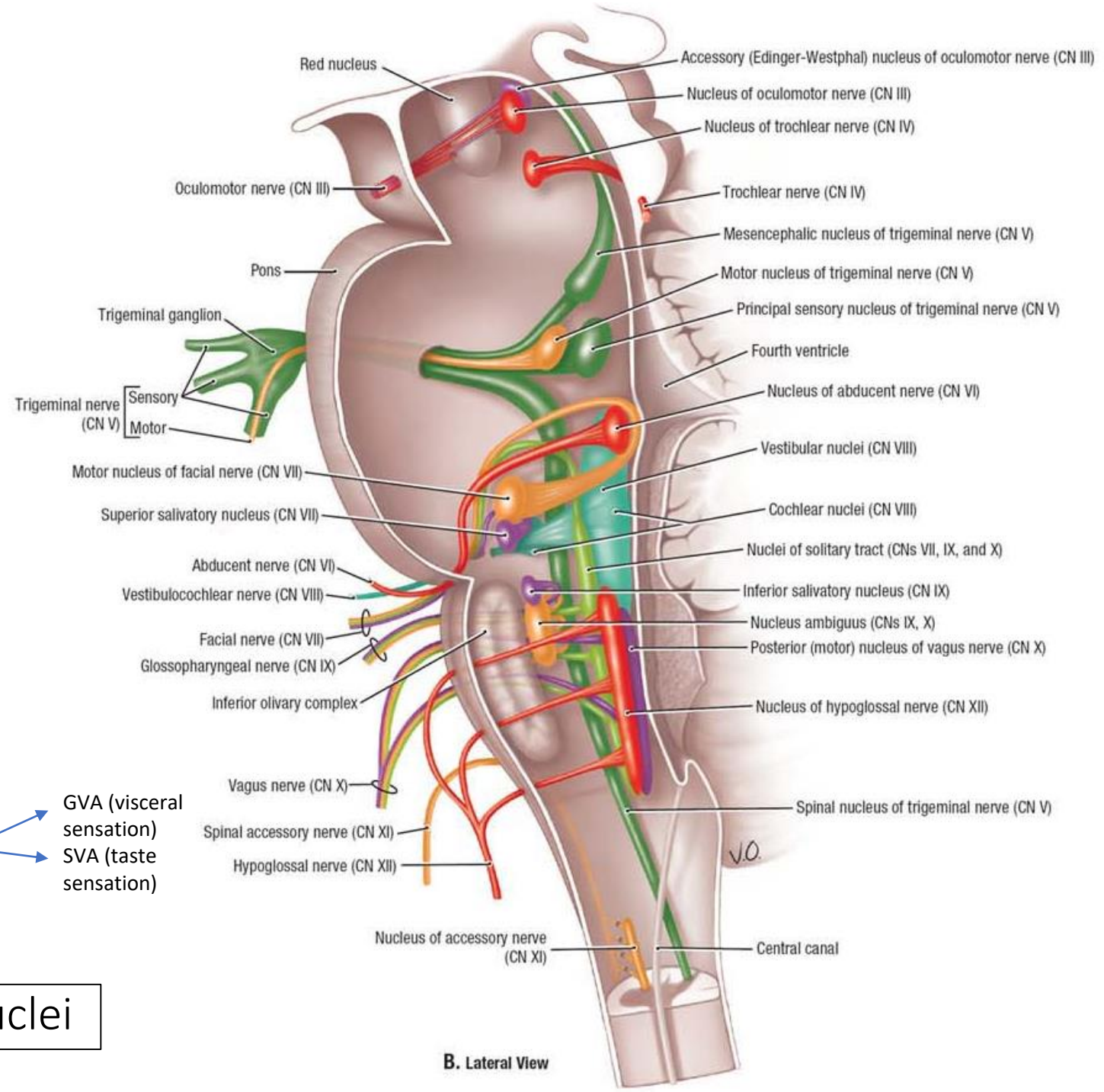


Fig. 3.22 *Transverse section through the developing hindbrain of a human embryo, 10.5 mm long, showing the relative positions of the columns of grey matter from which the nuclei associated with the different nerve components are derived. Postganglionic neurones are associated with the general visceral efferent column, bipolar neurones are associated with the otocyst and unipolar afferent neurones are associated with the other alar lamina columns.*



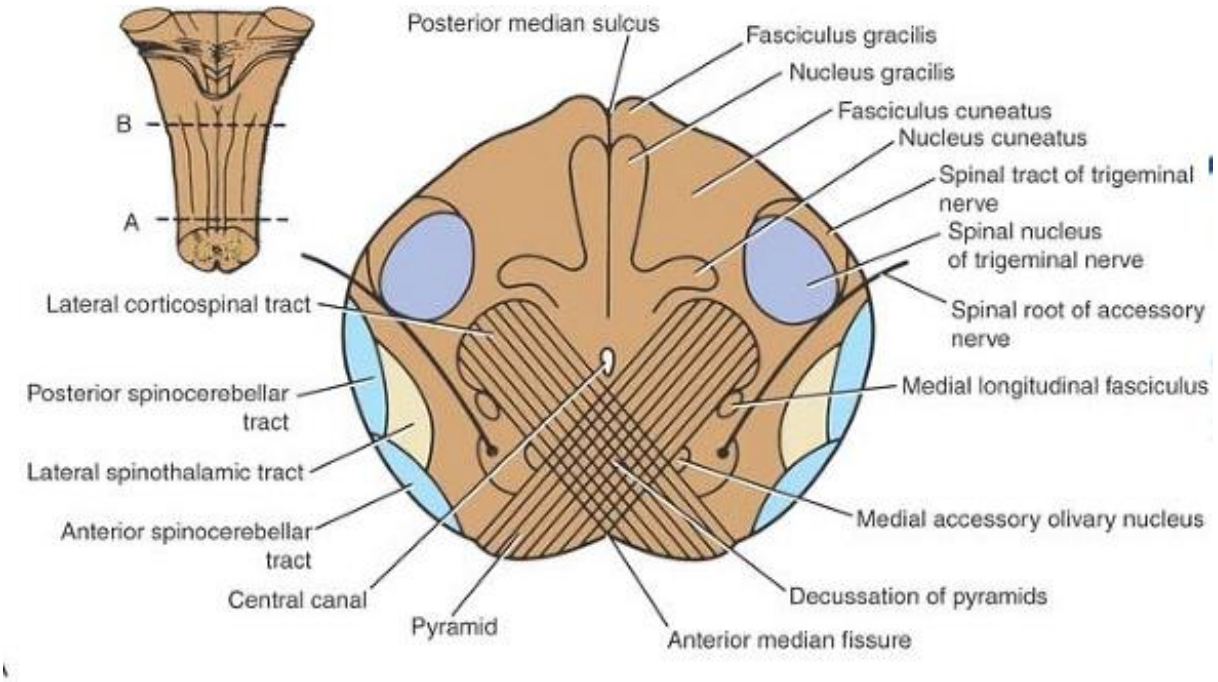
GVA (visceral sensation)
SVA (taste sensation)



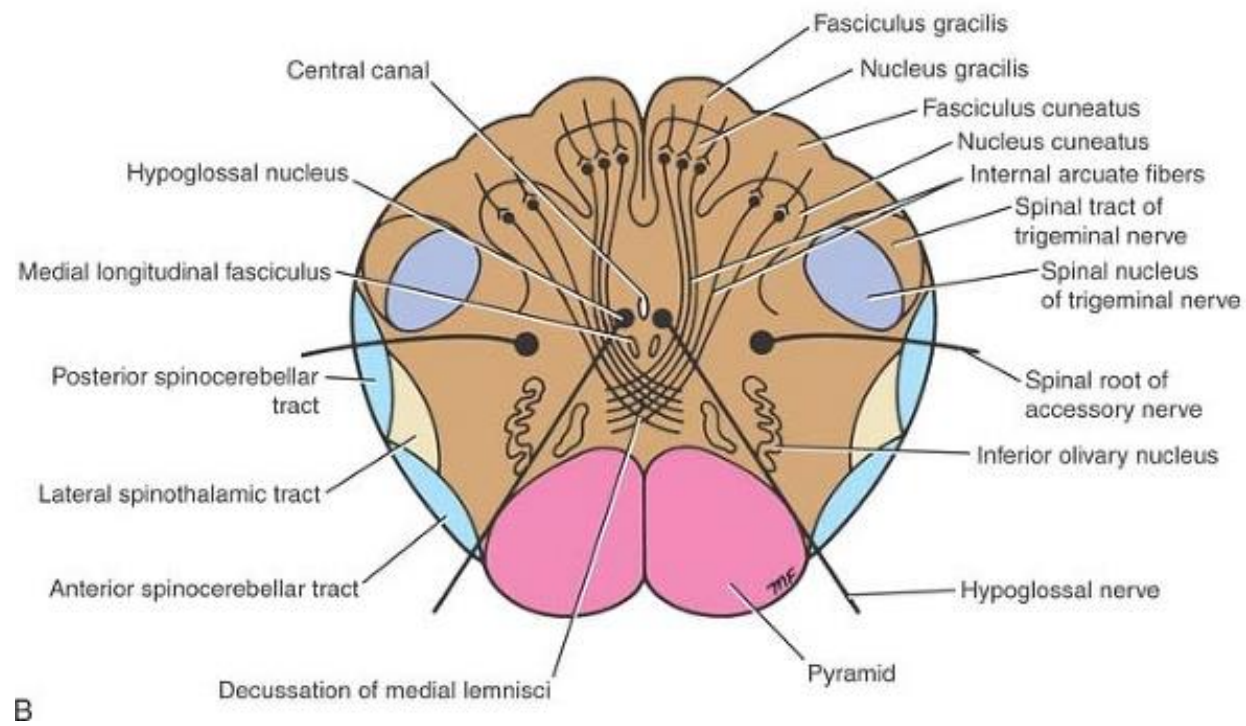
Cranial Nerves Nuclei

Cross-sections of the Medulla Oblongata

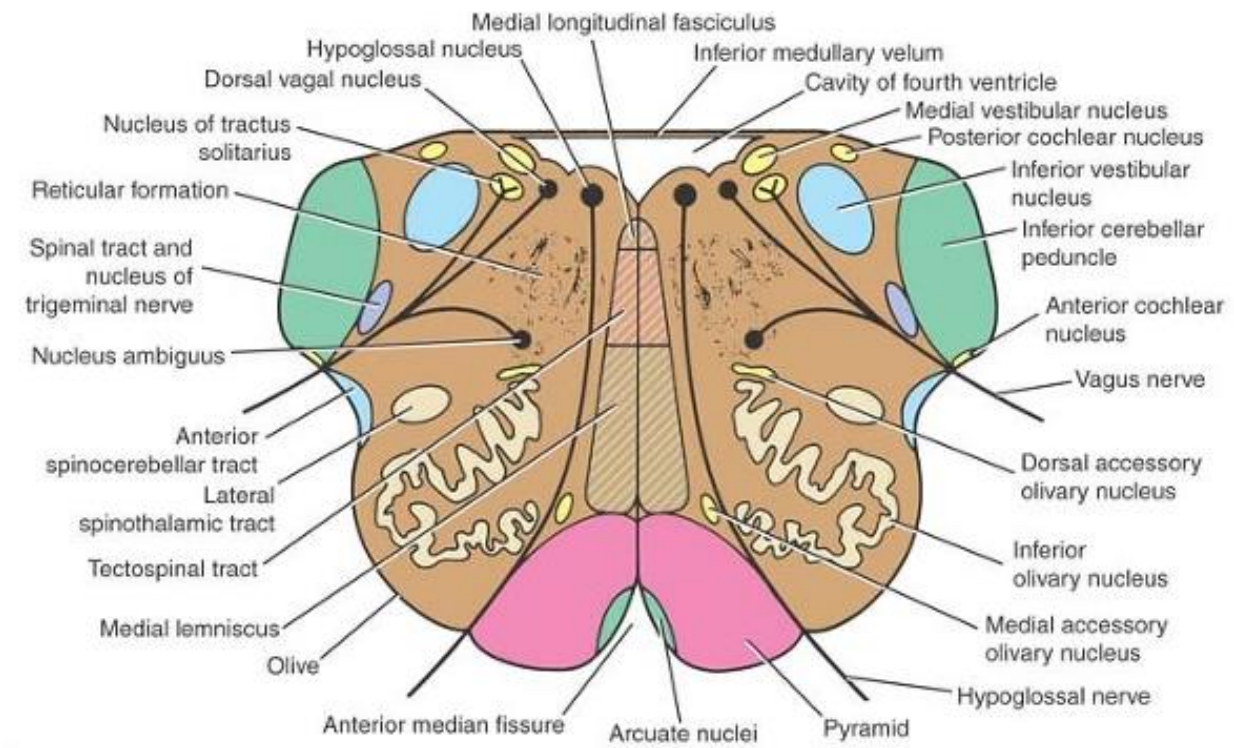
Level of pyramidal decussation (lower third)



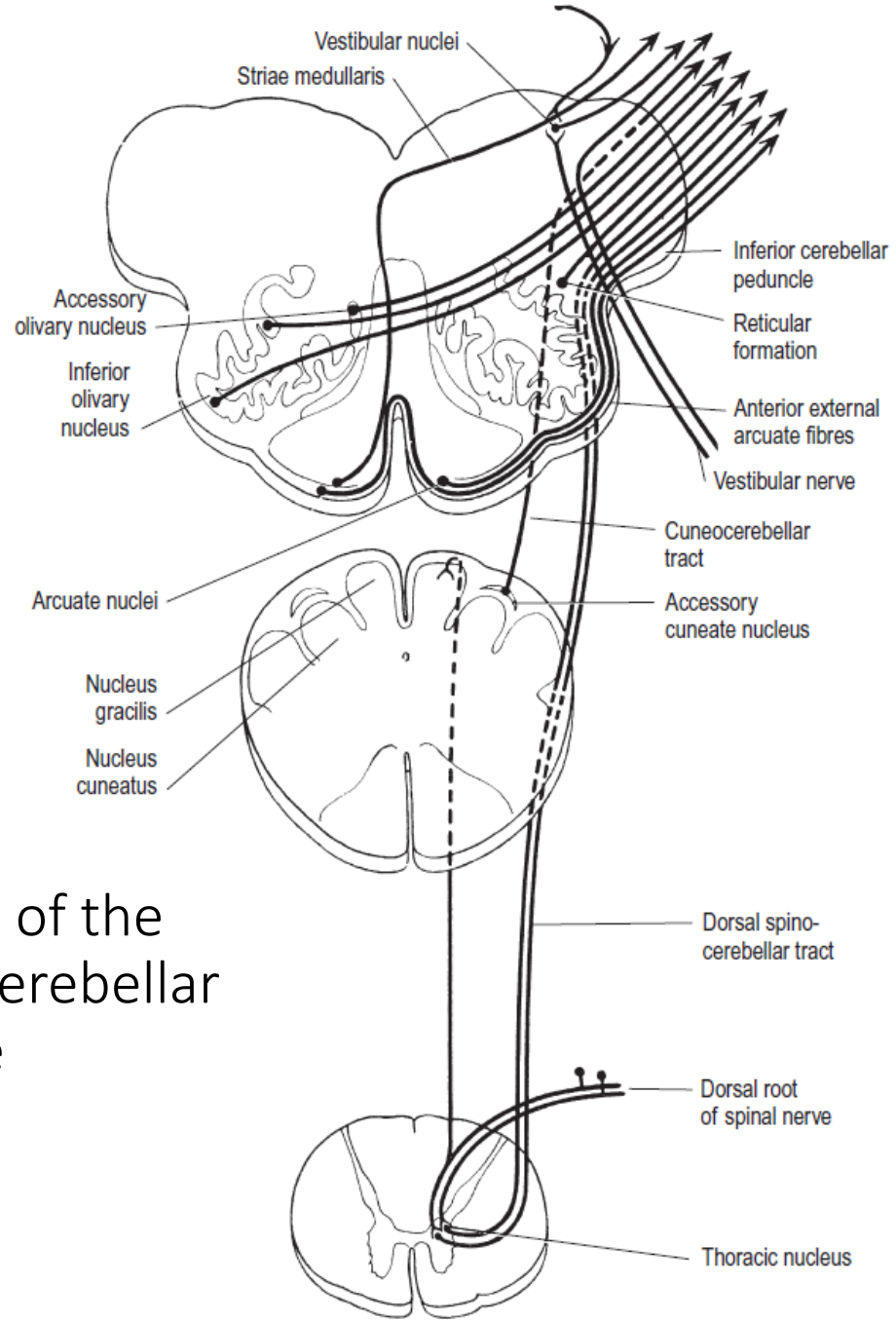
Level of lemniscal decussation (middle third)



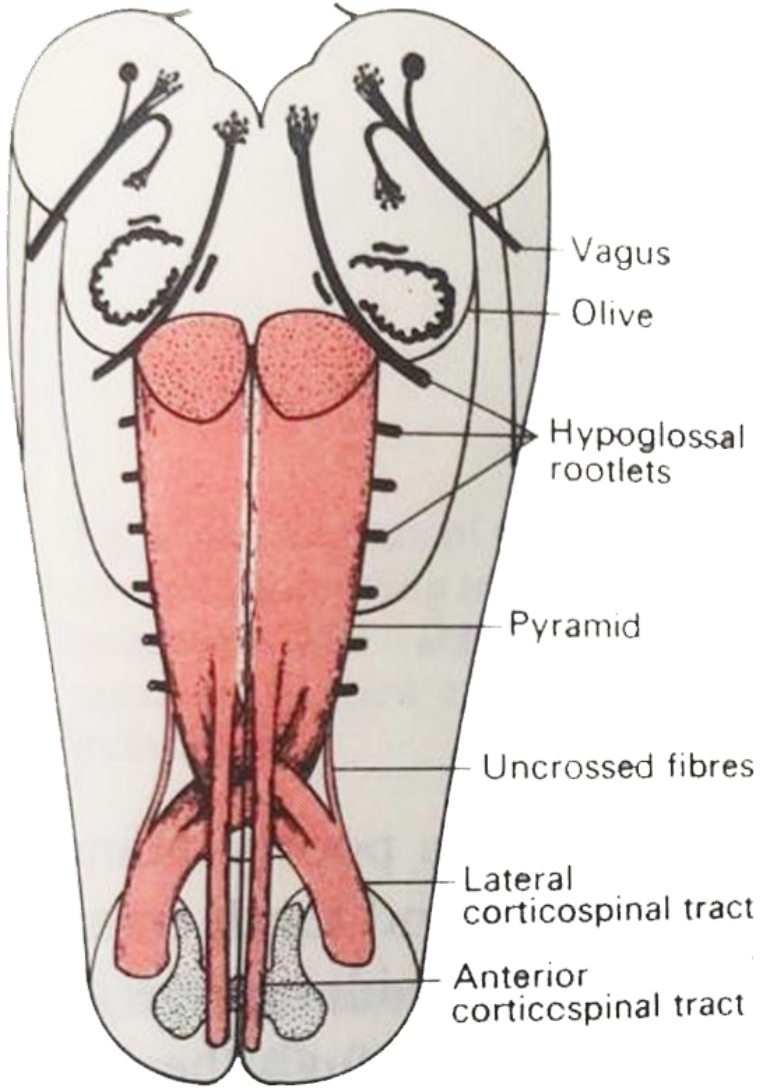
Level of olivary nuclei (upper third)



Afferents of the inferior cerebellar peduncle



Pyramidal decussation in the medulla



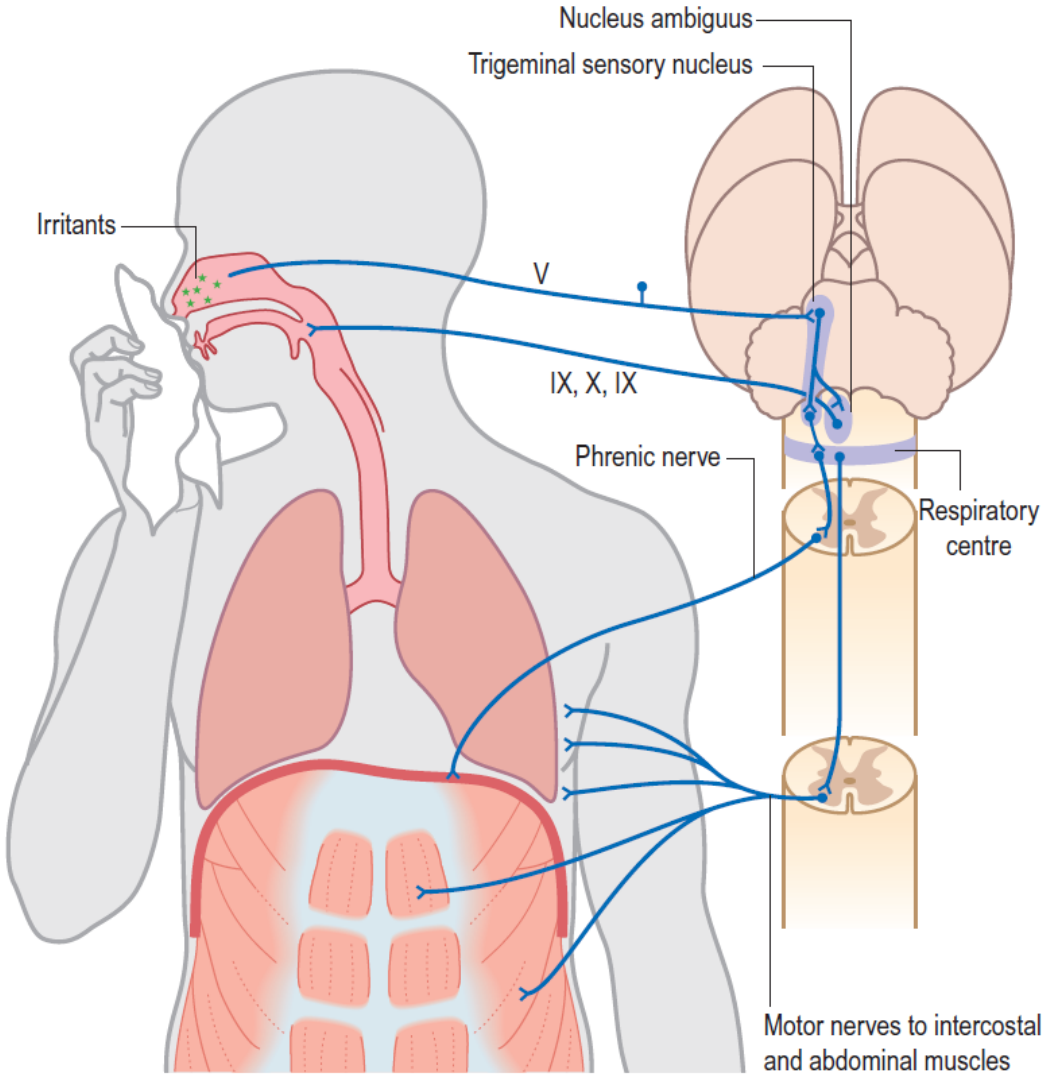


Fig. 10.16 *Sneeze and cough reflexes. (Redrawn from MacKinnon, P., Morris, J.*

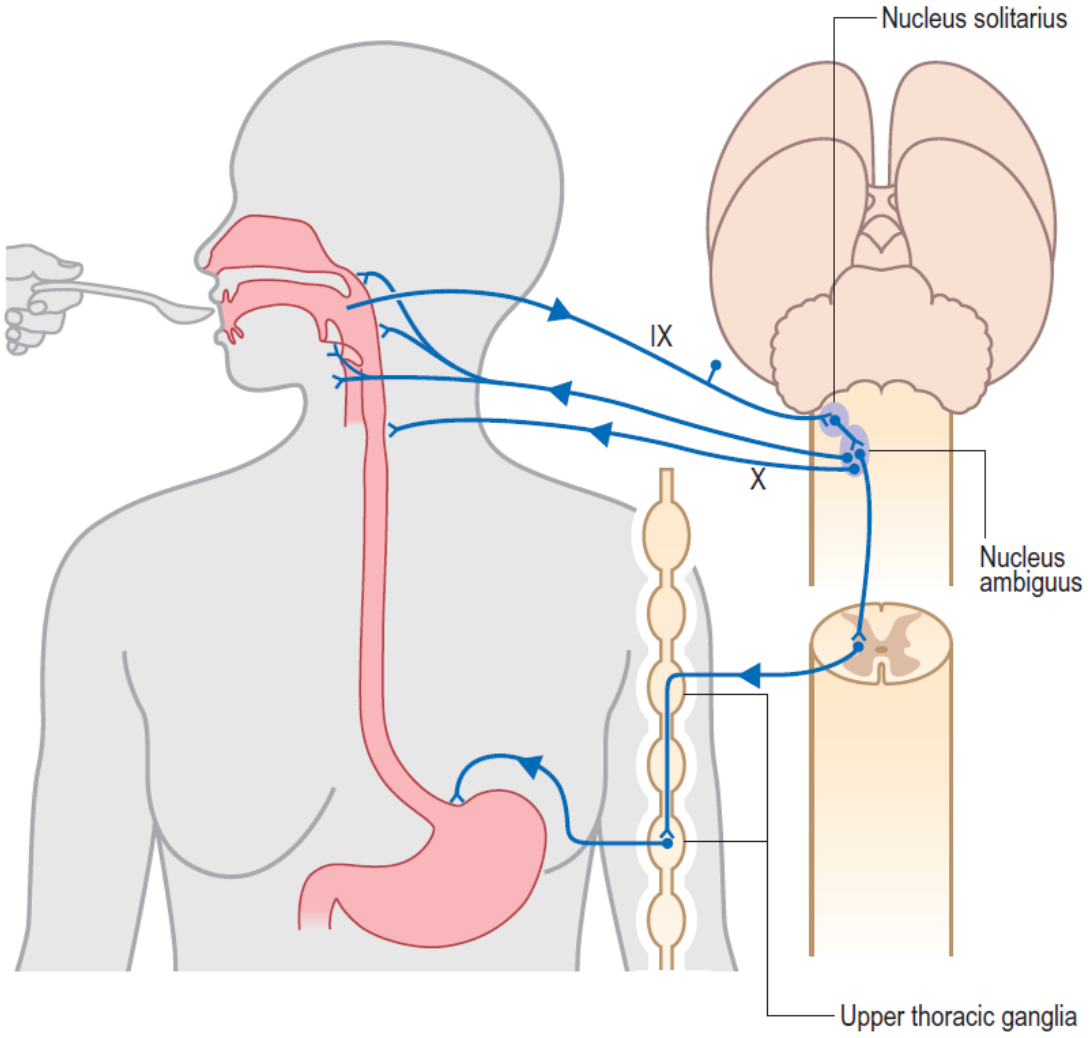


Fig. 10.15 *Swallowing and gag reflexes. (Redrawn from MacKinnon, P., Morris, J.*

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