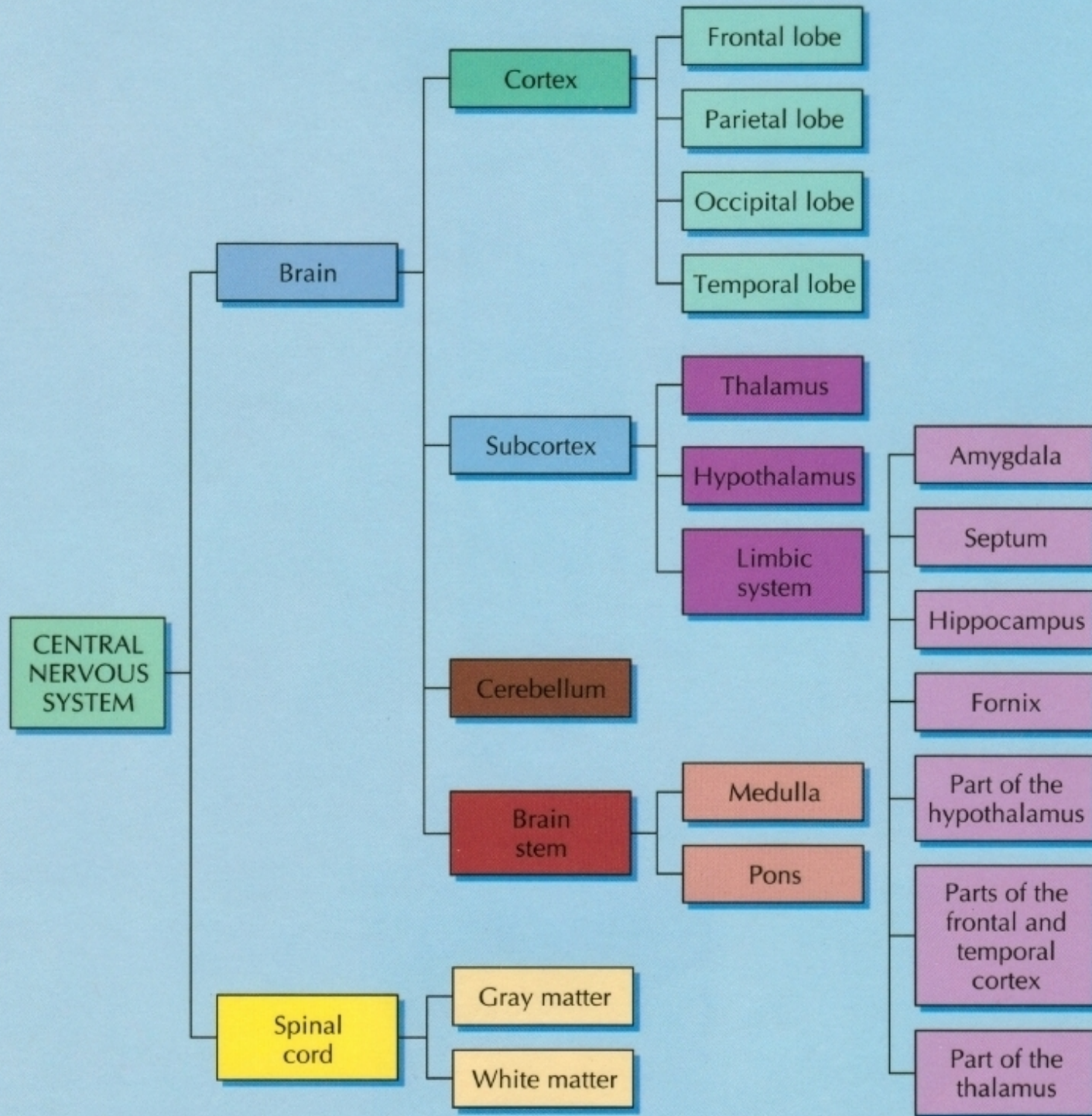
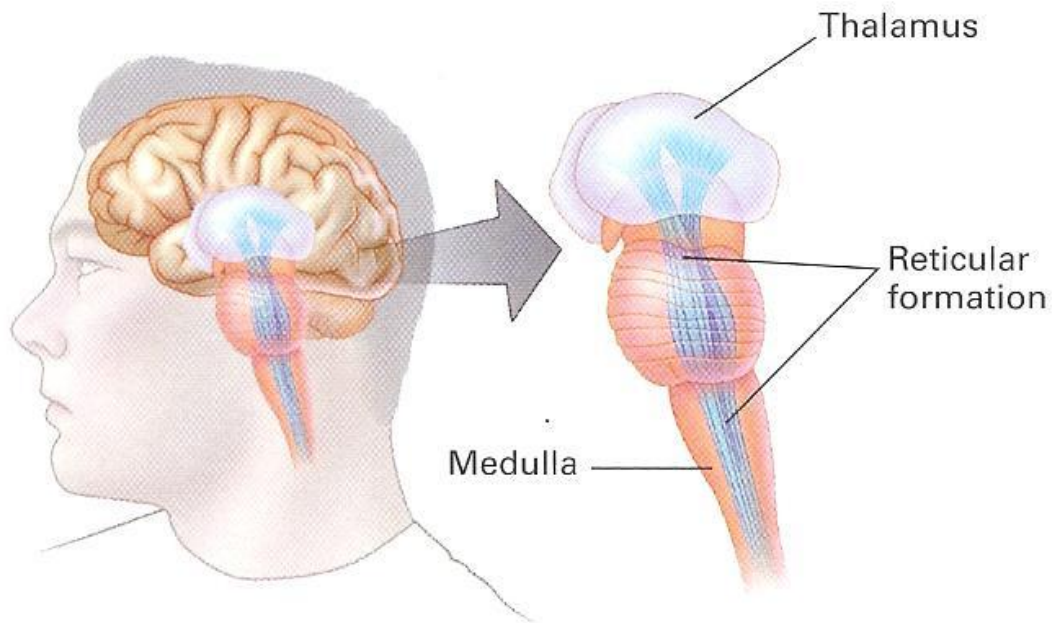
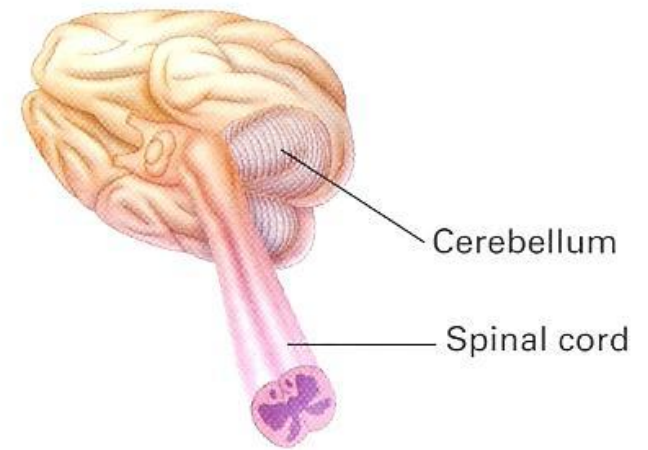


Divisions of the Central Nervous System

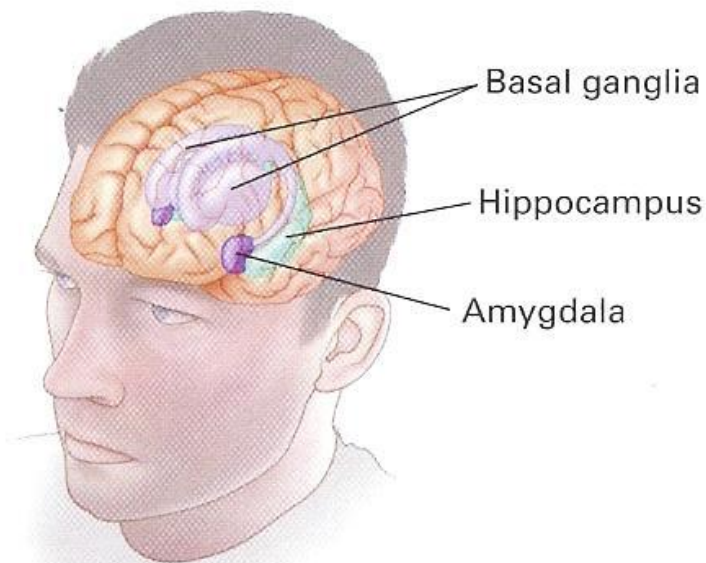




(a)



(b)

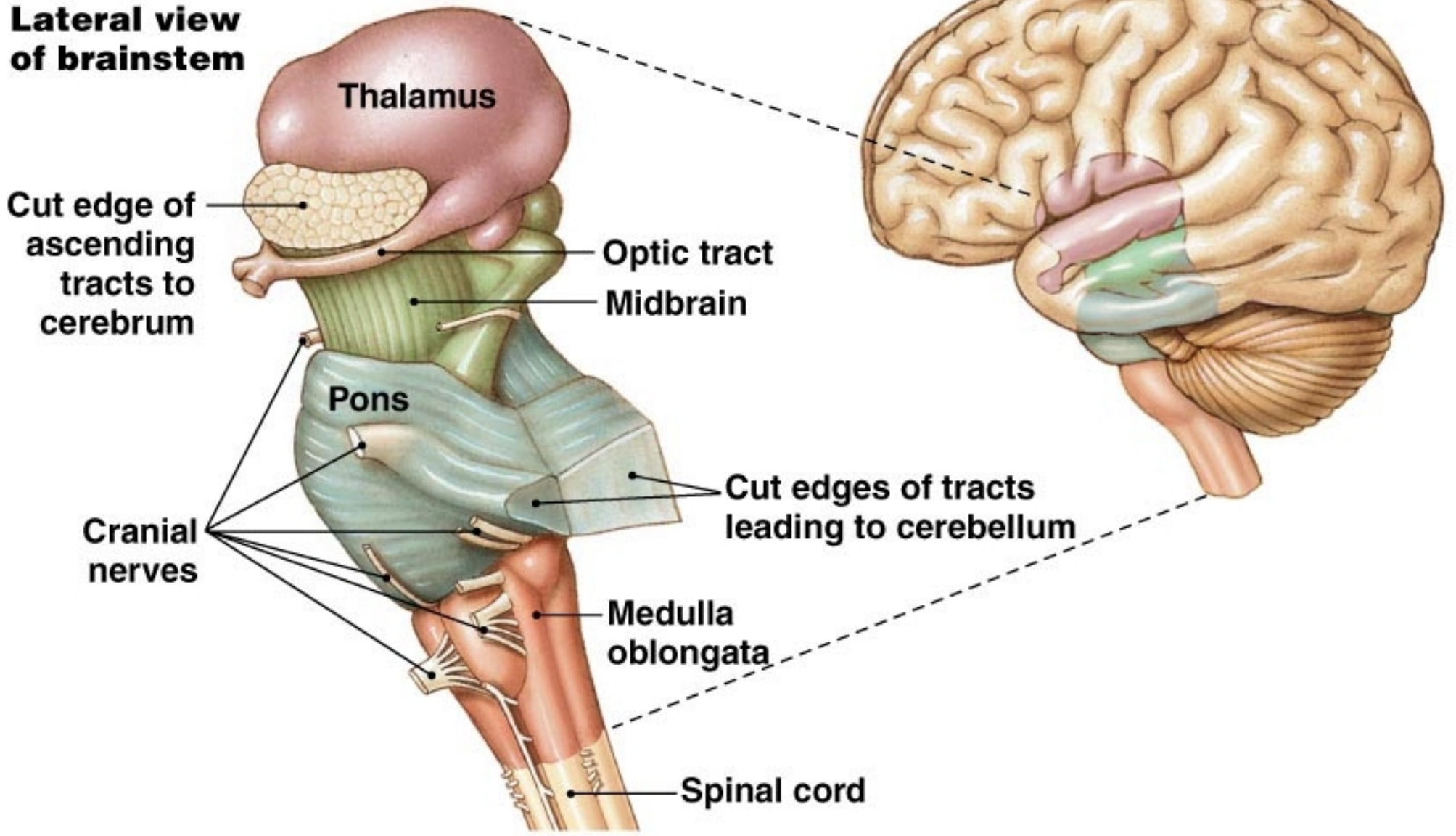


(c)

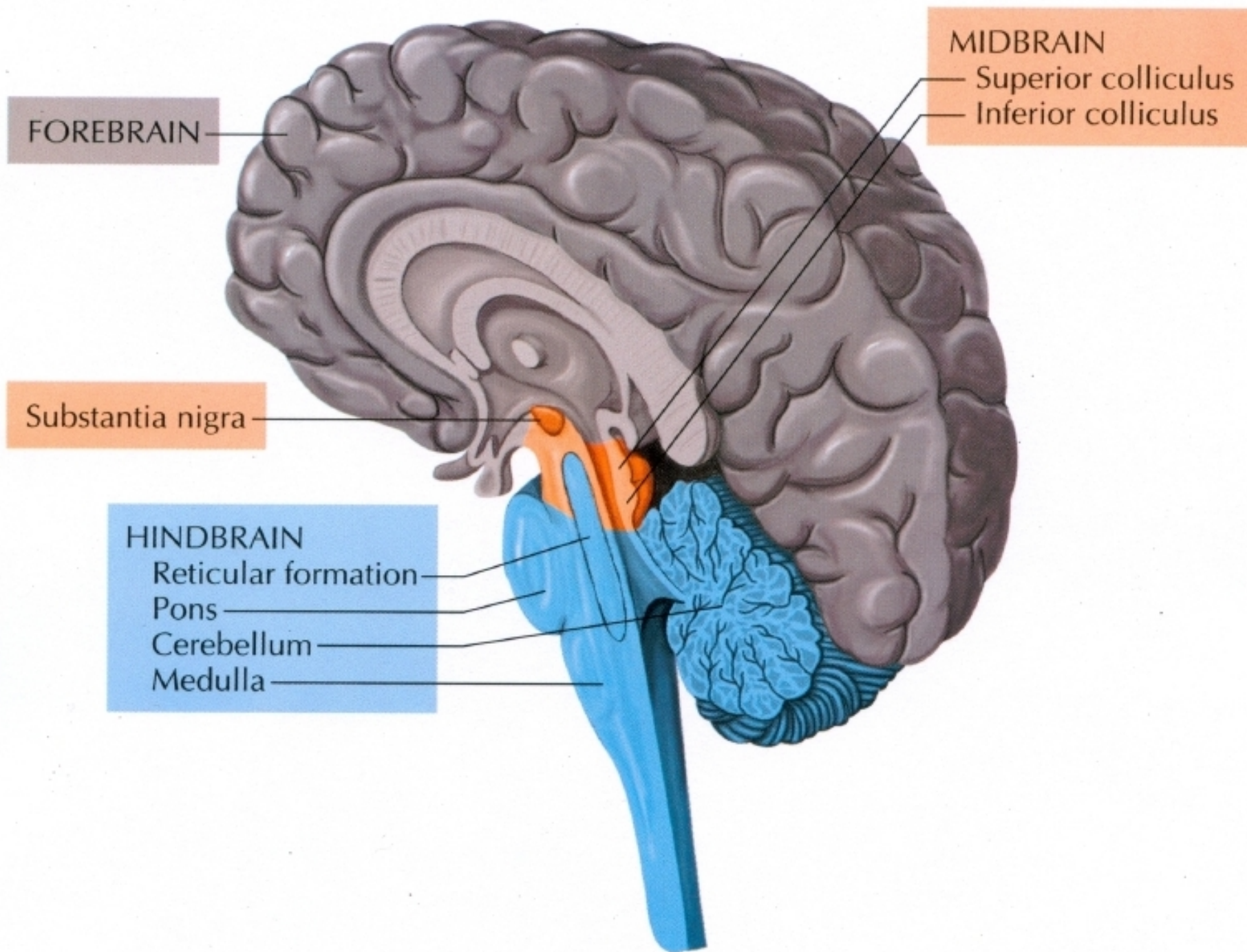
Central Core Brain Structures

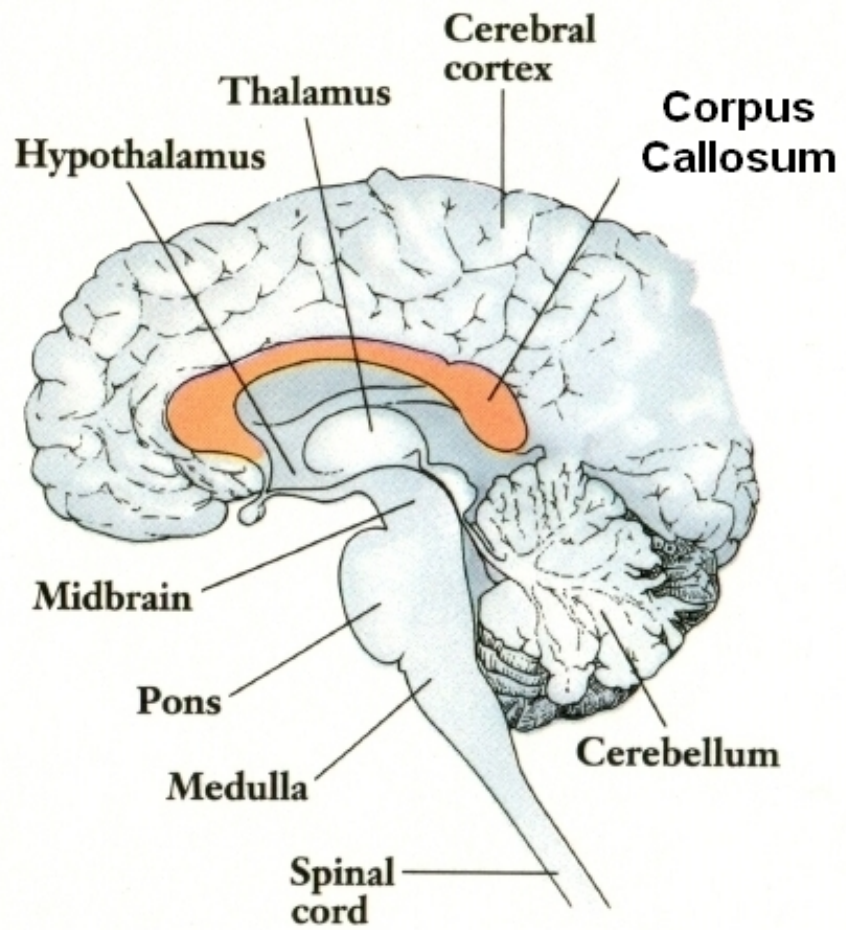
The central core of the brain includes (a) the brain stem (which includes the medulla), the thalamus attached to the top of the brain stem, and the reticular formation which passes through both; (b) the cerebellum, which extends from the back of the brainstem; and (c) the basal ganglia that surround the thalamus.

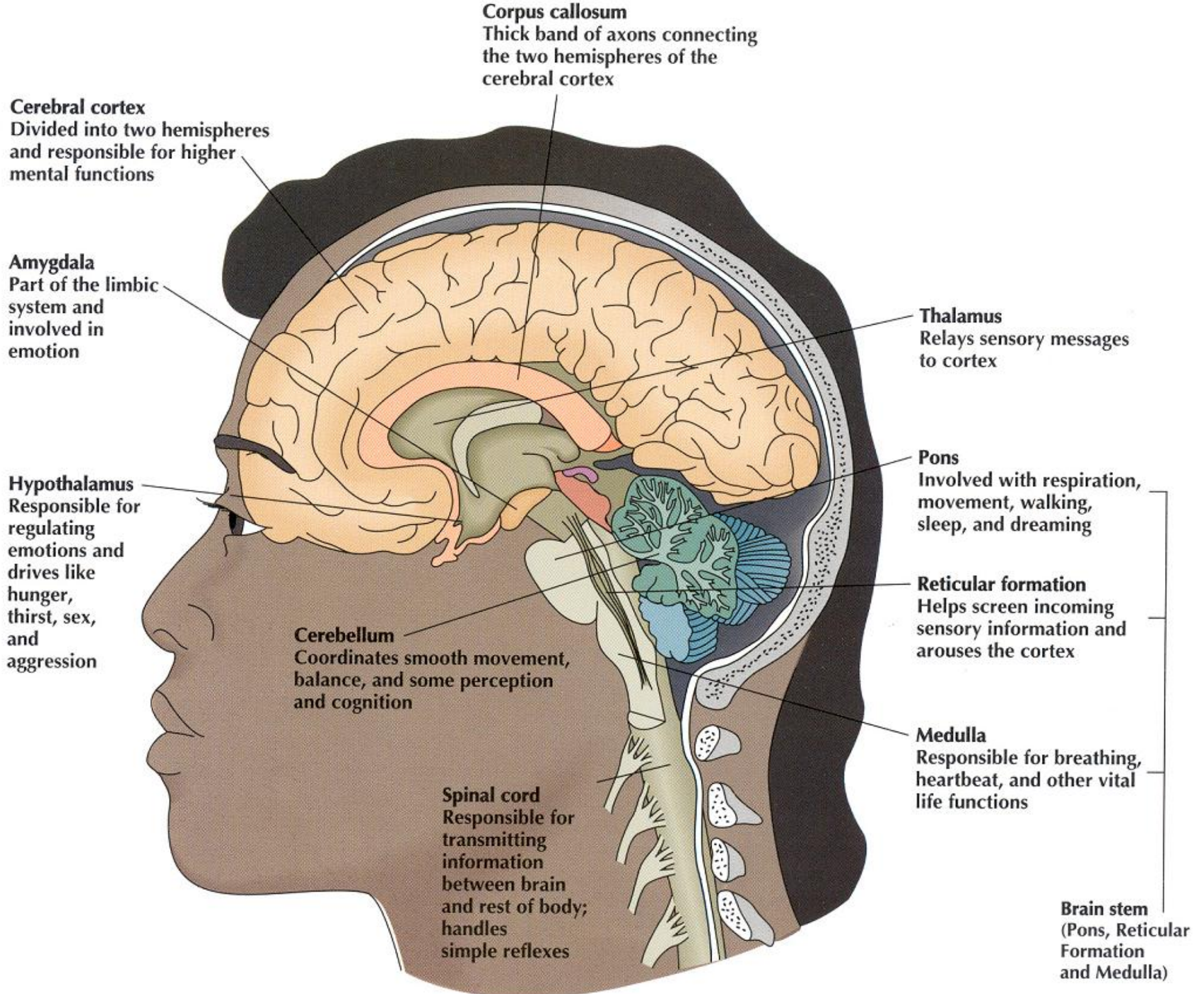
**Lateral view
of brainstem**

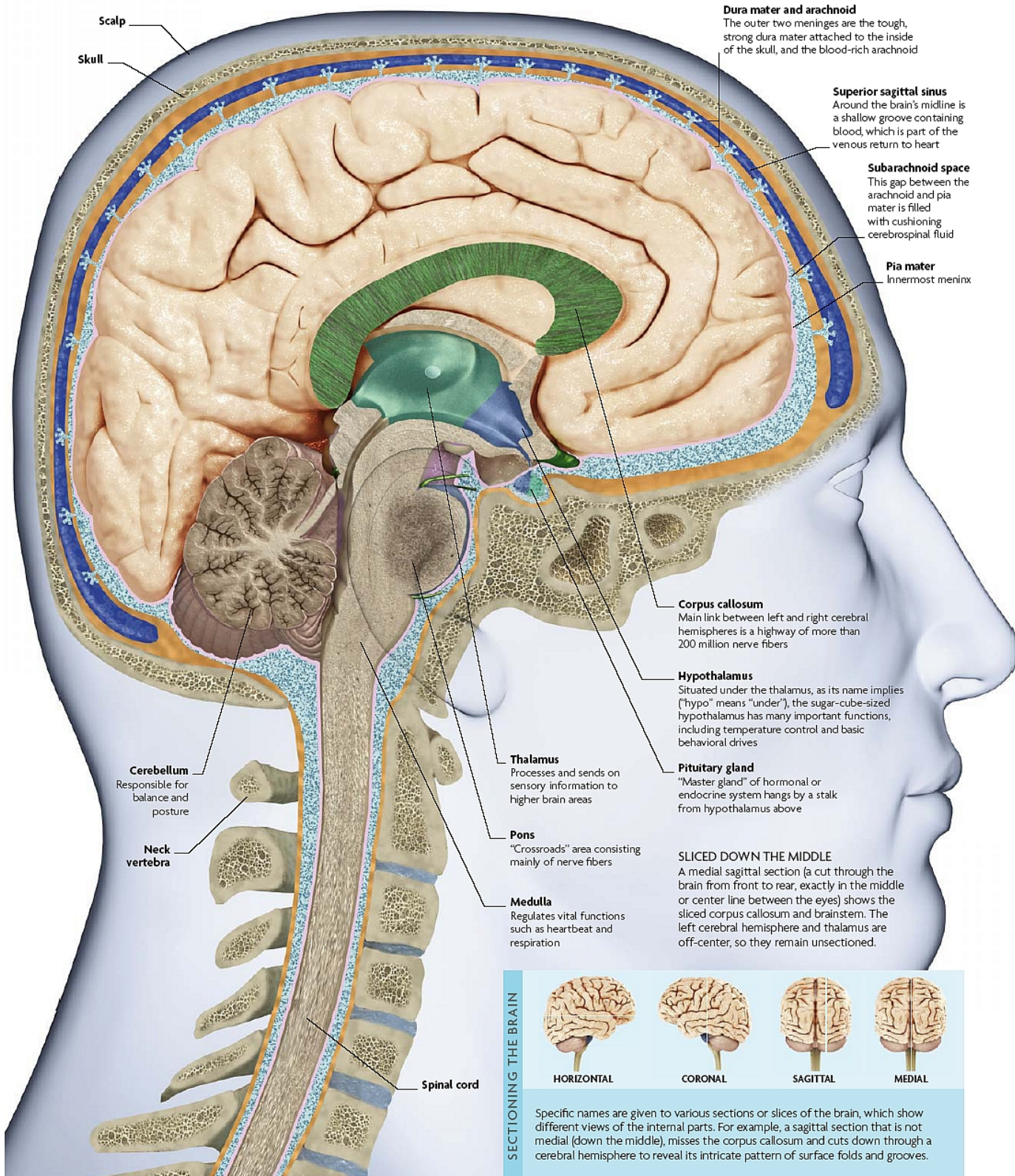


The Hindbrain and Midbrain









Scalp
Skull

Dura mater and arachnoid
The outer two meninges are the tough, strong dura mater attached to the inside of the skull, and the blood-rich arachnoid

Superior sagittal sinus
Around the brain's midline is a shallow groove containing blood, which is part of the venous return to heart

Subarachnoid space
This gap between the arachnoid and pia mater is filled with cushioning cerebrospinal fluid

Pia mater
Innermost meninx

Corpus callosum
Main link between left and right cerebral hemispheres is a highway of more than 200 million nerve fibers

Hypothalamus
Situated under the thalamus, as its name implies ("hypo" means "under"), the sugar-cube-sized hypothalamus has many important functions, including temperature control and basic behavioral drives

Pituitary gland
"Master gland" of hormonal or endocrine system hangs by a stalk from hypothalamus above

Thalamus
Processes and sends on sensory information to higher brain areas

Pons
"Crossroads" area consisting mainly of nerve fibers

Medulla
Regulates vital functions such as heartbeat and respiration

Cerebellum
Responsible for balance and posture

Neck vertebra

Spinal cord

SLICED DOWN THE MIDDLE
A medial sagittal section (a cut through the brain from front to rear, exactly in the middle or center line between the eyes) shows the sliced corpus callosum and brainstem. The left cerebral hemisphere and thalamus are off-center, so they remain unsectioned.



Specific names are given to various sections or slices of the brain, which show different views of the internal parts. For example, a sagittal section that is not medial (down the middle), misses the corpus callosum and cuts down through a cerebral hemisphere to reveal its intricate pattern of surface folds and grooves.