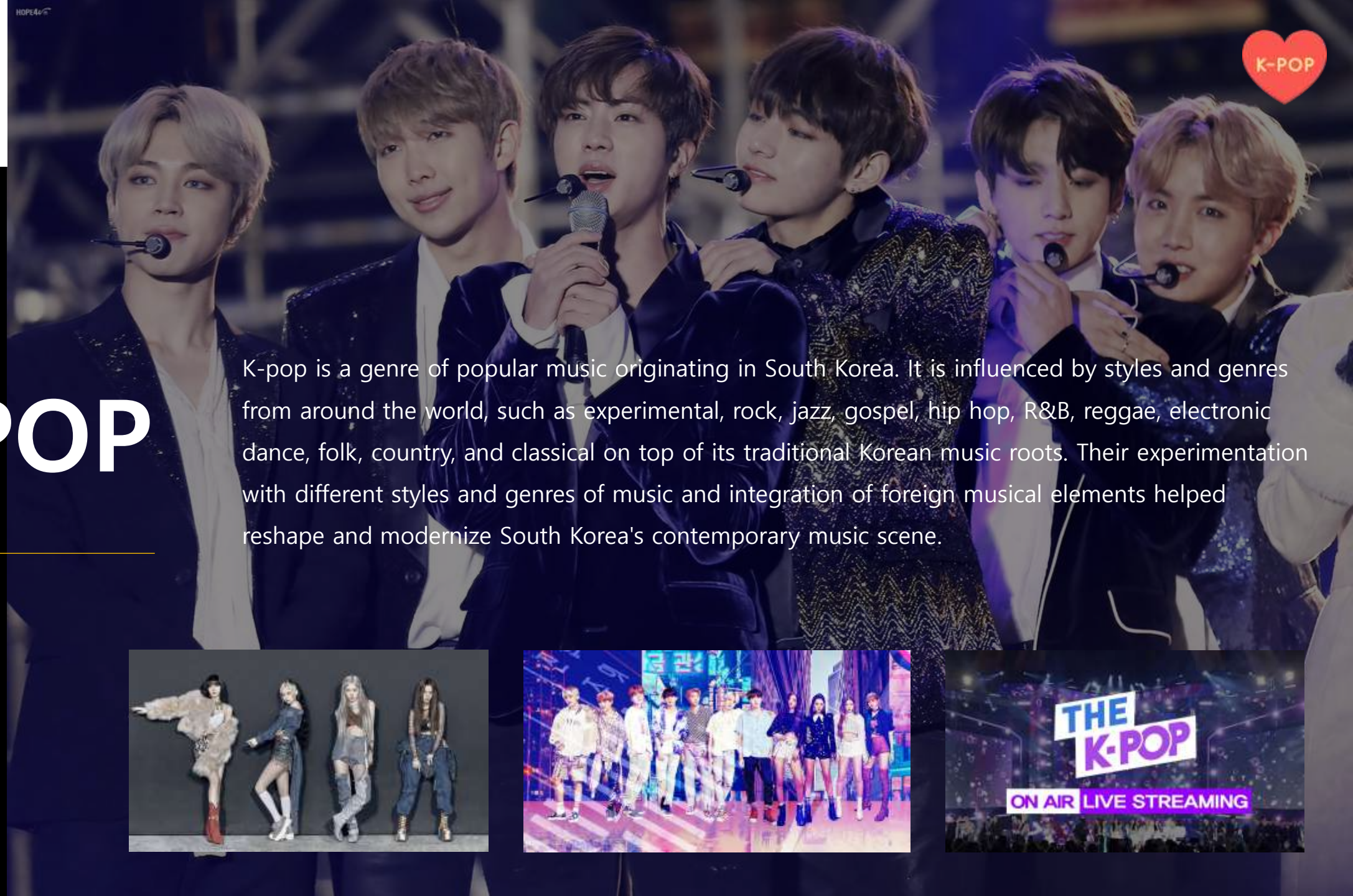
BRAIN

about my country Korea, about Franciscus Sylvius

10602a Medicine

LEE HAM



K-POP

K-pop is a genre of popular music originating in South Korea. It is influenced by styles and genres from around the world, such as experimental, rock, jazz, gospel, hip hop, R&B, reggae, electronic dance, folk, country, and classical on top of its traditional Korean music roots. Their experimentation with different styles and genres of music and integration of foreign musical elements helped reshape and modernize South Korea's contemporary music scene.

Franciscus Sylvius

Sylvius" redirects here

For the alternate spelling of the word,

see Silvius

Franciscus Sylvius

15 March 1614 – 19 November 1672), born Franz de le Boë a Dutch physician and scientist (chemist, physiologist and anatomist)

champion of Descartes', Van Helmont's and William Harvey's work and theories

He was one of the earliest defenders of the theory of circulation of the blood in the Netherlands, and commonly falsely cited as the inventor of gin – others pin point the origin of gin to Italy

Born	Franz de le Boë 15 March 1614 Hanau, Holy Roman Empire
Died	19 November 1672 (aged 58) Leiden, Republic of the United Netherlands
Education	Academy of Sedan Leiden University University of Basel (M.D., 1637)
Known for	Sylvian fissure
	Scientific career
Institutions	Leiden University
Theses	*Positiones variae medicae (Various Medical Positions)* (1634) *De animali motu ejusque laesionibus (On Animal Movement and its Disorders)* (1637)
Doctoral advisor	Emmanuel Stupanus
Other academic advisors	Adolph Vorstius Otto Heurnius
Doctoral students	Burchard de Volder[1]
Other notable students	Ehrenfried von Tschirnhaus
Influences	Jan Baptist van Helmont[2]

In 1669 Sylvius founded the first academic chemical laboratory.
Biology of Leiden University the *Sylvius Laboratory*.

-Famous students : Jan Swammerdam, Reinier de Graaf, Niels Stensen and Burchard de Volder.

He founded the Iatrochemical School of Medicine -which all life and disease processes are based on chemical actions

introduced the concept of chemical affinity as a way to understand the way the human body uses salts and contributed greatly to the understanding of digestion and of bodily fluid.

published: Praxeos medicae idea nova (*New Idea in Medical Practice*, 1671)

He researched the structure of the brain and was credited as the discoverer of the cleft in the brain known as Sylvian fissure by Caspar Bartholin in his 1641 book *Casp*

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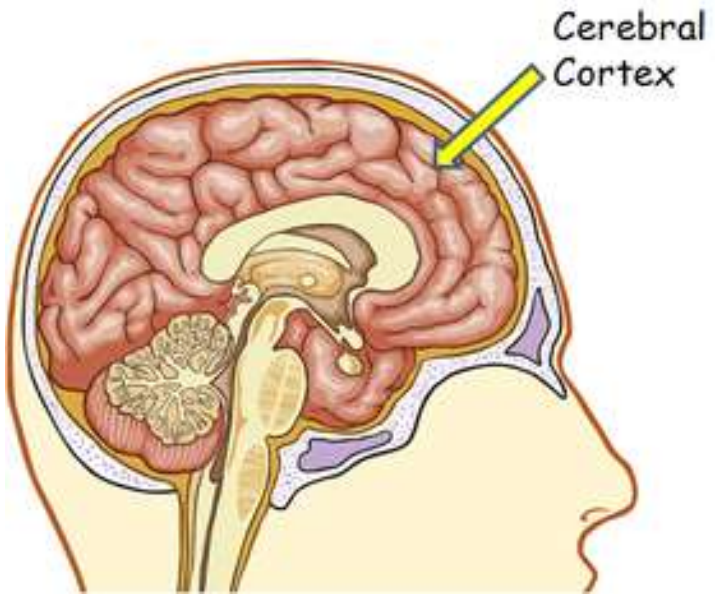
Prosencephalon

Telencephalon

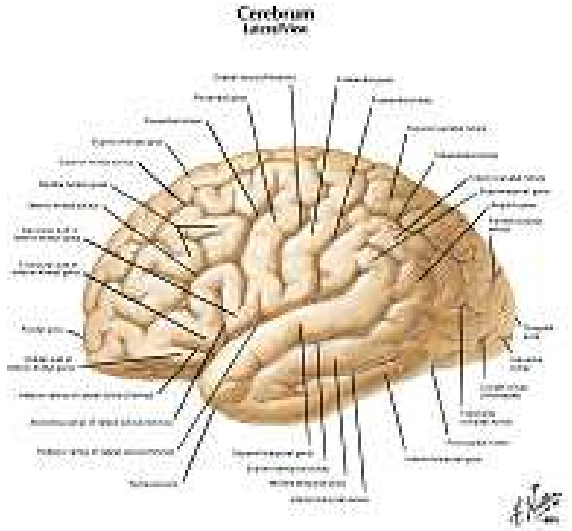
Cerebral cortex

BRAIN

The cerebral cortex, also known as **the cerebral** mantle, is **the** outer layer of neural tissue of **the** cerebrum of **the brain** in humans and other mammals. **The cerebral cortex** mostly consists of **the** six-layered neocortex, with just ten percent consisting of allocortex.



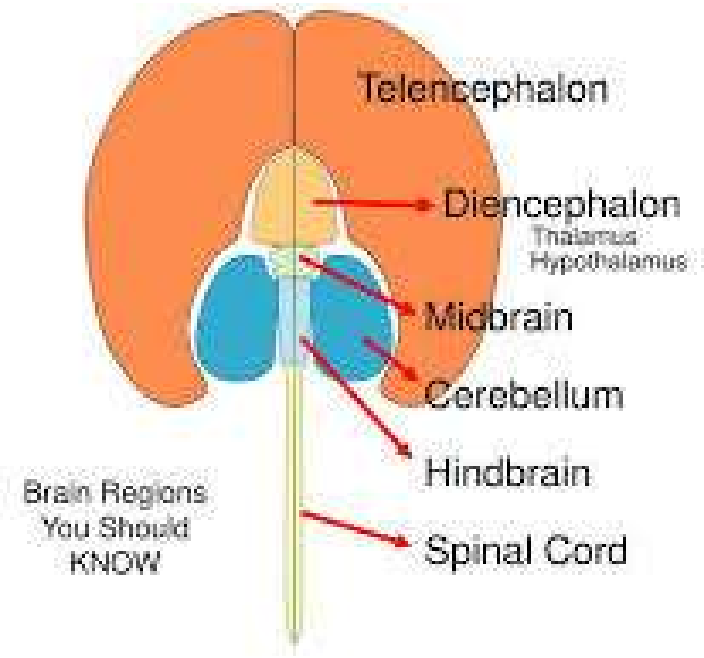
Brain part	Function
Area occipitalis	vision
Caudatum	movement
Putamen	movement
Thalamus	emotion
Pulvinar thalami	sensory system
Cortex cerebri	thinking
Lobulus parietalis superior	knowledge
Gyrus frontalis medius	cognitive function
Cerebellum	equilibrium
Corpus callosum	tract
Hippocampus	limbic system



Forebrain
Prosencephalon

Telencephalon

Cerebral cortex

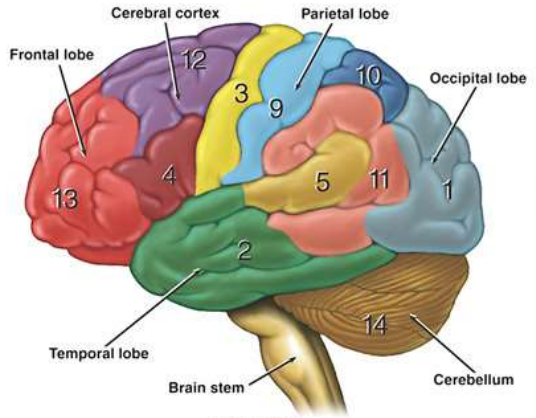


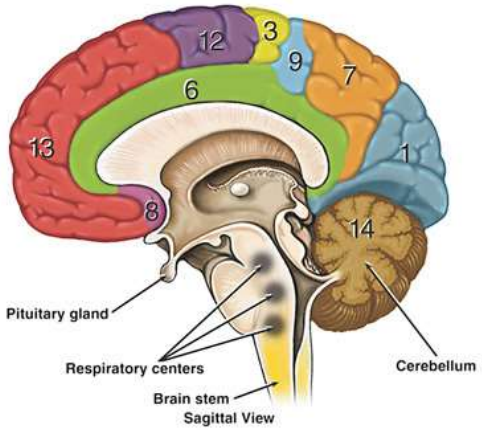
Functional Areas of the Cerebral Cortex

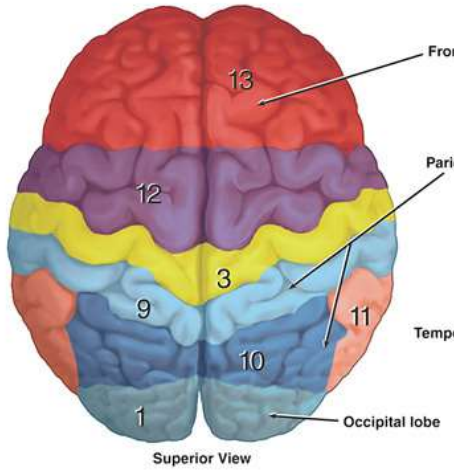
1. **Visual Area:** Sight, Image recognition, Image perception
2. **Association Area:** Short-term memory, Equilibrium, Emotion
3. **Motor Function Area:** Initiation of voluntary muscles
4. **Broca's Area:** Muscles of speech
5. **Auditory Area:** Hearing
6. **Emotional Area:** Pain, Hunger, "Fight or flight" response
7. **Sensory Association Area**
8. **Olfactory Area:** Smelling
9. **Sensory Area:** Sensation from muscles and skin
10. **Somatosensory Association Area:** Evaluation of weight, texture, temperature, etc. for object recognition
11. **Wernicke's Area:** Written and spoken language comprehension
12. **Motor Function Area:** Eye movement and orientation
13. **Higher Mental Functions:** Concentration, Planning, Judgment, Emotional expression, Creativity, Inhibition

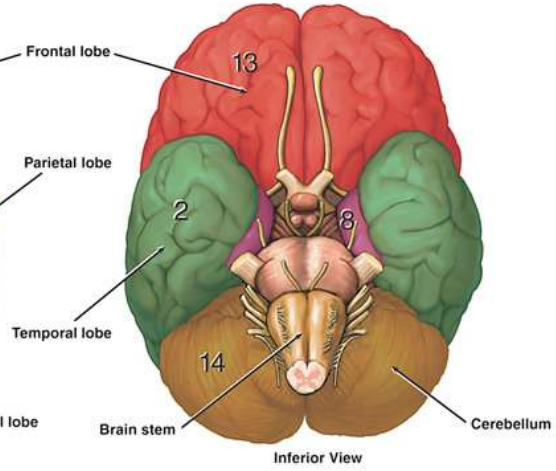
Functional Areas of the Cerebellum

14. **Motor Functions:** Coordination of movement, Balance and equilibrium, Posture

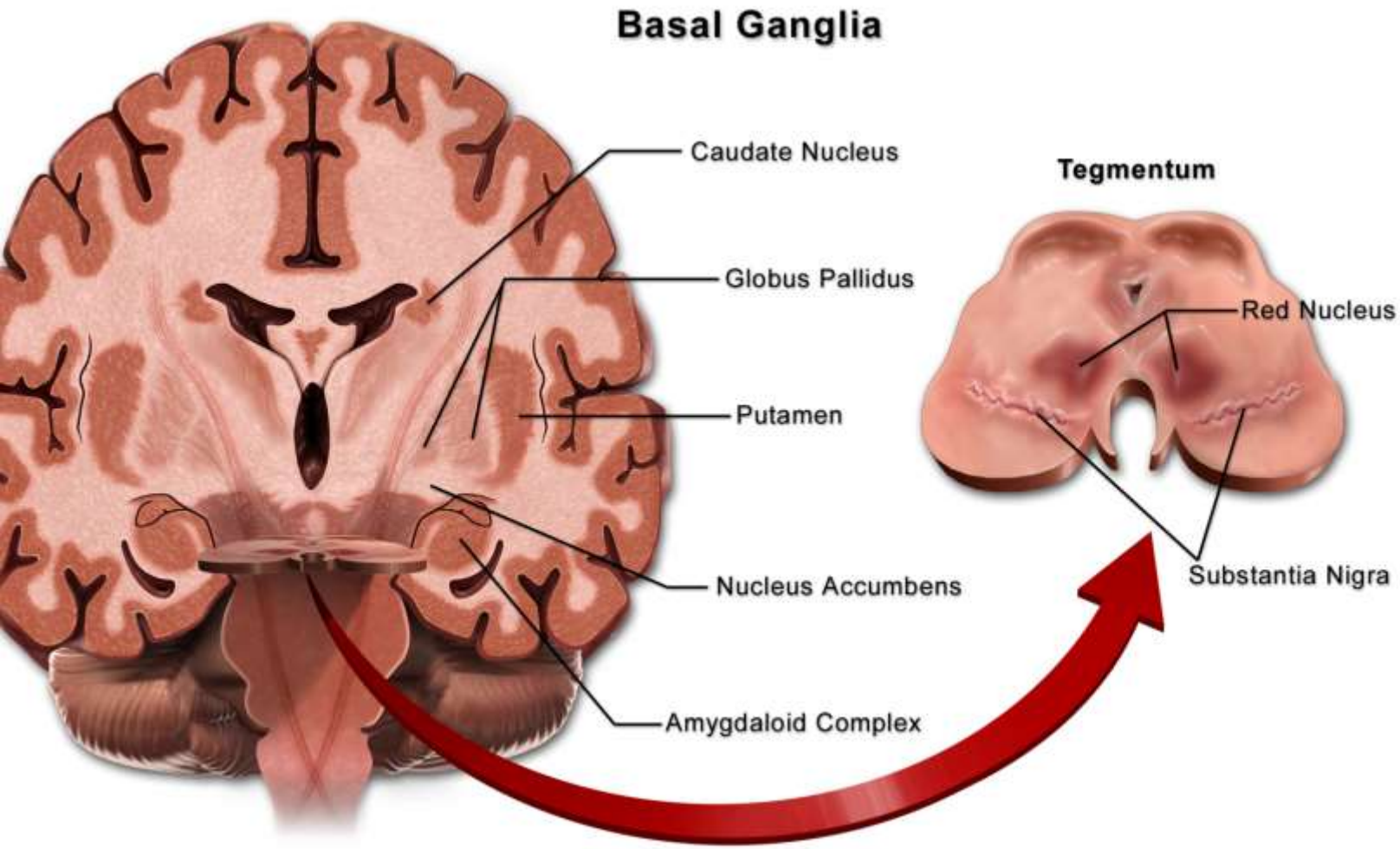








Basal ganglia



The **basal ganglia** are a group of subcortical nuclei, of varied origin, in the brains of vertebrates. In humans, and some primates, there are some differences, mainly in the division of the globus pallidus into an external and internal region, and in the division of the striatum.

Limbic system

The **limbic system** is a set of structures in the brain that deal with emotions and memory. It regulates autonomic or endocrine function in response to emotional stimuli and also is involved in reinforcing behavior.

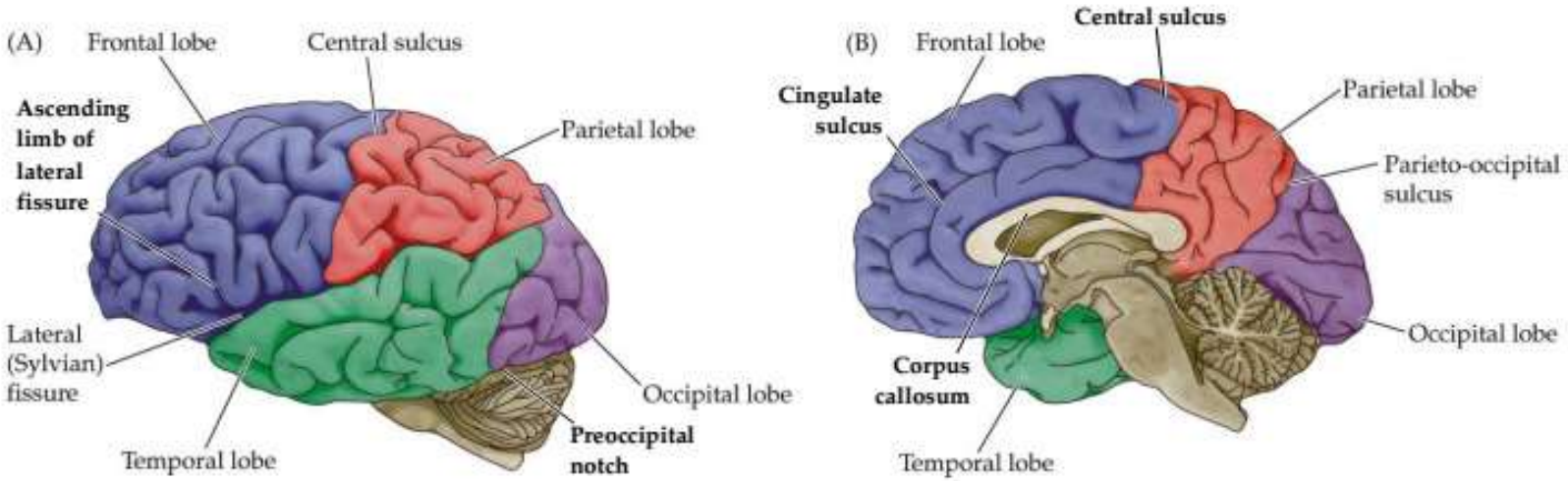
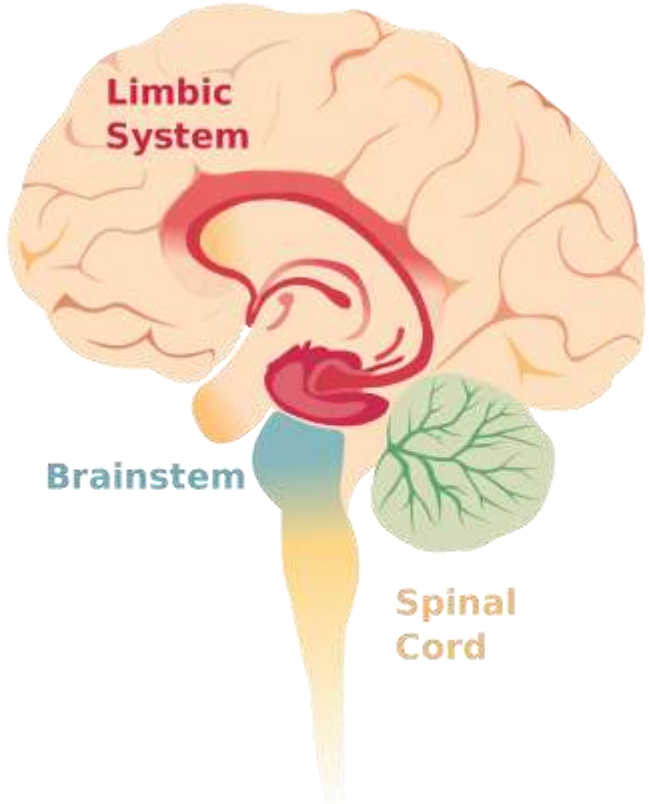


Figure 1.5. Lateral and midsagittal views of the human brain, emphasizing the division of the cerebral cortex into four lobes (identified with color). (Figure A4 from Neuroscience, 6th Ed.)

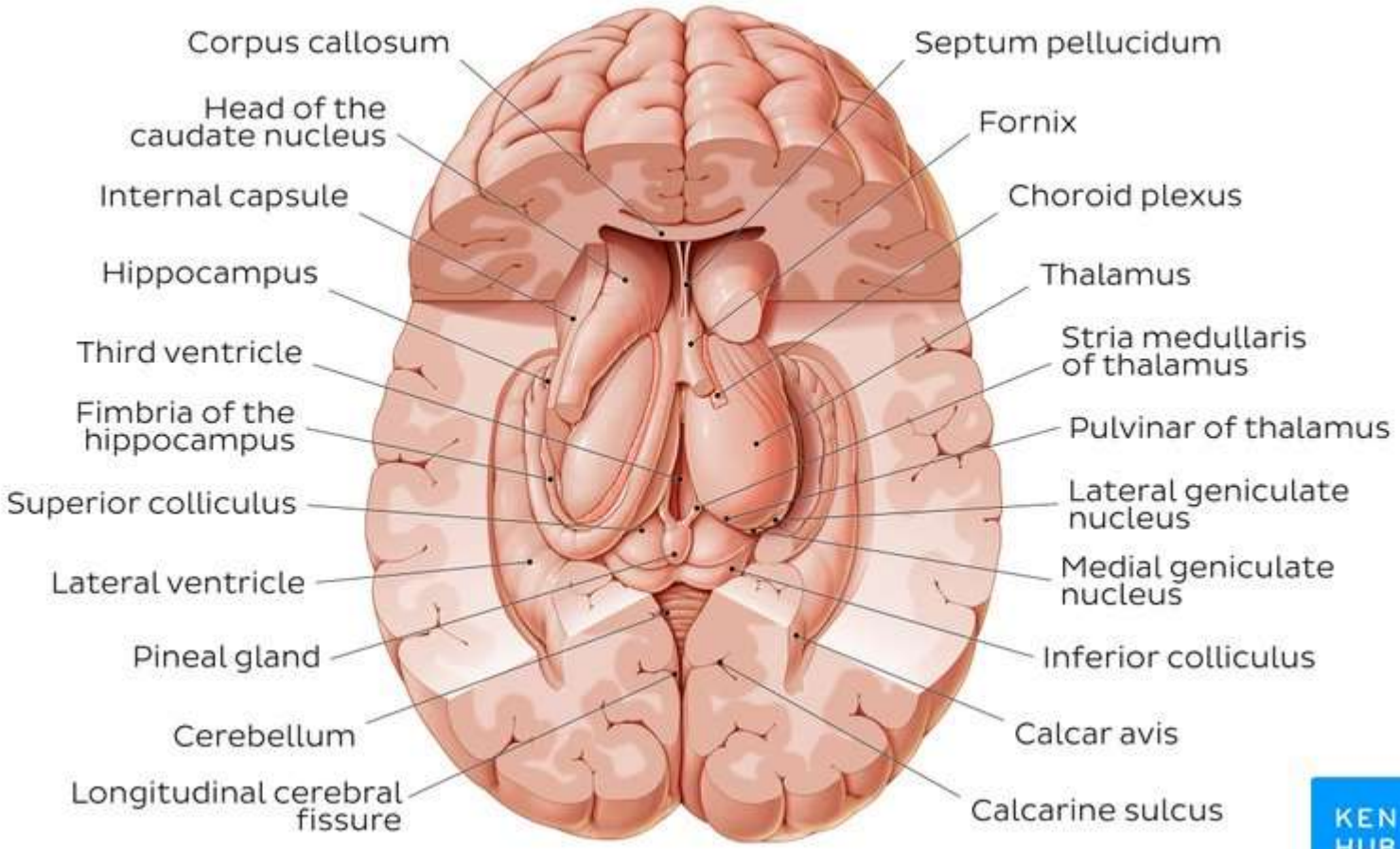


Forebrain
Prosencephalon

Diencephalon

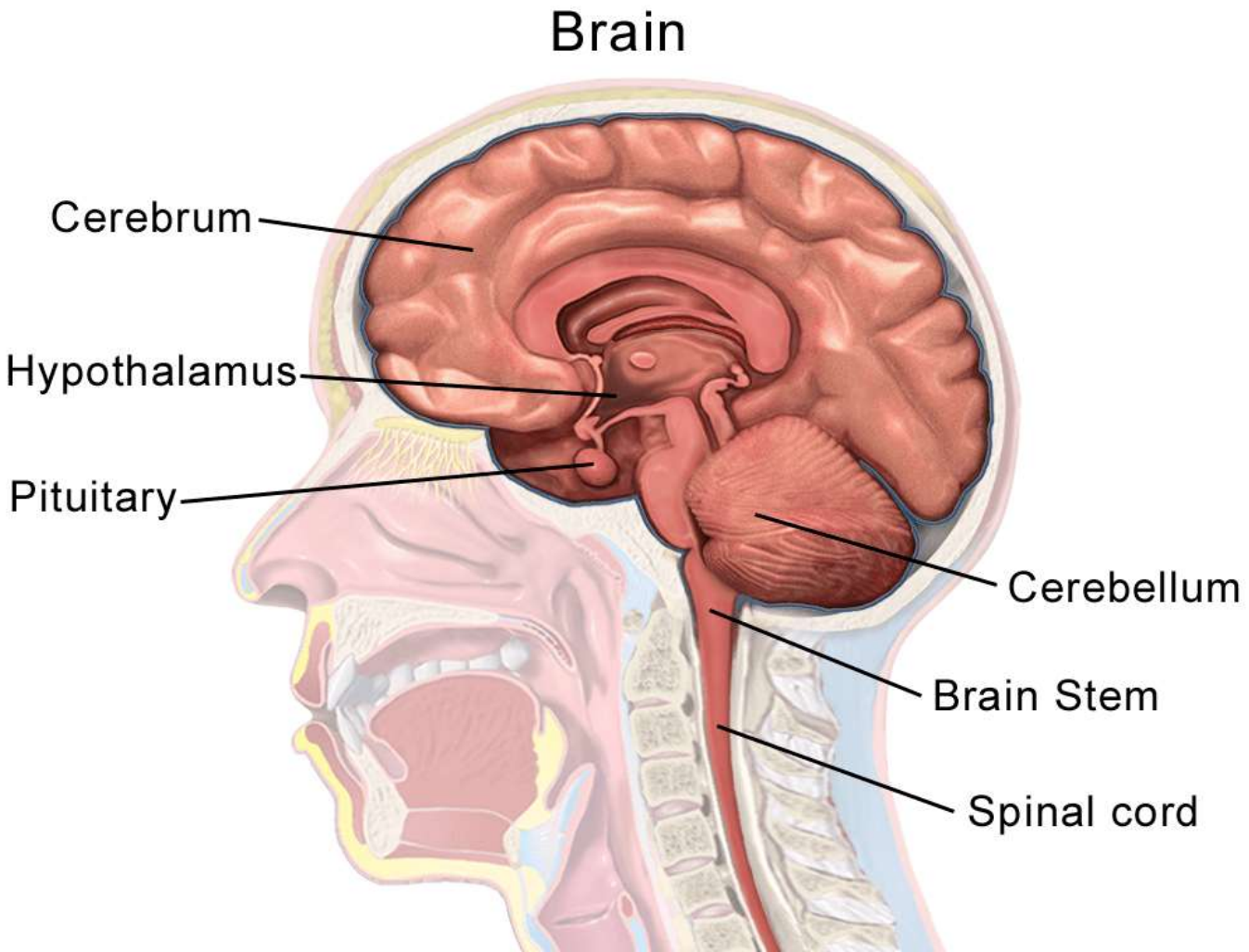
Thalamus

The **thalamus** is a small structure within the brain located just above the brain stem between the cerebral cortex and the midbrain and has extensive nerve connections to both. The main function of the **thalamus** is to relay motor and sensory signals to the cerebral cortex.



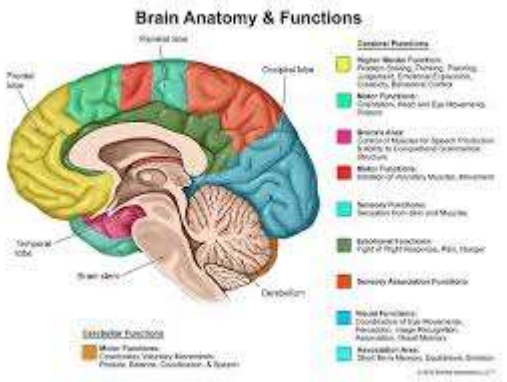
Hypothalamus

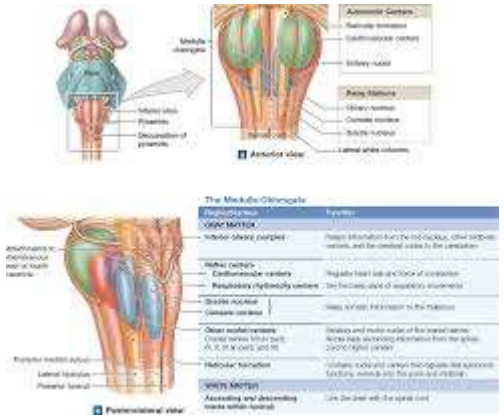
The hypothalamus (from Ancient Greek ὑπό, "under", and θάλαμος, "chamber") is a portion of the brain that contains a number of small nuclei with a variety of functions. One of the most important functions of the hypothalamus is to link the nervous system to the endocrine system via the pituitary gland.

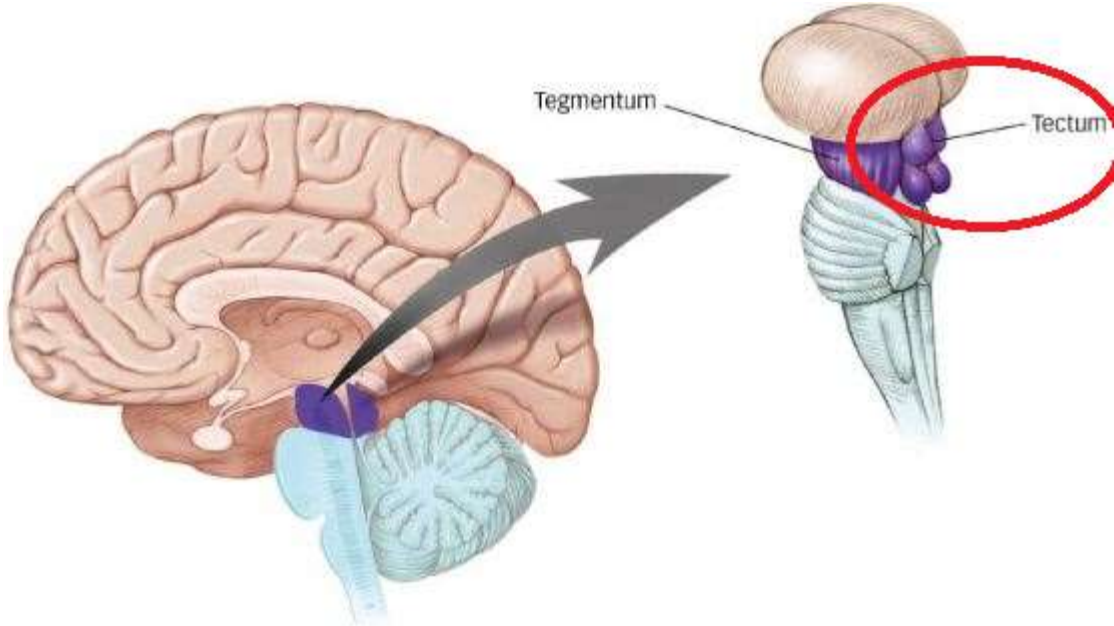


Tectum

The tectum (Latin for roof) is the dorsal side of the midbrain. The position of the tectum is contrasted with the tegmentum, which refers to the region in front of the ventricular system, or floor of the midbrain.
It is involved in certain reflexes in response to visual or auditory stimuli. The reticulospinal tract, which exerts some control over alertness, takes input from the tectum, and travels both rostrally and caudally from it.

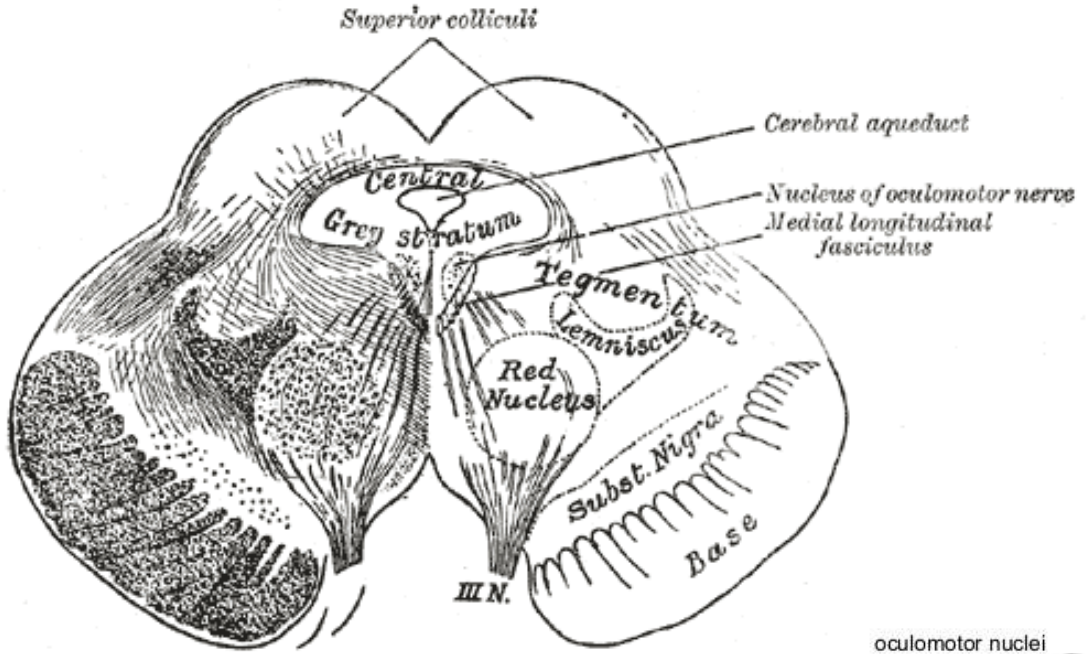


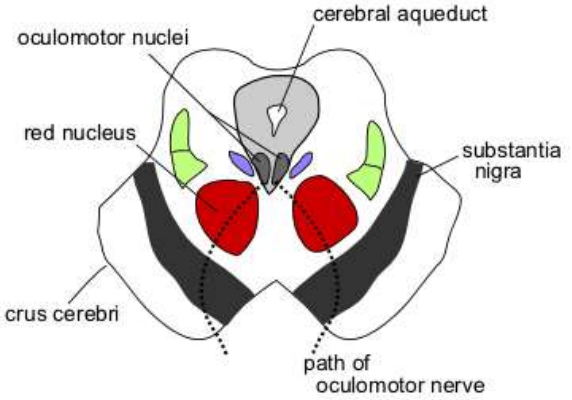




Tegmentum

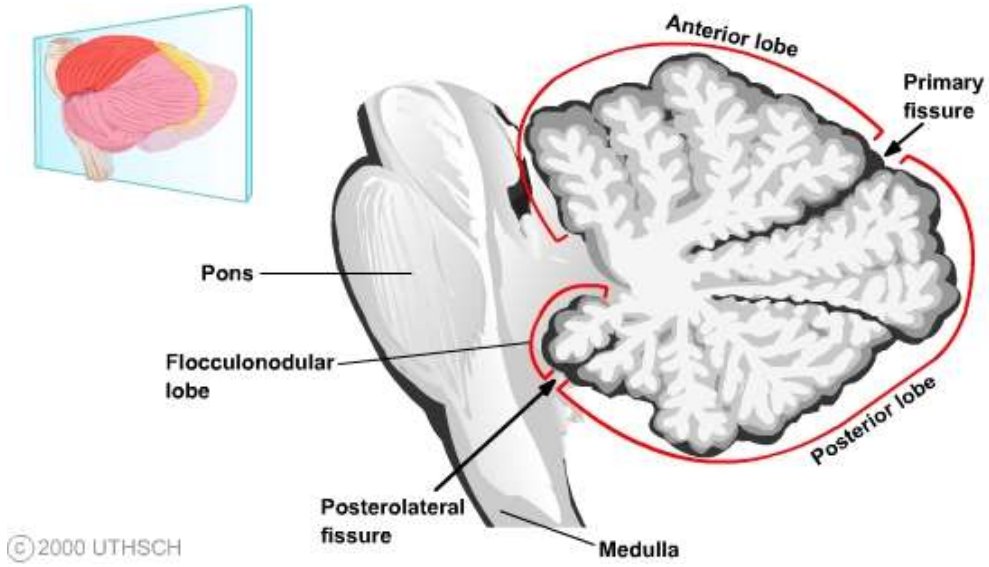
The tegmentum (from Latin for "covering") is a general area within the brainstem. The tegmentum is the ventral part of the midbrain and the tectum is the dorsal part of the midbrain. It is located between the ventricular system and distinctive basal or ventral structures at each level. It forms the floor of the midbrain (mesencephalon) whereas the tectum forms the ceiling.

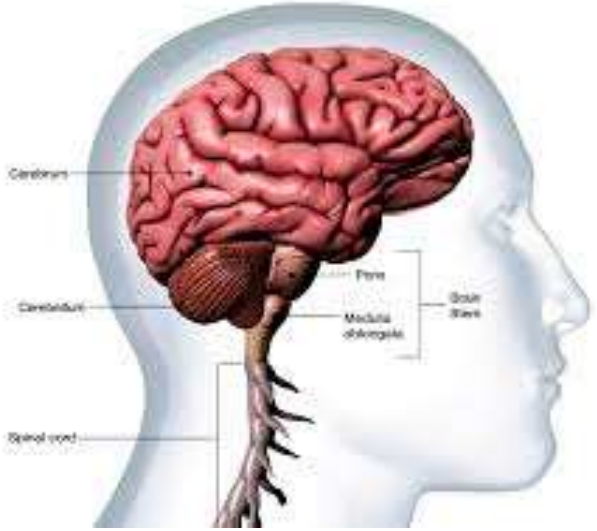




Cerebellum

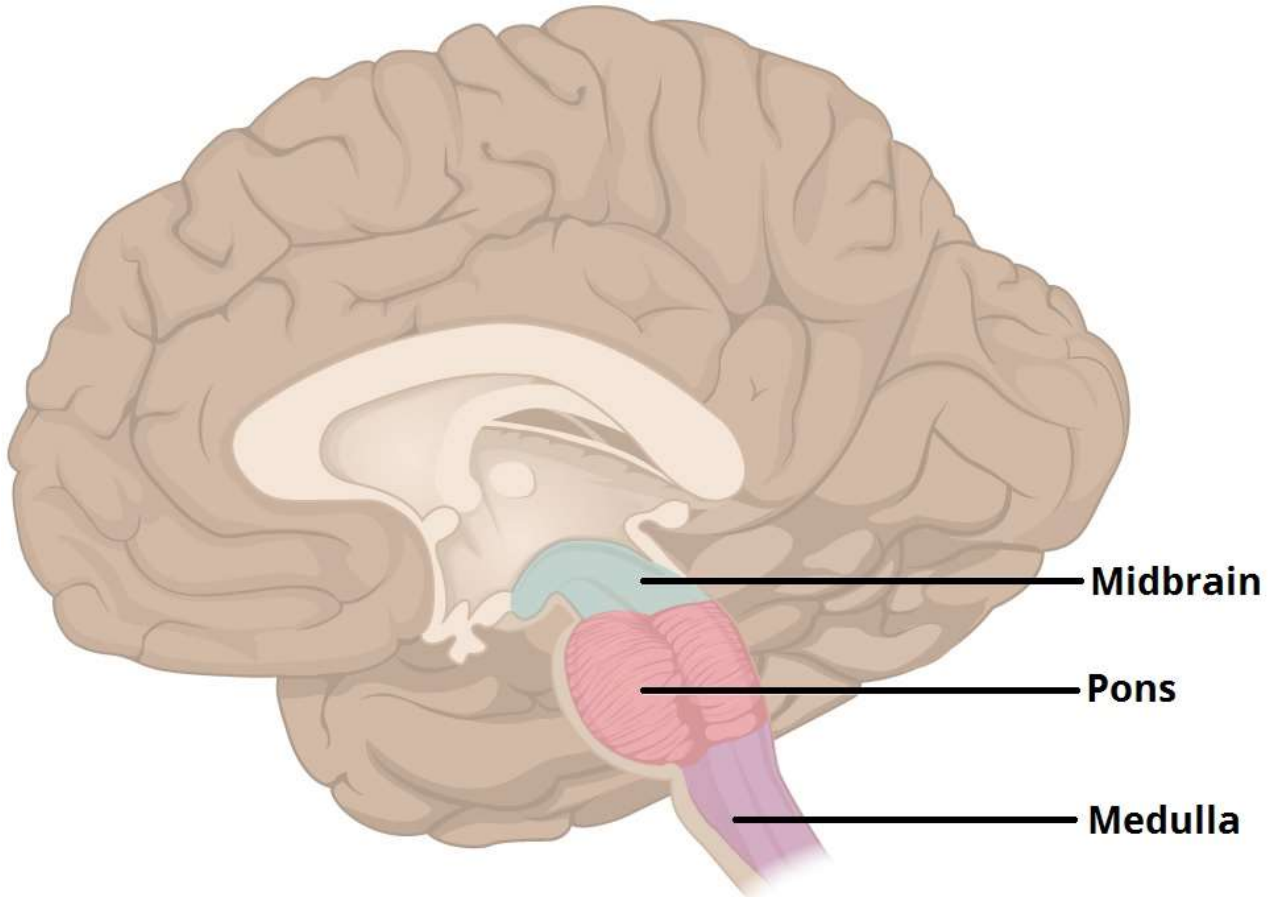
The **cerebellum** (which is Latin for "little brain") is a major structure of the hindbrain that is located near the brainstem. This part of the brain is responsible for coordinating voluntary movements. It is also responsible for a number of functions including motor skills such as balance, coordination, and posture.





Pons

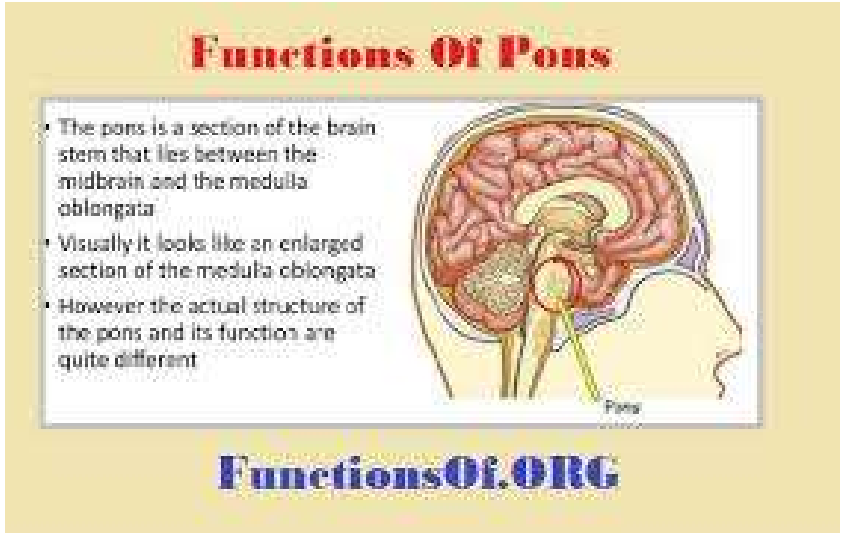
The **pons** (Latin for "bridge") is part of the brainstem and in humans and other bipeds lies inferior to the midbrain, superior to the medulla oblongata and anterior to the cerebellum. The **pons** is also called the **pons** Varolii ("bridge of Varolius"), after the Italian anatomist and surgeon Costanzo Varolio

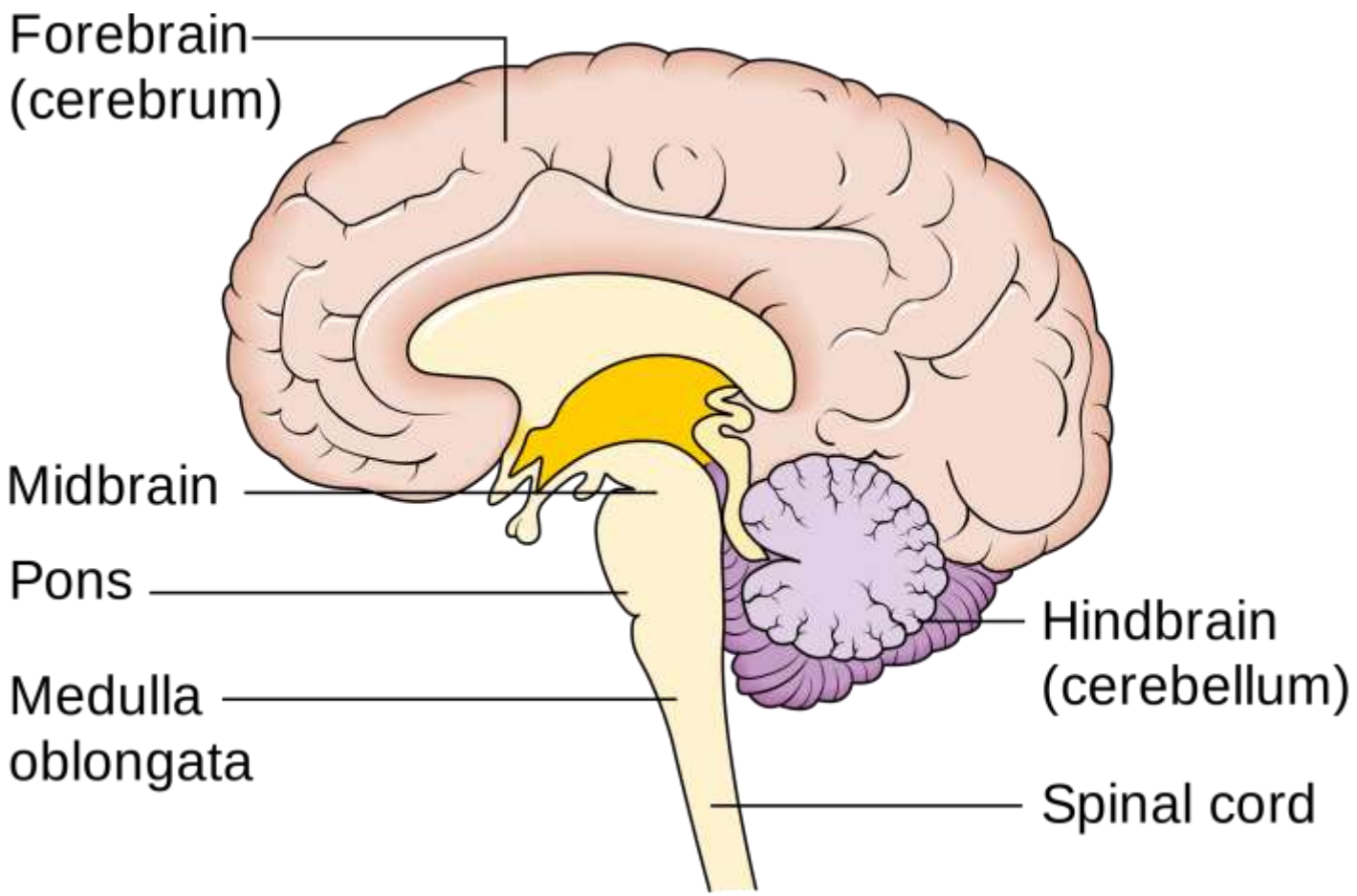


Hindbrain
Rhombencephalon

Metencephalon

Pons



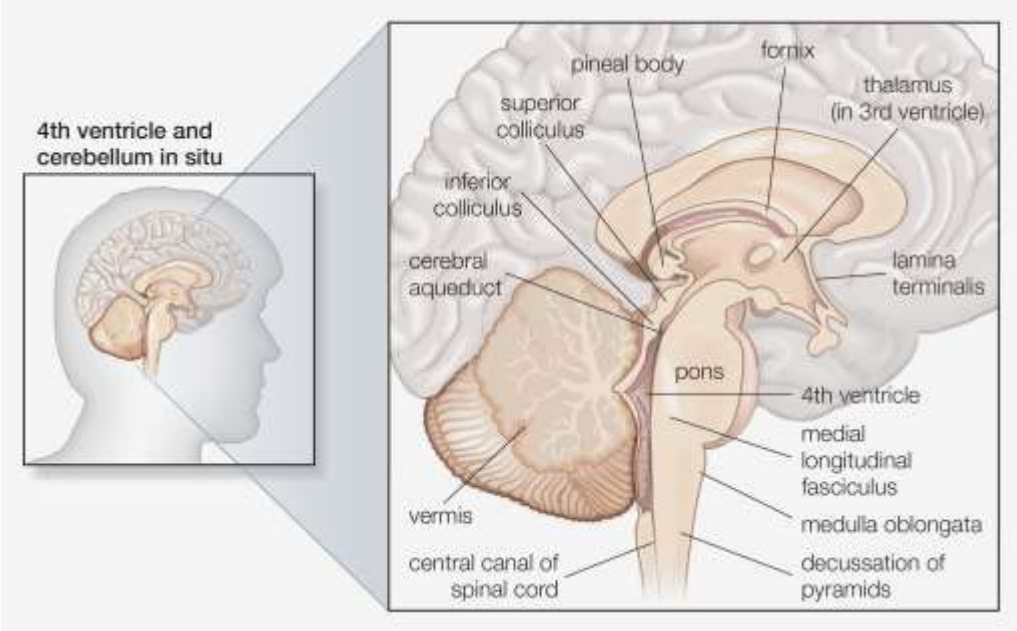


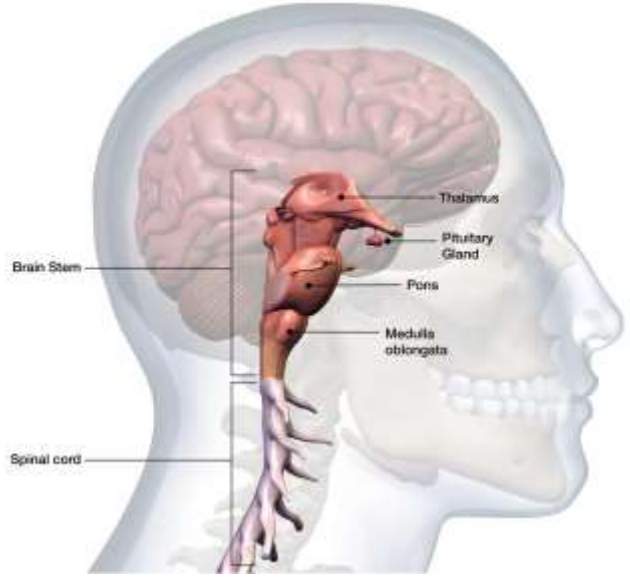
Hindbrain
Rhombencephalon

Myelencephalon

Medulla oblongata

The **medulla oblongata** or simply **medulla** is a long stem-like structure which makes up the lower part of the brainstem. It is anterior and partially inferior to the cerebellum. It is a cone-shaped neuronal mass responsible for autonomic (involuntary) functions, ranging from vomiting to sneezing.





Thank you