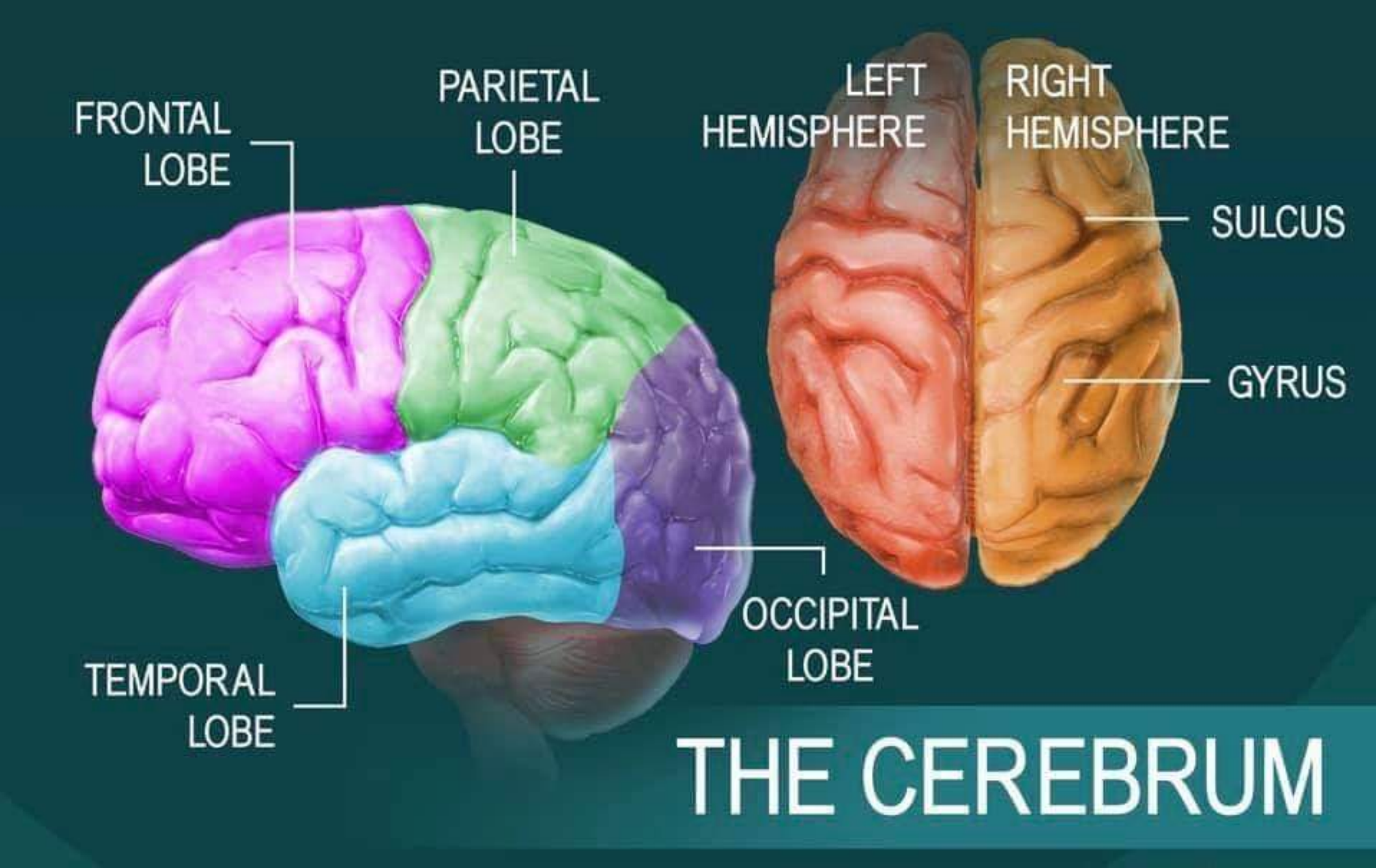
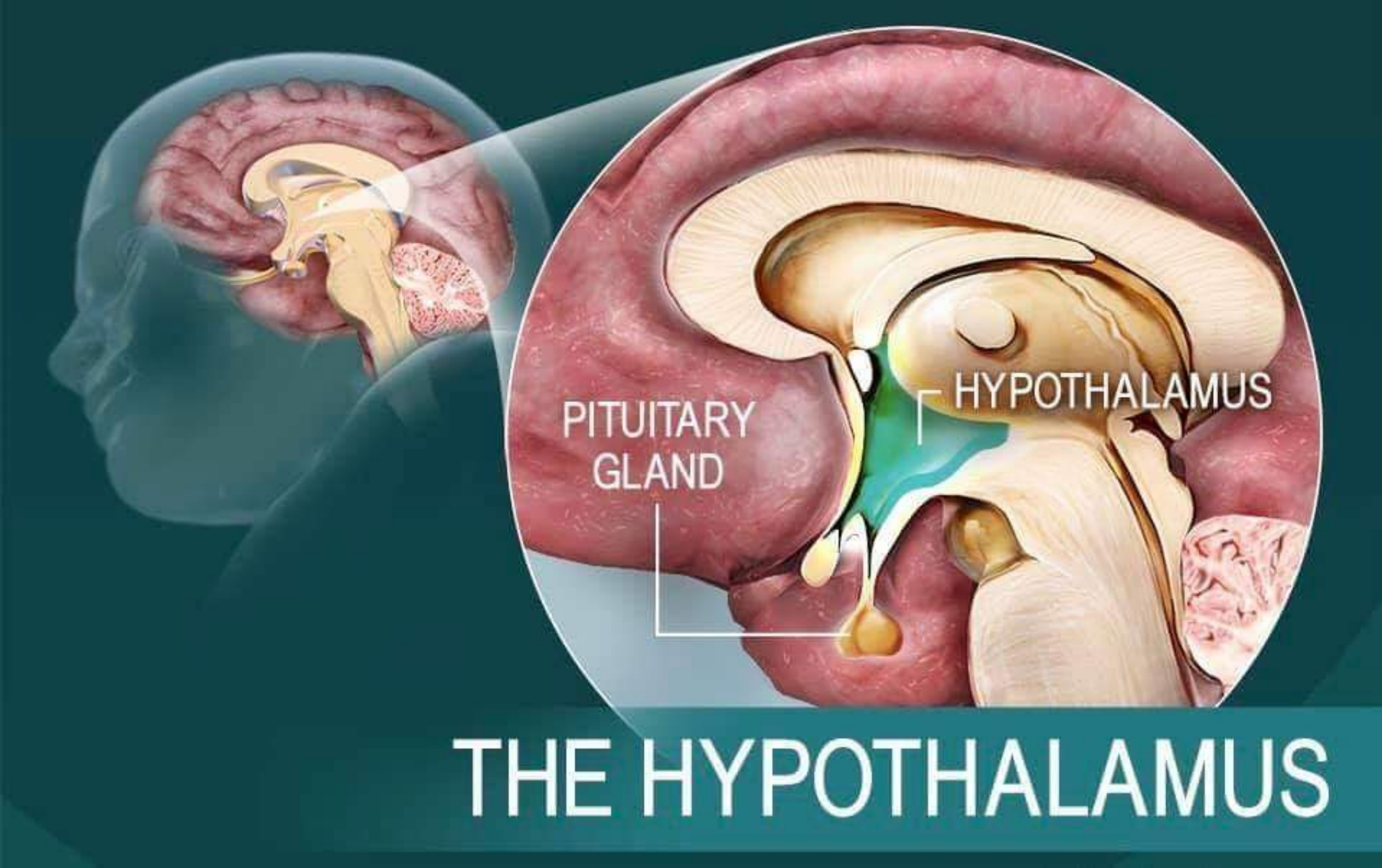
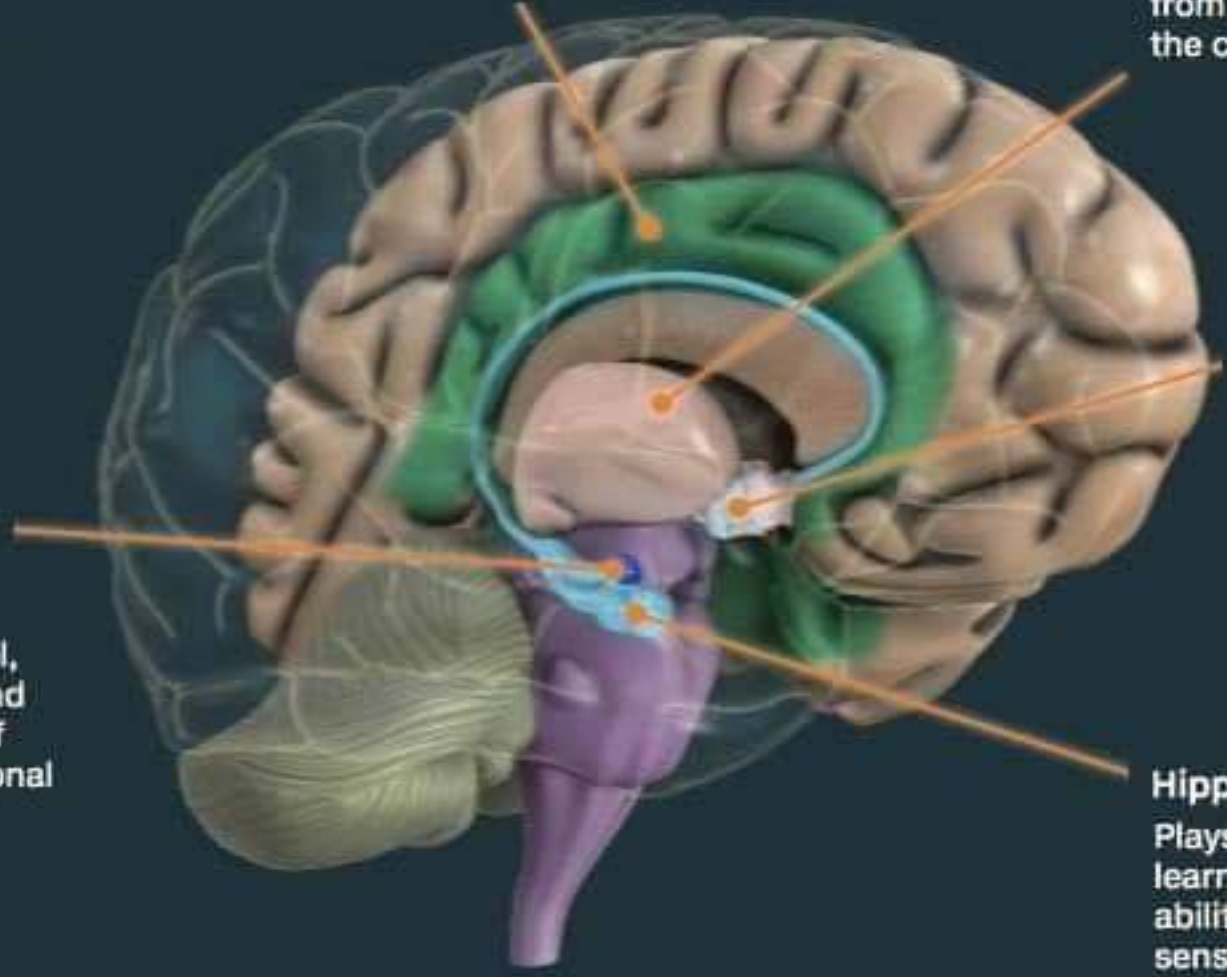

FRONTAL LOBE
PARIETAL LOBE
LEFT HEMISPHERE
RIGHT HEMISPHERE
SULCUS
GYRUS
OCCIPITAL LOBE
TEMPORAL LOBE
THE CEREBRUM


PITUITARY GLAND
HYPOTHALAMUS
THE HYPOTHALAMUS



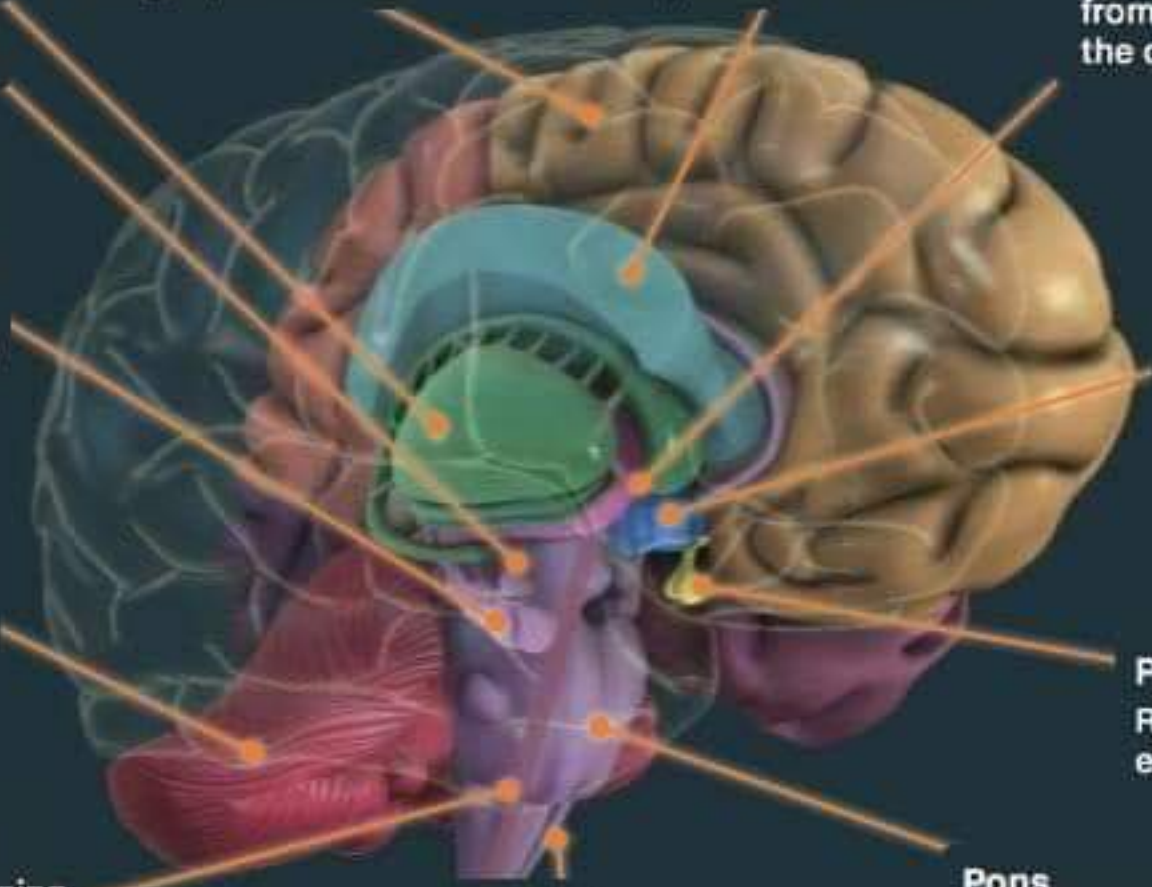
Cingulate cortex
Primary cortical component of the limbic system, involved in emotional and cognitive processing.

Thalamus
Part of the forebrain that relays information from sensory organs to the cerebral cortex.

Hypothalamus
Part of the forebrain that regulates the amount of fear, thirst, sexual drive, and aggression we feel.

Amygdala
Influences our motivation, emotional control, fear response, and interpretations of nonverbal emotional expressions.

Hippocampus
Plays a role in our learning, memory, and ability to compare sensory information to expectations.



Cerebral cortex
Controls complex thought processes.

Corpus callosum
Connects left and right hemispheres of the brain.

Thalamus
Part of the forebrain that relays information from sensory organs to the cerebral cortex.

Basal ganglia

Amygdala

Hippocampus
Plays a role in our learning, memory, and ability to compare sensory information to expectations.

Hypothalamus
Part of the forebrain that regulates the amount of fear, thirst, sexual drive, and aggression we feel.

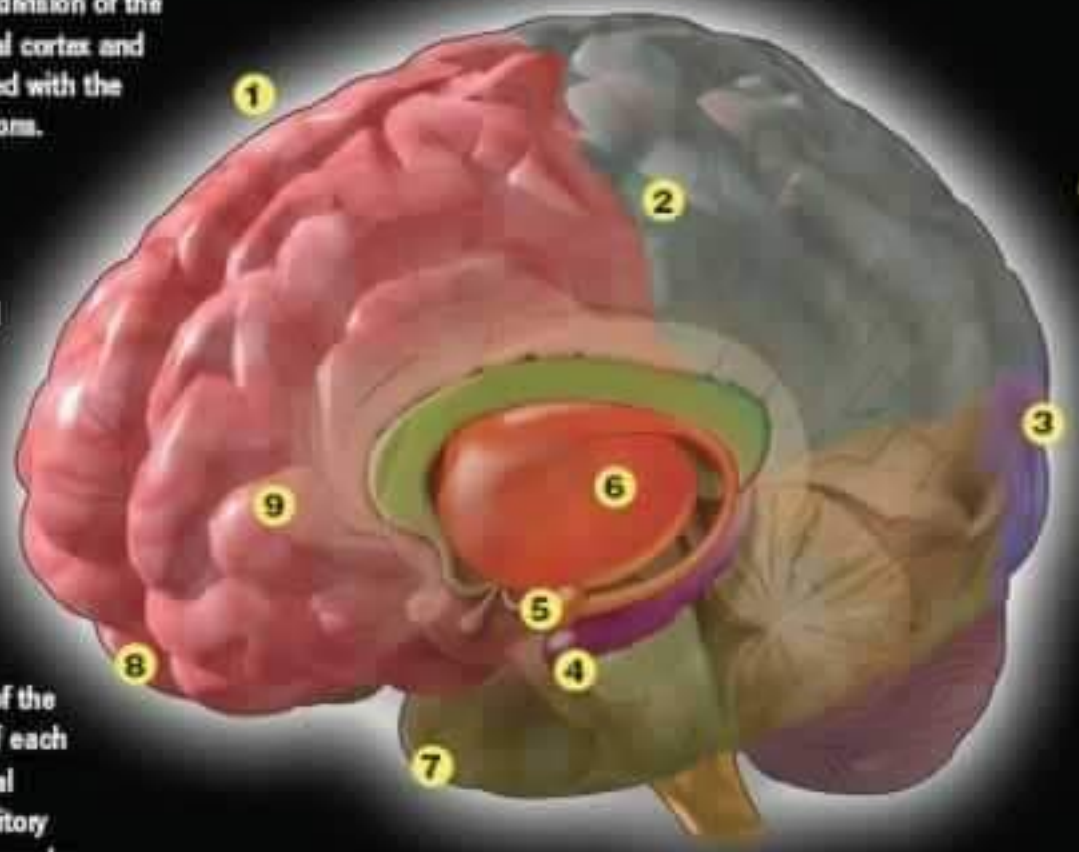
Cerebellum
Part of the hindbrain that controls balance and maintains muscle coordination.

Pituitary gland
Regulates other endocrine glands.

Reticular formation
A system of nerves running from the hindbrain and through the midbrain to the cerebral cortex, controlling arousal and attention.

Medulla
Part of the hindbrain that controls heartbeat, breathing, and swallowing.

Pons
Part of the hindbrain that relays messages between the cerebellum and the cortex.



1 **Cerebral hemispheres:** The left hemisphere is specialized for speech, writing, language and calculation; the right hemisphere is specialized for spatial abilities, face recognition in vision, and some aspects of music perception and production.

2 **Cerebral cortex:** The outermost layer of the cerebral hemispheres responsible for all forms of conscious experience, including perception, emotion, thought and planning.

Parietal lobe: One of four subdivisions of the cerebral cortex. It plays a role in sensory processes, attention and language.

9 **Forebrain:** The largest division of the brain includes the cerebral cortex and basal ganglia. It is credited with the highest intellectual functions.

3 **Occipital lobe:** Controls vision and color recognition.

8 **Frontal lobe:** One of the four divisions—others include parietal, temporal and occipital—of each hemisphere of the cerebral cortex. It has a role in controlling movement and associating the functions of other cortical areas.

4 **Hippocampus:** This seahorse-shaped structure functions in learning, memory and emotion. It acts like a sorting machine—collecting and sending information to other parts of the brain. The hippocampus houses immediate or "working memory," an extremely short-lived phase of memory. When learning new concepts, the information goes to the hippocampus first until it gets lost or moved into long-term memory in the basal ganglia.

7 **Temporal lobe:** One of the four major subdivisions of each hemisphere of the cerebral cortex. It functions in auditory perception, speech and complex visual perceptions.

5 **Amygdala:** A structure in the forebrain. Sustained levels of high amygdala arousal can cause a person to think unclearly.

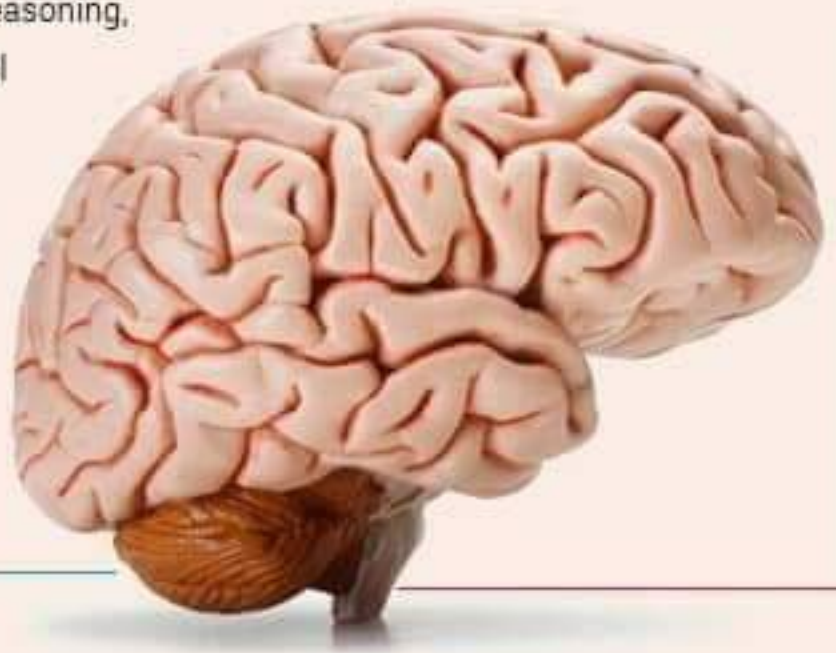
6 **Basal ganglia:** Clusters of neurons located deep in the brain that play an important role in movement. With effort, information comes from the hippocampus and other areas of the brain into long-term memory in this area. Long-term memory constitutes the final phase of memory when information storage may last from hours to a lifetime. Neuroscientists use the term "memory consolidation" to refer to the physical and psychological changes as the brain organizes and restructures information to make it permanent.

CEREBRUM

touch vision, hearing, speech, reasoning, emotions, learning & fine control movements

CEREBELLUM

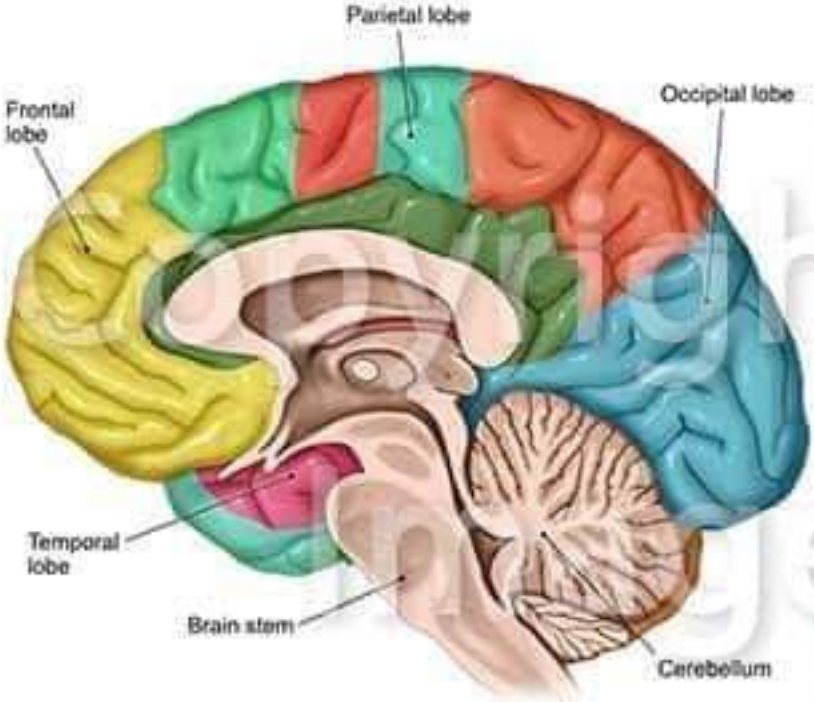
Co-ordinate muscle movements, maintain posture, and balance.



BRAIN STEM

relay center connecting the cerebrum and cerebellum to the spinal cord.breathing, heart rate, body temperature, wake and sleep cycles, digestion, sneezing, coughing, vomiting, vomiting, and swallowing

Brain Anatomy & Functions

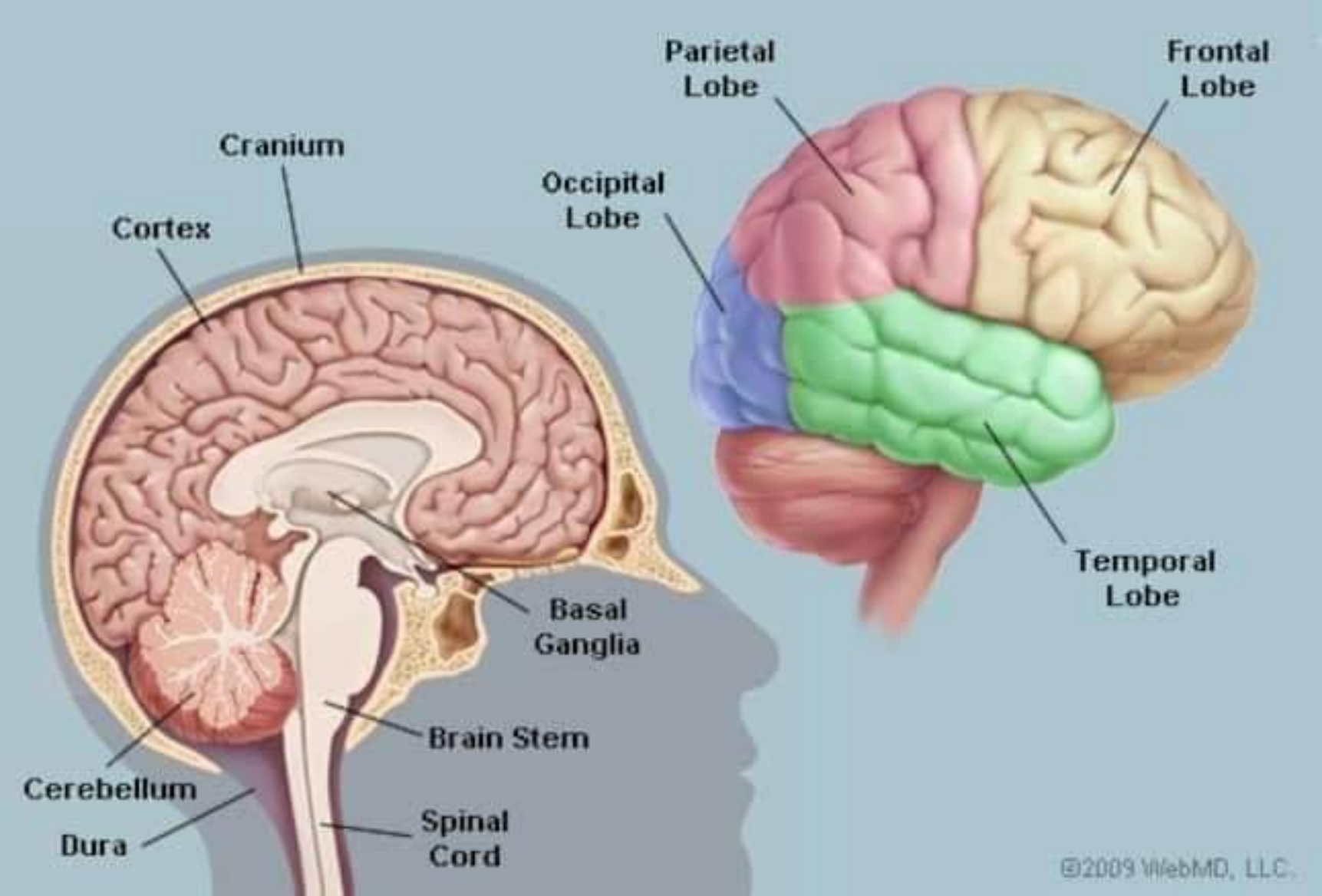


Cerebral Functions

- **Higher Mental Function:** Problem Solving, Thinking, Planning, Judgement, Emotional Expression, Creativity, Behavioral Control
- **Motor Functions:** Orientation, Head and Eye Movements, Posture
- **Broca's Area:** Control of Muscles for Speech Production & Ability to Comprehend Grammatical Structure
- **Motor Functions:** Initiation of Voluntary Muscles, Movement
- **Sensory Functions:** Sensation from Skin and Muscles
- **Emotional Functions:** Fight or Flight Response, Pain, Hunger
- **Sensory Association Functions**
- **Visual Functions:** Coordination of Eye Movements, Perception, Image Recognition, Association, Visual Memory
- **Association Area:** Short Term Memory, Equilibrium, Emotion

Cerebellar Functions

- **Motor Functions:** Coordinates Voluntary Movements: Posture, Balance, Coordination, & Speech


Parietal Lobe
Frontal Lobe
Cranium
Occipital Lobe
Cortex
Temporal Lobe
Basal Ganglia
Brain Stem
Cerebellum
Spinal Cord
Dura
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