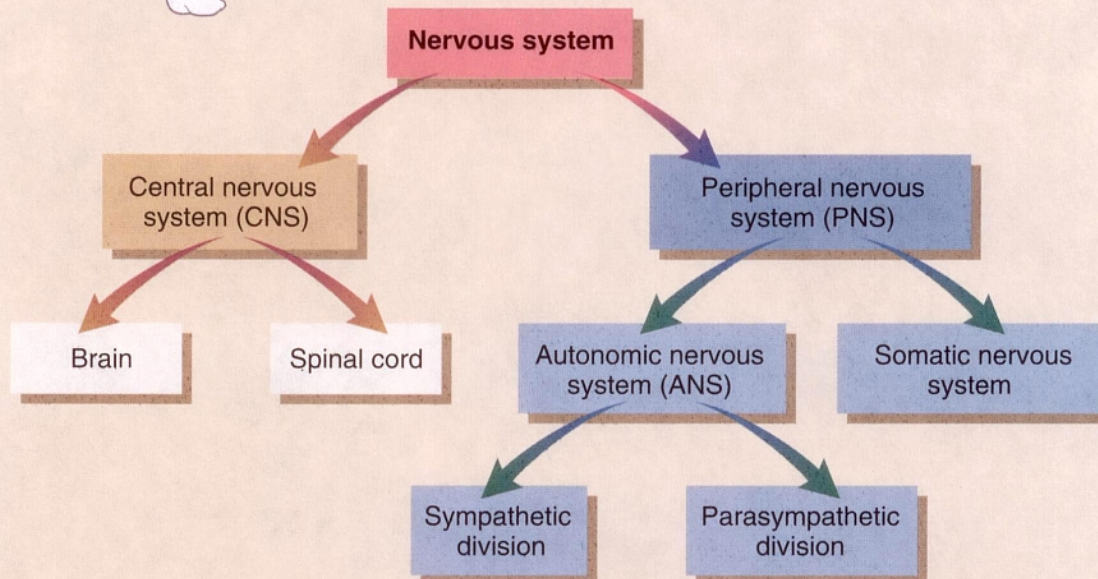
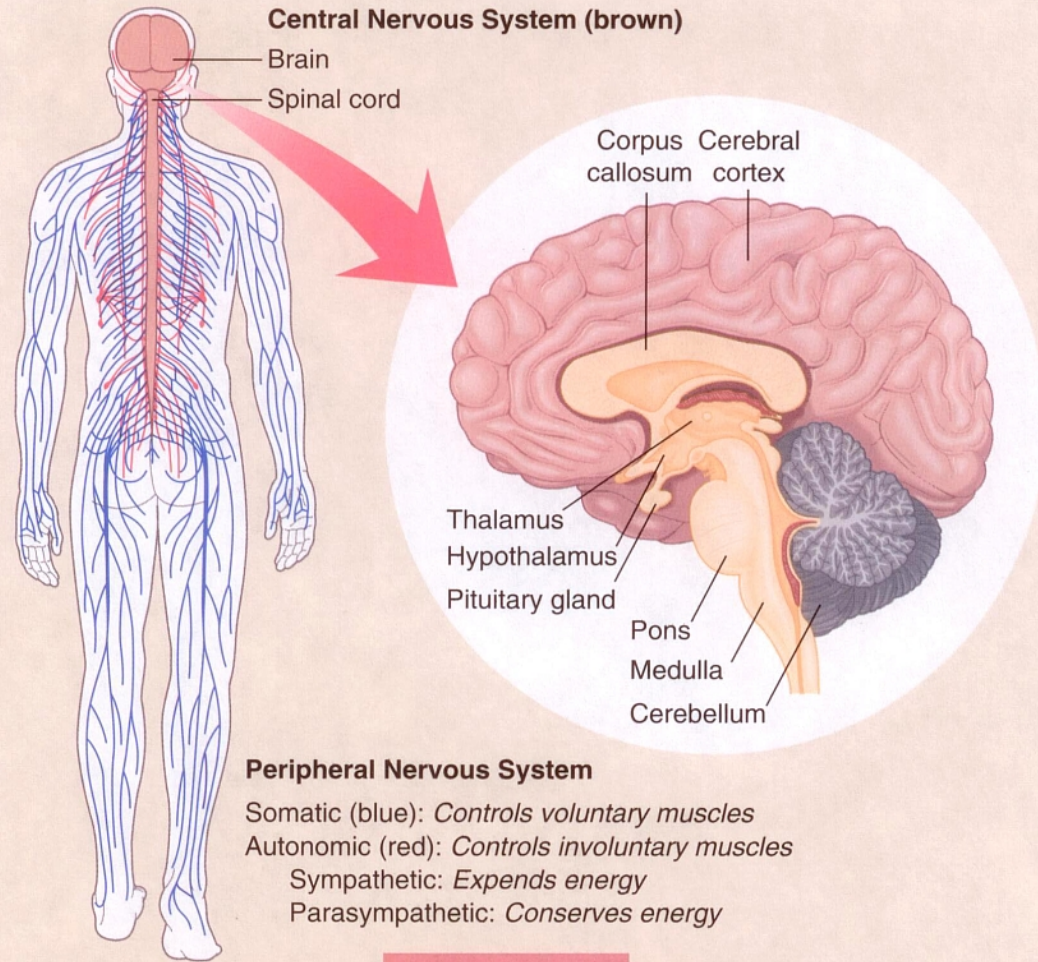
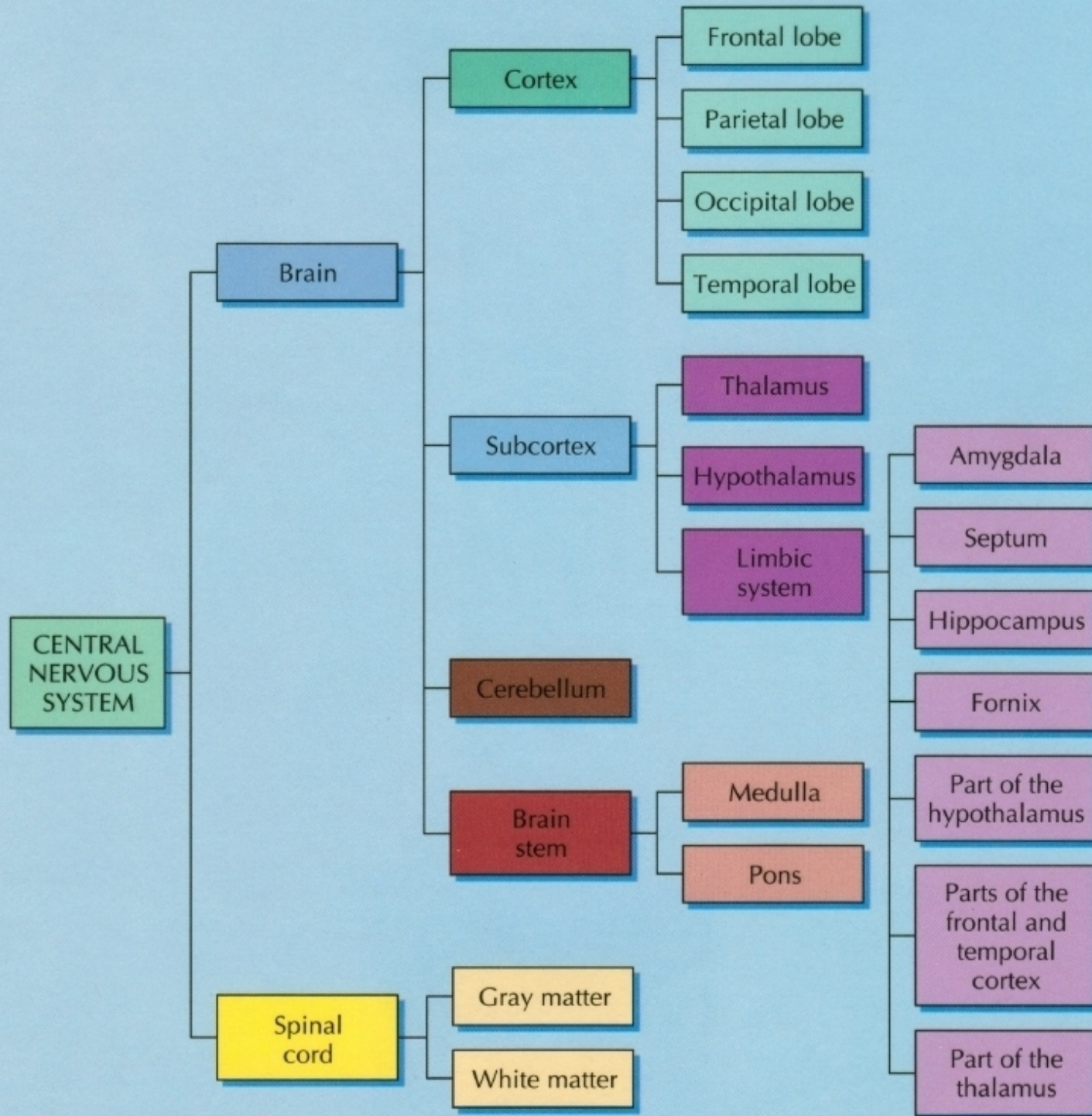


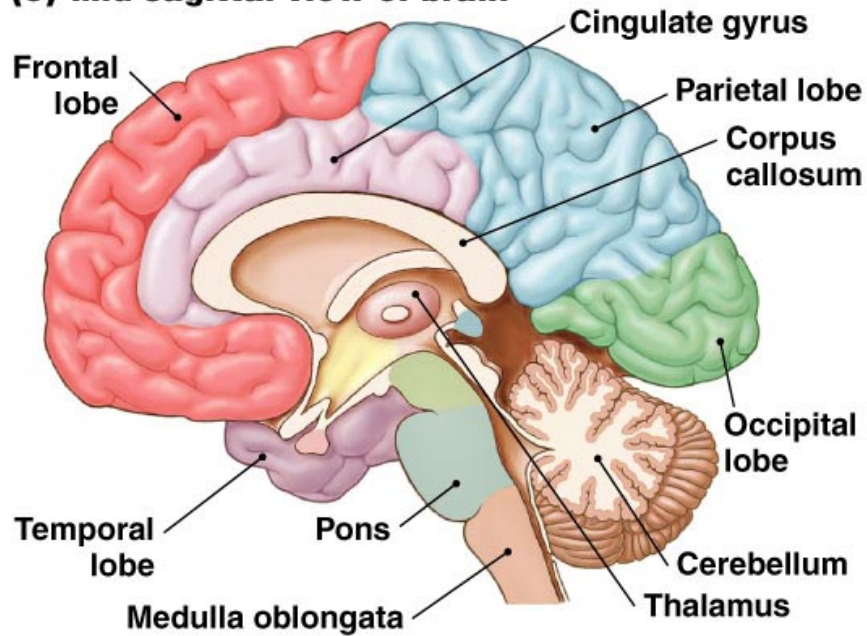
# Divisions of the Nervous System



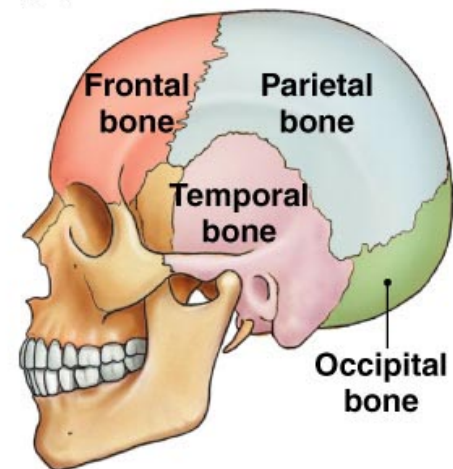
# Divisions of the Central Nervous System



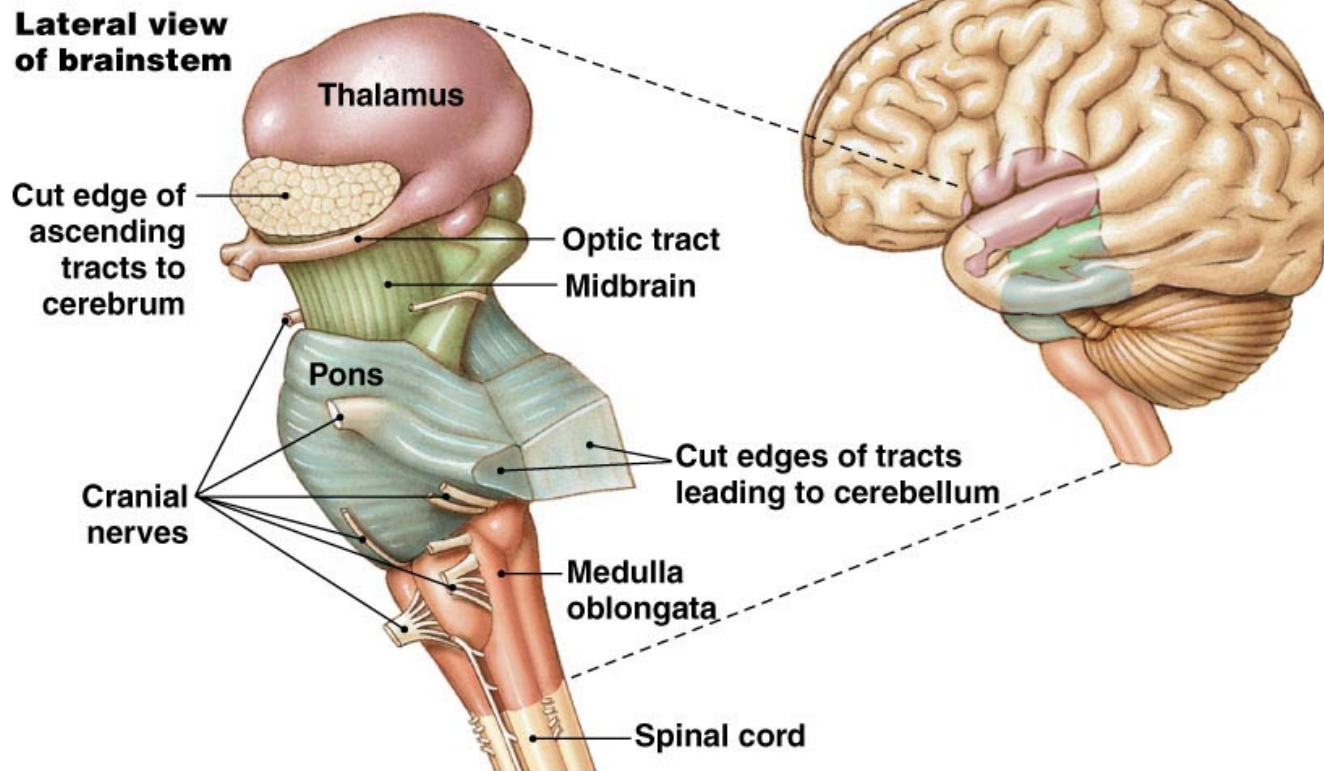
**(c) Mid-sagittal view of brain**



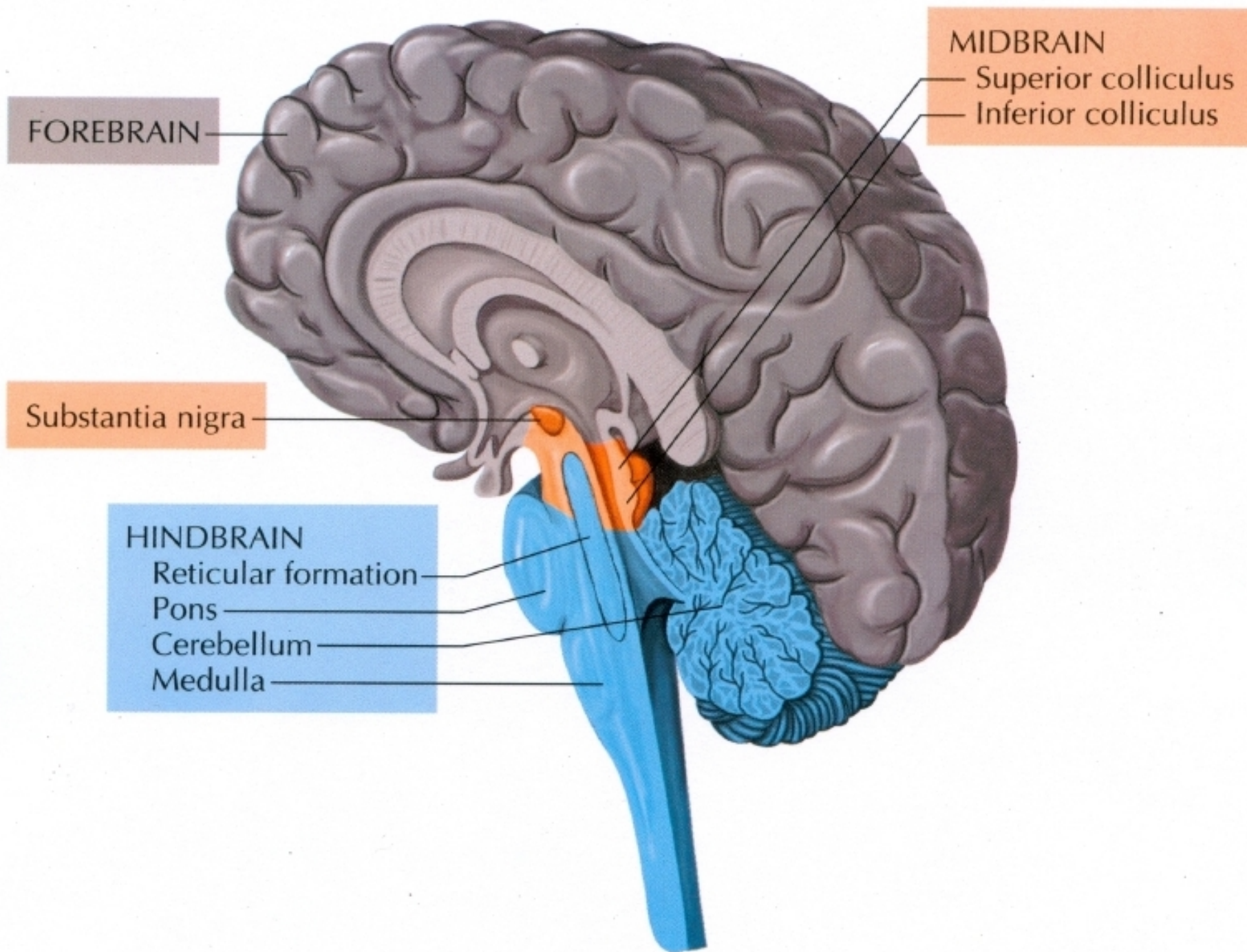
**(e) The skull**

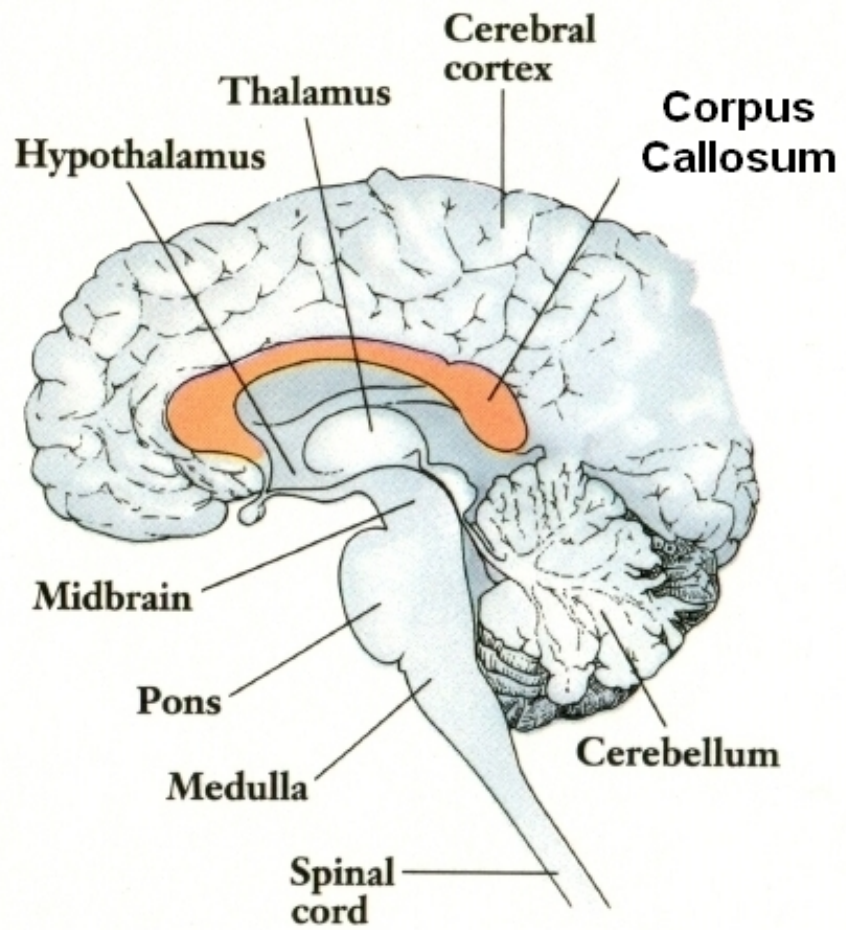


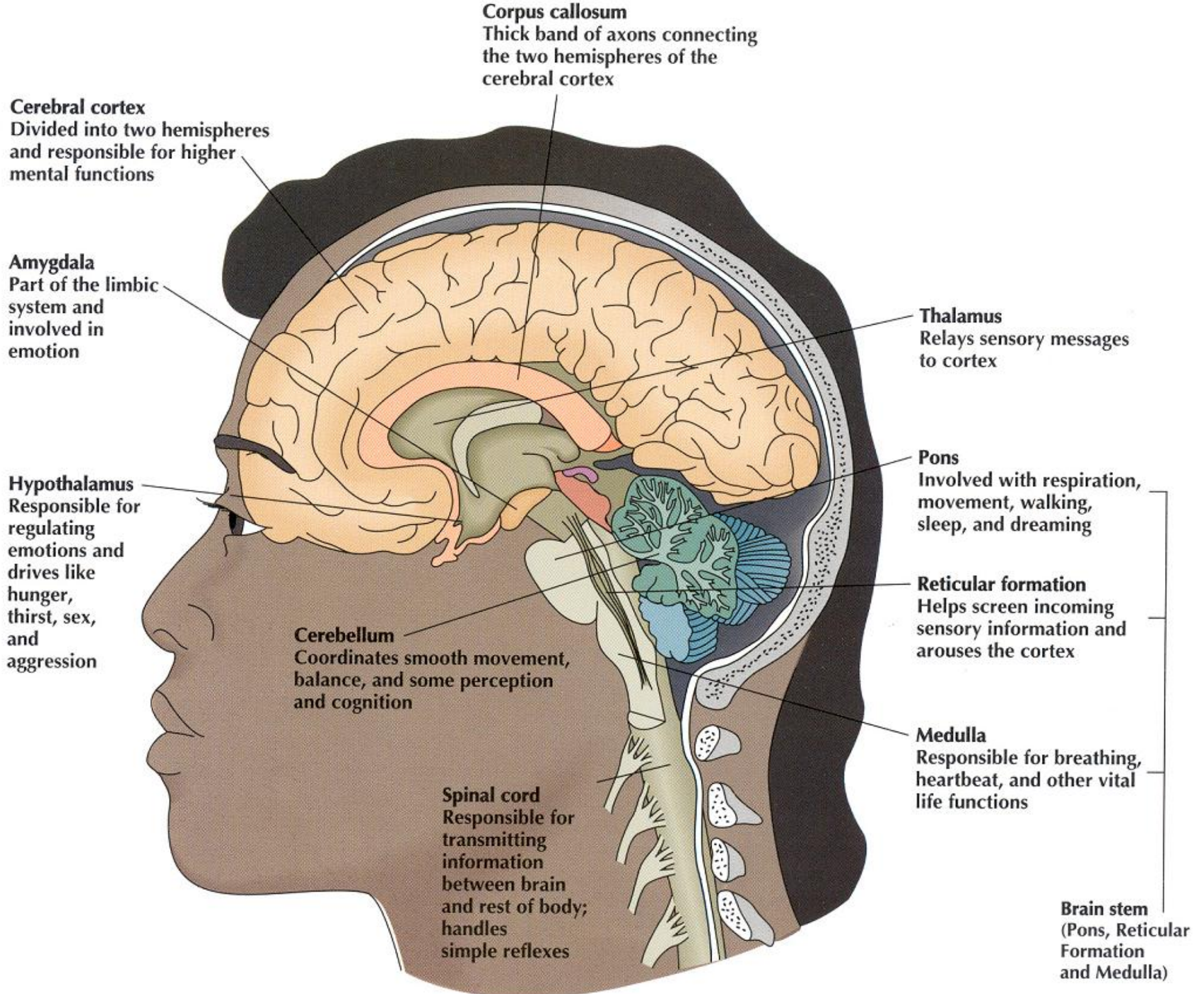
**(d) Lateral view of brainstem**



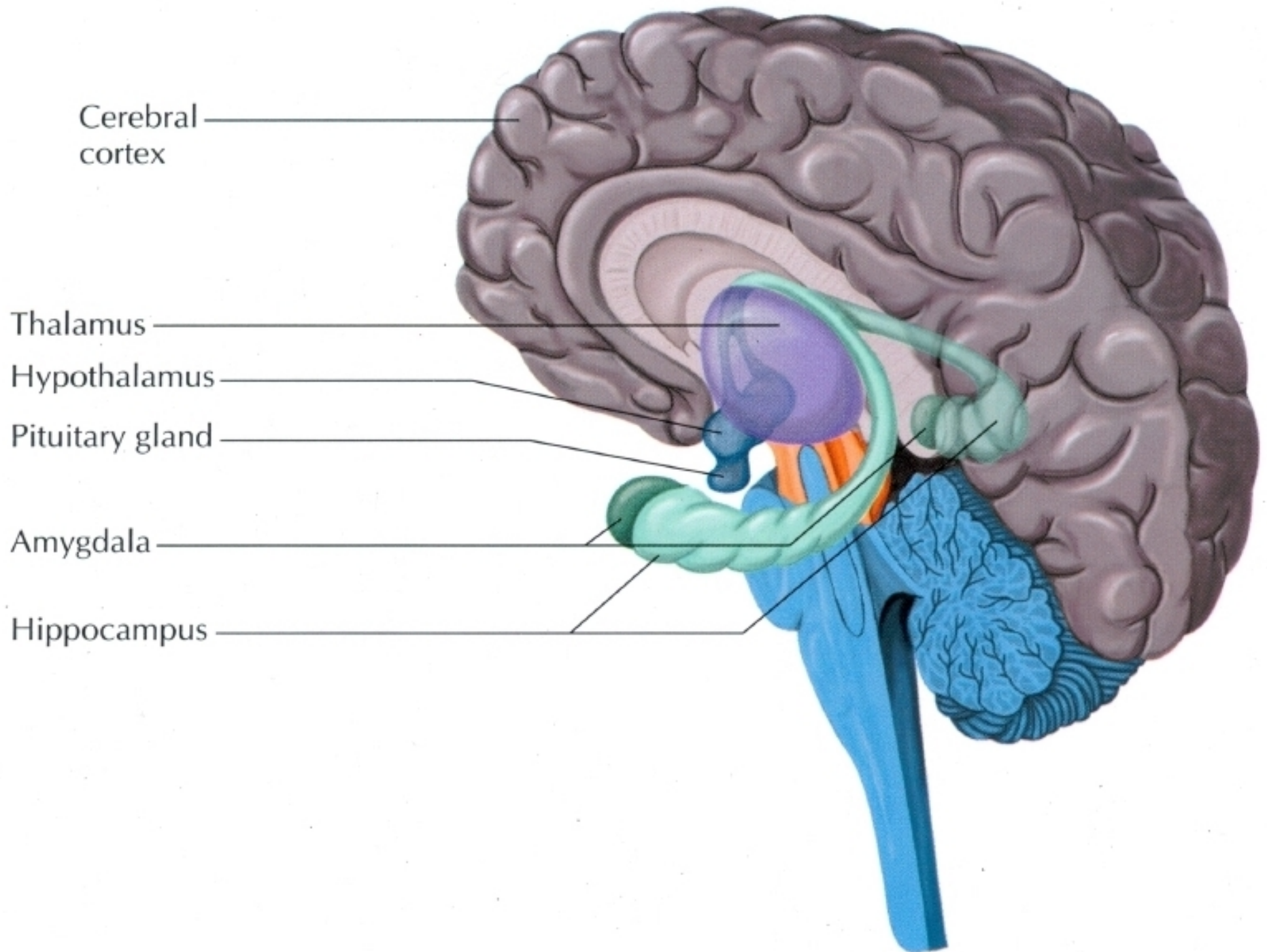
# The Hindbrain and Midbrain



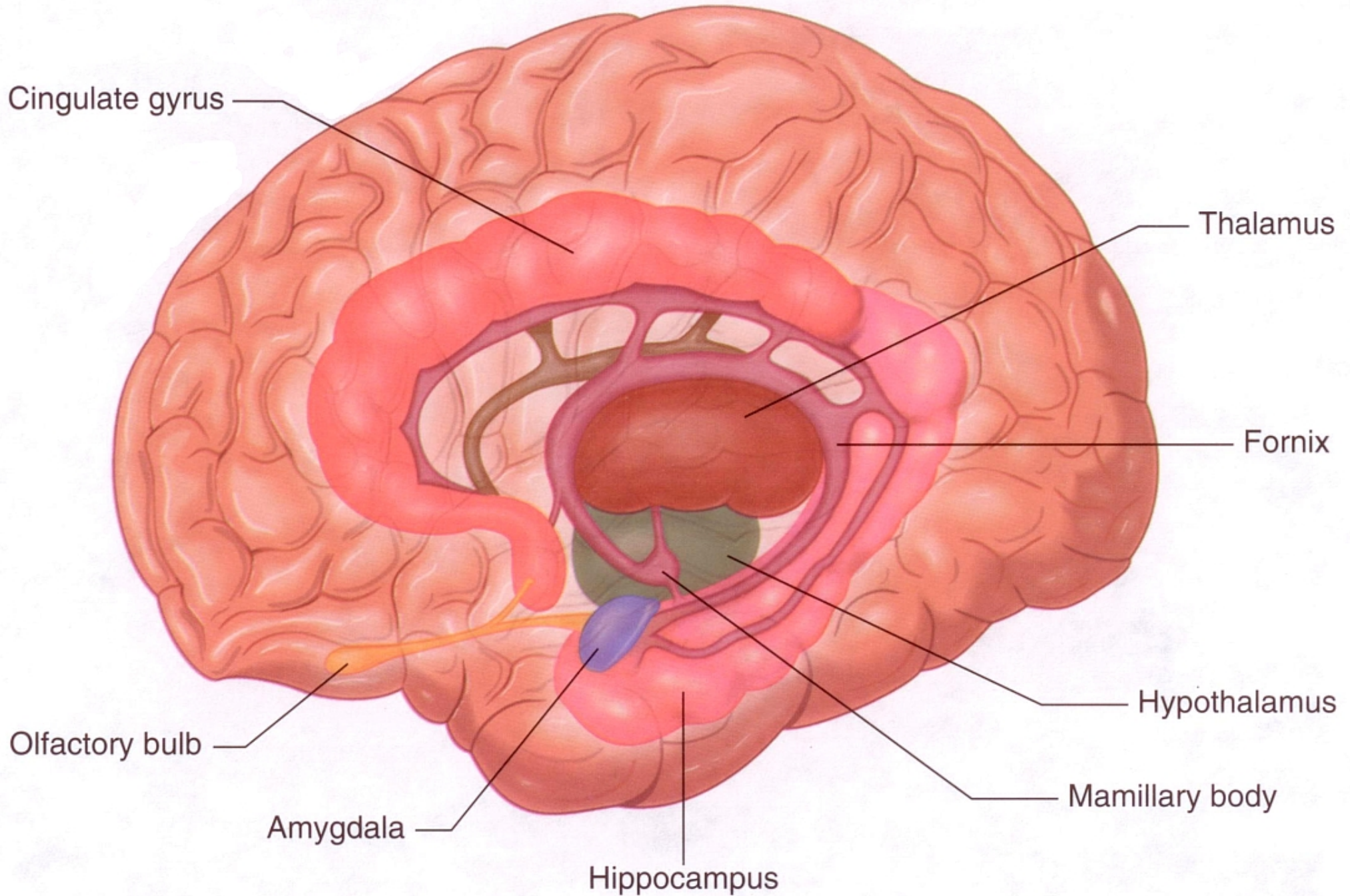




# The Forebrain and Limbic System

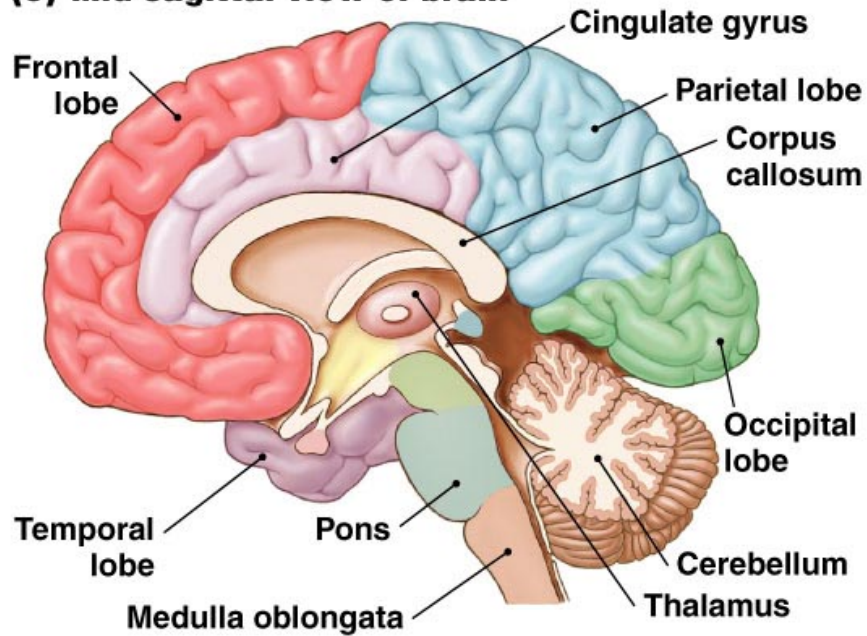


# The Limbic System

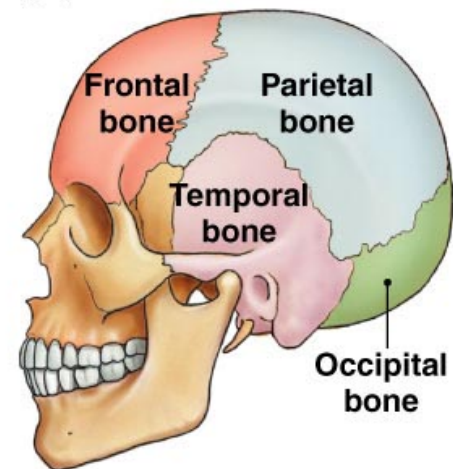




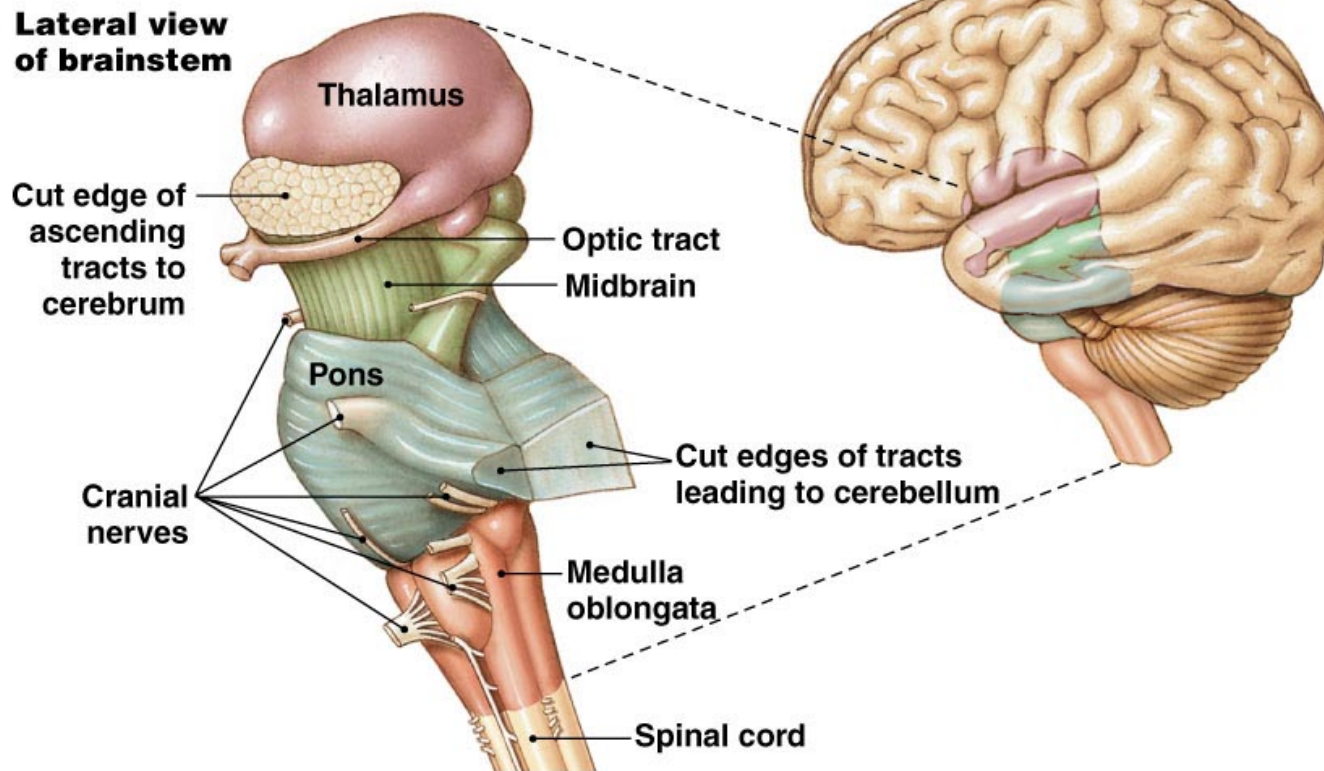
**(c) Mid-sagittal view of brain**



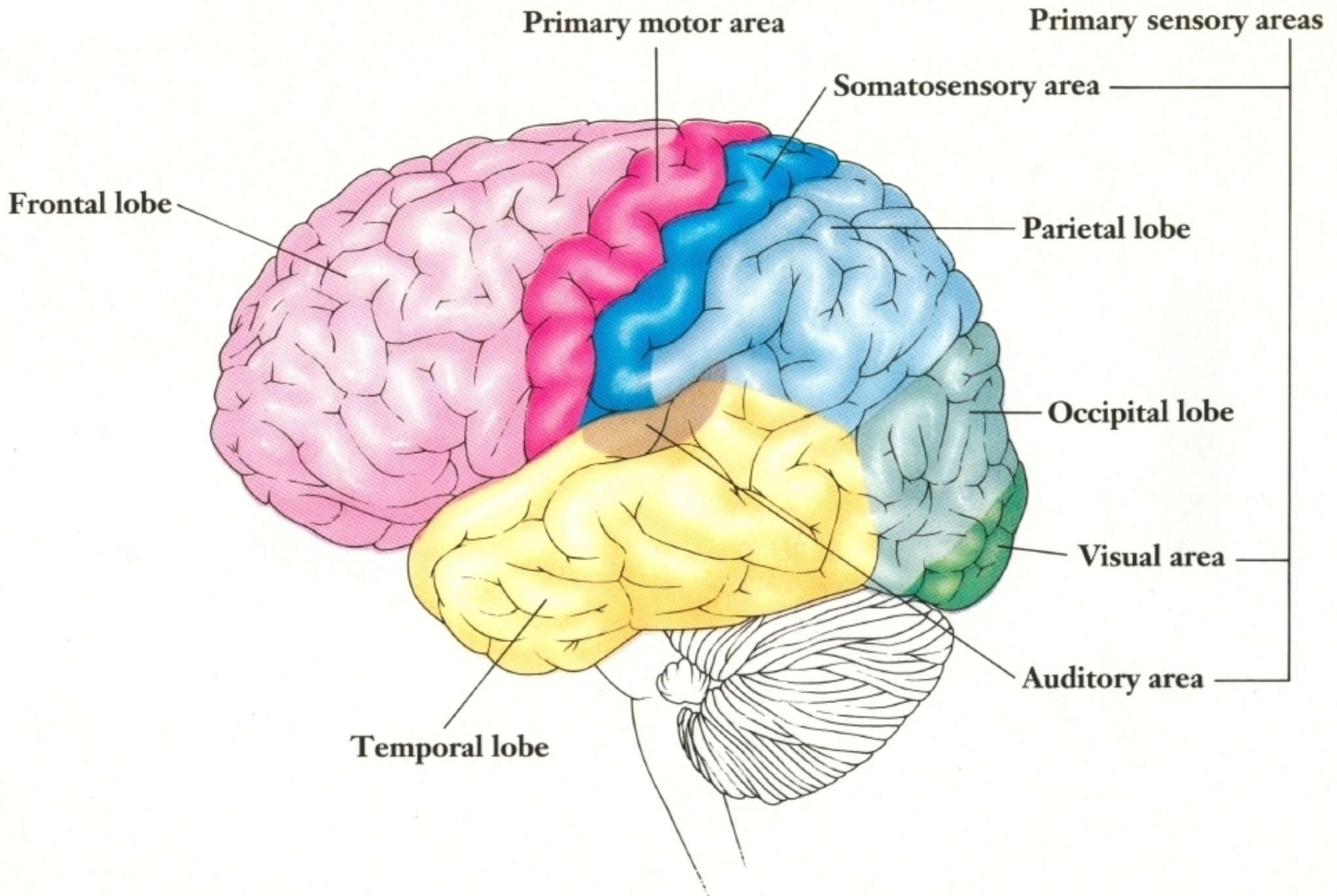
**(e) The skull**

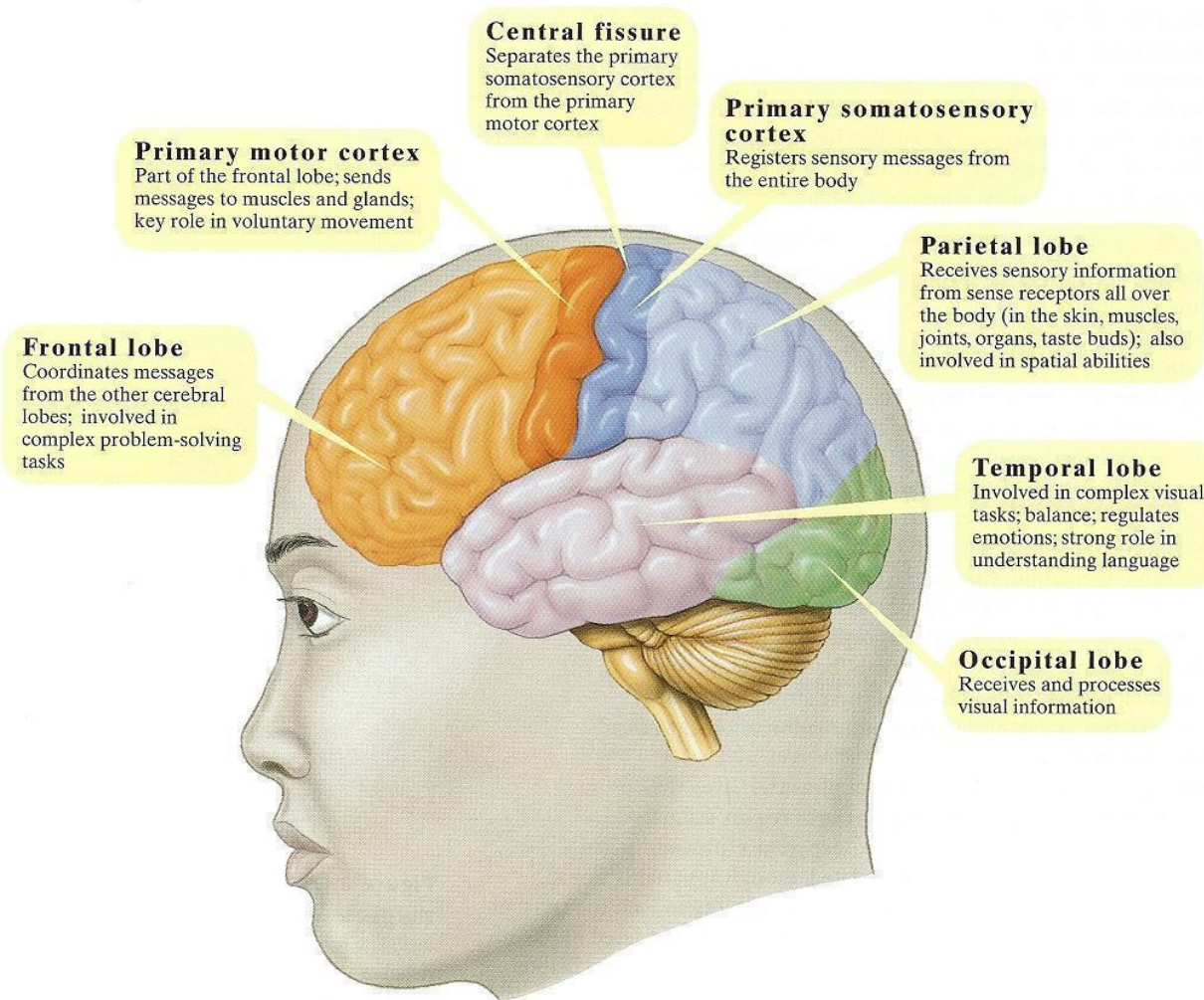


**(d) Lateral view of brainstem**



# The Cerebral Cortex





**The four lobes of the cerebral cortex.** Deep fissures in the cortex separate these areas or lobes. Also shown are the primary somatosensory and motor areas.

**cerebral cortex** The outer surface of the two cerebral hemispheres that regulates most complex behavior.

**association areas** Areas of the cerebral cortex where incoming messages from the separate senses are combined into meaningful impressions and outgoing messages from the motor areas are integrated.

**frontal lobe** Part of the cerebral cortex that is responsible for voluntary movement; it is also important for attention, goal-directed behavior, and appropriate emotional experiences.

**primary motor cortex** The section of each frontal lobe responsible for voluntary movement.

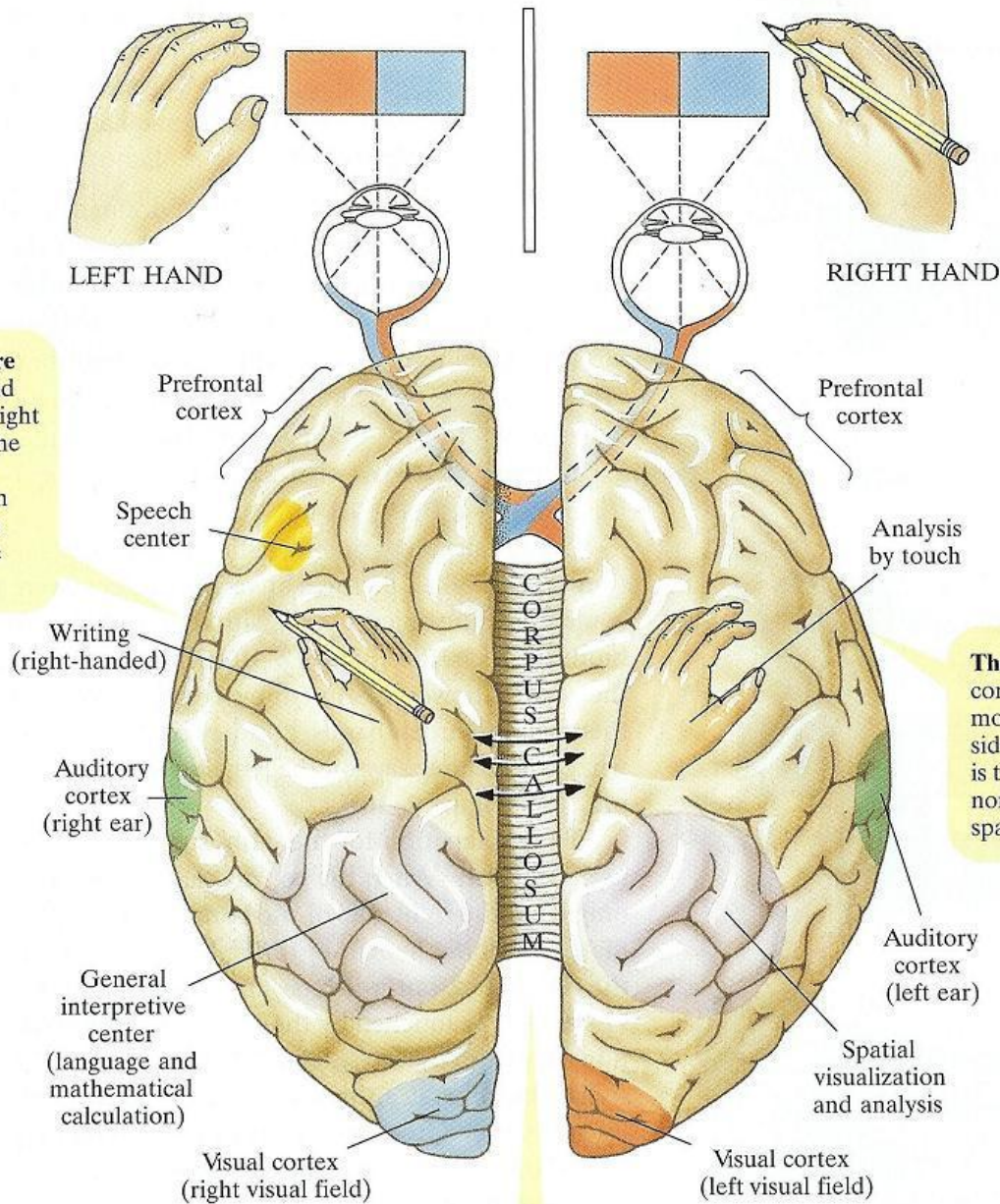
**primary somatosensory cortex** Area of the parietal lobe where messages from the sense receptors are registered.

**parietal lobe** Part of the cerebral cortex that receives sensory information from throughout the body.

**temporal lobe** Part of the cerebral hemisphere that helps regulate hearing, balance and equilibrium, and certain emotions and motivations.

**occipital lobe** Part of the cerebral hemisphere that receives and interprets visual information.

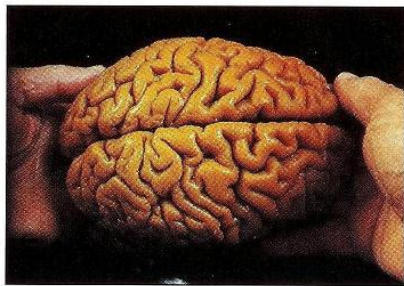
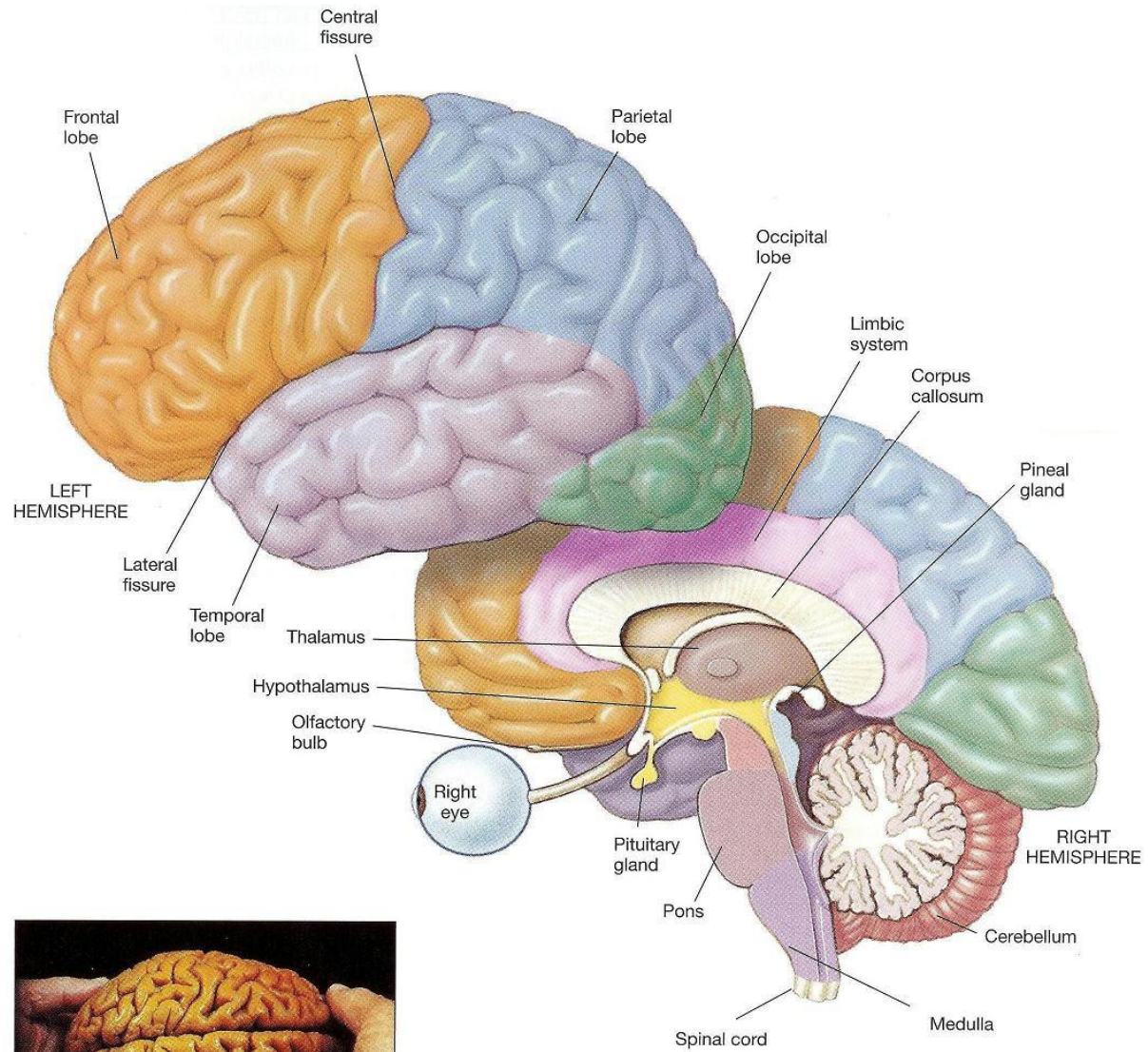
**The left hemisphere** controls writing and movement of the right side of the body. The left hemisphere is usually dominant in language and tasks involving symbolic reasoning.



**The right hemisphere** controls touch and movement of the left side of the body and is typically superior at nonverbal, visual, and spatial tasks.

**The corpus callosum** permits the exchange of information between the two hemispheres.

**corpus callosum** A thick band of nerve fibers connecting the left and right cerebral cortex.



The human brain, viewed from the top. Its relatively small size belies its enormous complexity.

**hindbrain** Area containing the medulla, pons, and cerebellum.

**cerebellum** Structure in the hindbrain that controls certain reflexes and coordinates the body's movements.

**midbrain** Region between the hindbrain and the forebrain; it is important for hearing and sight, and it is one of several places in the brain where pain is registered.

# Nervous System Organization - Key Terms

## Peripheral Nervous System

- Somatic

- Autonomic

  - (Parasympathetic and Sympathetic)

## Central Nervous System

- Brain and Spinal Cord

## Hindbrain

- Brainstem

  - (Medulla, Pons, Reticular Formation)

- Cerebellum

# Nervous System Organization - Key Terms

## Midbrain

Thalamus, Hypothalamus, Substantia Nigra

## Limbic System

Amygdala, Hippocampus, Hypothalamus, Pituitary,  
Thalamus, Olfactory Bulbs, Cingulate Gyrus

## Forebrain

Cingulate Gyrus

Cerebral Cortex

(Frontal, Temporal, Parietal, and Occipital Lobes)