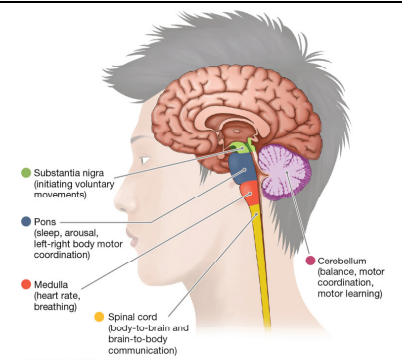
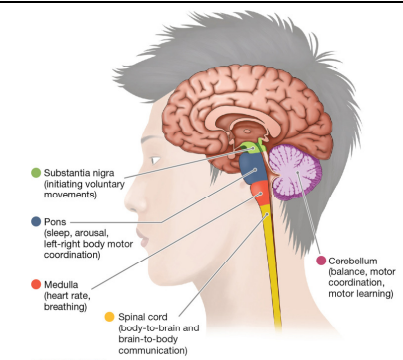
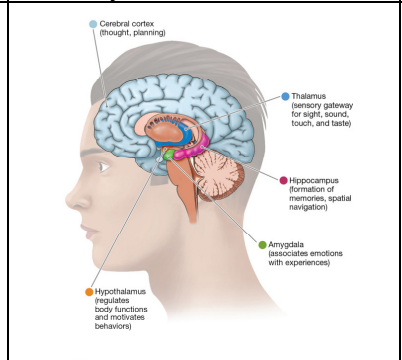
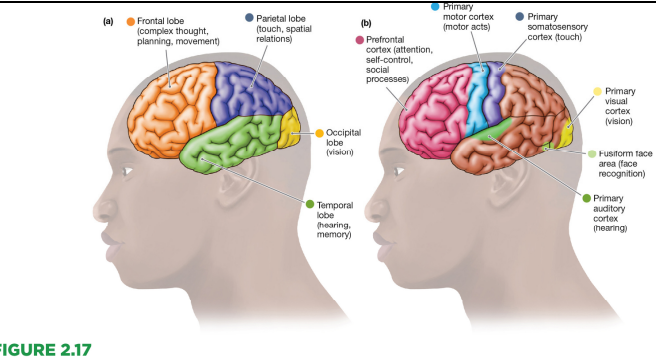
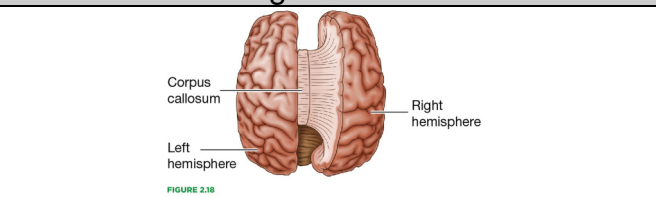
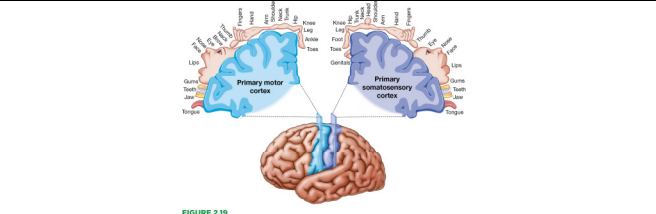


Summary of the Major Brain Structures

Hindbrain	Midbrain	Forebrain Subcortical	Forebrain Cortical
A region at the base of the brain that contains several structures that control body functions that are essential for survival	Located above the pons, it consists of several structures that are involved in the reflexive movement of the eyes and body.	A group of forebrain structures that form a border around the brainstem and are involved in emotion, motivation, learning and memory.	The wrinkled outer portion of the forebrain, which contains the most sophisticated brain centers.
 <p>FIGURE 2.15</p> <p><small>Copyright © 2022 W. W. Norton & Co., Inc.</small></p>	 <p>FIGURE 2.15</p> <p><small>Copyright © 2022 W. W. Norton & Co., Inc.</small></p>	 <p>FIGURE 2.16</p> <p><small>Copyright © 2022 W. W. Norton & Co., Inc.</small></p>	 <p>FIGURE 2.17</p> <p><small>Copyright © 2022 W. W. Norton & Co., Inc.</small></p>
Figure 2.15	Figure 2.15	Figure 2.16	Figure 2.17
 <p>FIGURE 2.18</p> <p><small>Copyright © 2022 W. W. Norton & Co., Inc.</small></p>			
 <p>FIGURE 2.19</p> <p><small>Copyright © 2022 W. W. Norton & Co., Inc.</small></p>			
Figure 2.19			

Summary of the Major Brain Structures

Hindbrain	Midbrain	Forebrain Subcortical Structures	Forebrain Cortical Structures
<ul style="list-style-type: none"> • <u>Medulla</u>: A hindbrain structure at the top of the spinal cord; it controls survival functions such as heart rate and breathing. • <u>Pons</u>: A hindbrain structure above the medulla; it regulates sleep, arousal and coordinates movements of the left and right sides of the body. • <u>Cerebellum</u>: A hindbrain structure behind the medulla and pons; it is essential for motor learning, coordination, and balance. • <u>Reticular formation</u>: A network of nerve fibers located in the center of the medulla that helps regulate attention, arousal, and sleep; also called the reticular activating system. 	<ul style="list-style-type: none"> • <u>Substantia nigra</u>: A brain structure important for initiating voluntary movements. 	<ul style="list-style-type: none"> • <u>Thalamus</u>: A subcortical forebrain structure; the gateway to the brain for sight, sound, touch, and taste sensory information before that information reaches the cortex. • <u>Hypothalamus</u>: A subcortical forebrain structure involved in regulating bodily functions. The hypothalamus also influences basic motivated behaviors such as sleep, body temperature, sex, eating and thirst. • <u>Hippocampus</u>: A subcortical forebrain structure; it is associated with the formation of new memories and with spatial navigation. • <u>Amygdala</u>: A subcortical forebrain structure involved in detecting and responding to threats; it also plays a vital role in learning to associate things with emotional responses and in processing emotional information. 	<ul style="list-style-type: none"> • <u>Corpus Callosum</u>: A thick band of axons that connects the two cerebral hemispheres and acts as a communication link between them. • <u>Occipital lobe</u>: Regions of the cerebral cortex at the back of the brain important for vision. <ul style="list-style-type: none"> ○ Primary visual cortex • <u>Parietal lobe</u>: Regions of the cerebral cortex in front of the occipital lobes and behind the frontal lobes important for the sense of touch and for picturing the layout of spaces in an environment. <ul style="list-style-type: none"> ○ Primary somatosensory cortex • <u>Temporal Lobe</u>: Regions of the cerebral cortex below the parietal lobes and in front of the occipital lobes important for hearing and for recognizing objects, such as faces. <ul style="list-style-type: none"> ○ Primary auditory cortex ○ Fusiform face area ○ Wernicke's Area • <u>Frontal lobe</u>: Regions of the cerebral cortex at the front of the brain; important for movement, planning, and complex processes (rational thought, attention, self-control, social processes, and so on). <ul style="list-style-type: none"> ○ Prefrontal Cortex ○ Primary Motor Cortex ○ Broca's Area