


How is the Nervous System Organized?



Ch. 3-Neuroscience

1

Class Objectives

- ⦿ What is APA style?
- ⦿ What is the Nervous System?
- ⦿ What are the 3 divisions of the brain?

2

What your citation should look like

- ⦿ Murray, B. (2000). Teaching students how to learn. *Monitor on Psychology*, Vol. 31 (8), pp. 64-68.

3

What is the Nervous System?

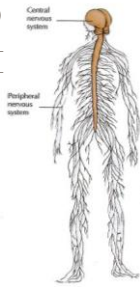
- ⦿ The *Nervous System* is the body's main _____

- ⦿ This consists of structures and organs that facilitate _____

The Nervous System

- ⦿ Central Nervous System (CNS)

- ⦿ Peripheral Nervous System (PNS)
- Bundles of axons between the _____



CNS-Spinal Cord

- ⦿ The spinal cord _____
from the sensory organs, muscles and glands
to the brain.

- ⦿ The spinal cord is like a **communication superhighway** between the brain and the rest of the body.



How does the spinal cord communicate?

- Communicates with the body below the head through _____
- Sensory neurons
 - Carry information about touch, pain, and other senses from the periphery of the body to the spinal cord
- Motor neurons
 - Transmit impulses from the central nervous system to the muscles and glands

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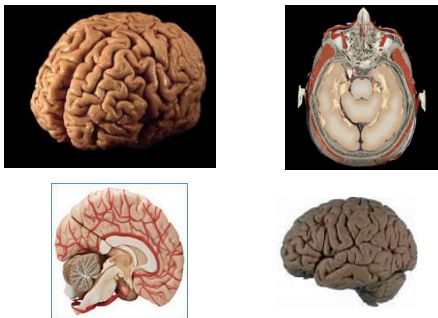


How much do you know about YOUR brain??



8

What observations can you make about the brain?



9

Looking at the Brain

- The exterior covering (_____) of the brain is wrinkled which increases the _____
- The brain is divided into 2 hemispheres
 - Right and left hemispheres

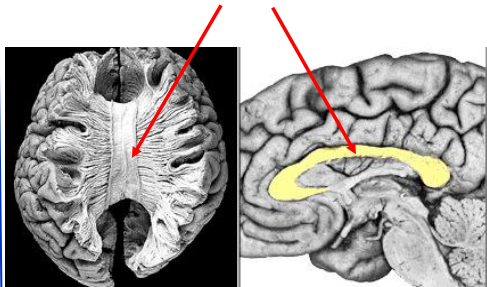
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The hemispheres of the brain are connected

- The _____ connects these hemispheres and allows communication from one side of the brain to the other.
- Damage to the Corpus Callosum results in two independent brains in one skull
- *Split brain patients* allowed researchers to discover “ _____ ”

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Corpus Callosum



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Split Brain Research

- ⊙ This research showed that each hemisphere of the brain is specialized
- ⊙ The _____ is associated with musical ability, spatial and drawing tasks
- ⊙ The _____ is associated with speech and language.

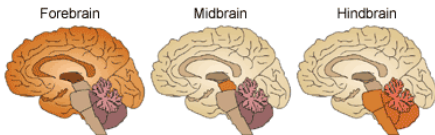
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“Does bigger mean smarter?”

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Three Divisions of the Brain

- Hindbrain
- Midbrain
- Forebrain



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The Hindbrain

- ⊙ _____
- ⊙ The structures in the lower brain tend to be responsible for basic, reflexive functions.
- ⊙ Includes the _____

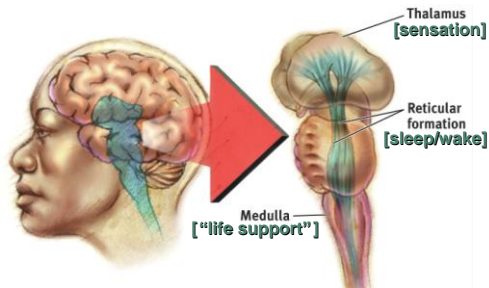
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The Hindbrain



- ⊙ The Medulla is the _____ and lowest portion of the hindbrain (Part of the brain stem).
- It controls basic body functions-

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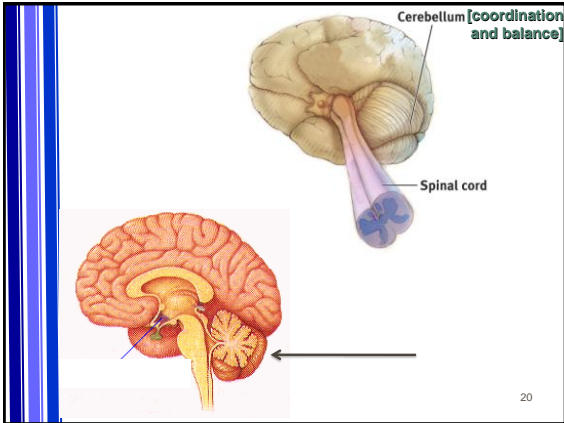
- ⦿ Pons- provides link (“bridge”)between the medulla and the cerebellum and rest of brain

- _____

- ⦿ Cerebellum- “Little brain” – attached to back surface of brain stem.

- ⦿ Influences _____

- Allows you to walk a straight line



Next Class...

- ⦿ More on the brain!
