An Engaging Activity on the Nervous System To Avoid Students Saying:

"Argh! Why Do I Have To Learn About Biology In Psychology?!

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http://tinyurl.com/lvh4t5y

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Summary of Activity

- Purpose: Make the biological processes underlying psychology concrete and relevant to students
- Equipment: Timer; PowerPoint (optional)
- Preparation: Activity worksheet; PowerPoint slides
- Ethical Issues: Sensitivity to individual differences

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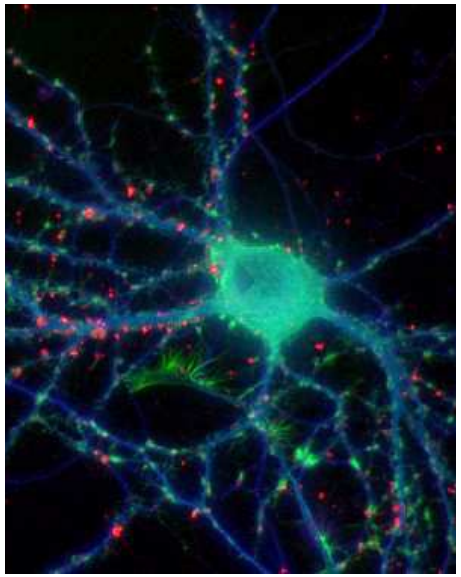
Goals for Chapter 2: The Role of Biology in Psychology

1. Why care about biology in a psychology class?
2. How do neurons allow thought and behavior?
3. What does my nervous system do?
4. Why should I cherish my cortex?
5. Why should I love my immune and endocrine systems?



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1. Why care about biology in a psychology class?

"As a scientist I am compelled to the conclusion that there must exist certain physical-chemical changes in the nervous tissue that correspond to all psychological processes…The alternative stance, that it may be possible for any behavior or any thought to occur independently of physical changes in the ***nervous system***, is sheer mysticism."

Endel Tulving, cognitive neuroscientist

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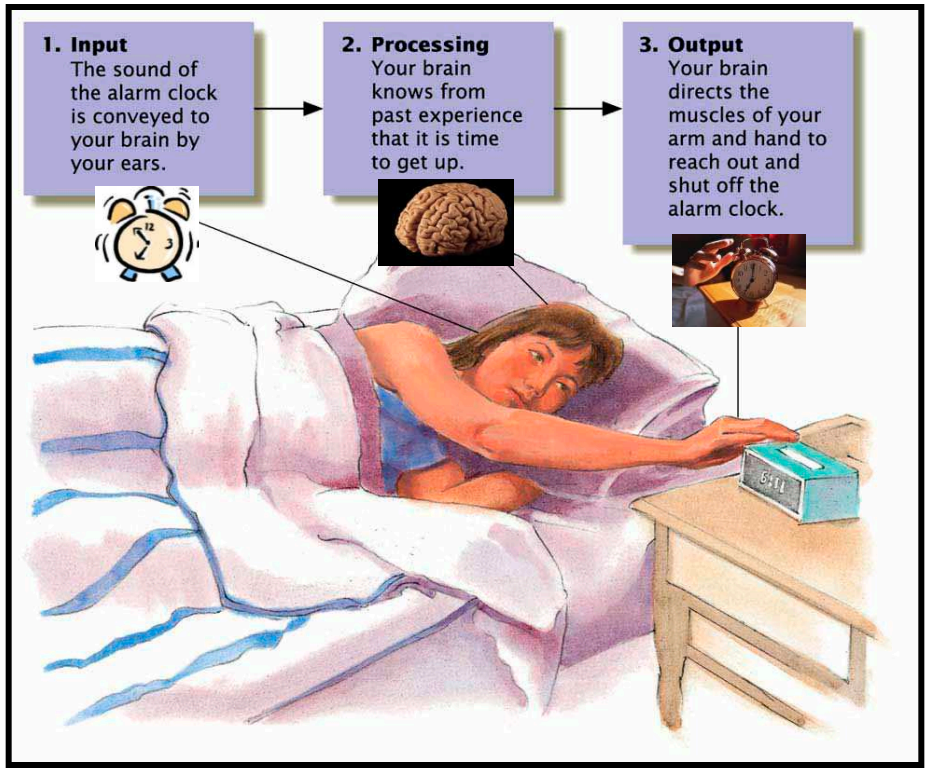
1. Why care about biology in a psychology class?

Our nervous system has three functions



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1. Why care about biology in a psychology class?

- **Nervous System:** Combination of organs and cells in the body

1. Organs:
   - ✓ Brain and the spine

2. Cells:
   - ✓ **Neurons:** 100 billion neurons allow communication inside brain
   - ✓ **Glial cells:** 10-50 x more than neurons, provide support for neurons, create myelin
   - ✓ Nerve fibers: Located in the spine

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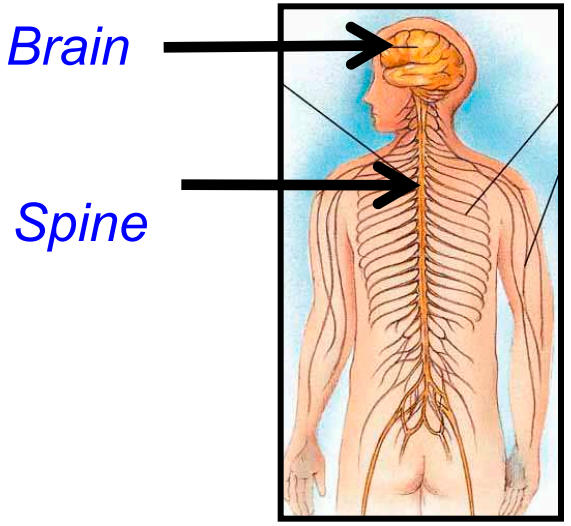

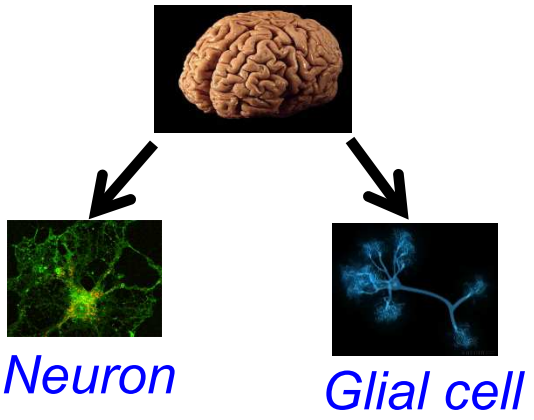

Activity About Your Nervous System

1. Please stand up and **hold the ankle** of the person next to you
2. We will form a long UNBROKEN chain of people
3. You will be holding on until I tell you "GO!"
4. The person at START will SQUEEZE the **ankle** of the person next to them and so on to the END!
5. Please note how long it takes on your activity sheet!

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Activity About Your Nervous System

1. Now please **hold the shoulder** of the person next to you
2. We will again form a long UNBROKEN chain of people
3. You will be holding on until I tell you "GO!"
4. The person at START will SQUEEZE the **shoulder** of the person next to them and so on to the END!
5. Again, please note of how long it takes on your activity sheet!

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Activity About Your Nervous System

Please talk with your neighbor to answer the questions.

1. How long did each task take?

Ankle Task: _____ seconds **Shoulder Task:** _____ seconds

2. What were the 3 functions of your nervous system during the Ankle Task and the Shoulder Task?

3. Can you explain why one task was faster based on the functions of your nervous system?

All this depends on your nervous system – and your neurons!

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What's Your Opinion?

Now do you believe that all of your thinking and behavior are due to your nervous system and neurons?

A. Yes!

B. No. I think it might be magic

You made Endel Tulving very happy!

1. Why care about biology in a psychology class?

Case Study: Symptoms of Multiple Sclerosis (MS)

- Physical: Vision loss, weakness, clumsiness, slurred speech
- Cognitive: Inattention, poor memory
- Emotional: Mood swings, depression

Jack Osbourne was diagnosed with MS in 2012. Let's see what happens in the nervous system and neurons to cause MS symptoms…

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Thank you!

- Thank you to MISTOP and Pat and Ava for this opportunity.
- Questions or thoughts? Please catch me before the conference ends or mail me at sgrison@parkland.edu

Gratuitous photo of my daughters!

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