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VIDEO GUIDE · UNIT 1 · TOPIC 1.3

Types of Neurons and Glial Cells

Watch the lesson

Name _____ Class _____ Date _____

NOTES: FILL IN THE BLANKS WHILE YOU WATCH

Glial cells and myelin

1. _____ support neurons: they provide structure and insulation, help with communication, and remove waste.
2. The _____ insulates the axon like the coating on a wire, helping action potentials travel faster.
3. In _____, the myelin sheath is damaged, so signals slow down or get disrupted even though the muscles themselves are fine.

Three types of neurons

4. _____ carry information from the senses, like receptors in the skin, toward the central nervous system.
5. _____ work in between, within the CNS (e.g., in the spinal cord during a reflex), connecting sensory neurons to motor neurons.
6. _____ carry instructions from the CNS out to the muscles, producing movement.

CHECK YOUR UNDERSTANDING

1. Two axons are identical except that one is wrapped in a myelin sheath. How will action potentials along the myelinated axon compare?

(A) They will travel faster

(B) They will travel slower

(C) They will be stronger but equally fast

(D) They will not reach the end of the axon

2. A patient's motor neurons are damaged, but her sensory neurons are healthy. She touches a hot stove. What is most likely?

(A) She can't feel the heat, but her hand pulls away

(B) She feels the heat but can't pull her hand away

(C) She neither feels the heat nor pulls away

(D) She feels the heat and pulls away normally

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3. A spinal injury damages neurons that lie entirely within the spinal cord, while the nerves carrying signals from the hand and out to the arm muscles stay intact. Her hand no longer jerks back reflexively from a hot pan. Which neurons were most likely damaged?

(A) Sensory neurons

(B) Motor neurons

(C) Interneurons

(D) Glial cells

NOTES

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