What is the Peripheral Nervous System?

Worksheet

The peripheral nervous system is made up of all the nerves outside the brain and spinal cord; it carries sensory information to the CNS and motor commands from the CNS to muscles and glands, and is divided into somatic (voluntary) and autonomic (involuntary) divisions.

Questions

1. What is included in the peripheral nervous system?

A) Only the brain
B) Only the spinal cord
C) All nerves outside the brain and spinal cord
D) Only sensory organs

2. Which division controls voluntary skeletal muscle movement?

A) Sympathetic division
B) Somatic nervous system
C) Parasympathetic division
D) Central nervous system

3. Which division triggers the 'fight-or-flight' response?

A) Parasympathetic
B) Somatic
C) Sympathetic
D) Sensory

4. Which system slows heart rate and promotes digestion after stress?

A) Sympathetic division
B) Somatic nervous system
C) Parasympathetic division
D) CNS only

5. Explain which part of the PNS is responsible for consciously kicking a soccer ball.

6. Describe the PNS response when someone suddenly jumps out and scares you.

7. Explain how the parasympathetic nervous system helps the body after a stressful event ends.

8. Define: What does the PNS consist of?

9. Define: What are the two divisions of the PNS?

10. Define: What does the somatic nervous system control?

Answer Key

1. C) All nerves outside the brain and spinal cord - The PNS is everything outside the CNS, i.e., all peripheral nerves.

2. B) Somatic nervous system - The somatic nervous system governs conscious, voluntary movement.

3. C) Sympathetic - The sympathetic division prepares the body for immediate action under stress.

4. C) Parasympathetic division - The parasympathetic division restores the body to a resting, digesting state.

5. The decision to kick is made in the brain's motor cortex A signal travels down the spinal cord and out via the somatic nervous system Somatic motor neurons connect directly to the leg's skeletal muscles The muscles contract under conscious control, producing the kick

6. The sudden stimulus is registered as a threat by the brain The sympathetic division of the autonomic nervous system activates instantly It triggers a faster heart rate, wider pupils, and adrenaline release This is the classic 'fight-or-flight' response, all controlled involuntarily by the PNS

7. Once the threat is gone, the sympathetic response is no longer needed The parasympathetic division of the autonomic nervous system activates It slows the heart rate and stimulates digestion This 'rest-and-digest' state returns the body to a calm baseline

8. All nerves outside the brain and spinal cord.

9. The somatic nervous system and the autonomic nervous system.

10. Voluntary movement of skeletal muscles.