

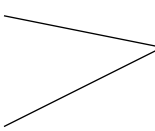
Module 10 LO2

Nervous System Divisions

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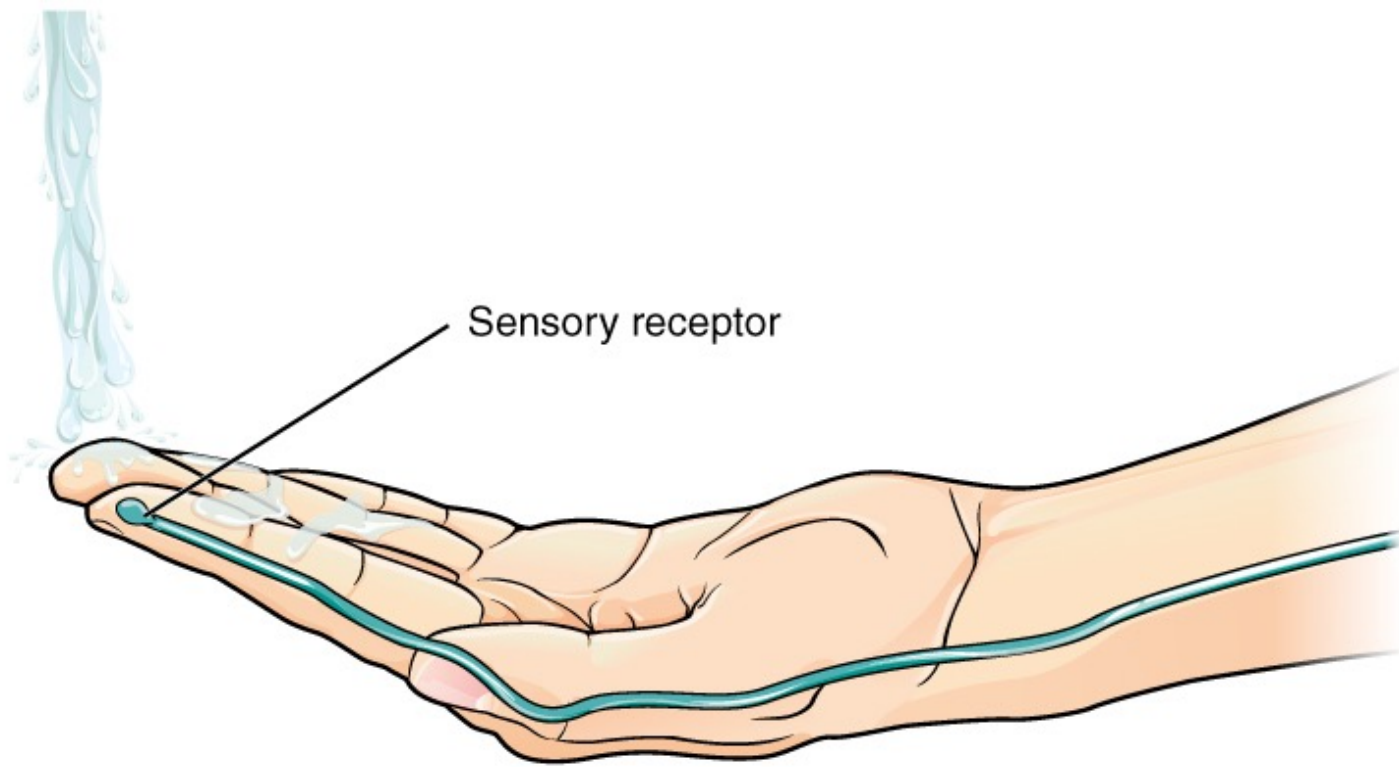
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2. Nervous System Divisions

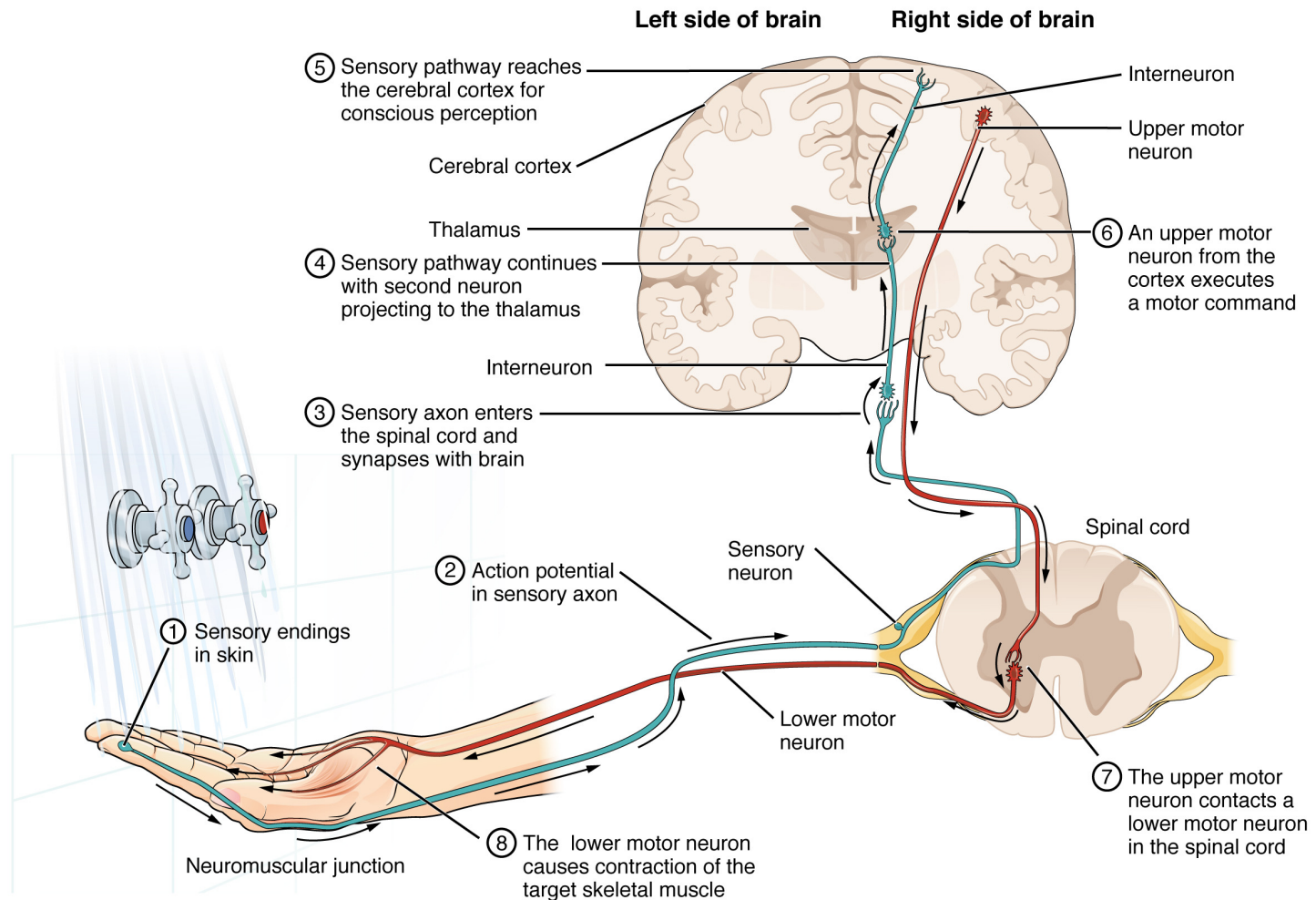
- CNS
 - PNS
- 
- Maintain homeostasis
- Basic functions:
 - A. Sensory (input)
 - Detects internal and external stimuli
 - B. Integrative (control)
 - Processing of information and making decisions for appropriate response
 - Perception – conscious awareness of sensory stimuli
 - C. Motor (output)
 - Muscular contraction
 - Glandular secretion

A. Sensory Input

- Receptors in the skin sense the temperature of the water.

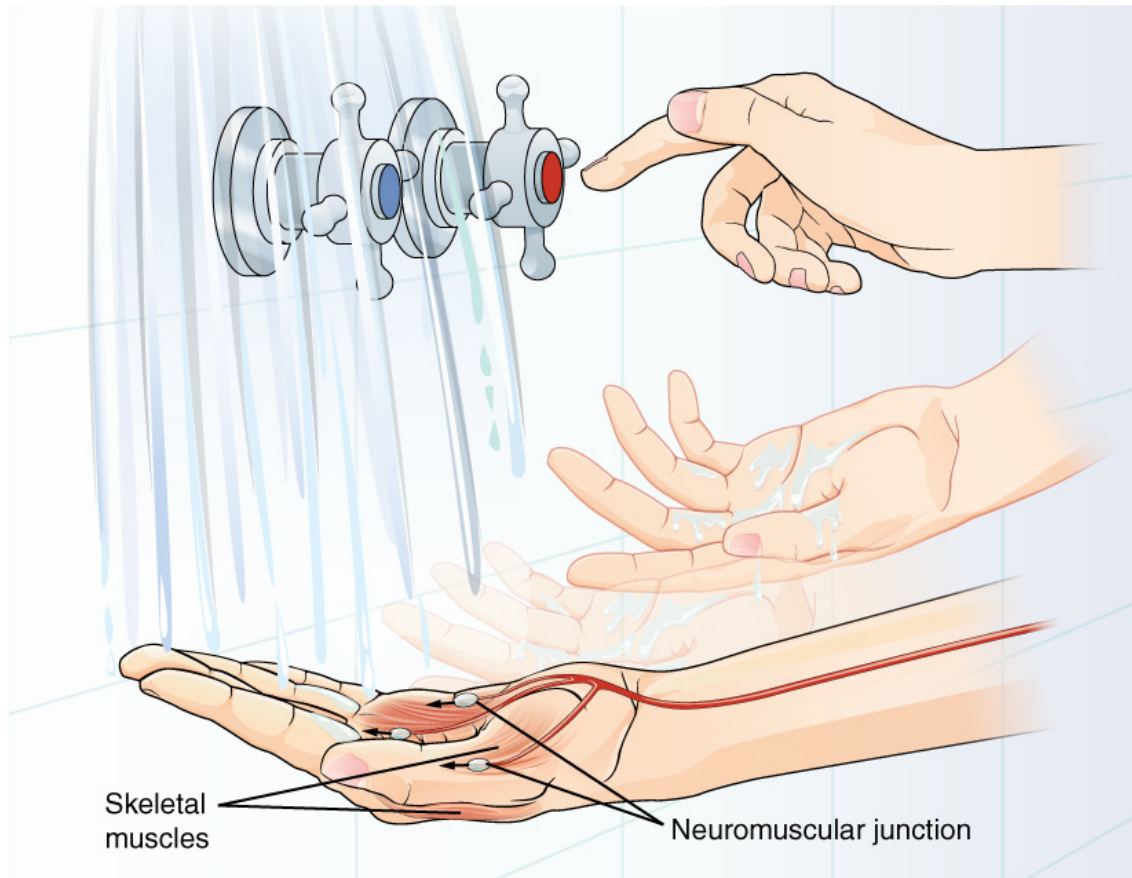


B. Integrative Control



C. Motor Output

- Sensory input and the integration in the CNS leads to a motor response is formulated and executed



Peripheral Nervous System

A. Somatic Nervous System

- Consists of:
 - Somatic sensory neurons
 - From receptors in PNS ➡ CNS
 - Somatic motor neurons
 - From CNS ➡ skeletal muscles ONLY

B. Autonomic Nervous System

- Autonomic (visceral) sensory neurons
 - Visceral organs ➡ CNS
- Autonomic motor neurons
 - From CNS ➡ smooth and cardiac muscles; glands

ANS Subdivisions

A. Sympathetic Nervous System

- Helps support exercise or emergency actions
 - “fight-or-flight”
 - Major regulator of cardiovascular system

B. Parasympathetic Nervous System

- Helps support more relaxing functions
 - “rest-and-digest”
 - Major regulator of digestive and respiratory systems

C. Enteric Nervous System (“brain of the gut”)

- Sensory neurons – monitor chemical changes
- Motor neurons – govern contraction and secretion

Nervous System Organization

