

# Module 10 LO2

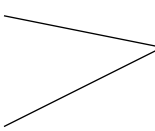
## Nervous System Divisions

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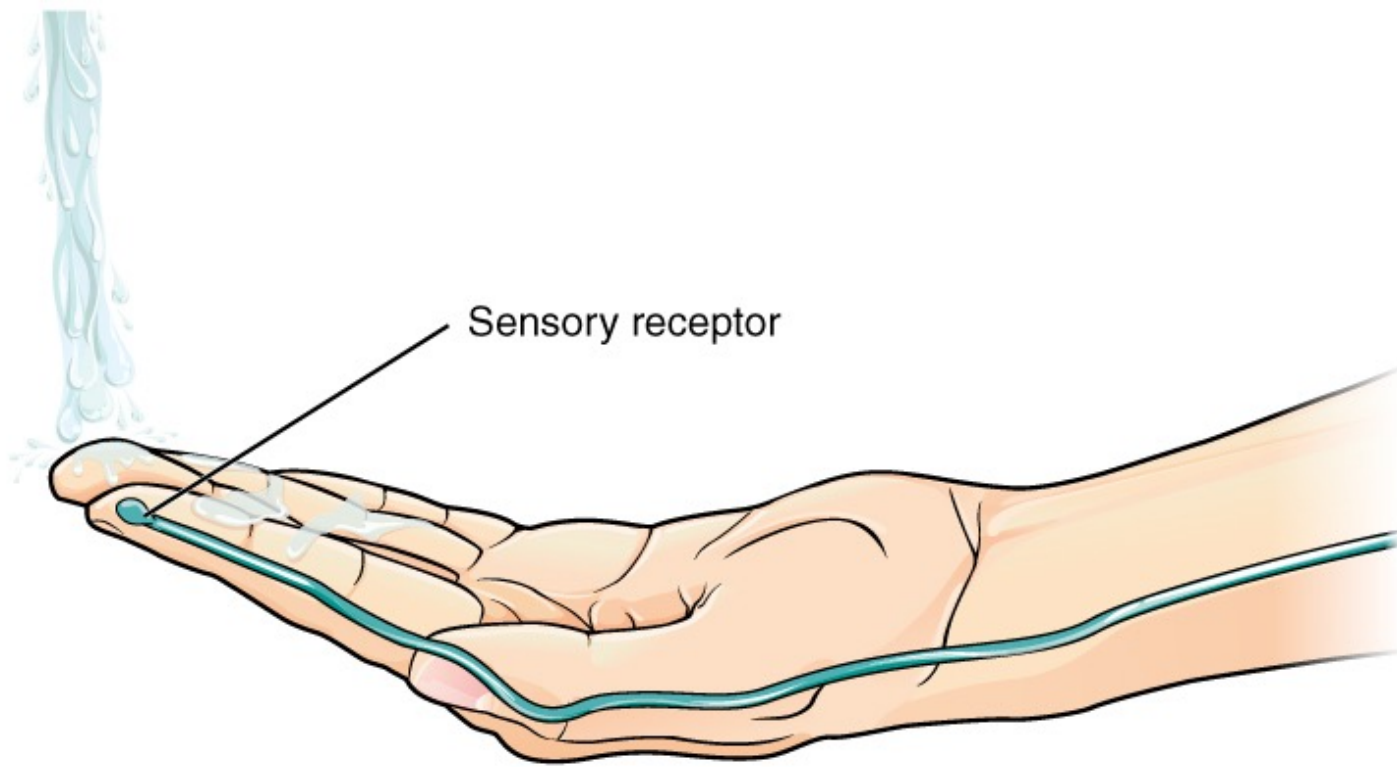
[Video Recording Link](#)

## 2. Nervous System Divisions

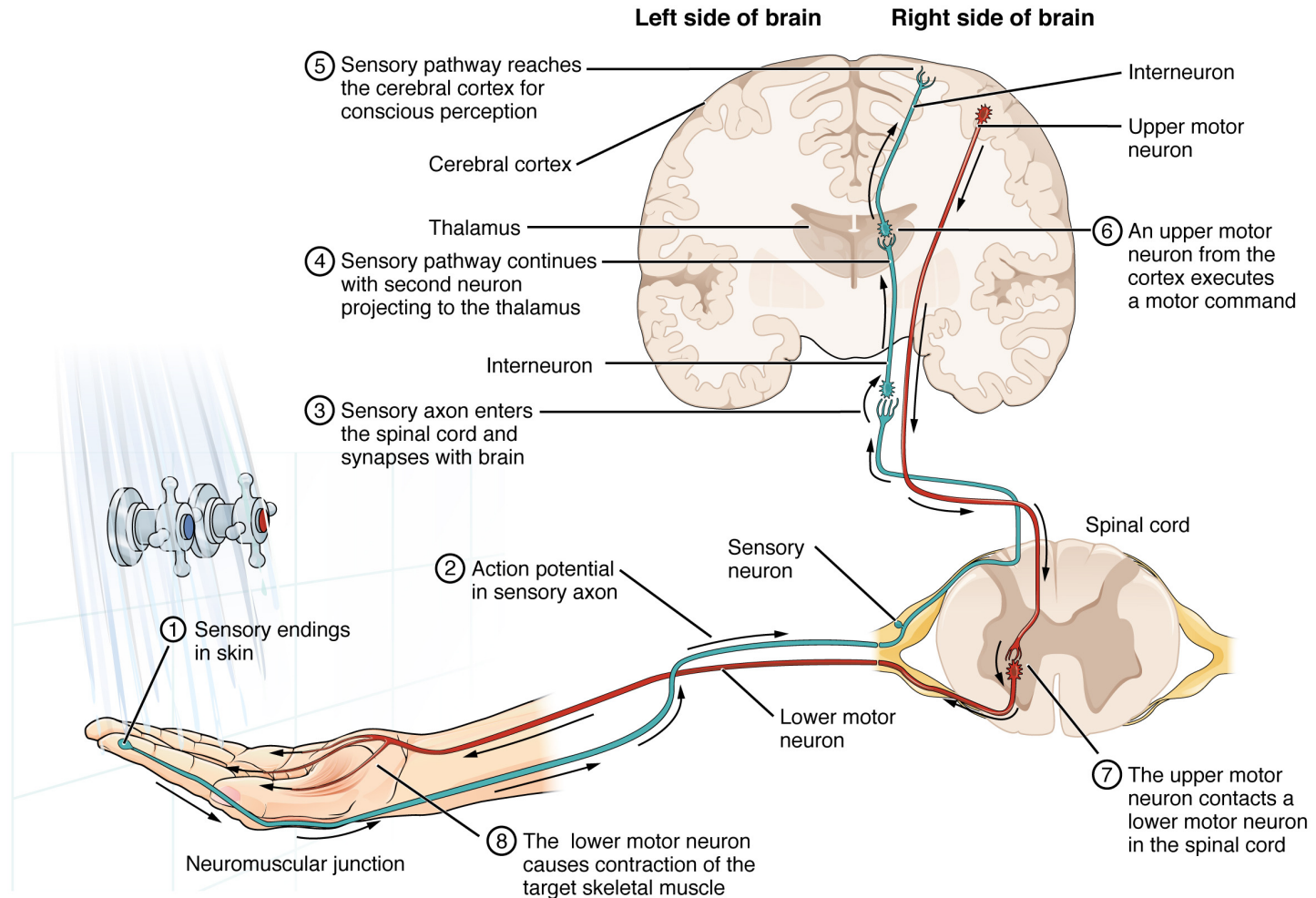
- CNS
  - PNS
- 
- Maintain homeostasis
- Basic functions:
    - A. Sensory (input)
      - Detects internal and external stimuli
    - B. Integrative (control)
      - Processing of information and making decisions for appropriate response
      - Perception – conscious awareness of sensory stimuli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

## A. Sensory Input

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

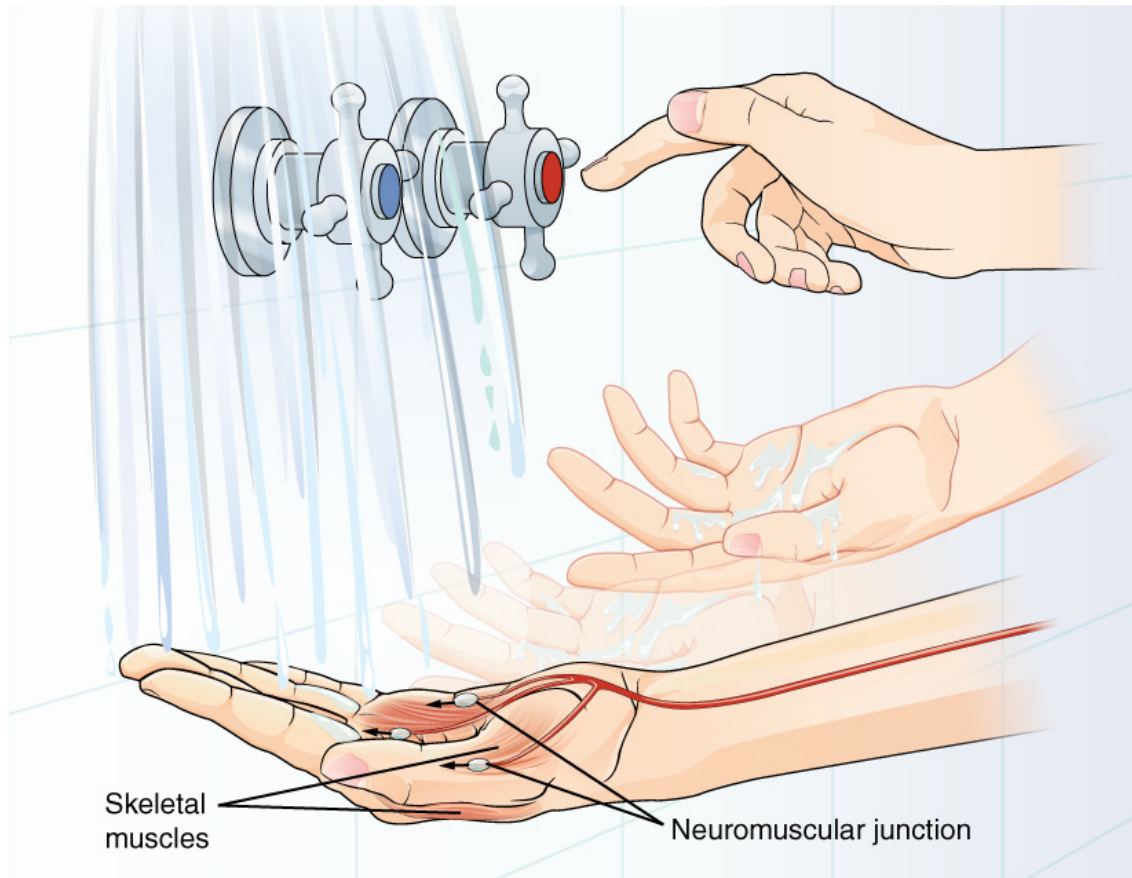


## B. Integrative Control



## 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

