

SOMATIC NERVOUS SYSTEM (SNS)

Voluntary Control & Sensory Information Processing

1. SENSORY INPUT (AFFERENT)

- **General Somatic Senses** Touch, pain, temperature, and proprioception from skin and joints.
- **Special Senses** Vision, hearing, equilibrium, and smell processed via cranial nerves.

2. MOTOR OUTPUT (EFFECTER)

- **Skeletal Muscles** Excitation of muscle fibers leading to voluntary contraction.
- **Reflex Arcs** Involuntary rapid responses processed through the spinal cord.

[Diagram: Pathway from Peripheral Receptors to Central Nervous System to Effectors]

3. CRANIAL NERVES

- **I, II, VIII** Purely sensory (Smell, Sight, Balance/Hearing).
- **III, IV, VI, XI, XII** Primarily motor (Eye movement, Neck, Tongue).

4. SPINAL NERVES

- **31 Pairs** Mixed nerves containing both sensory and motor fibers.
- **Dermatomes** Specific skin areas supplied by a single spinal nerve.

Classroom Reference Material • Anatomy & Physiology Section • Voluntary Systems