Neural Control and Coordination - Part 1

HEARING
Audio receptor

Olfactory receptor
SMELL

Gustatory receptor
TASTE

Thermoreceptor
TOUCH

Photo receptor
SIGHT
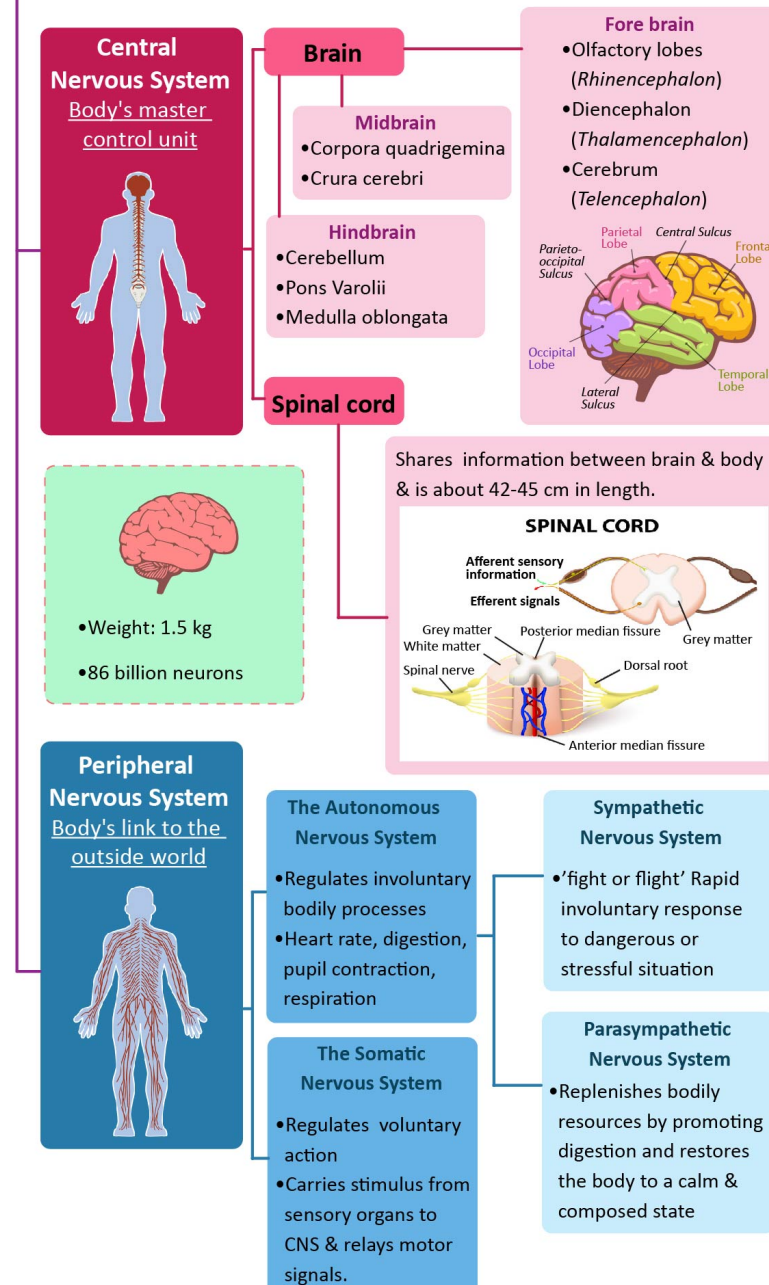
5 types of Sensory receptors

Help us to detect changes in the environment and send the stimulus to the **CNS** with help of **PNS**

Neural Control and Coordination

Organization of Nervous System

Central Nervous System
Body's master control unit

Brain

Midbrain
- Corpora quadrigemina
- Crura cerebri

Hindbrain
- Cerebellum
- Pons Varolii
- Medulla oblongata

Fore brain
- Olfactory lobes (*Rhinencephalon*)
- Diencephalon (*Thalamencephalon*)
- Cerebrum (*Telencephalon*)

Parieto-occipital Sulcus — Parietal Lobe — *Central Sulcus* — Frontal Lobe — Occipital Lobe — *Lateral Sulcus* — Temporal Lobe

Spinal cord

- Weight: 1.5 kg
- 86 billion neurons

Shares information between brain & body & is about 42-45 cm in length.

SPINAL CORD
Afferent sensory information
Efferent signals
Grey matter
White matter
Spinal nerve
Posterior median fissure
Grey matter
Dorsal root
Anterior median fissure

Peripheral Nervous System
Body's link to the outside world

The Autonomous Nervous System
- Regulates involuntary bodily processes
- Heart rate, digestion, pupil contraction, respiration

The Somatic Nervous System
- Regulates voluntary action
- Carries stimulus from sensory organs to CNS & relays motor signals.

Sympathetic Nervous System
- 'fight or flight' Rapid involuntary response to dangerous or stressful situation

Parasympathetic Nervous System
- Replenishes bodily resources by promoting digestion and restores the body to a calm & composed state