

Republic of Iraq Ministry of Higher
Education and Scientific Research
Al-Zahraa University for Women
College of Pharmacy



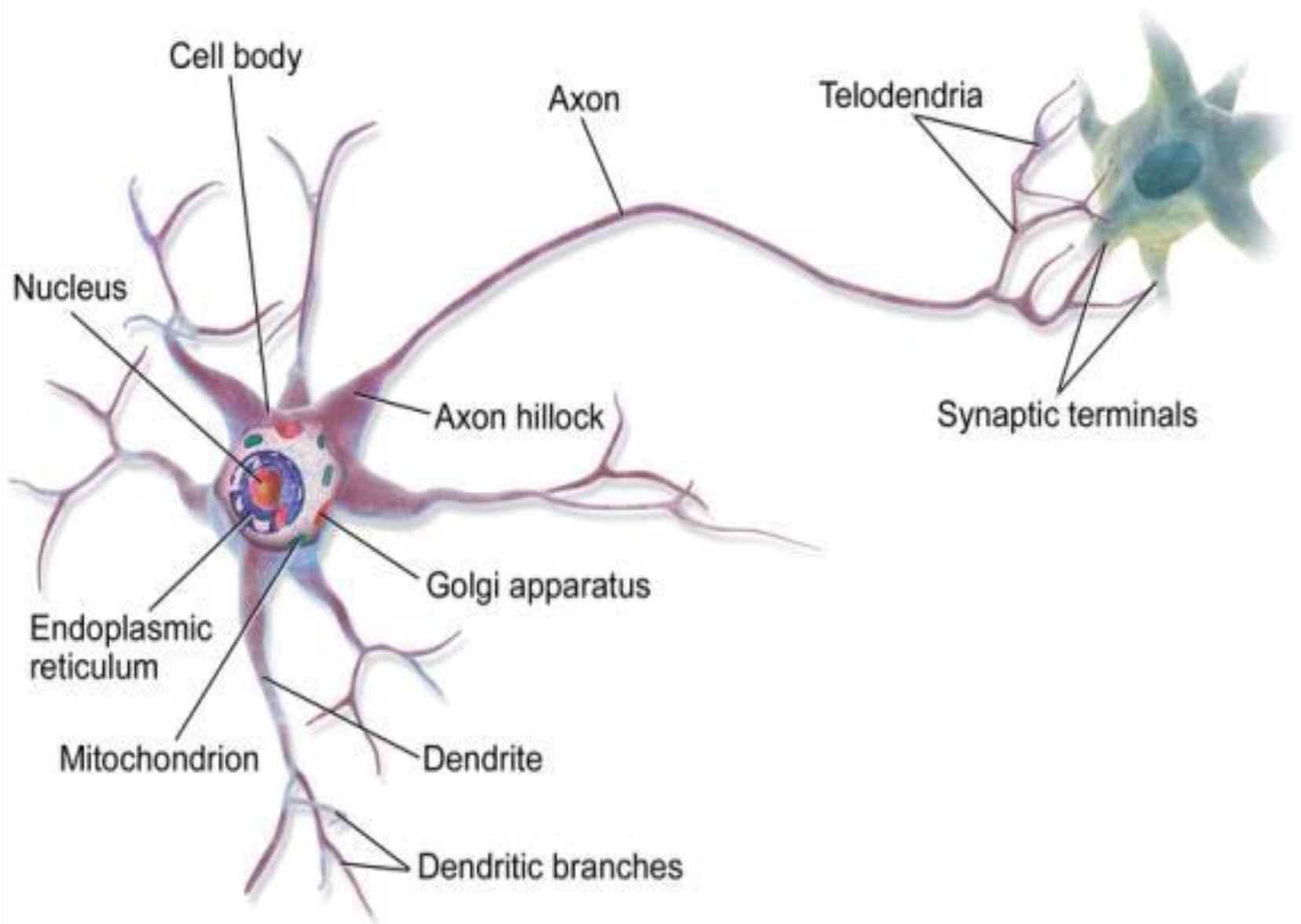
Human Anatomy
second semester/ Lab.4
The Nervous System

By:

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What is the nervous system?

- an organized group of cells called **neurons**
- it controls your movements, thoughts and automatic responses to the world around you.
- It also controls other body systems and processes, such as digestion, breathing and sexual development (puberty).



Functions of the Nervous System

- **–Maintain homeostasis with electrical signals**
- **–Provide for sensation –Provide for higher mental functions and emotions**
- **–Activate muscles and glands**

Divisions of the Nervous System

1- Central Nervous System CNS

- Brain
- Spinal Cord

2- Peripheral Nervous System PNS

- Cranial Nerves
- Spinal Nerves
- Ganglia
- Sensory Receptors

CNS

vs

PNS

Central Nervous System

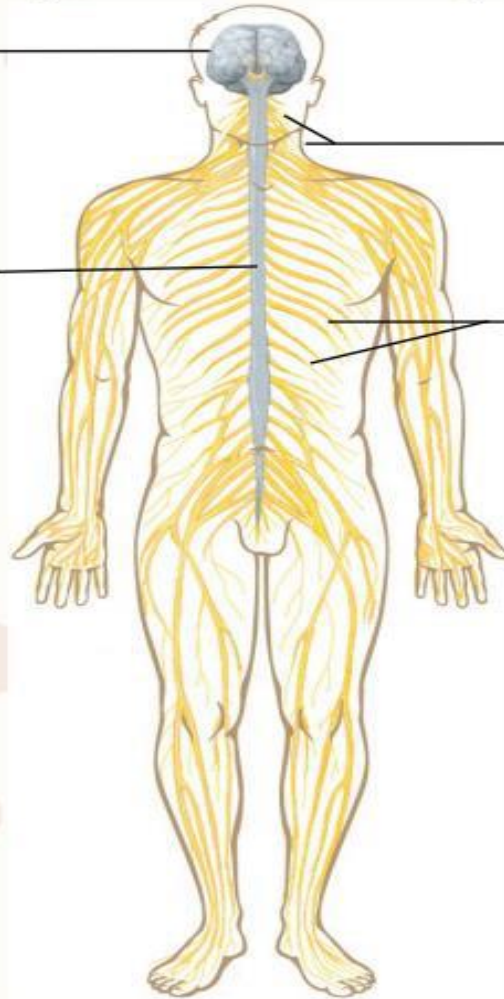
Peripheral Nervous System

Brain

Spinal
cord

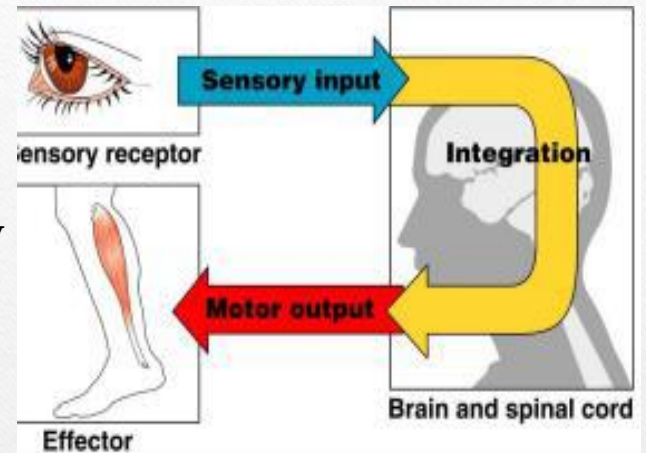
Cranial nerves (12 pairs)

Spinal nerves (31 pairs)

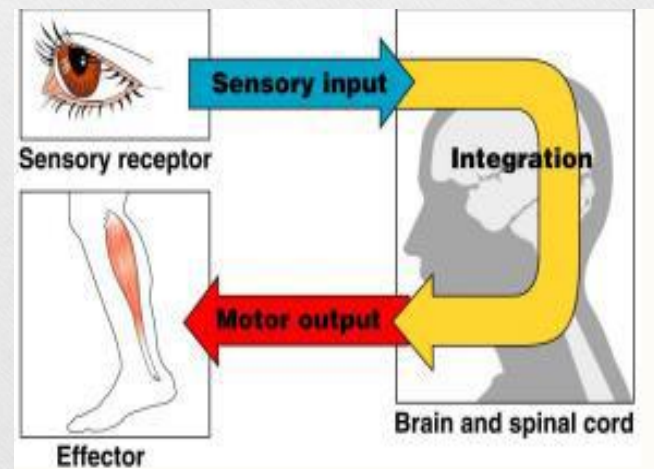


Functional Classification of the Peripheral Nervous System

- **Sensory (afferent) division:** nerve fibers that carry information to the central nervous system

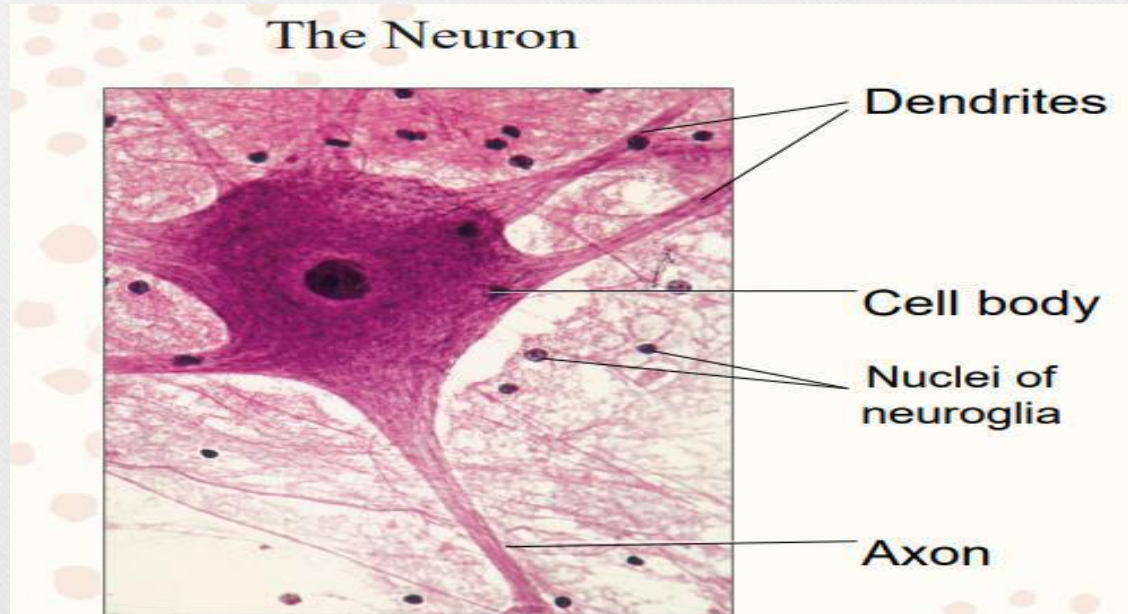


- **Motor (efferent) division:** nerve fibers that carry impulses away from the central nervous system

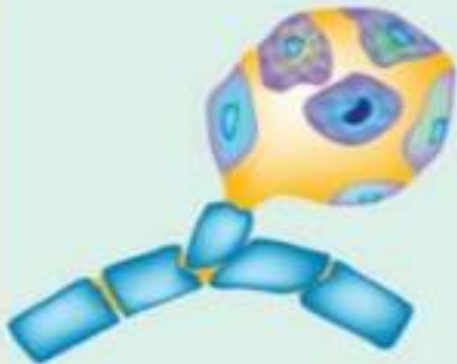


Cells of Neural Tissue

- **Neurons:** are responsible for sensing change in their environment and communicating with other neurons via electrochemical signals.
- **Glial cells:** work to support, nourish, insulate neurons and remove the waste products of metabolism.



Peripheral Nervous System



Satellite cells

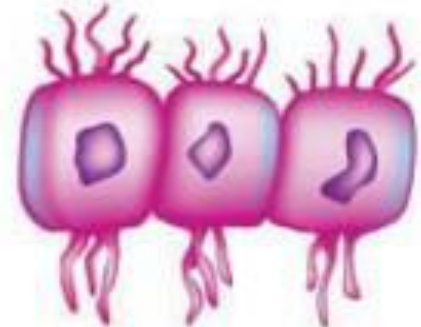


Schwann cells

Central Nervous System



Microglia



Ependymal cells



Oligodendrocytes



Astrocytes



THANK YOU

Nabaa Faiz Abbas