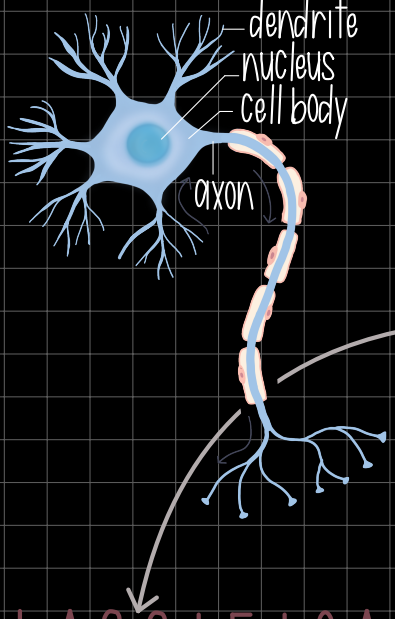
nervous system

- central nervous system
  - brain + spinal cord
- peripheral nervous system
  - sensory + motor nerves



neuroglia- smaller, more abundant, don't create action potentials

- 2 in PNS
  - schwann
  - satellite
- 4 in CNS
  - astrocytes
  - oligodendrocytes
  - microglia
  - ependimal

GRAY vs. WHITE

- unmyelinated
- myelinated group, form tracts

neuron- longest cells in the body (1mm-3ft)

- dendrites- receives info. + convert to graded potential
- cell body- continues process
- axon- transmits signals to cells

CLASSIFICATION

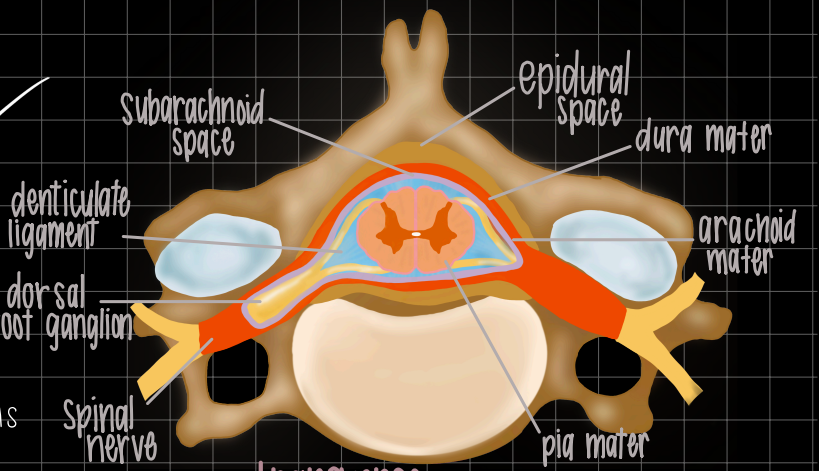
structural

- tripolar: several dendrites + 1 axon
- bipolar: 1 dendrites + 1 axon
- unipolar: dendrite + axon fused

functional

- sensory neurons: afferent
- interneurons: association
- motor neurons: efferent

SPINAL cord



transverse section

external

KEYWORDS:

cervical enlargement- C3through T1, contains the nuclei for upper extremities

lumbar enlargement- T1 through T12, contains the nuclei for lower extremities

conus medullaris- ending of the spinal cords, L3or L4

cauda equina- a group of nerve roots arising from inferior portion

film terminale- extension of the pia mater continues past conus medullaris

LAYERS OF SPINAL NERVES

epineurium, that surrounds the whole nerve

pernieurium, that encases each fascicle

endometrium, that covers myelinated and unmylinated axons

SPINAL nerves

★send info. from peripheral sensory receptors to spinal cord

★31 pairs of spinal nerves

★emerge from intervertebral foramina; posterior/anterior root

REFLEXES

reflexes

components:

1 sensory receptors
2 sensory neurons
3 integrating center
4 motor neuron
5 effector

patellar reflex

extension of knee, occurs when the quad is stretched, helps protect from injury