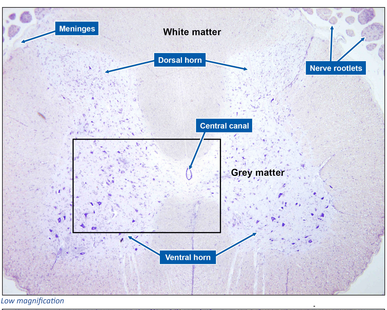
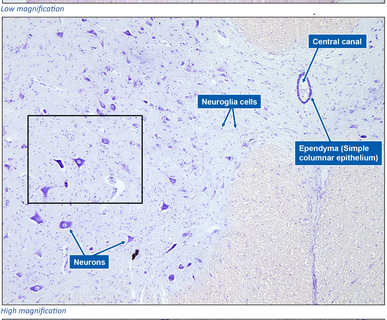
SPINAL CORD

Nervous System

Cross section of the spinal cord showing dorsal horn, ventral horn, and nerve rootlets. Grey mater, white mater and central canal are also seen.



Low magnification



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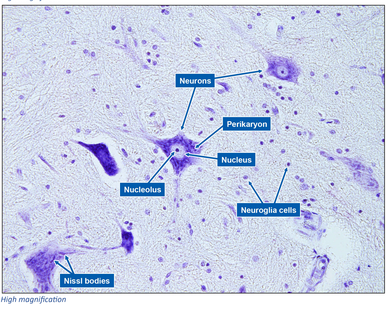

High magnification

- Filum terminale: fibrous band that extends from conus medullaris to the periosteum of the coccyx, acts as an anchor for the spinal cord and meninges.
- Ependymal cells are cells with cilia and microvilli on the surface of cuboidal to columnar cells, which are found on the border of the ventricles of the brain and the central canal of the spinal cord.
- The cells are linked apically by junctional complexes, the basal ends of the ependymal cells extend and branch spreading into the adjoining neuropil.
- Their function is to circulate and absorb CSF.
- Hydrocephalus: can be due to too much of CSF production or obstruction to the CSF circulation.
- Ependymoma is a tumour that arises from the ependymal cells.
- Parkinson's disease: progressive loss of dopaminergic neurons in substantia nigra leading to movement issues.
- Nucleolus is located at the core of the neuron nuclei. Appears as a highly pigmented spherical inclusion, 1/3rd the size of the nucleus. Nucleolus produces ribosomal RNA essential for the synthesis of protein.
- Nissl bodies are cytoplasmic (basophilic) granules, they constitute free poly-ribosome aggregates and rough endoplasmic reticulum. They are found in the cytoplasm of the neuronal cell body. They represent the protein synthetic machinery of the cell.
- Polio viruses affects nerve cell body - Lower Motor Neuron (LMN) in Ventral Horn of the spinal cord.
- Route of entry: Polio virus enters thru Gastrointestinal tract.
- Route of administration of Polio vaccine: Oral polio drops most effective in eradicating the polio virus from the world.
- Polio disease is a LMN lesion.