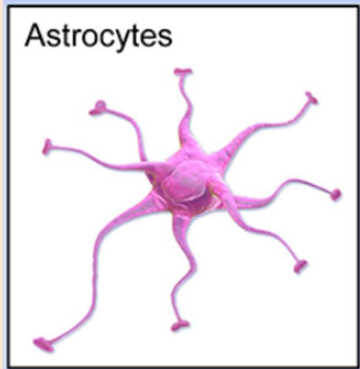
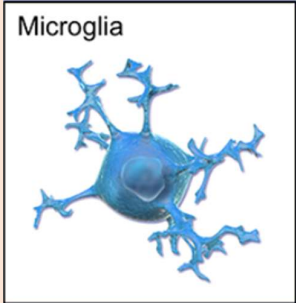
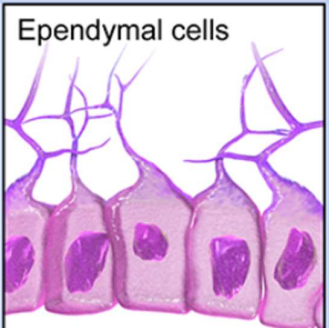
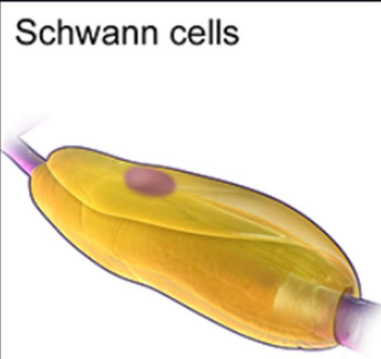
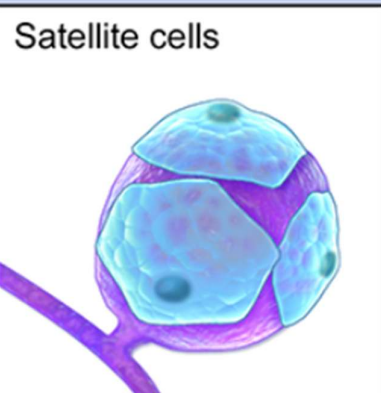


Type	Structure	Location	Functions	
Astrocytes 1. Protoplasmic (in gray matter) Many short, branched processes 2. Fibrous (in white matter) Long, unbranched processes	Largest and most numerous; star-shaped	CNS gray and white matter	1. Provide mechanical support via microfilaments 2. Maintain blood–brain barrier by interacting with capillaries 3. Regulate neuronal development (growth, migration, synapse formation) 4. Maintain ionic and chemical balance, remove neurotransmitters 5. Involved in learning and memory	 Astrocytes
Oligodendrocytes	Fewer and smaller processes than astrocytes	CNS white matter	Form and maintain myelin sheath in CNS, increasing impulse speed	 Oligodendrocytes
Microglia	Small, with slender, spinelike processes	Scattered in CNS	Function as phagocytes: remove debris, pathogens, and damaged tissue	 Microglia

Ependymal Cells	Cuboidal/ columnar; cilia & microvilli; form a single epithelial layer	Line ventricles of brain & central canal of spinal cord	1. Produce and circulate CSF 2. Contribute to the blood–CSF barrier	 Ependymal cells
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Type	Structure	Location	Functions	
Schwann Cells	Enclose axons; each forms myelin around one axon	Around PNS axons	1. Myelinate single axons in the PNS 2. Can enclose multiple unmyelinated axons 3. Aid in axon regeneration	 Schwann cells
Satellite Cells	Flat, sheet-like cells	Surround neuron cell bodies in PNS ganglia	1. Provide structural support 2. Regulate exchange of materials between cell bodies and interstitial fluid	 Satellite cells

Feature	Details
Definition	Neuroglia (glial cells) are non-neuronal support cells in the nervous system that assist neurons functionally and structurally.
Key Features	- Make up ~50% of CNS volume- Smaller but 5–25× more numerous than neurons- Do not generate action potentials- Capable of mitosis in adulthood- Multiply in response to injury/disease - Gliomas are malignant tumors arising from glia