

# Human Brain Tissue

**Human brain tissue** refers to the complex biological material that makes up the human brain, composed of highly specialized cells and extracellular components responsible for the central nervous system's structure and function. It includes:

**Gray matter:** contains neuronal cell bodies, dendrites, and unmyelinated axons; involved in processing and cognition.

**White matter:** made up of myelinated axons that connect different brain regions.

**Glial cells:** support cells such as astrocytes, oligodendrocytes, and microglia.

**Blood vessels:** form the neurovascular unit and are essential for maintaining the blood-brain barrier.

Human brain tissue is studied in neuroscience to understand brain function, neurodegenerative diseases, psychiatric conditions, and developmental disorders. It is also used in post-mortem analysis, neurosurgical biopsies, and experimental research, including transcriptomics, proteomics, and epigenetics.

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Last update: **2025/06/25 19:19**

