

Glossary of Gyri and Sulci

Cerebral Cortex:

The outer layer of the brain, made of gray matter, responsible for higher cognitive functions such as thought, perception, and memory.

Fissure:

A very deep sulcus that creates a major division between brain regions, such as the longitudinal fissure separating the two hemispheres.

Gyrencephalic:

Describes a brain with many folds (gyri and sulci), increasing surface area and typically associated with larger, more complex brains.

Gyrification:

The developmental process of forming folds in the cerebral cortex during fetal and neonatal growth.

Gyrus (plural: Gyri):

A ridge or raised fold on the surface of the cerebral cortex.

Lissencephalic:

Describes a brain that is smooth, with few or no gyri and sulci; common in small mammals and most non-mammalian vertebrates.

Precentral Gyrus:

The gyrus located just in front of the central sulcus, housing the primary motor cortex.

Postcentral Gyrus:

The gyrus located just behind the central sulcus, housing the primary somatosensory cortex.

Sulcus (plural: Sulci):

A groove or furrow on the surface of the cerebral cortex, separating adjacent gyri.

Sylvian Fissure (Lateral Sulcus):

A prominent sulcus that separates the temporal lobe from the frontal and parietal lobes.

Central Sulcus:

The sulcus dividing the frontal lobe from the parietal lobe; a major landmark in neuroanatomy.

Parieto-Occipital Sulcus:

A sulcus separating the parietal lobe from the occipital lobe, seen more clearly on the medial brain surface.

Cingulate Gyrus:

A gyrus located above the corpus callosum, part of the limbic system involved in emotion, learning, and memory.

Neural Plasticity:

The brain's ability to reorganize and form new connections, which may involve structural changes in gyri and sulci over time.

Cortical Surface Area:

The total area of the cerebral cortex, expanded by the presence of folds.