Motor cortex

the planning, control, and execution of voluntary movements.

Parts

The Primary motor cortex.

The Premotor cortex.

The Supplementary motor area (or SMA).

The posterior parietal cortex is sometimes also considered to be part of the group of motor cortical

areas. It is thought to be responsible for transforming multisensory information into motor commands, and to be responsible for some aspects of motor planning, in addition to many other functions that may not be motor related.

The primary somatosensory cortex, especially the part called area 3a, which lies directly against the motor cortex, is sometimes considered to be functionally part of the motor control circuitry.

Other brain regions outside the cerebral cortex are also of great importance to motor function, most notably the cerebellum, the basal ganglia, and the red nucleus, as well as other subcortical motor nuclei.

Motor cortex seizures

Seizures arising in or adjacent to the motor cortex appear simply as clonic jerking of the motor structures (muscle groups) innervated by the cortex involved (on the contralateral side). If the seizure spreads from the focus, the clinical seizure progresses to involve contiguous areas of the body.

The progression appears as a march of activity over the body (and over the cortex; the Jacksonian march) from the upper extremity to the face, trunk, and lower limb. As with any partial seizure, it may subsequently generalize either via the corpus callosum or the rostral brain stem.

see Supplementary motor area

Motor cortex surgery

see Motor cortex surgery

Motor cortex brain metastases

Motor cortex brain metastases.