

THE LOBES OF THE BRAIN AND THEIR FUNCTION

(An Introduction)

The Lobes

The Brain is made up of many structures. Shown you can see the lobes that form the CEREBRUM(which sits above the CEREBELLUM and the BRAINSTEM. The Cerebrum has 4 main lobes and a smaller one called the insula(not shown), it sits under the junction of the frontal, temporal, and parietal lobes.

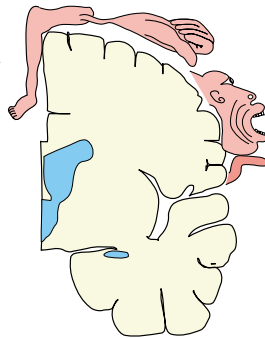
The Cerebrum

As a rule each side of the cerebrum(called Cerebral Hemisphere) is responsible for the function on the opposite side of the body. Some hemisphere function involves whole body tasks such as memory, speech and personality. The origin of these may predominately be in one half of the brain. The surface of the brain is made of folded cortex and this forms a raised area(Gyrus) and fissure(sulcus) between the folds. All the gyri and some of the sulci are named. The most important sulcus is the Central Sulcus which separates the frontal and parietal lobes. On each side of this runs the precentral gyrus on the back of the frontal lobe(responsible for movement) and the postcentral gyrus on the front of the parietal lobe(responsible for the appreciation of sensation).[see illustration above]

90% of people are right handed and this makes the left hemisphere dominant. Speech is in the left hemisphere in 95% of people.

Cross Section along motor cortex

(shows areas responsible for movement of parts of the body)



The Frontal Lobes

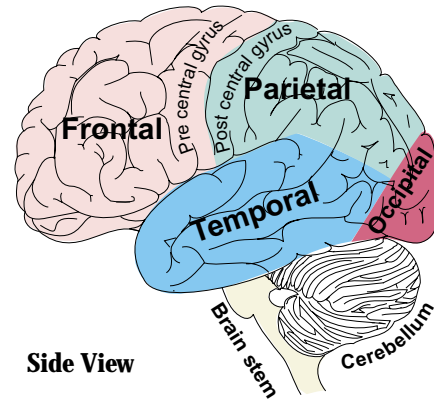
Control the movement on the opposite side of the body(precentral gyrus)(certain areas control specific parts of the body)[see illustration]

Bilateral or severe left damage may result in the patient being disinhibited (speaking their mind regardless of social consequence). Motivation(drive) resides here

The left frontal lobe

Responsible for the delivery of speech(damage does not stop the understanding)

Your personality predominately resides here



Parietal Lobes

Sensation from the opposite side of the body(postcentral gyrus)

Taste area in bottom of post central gyrus

Damage to this area may result in defects in recognising things and patients may not be able to recognise where their limbs are(they may "neglect" part of the body).

Occipital Lobes

Right sided vision from each eye goes to the left cortex and vice versa

Temporal Lobes

Memory formation goes through the deep part of this lobe

Some memory is stored here but your long term memory is probably stored in whole brain.

Hearing is delivered here and damage may cause the inability to understand speech

The cerebellum

Sits behind and is attached to the brainstem. It is the oldest part of the brain. It contains two Hemispheres that are joined by a band in the middle called the Vermis(not shown).

Receives all the information from different sense organs to control balance and the co-ordination of tasks. Walking co-ordination is controlled here. The skill to walk a white line comes from here. The delicate task of writing is controlled from here and deep inside the rest of the brain. Damage to this area makes you walk like you are drunk.

