THE BRAIN AND ACQUIRED BRAIN INJURY

FRONTAL LOBES

Functions:
Located, right under the forehead (anterior) the frontal lobes are involved in tracking and sense of self. Additionally, they're involved in arousals and initiatives as well as consciousness of environment reaction to self and environment. Executive functioning and judgments. Emotional response and stability. Language usage, personality, word associations and meaning. Memory for habits, motor activity.

Impairments in frontal lobes caused by head injury:
Sequencing - difficulties planning and completing complex tasks in correct order, such as making coffee.
Perseveration - repeating same actions and comments over without conscious awareness of having done so.
Loss of spontaneity in interacting with others.
Loss of flexibility in thinking, (mental rigidity).
Distractibility - easily distracted.
Attention - difficulty focusing on tasks.
Concentration difficulties.
Mood swings - (emotional lability).
Changes in personality and social behavior.
Diminished abstract reasoning - imagination.
Difficulty with problem solving.
Expressive difficulties - language usage and word finding (Broca's Aphasia).
Loss of simple movement of various body parts (paralysis).

PARA LOBES

Functions:
Located near the back and top of the head. The parietal lobe is involved in:
Visual perception.
Tactile or touch perception.
Object manipulation.
Integration of sensory information that allow for understanding of a single concept.
Goal-directed voluntary movements.

Impairments caused by head injury:
Difficulties naming objects (Anomia).
Difficulties writing words (Agraphia).
Inability to attend to more than one object at a time.
Inability to focus visual attention, problems with reading (Alexia).
Poor hand-eye coordination and/or confusing left-right orientation.
Difficulty performing math calculations (Dyscalculia).
Difficulty drawing and/or poor visual perception.
Loss of awareness of certain body parts and/or surrounding space (Apraxia) that leads to difficulties in self-care.

TEMPORAL LOBES

Functions:
Located on the Side of the head above ears.
The temporal lobes have to do with intellect.
Auditory perception (hearing).
Long-term memory.
Some visual perception.
Object categorization.

Impairments caused by head injury:
Difficulty remembering names and faces (Prosopagnosia).
Difficulty understanding spoken words (Wernicke's Aphasia).
Difficulty with identification of, and verbalization about objects.
Difficulty with concentration.
Short-term memory loss.
Interference with long-term memory.
Aggressive behavior.
Change in sexual interest.
Persistent talking (damage to right lobe).
Difficulty locating objects in environment.
Inability to categorize objects (Categorization).
Religiosity.
Seizure disorders, auras and strange reveries.

OCCIPITAL LOBES

Functions:
Located at the back of the head (Posterior).
Visual perception.

Limitations:
Visual defects (Visual Field Cuts).
Difficulty recognizing colors (Color Agnosia).
Hallucinations.
Visual illusions - inaccurately seeing objects.
Word blindness - inability to recognize words.
Difficulty recognizing drawn objects.
Difficulty perceiving movement (Movement Agnosia).
Loss of academic skills (reading, writing).

Accord Services Healthcare Excellence

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Use this chart as a general guideline, keeping in mind everyone is unique. For more information please visit our websites: www.accordservices.com or www.journeybacktolife.com
The brain has many parts including the cerebral cortex, brain stem and cerebellum. The brain is a very complex organ; it regulates every aspect of human behavior. Everything about ourselves and the environment is experienced through the brain. It has been described as a three pound universe. It is thought to house the seat of the self, the place where the sense of self resides. Damage to the hippocampus interferes with the ability to store new memories. Likewise, the ability to use language recognize familiar faces, to count, read and many other higher functions are dependant on intact memory functions. Impairments in such basic functions are fundamental to personal identity. Wipe out one part of the brain and the person speaks fluent gibberish; other damage interferes with the ability to recognize familiar faces. The information contained in this sheet represents primary brain functions and some of the common problems that result from brain injury. The brain functions as an interrelated whole, however injury may disrupt a portion of an activity that occurs in a specific part of the brain.