THE BRAIN

SKILLS & FUNCTIONS ASSOCIATED WITH THE LOBES OF THE BRAIN

**Frontal Lobe**
- Executive function
- Controls attention
- Emotional/Impulse control
- Guide/control social behavior
- Judgment
- Problem solving
- Insight and empathy
- Expressive language
- Motor integration
- Voluntary Movement
- Personality

**Occipital Lobe**
- Visual perception
- Visual input
- Reading

**Cerebellum**
- Coordination of voluntary movement
- Balance and equilibrium
- Inputs to cognition and language

**Temporal Lobe**
- Memory
- Receptive language
- Language comprehension
- Musical awareness
- Sequencing skills

**Brain Stem**
- Autonomic nervous system (heart rate, breathing, temperature, etc.)
- Level of alertness
- Integrate visual & spatial pathways
### Changes Observed After Brain Injury

#### Changes After Frontal Lobe Damage
- Difficulties with focus/attention
- Loss of cognitive reserve
- Cognitive fatigue
- Personality changes
- Inflexible thinking
- Loss of spontaneity
- Problem-solving difficulties
- Loss of verbal expression
- Uncontrollable emotional, social and sexual behavioral changes

#### Changes After Occipital Lobe Damage
- Vision defects (visual field cuts)
- Difficulty visually locating objects
- Difficulty identifying colors
- Hallucinations and visual distortions
- Word blindness
- Inability to recognize object movements
- Difficulties reading and writing

#### Changes After Temporal Lobe Damage
- Difficulty understanding spoken words
- Disturbance of selective attention
- Memory loss
- Change in sexuality
- Persistent talking
- Increased aggressive behavior
- Difficulty identifying and categorizing objects
- Difficulty recognizing faces and visually locating objects

#### Changes After Parietal Lobe Damage
- Inability to focus visual attention
- Reading and writing problems
- Object naming problems
- Right/left confusion
- Math difficulties
- Problems with eye-hand coordination
- Lack of awareness of body parts

#### Changes After Brain Stem Damage
- Decreased breathing capacity
- Sleeping difficulties
- Possible visual/spatial difficulties
- Difficulty swallowing food and fluid
- Problems with balance and movement
- Dizziness and nausea (vertigo)

#### Changes After Cerebellum Damage
- Loss of the ability to walk
- Inability to grasp objects
- Tremors and/or dizziness
- Slurred speech
- Concentration problems
- Language problems
- Problems with fine movement coordination
- Inability to make rapid movements

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