

# Neuropsychology of Traumatic Brain Injury

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## ORGANIC VERSUS PATHOLOGICAL? (Keep In Mind)

- What is the causal agent for the behavior and problems that we see exhibited?
- We must be aware that each individual is different and each person had a life, which they may be able to remember, prior to the brain injury.

## General functions; Lobes:

- Frontal, left vs. right: Emotional control center and highest intellectual area of the brain; includes language, creative thought, problem solving, initiation of movement, judgment, and impulse control.
- Temporal: Memory, language, sequencing, musical ability.
- Parietal: Sensation, reading, listening, awareness of spatial relationships, and memory.
- Occipital: Visual perception.

## Specific terms (all caused by the injury):

- Denial
- Apathy
- Emotional lability
- Impulsivity and disinhibition
- Frustration intolerance
- Lack of insight
- Inflexibility
- Confusion
- Forgetting
- Verbosity
- Perseveration
- Confabulation
- Lack of initiation and follow-through
- Slow and inefficient thinking
- Poor judgment and reasoning

- Social imperception
- Fatigue

### Manifestation of injury:

- Decreased alertness and arousal.
- Inadequate attention and concentration:
  - Focused
  - Sustained
  - Selective
  - Alternating
  - Divided
- Confusion and disorientation.
- Impaired memory for new information.
- Impaired sequential memory of past information.
- Expressive language problems.
- Receptive language problems.
- Agitation and irritability.
- Catastrophic reaction and reactive depression.
- Exacerbation of pre-injury mental health issues or decrease of pre-injury mental health issues.
- Impaired adaptive behavior = Executive functioning:
  - Difficulty in planning a course of action
  - Planning, organizing, and following through on any goal orientated task at home or work
- Syndromes:
  - Frontal lobe--left or right
  - Aphasia                      -Amnesiac
  - Parietal lobe                -Emotional Sequelae

### Inconsistencies:

- Everyone says you look good and are doing well.
- Mirror says I look good.
- No retrograde amnesia so I can remember all the things I have done and can do.
- Impairments block understanding of self information (right hemisphere injury).
- The affect of fatigue compounds the effects of the injury.
- “Can’t walk and chew gum!”
- Frontal lobe problems- Too many choices and decisions.
- Simple definition: No auto pilot now, must always be alert.
- Higher functioning individuals who use cognitive processes are

more aware of even small shortcomings, which in turn magnifies the impairments.

- Major memory impairment and adequate intellectual capacity often has “impairment” as focus of treatment versus use of preserved skills.
- Minor memory impairments often are ignored as not important.

### Community issues:

- Lack of understanding of the functional deficits or too much understanding of the “deficits” blocks community success.
- “Normal” verbal abilities and/or normal “IQ” often has support people downplaying the impairments or ignoring the impairments as not important.
- What does brain injury mean to you? Individuals often select one or two cases as their idea of brain injury; this may not represent current case.
- Underlying or pre-existing mental health and/or life style issues are ignored or become focus.
- Unawareness of how to treat the brain injured individual; i.e. can I set limits, what should I say when...happens, we don't want him to get upset, etc.
- One size does not fit all.

### Needs:

- Awareness of injury deficits in a functional sense. How does a right frontal lobe injury affect the person in the environment? This has to be an ongoing educational process with supports available following failures to process what happened.
- Functional and verifiable knowledge of strengths.
- Functional and verifiable knowledge of weaknesses.
- Energy output:
  - How much.
  - How long.
  - Crashes/recovery.
- Risk taking to develop new skills or verify existing skills.
- Planned failure in the community setting to assist the learning process.

### Problems and Changes:

- How can we expect individuals to change if they don't know what is wrong?
- When you know, it is easier to take responsibility for your self versus listening to others tell you what and why you need to change.
- Planned failure and community challenges.

### Ongoing needs:

- Neuropsychological examination results.
- Community supports - Are they coordinated?
- "Family" supports.
- Specific information for care providers so they know how to assist individual.

### Questions and Ideas:

- Importance for survival in the community --RISK TAKING--
- Psychological impact of accepting change.
- Need to adapt everything to a "real world" environment. Importance for care providers.

### Caveat:

- Always remember that you are dealing with a WHOLE system (person) that had a life prior to becoming a brain injured "patient or client." Always be aware that systems function together and may not always fit neatly into specialty areas.