

Memory, Behaviour, Emotional and Personality Changes after a Brain Injury

The consequences of a “brain injury” on any individual, family or relationship are far reaching. A brain injury not only impacts who the person once was, but also how the family will be together. Memory, behavioural, emotional, and personality changes are often difficult to accept and understand. Many family members feel that their loved ones are “forever changed” and find it hard to accept what has been “lost”. They often do not have the time to grieve or understand the changes before they have to take on new roles and responsibilities. As a result, families and survivors often experience a myriad of intense feelings such as shock, despair, anger, denial, and depression resulting from a brain injury. In addition, the brain injury may cause the survivor to do things that seem out of character or inappropriate compared to their typical behaviour. It is in those unpredictable moments that the survivor requires patience and understanding as they relearn how to be in their world again.

Most commonly reported behavioural/personality changes:

Behavioural and personality changes may be due to several factors, such as the individual’s previous coping style and their ability to manage the internal and external demands post-injury. At times, changes in a survivor’s personality may be an exaggeration of the person’s pre-injury personality (i.e. increased negativity or anger) or may be a complete reversal (i.e. easily agitated vs. laid back). Many of these changes are amplified by the survivors’ feelings of frustration and loss.

Behaviour	Examples
<i>Impulsive behaviour and dis-inhibition</i>	An individual with a brain injury may not be able to monitor his or her behaviour as closely as normal. Brain injury may cause an individual to do or say something too quickly, often leading to errors and difficulties (i.e. falling/swearing/interrupting).
<i>Perseveration and repetitive behaviours</i>	An individual with a brain injury may have difficulty turning his or her attention from one thought to another. They may get stuck on one response (i.e. asking what time it is) or behaviour (i.e. picking at clothing) and not be able to shift from this response or behaviour.
<i>Socially inappropriate behaviour and emotional outbursts</i>	An individual with a brain injury may act out aggressively when frustrated or angry, exhibit sexually explicit behavior or seek attention in unusual or self-injurious ways. In addition, they may not respond appropriately to social cues (i.e. jokes or sarcasm or invade personal space). These behaviours may be the result of impaired perception, recognition, and judgment.
<i>Slowed responses</i>	Some brain injured individuals may become cautious, withdrawn or more reserved.
<i>Impaired self control</i>	A brain injury may impact the individual's insight, self-monitoring, and error correction.
<i>Abulia = Difficulty with motivation/initiation/initiative</i>	Like a car stuck in neutral, a brain injured individual may be able to understand the steps, but not know how to take action (i.e. Answer the phone, but not speak). They may also have difficulty maintaining a behaviour or task or have difficulty doing tasks without being prompted or reminded.
<i>Agitation and restlessness -confusion and disorientation, crying, moaning, flailing, kicking, and hitting are common</i>	These behaviours are common in the early stages and may seem unrelated to provocation, but in the later stages the agitation is more clearly seen in response to environmental cues. Agitation may be the result of confusion, pain, fear, and lack of control.

Behaviour, cont.	Examples
<i>Attention difficulties</i>	An individual with a brain injury may be easily distracted, having difficulty with selective attention and concentration.
<i>Decreased tolerance for daily activities</i>	Decreased tolerance may be seen in therapy or daily routines such as washing and dressing and may trigger perseverative and/or disruptive behaviours.
Memory and Problem Solving	Examples
<i>Short term memory and interference with long term memory</i>	Memory impairment can impact all areas of the individual's life, from daily functioning to relationships with others. Impaired memory is very common (especially in frontal lobe brain injuries).
<i>Anterograde memory loss</i>	This type of memory loss affects the individuals' ability to remember events that occurred after the brain injury. This type of memory loss may impact the individual's ability to "generalize the information". For example, the individual may be able to learn a task such as wheeling the wheelchair in rehabilitation, but then forget how to do it once they get home.
<i>Retrograde (recall) memory loss</i>	This type of memory loss is commonly known as shrinking retrograde amnesia. In brain injury, individuals may not remember the events that happened just prior to the accident.
<i>Post-traumatic Amnesia</i>	This is a type of memory loss where individuals cannot remember events that happen moment to moment in their daily lives. This can be marked by high levels of confusion and disorientation.
<i>Specific memory loss</i>	This is a type of memory loss that is specific to verbal and non-verbal material (i.e. letters, words, paragraphs, shapes, faces).

Memory and Problem Solving, cont.	Examples
<i>Prospective memory loss</i>	This is a type of memory loss that is specific to one's ability to carry out and remember daily activities like taking medications.
<i>Difficulties with orientation</i>	Individuals with brain injury may have a diminished sense of what is going on around them. This includes knowing the day, date, month and year; knowing things about one's self; knowing where they are and how to get around and knowing what happened to them. For example, they may ask for dinner before they have had breakfast or state that a family member has not visited when they came that morning.
<i>Decreased attention</i>	Some brain injured individuals may have difficulty suppressing or redirecting their attention in order to deal with more than one task at a time.
<i>Difficulty problem solving</i>	Individuals with a brain injury may have difficulty with the identification and verbalization about problems. They may have difficulty in organizing their thoughts and making decisions. Leading them to make impulsive decisions or have impaired planning capabilities.
<i>Confabulation/Confusion</i>	Confabulation is not lying, but the brain's way of trying to make sense of the missing information and situation it does not understand. Thus, the brain injured person tries to make a story that makes sense.
<i>Anosognosia=Lack of awareness and insight</i>	Indicating a lack of awareness of neurological deficits. Where the client is truly unable to comprehend that he or she has suffered a loss of function.
<i>Prosopagnosia</i>	Difficulty in recognizing faces.
<i>Anomia</i>	Difficulty in naming an object.



<i>Agraphia</i>	Inability to locate the words for writing.
<i>Difficulty categorizing</i>	Difficulty locating objects in his or her environment. Difficulty identifying colors (color Agnosia). Difficulty recognizing words.

Emotions	Examples
<i>Loss of self-esteem/fear/helplessness</i>	In individuals with a brain injury this may be due to the decline in function, changes in relationships, independence, and quality of life. Feelings of helplessness may result when the brain injured individual senses their loss of control and ability to manage their environment. They may feel more fearful or distressed as they recognize their increased emotional and physical dependency upon others.
<i>Full range of emotions (mood swings) can be experienced, from fear to grief, paranoia, depression and hopelessness.</i>	<p>The psychological response to loss of function + loss of independence is normal and expected, but in some cases it can develop into full blown depression. Depression may be triggered by the physiological damage to the brain itself (due to several causes).</p> <ul style="list-style-type: none"> • Symptoms of Depression include: Feelings of sadness, social withdrawal or loss of interest in rehabilitation and therapy, frequent crying, anxiety or irritability, difficulty getting out of bed, increased fatigue, difficulty sleeping, loss of appetite, loss of libido, and loss of pleasure in previously enjoyed activities. Feelings of inappropriate guilt and persistent thoughts of death and suicide.
<i>Anger and Irritability</i>	Can be recognized by increased feelings of frustration, lowered anger threshold, and in some cases results from a decreased ability to process information.
<i>Anxiety</i>	Can be recognized by increased nervousness, insecurity or fear. Individuals may have several symptoms from panic attacks to physiological symptoms such as, tingling, tightness, tension and appear hypervigilant showing rapid speech and/or breathing patterns.
<i>Denial</i>	Denial can be confused with anosognosia (a lack of awareness of the effects of the brain injury). Psychological denial is a normal part of the response to a traumatic event such as a brain injury. If prolonged, it can be maladaptive and interfere with rehabilitation.
<i>Emotional labile (rapid fluctuation of the feeling state and difficulty with emotional control)</i>	This type of emotional response signifies problems with mood control rather than depression. A brain injured individual may have emotional responses that are incongruent with their immediate circumstances. This type of emotional response is not

	always associated with depression, but usually manifests as excessive tearfulness or excessive laughter.
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Emotions cont.	Examples
<i>Emotionally flat and feelings of apathy</i>	Brain injury may cause an individual to be emotionally flat. For example, the brain injured individual may seem to understand what has happened to them, but they do not appear to be concerned about it. Responses seem distant and disengaged.

These are only some of the changes noted, since no two brain injuries are alike it is important to remember that each person's injury and their outcome will be unique.

Sources:

1. Sohlberg, M.M., & Mateer, C.A. (2001). Cognitive rehabilitation: An integrative neuropsychological approach. Guilford Press: New York.
2. www.braininjuryforum.com

Tips for How to Interact with People with Brain Injuries

- 1) Don't take things personally; if they have offended you, tell them they have done so, ask them not to do that again, and move on to something else.
- 2) Use distraction to your advantage – change the topic, move on to another activity, etc.
- 3) Don't try to explore the rationale for their behaviour – many clients with brain injury lack insight in to how their actions play into their behaviour. And, if they don't have insight, you cannot change their behaviour.

USE ENVIRONMENTAL MODIFICATIONS VERSUS TRYING TO CHANGE THE PERSON'S BEHAVIOUR