

# Child and Adolescent Brain Injury

When discussing brain injury, especially in children and adolescents, it is useful to first understand brain development.

There are 6 broadly recognised stages of cognitive development:

**Birth to 2 years: The sensory-motor Stage**

This is the stage where a child learns and experiences very much through touch, feel and exploration.

**2 to 7 years: The pre-operational stage**

Language goes through a rapid period of growth during this stage. More complex problem-solving skills are beginning to develop.

**7 to 11 years: The concrete operational stage**

A more logical type of thinking begins at this stage, for example a questioning of Santa and the tooth fairy.

**11 to 13 years: The formal operational stage**

Abstract thinking increases, for example the ability to understand and complete difficult Maths problems.

**14 to 17 years: Adolescence**

The focus becomes more about how others perceive them, greater awareness to their development.

**18 to 21 years: Late Adolescence to early adulthood**

Most cognitive skills are established at this point and an increase maturation of the frontal lobes.



# Brain Injury

Brain injury for a child or adolescent poses different challenges and an appreciation for child development. A child's brain continues to grow and develop in a process started from conception through late adolescence. The adult brain is fully developed with critical nerve pathways already established and interconnected. An injury to a young brain affects recovery and ongoing development.

**Please remember any information that you read merely summarises injury and recovery. More detailed information should be obtained from your GP or paediatric treatment providers and brain injury resources**

Rehabilitation can help towards the healing process by providing stimulation and activities to restore injured skill areas. If the injury is such that areas of the brain cannot perform their typical function, surrounding areas may be recruited through stimulation and practice, to assume some roles of the injured area.

## The Effects of Childhood Brain Injury

The effects of a brain injury varies from child to child. This is partly because every brain injury differs in type and severity. In addition, recovery from a brain injury is complex and is affected by many non-injury factors, such as the child's age at the time of the injury, pre-injury functioning and family supports.

The recovery process is complex and health care providers cannot predict the precise outcome for a specific child. Some risk factors are known to increase the likelihood of certain types of outcomes. For example, more severe brain injury is associated with greater likelihood of impairment.

Given that the child's brain is developing over a number of years, it is important to appreciate that needs and challenges may change over time. This calls for a higher degree of diligence in monitoring the effects and readiness of a brain injury in order to adapt the environment to meet a change in needs that may emerge. Things may appear fine until the child hits a milestone. Parents can often forget an accident that happened years before and not link the behavior and accident.

# Stages of Adjustment for Families

## (family can move in and out between these stages)

- Stage I:** The shock of the injury dominates. Hopes for full recovery. Repressed feeling and denial of severity.
- Stage II:** Recognition of the severity of the injury. Helplessness and frustration.
- Stage III:** Start to get annoyed with individual. Family expects full independence. Still comparing 'before & after' realities. Start to recognise the reality of impairments. Start information seeking about brain injury.
- Stage IV:** Realism of situation sets in. Family begins to get exhausted. Reduction of time with loved one. Bereavement-like emotions and stages occurring.
- Stage V:** Profound sadness. Families grieve and can experience guilt with grieving. Mourn the loss of loved one's personality. This can occur as disenfranchised grief (unacknowledged by society) and/or ambiguous loss (no resolution, finality, ritual or clarity).
- Stage VI:** Greater understanding of the situation. Understand the person may never be the same. Begins to accept loved one's condition. Can now address needs of the entire family unit.



# Children with brain Injury – The Challenges

One of the biggest challenges facing an individual following a brain injury is learning to accept new abilities and realities, no matter how altered they may seem.

This conflict between the “old vs. new” self is especially problematic for the older children and adolescents who may have had a clear image of who they were before the brain injury. This issue is less noticeable for children who experience their injuries at an early age, since they have less awareness of themselves prior to the brain injury.

- Difficulty accepting changes is self relative to peers – A related challenge for a child is accepting changes that make them feel different to their peers. For example, speech.
- Cognitive changes viewed as differentiating the child from peers include memory problems (forgetting conversation topics or names), learning difficulties (having special education services or being slower in learning) and processing speed (trouble keeping up with conversations)
- Anger control and emotional lability – Emotional lability refers to rapid, volatile shifts in mood with more intense reactions than expected. Anger control issues often occur when a child is less able to tolerate frustration, reason about situations, and the ability to moderate their emotional and behavioural reaction.

## Sexual Self and Being

After a brain injury, teenagers may feel more self-conscious and vulnerable to the influence of others. Their ability to read social cues and make important social judgments may be affected by brain injury. Parents need to develop effective communication with their teens to foster discussion about good decisions. Parents need to also ensure that teens are knowledgeable about pregnancy and sexually transmitted diseases.

## Emotions and Behaviours

A brain injury may cause changes in cognitive functioning, and these issues often trigger inappropriate behaviour typically related to:

- Overstimulation
- Fatigue
- Unexpected Changes, for example a change in plans or schedule.

Interactions with peers, family members and others are often affected by a brain injury. Children with brain injury might display the following behaviours

- Decreased Social Skills: taking turns in groups and staying on topic
- Decreased Awareness of Social Cues
- Being distracted in Noisy Surroundings
- Bossy and Argumentative
- Poor Responsibility and Dependency
- Inappropriate Sexual Behaviour and/or language
- Suggestibility: A child with a brain injury might be more easily led or influenced by peers.

## Parents and Guardians as Advocates

In *What Psychotherapists Should Know About Disability*, Rhoda Olkin writes, “With the predominant focus on negative attitudes toward disability there is less understanding of positive, caring, loving, intimate relationships between an able-bodied person and person with a disability.”

Parents and guardians need to be advocates for their child who have experienced a brain injury and provide watchful attention and intervention. From recovery and beyond, parents will need to monitor their child’s needs in all areas of life and well-being: physically, socially, emotionally, and academically.

However, it is vital that parents also work with their child to help them learn to speak out regarding their own needs. Parents are vital in helping their child interpret the injury event and its impact and helping their child integrate the experience into his or her life in a way that fosters self-worth and growth. As the child moves through adolescence into adulthood, parents are encouraged to teach their child to become independent as a self-advocate.

With the help of family and the larger rehabilitation community the young person will become adept, identifying and using accommodations and resources to work toward reaching short and long term goals.

