
IMPACT OF ABI

Fact Sheet

An acquired brain injury (ABI) is potentially one of the most devastating disabilities, with a huge range of effects due to the complexity of the brain.

The number and severity of problems resulting from a brain injury will differ from person to person because each individual's brain injury varies in the extent and location of damage. The extent of some of these changes may only become apparent as time progressed.

Cognitive Changes

Cognition is the conscious process of the mind by which we are aware of thought and perception, including all aspects of perceiving, thinking and remembering. In general, cognition is knowledge – the way we learn and perceive the world around us.

The nature of cognitive problems will vary over time depending on what the person with the injury is doing and where they are. Some of them may not occur at all. There changes may become more obvious over time and be very frustrating because they can affect the person's ability to learn new things, to work and be involved socially.

Lack of Insight

This is probably the most difficult problem to deal with. People with a brain injury have great difficulty seeing and accepting changes to their thinking and behaviour. It is therefore necessary to provide frequent, clear and simple explanations about why a problem is being treated or why the person is unable to

do something. The person may deny the effects of the injury and have unreasonable expectations about what they are able to do. If the person continues to deny or to rationalize problems it is probably better to change the subject. It is not a good idea to try to argue or reason with the person as this will only make both of you upset and agitated. Eventually the person will be faced with the everyday consequences of these problems.

Memory Problems

One of the most common cognitive deficits is poor memory. There may be problems in remembering people's names or appointments, passing on messages or phone calls, or remembering details read in a book or newspaper. In therapy the person may forget what they are doing from one session to the next. Many are able to remember things that happened before the accident, but may have difficulty remembering things that happen from day-to-day. The person may have problems learning new things. Memory problems may resolve as the brain recovers but giving repeated practice of memory tasks will not necessarily bring about recovery. It may be more effective to develop compensatory strategies and thereby minimize the impact of the problem on everyday life.

Poor Concentration

A very common outcome is a tendency to lose concentration or be distracted easily from what they are doing. This is usually because they are having difficulty concentrating. The person may have a short concentration span,

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which means they might jump from one thing to the next.

Slowed Responses

The person with a brain injury may be slow to answer questions or to perform tasks and they may have difficulty keeping up in conversation. Their capacity to respond quickly in an emergency may also be lost. The person can be helped by allowing more time to respond and to complete tasks. An understanding employer may be willing to modify the work situation. It is also vital that we avoid letting the person get into situations where they may be at risk by virtue of their slowed responses. This is one reason why many people with a brain injury are not allowed to drive. There might also be a need for careful supervision in the home.

Poor Planning and Problem-solving

People with a brain injury may have difficulty solving problems and planning and organizing things they have to do. They may encounter trouble with open-ended decision-making and complex tasks need to be broken down into a step-by-step fashion.

Lack of Initiative

In spite of all good intentions, someone with a brain injury may sit around at home all day long and watch TV. If the problem is severe they may need prompting just to have a shower and get dressed or to participate in a conversation.

Inflexibility

People with a brain injury can be very inflexible in their thinking. They can't always change their train of thought, so they may tend to repeat themselves or have trouble seeing other people's points of view. They may not cope very well with sudden changes in routine.

Impulsivity

People with a brain injury can be very impulsive because they may have lost the filtering system or control that makes them stop and think before jumping in. This can lead to a wide range of behavioural issues and problems with relationships and finances.

Irritability

People with a brain injury tend to have a low tolerance for frustration and can lose their temper easily. If kept waiting for an appointment they may become agitated and walk out. They may become unreasonably suspicious and paranoid.

Socially Inappropriate Behaviour

People with a brain injury may have difficulty judging how to behave in social situations. They may walk up to strangers and start telling them about their accident, they may be overly familiar with therapists or they may make inappropriate sexual advances. This area can be incredibly difficult for families or partners. In more severe cases the person will often end up homeless or in the correctional system.

Communication

A broad range of social skills may be affected by an ABI including the ability to start or take turns in a conversation, interpret and respond to social cues, show interest in others, use humour appropriately, shift between topics of conversation and regulate the volume and tone of voice. A person with a brain injury often loses his or her listening skills, and may talk excessively. Accompanying memory problems may mean that they often repeat topics as well.

Self-centredness

People with a brain injury will often appear to be self-centred, and may be very demanding and fail to see other people's points of view.

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This can cause resentment from family members, and it is a key cause of losing friends and having trouble establishing new friendships.

Dependency

One of the possible consequences of self-centredness is a tendency for the person with a brain injury to become very dependent on others. The person may not like being left alone, and constantly demand attention or affection.

Emotional Ability

Just as people with a brain injury have difficulty controlling their behaviour, they may also have difficulty in controlling their emotions. They may cry too much or too often or laugh at inappropriate times, or they may suffer rapid mood changes, crying one minute and laughing the next.

Depression

Depression in a person with brain injury is a very common emotional consequence that usually comes some time after the injury. Signs of depression include lack of motivation, loss of sexual drive, sleep disturbance and tearfulness.

Physical Changes

Loss of Taste and Smell

A blow to the head can cause anosmia by injury to the olfactory nerve. The nerve sits between the frontal lobe and bony protrusions from the skull and is vulnerable to trauma. A blow to the head can also cause anosmia by damage to smell processing cells in the orbito-frontal or anterior temporal lobes or by mechanical damage to nasal structures. This loss of taste and smell often leads to either lack of appetite, or obesity as the person compensates with very salty or fatty foods.

Dizziness and Balance

These are very common complaints after acquiring a brain injury caused by damage to the brain stem, blood pressure fluctuations from damage to areas controlling the heart and blood flow or vertigo from damage to the inner ear.

Epilepsy and Seizures

These are chronic medical conditions produced by temporary changes in the electrical function of the brain, causing seizures which affect awareness, movement or sensation. Medication will usually control these conditions well but some lives are devastated by frequent, uncontrollable seizures or associated disabilities.

Fatigue

Sometimes called adynamia, fatigue is a disorder of motivation that typically arises after injury to the frontal lobes, particularly the dorso-lateral area. People with adynamia will experience loss of drive, indifference and placidity and may find themselves exhausted for days if they do not carefully manage their limited energy levels.

Headaches

There are multiple sources of head and neck pain, both inside and outside the head. Headaches arising from a brain injury can be caused by displacement of intracranial structures, inflammation, decreased blood flow, increased muscle tone, inflammation of the thin layers of tissue coating the brain and increased intracranial pressure.

Visual Problems

Vision and visual functioning is often adversely affected by a brain injury. Some of the more common visual systems problems include double vision, field cuts, sector losses, rapid eye movement and near sightedness.

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Chronic Pain

This kind of pain persists beyond the expected healing time and continues despite appropriate physical improvement in the affected area of the body. The pain can emerge as headaches, neck and shoulder pain, lower back pain and/or pain in other body areas if trauma caused the brain injury. The pain may be so intense and bothersome that the person withdraws from work, family and social activities.

Paralysis

Differing degrees of paralysis can affect all parts of the body depending on which part of the brain has been injured. Effects can include poor coordination, difficulty walking, visual difficulties, or weakness on one side of the body.

Hearing Problems

Hearing Problems can occur for a number of reasons, both mechanical and neurological, particularly when the inner ear and/or temporal lobes have been damaged. Tinnitus is experienced as noises which are commonly like a buzzing, hissing or ringing in the ears. Meniere's syndrome is caused by excessive pressure in the chambers of the inner ear. Nerve filled membranes stretch which can cause hearing loss, ringing, vertigo, imbalance and a pressure sensation in the ear.

Auditory agnosia is impaired recognition of nonverbal sounds and noises but intact language function. In some cases, trauma to the inner ear can cause the person to be extremely sensitive to certain noises or pitches and may not be able to tolerate many environments we take for granted.

Other Problems

So far only the more common issues have been looked at. However, there are many

disorders that are less common but no less debilitating. For example, Heterotopic Ossification is a secondary condition in which there is abnormal bone growth in selected joints, most commonly in the hips, shoulders, knees and elbows, usually occurring within the first nine months after injury. Chronic neuroendocrine difficulties are occurring in women some years post injury, with weight gain, thyroid disorders, changes in hair and skin texture and perceived body temperature changes. Other people struggle with topographic dislocation, where they cannot remember how to navigate even well known environments, such as their own home or suburb.

Myths and Misconceptions

A widely perceived myth is that a brain injury is simply a type of intellectual disability. People who acquire a brain injury usually retain their intellectual abilities but have difficulty controlling, coordinating and communicating their thoughts and actions.

ABI is often called the "invisible disability." As there are frequently no outward physical signs of a disability, effects such as fatigue, lack of initiation, anger, mood swings and egocentricity may be seen as simply personality defects by family members, government policy makers and health professionals. As a result, there are very few supports available for people with ABI, and often the few supports available may be withdrawn as the disability is not easily understood or recognized. It is easy to see why an ABI can be such a devastating disability, especially when it is historically one of the most neglected when it comes to support services for individuals.