

INFORMATION ON TRAUMATIC BRAIN INJURY

Incidence

Statistics on Traumatic Brain Injuries – “The Silent Epidemic”

- Brain injury is the number one killer and disabler of Canadians under the age of 45
- Over 56,000 Canadians sustain a brain injury annually; 20% will die
- 9,000 injured people will require long-term rehabilitation; 6,000 will live with disability

The Road to Recovery

The brain is the control centre of your body; it takes in information from its surroundings and produces the appropriate response. Different parts of the brain have different responsibilities. When the brain sustains a significant injury, it goes into safe mode. During this safe mode, only life sustaining processes are operating. This state is commonly known as a coma. The majority of individuals who survive a period of coma eventually regain consciousness. Data from the Traumatic Coma Data Bank indicates that of 650 patients who experienced a vegetative state after a brain injury, 14% were released from the hospital in a coma (to a long-term care facility). Of those, half had regained consciousness after one year’s time. Once the brain recovers from safe mode, its functions still need restoration. Different parts of the brain control different body or cognitive functions. Disabilities relate directly to the area of the brain that was damaged. For example, injury to the motor cortex may result in the inability to move your arms or legs.

Common disabilities resulting from a severe brain injury include:

- problems with cognition (thinking, memory, and reasoning);
- sensory processing (sight, hearing, taste touch and smell);
- communication (expression and understanding); and
- behaviour or mental health issues (depression, anxiety, personality changes, irritability, distractibility, impulsiveness, and inappropriate social behaviour).

A summary of the many challenges a survivor may face follows.

Neuroplasticity

“The brain is not hard-wired; rather, it is changing all the time. Neuroplasticity refers to the inherent ability of the brain to change its connections in response to experiences, including when it is injured. When the brain is injured, functions that were performed by the damaged area are lost. However, over time, and with practice and rehabilitation, uninjured parts of the brain can take over some, or all of those lost functions. The brain does this by rewiring itself, either by using alternative pathways or by sprouting new ones.”

Dr. Richard Dyck, University of Calgary Professor and Associate of Hotchkiss Brain Institute

Benefits of Longer-Term Rehabilitation

Dr. Shaun Gray, Director of the Provincial Brain Injury Rehabilitation Program at Halvar Jonson Centre, Ponoka, Alberta found that patients with severe brain injuries who were not candidates for other more conventional forms of rehabilitation showed significant improvement after extended programs admissions.

His study reviewed data from a long-term rehabilitation program for patients with severe brain injury who were in the general category of slow to recover, slow-stream, or not appropriate for admission to other types of brain injury rehab programs. The data suggests that these patients are capable of significant functional recovery months or even years post injury and that this functional improvement may relate to the capacity for community living in the majority of patients.

Article: Preliminary Outcome Analysis of a Long-Term Rehabilitation Program for Severe Acquired Brain Injury

D. Shaun Gray, MD, PhD, Robert S. Burnham, Msc, MD; Arch Phys Med Rehabil Vol 81, November 2000

TBI Community Services

Support

Association for the Rehabilitation of the Brain Injured

Pathways to Recovery Handbook
Kylan's Story – Making Life Better
Website: www.ARBI.ca

Southern Alberta Brain injury Society

(SABIS) 403-521-5212
Website: www.sabis.ab.ca

Northern Alberta Brain Injury Society

(NABIS)
Website: www.nabis.ab.ca

Community Support Services

Inform Alberta: A database of local and provincial programs and services

Website: www.informalberta.ca

Healthlink: a 24/7 nurse telephone advice and health information service

Toll-free 1-866-408-5465 Calgary 403-943-5465

On Line Education/Resources:

Brain Injury Database

Website: www.brainresource.ca

Brain Injury Association of Alberta

Website: www.biaa.ab.ca

Alberta Brain Injury Network Survival Guide

Website: www.braintrust.ca

Brain Injury Association of Canada

Website: www.biac-aclc.ca

Ontario Brain Injury Association

Website: www.obia.on.ca

Brain Injury Association of the USA

Website: www.biausa.org

Books

Mindstorms: The Complete Guide for Families Living with Traumatic Brain Injury, by John Cassidy MD and Lee Woodruff

Brain Injury Survivor Guide: Welcome to Our World, by Larry & Beth Jameson

The Brain that Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science, by Norman Doldge, M.D. www.normandoldge.com

For the Love of Mel, by Edna Lissett Hunter