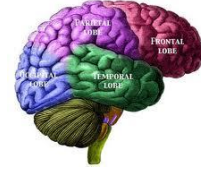


VISION REHABILITATION & ACQUIRED BRAIN INJURY



Vision dysfunctions are among the most common effects associated with acquired brain injury (BI).

Causes of brain injury which may contribute to visual dysfunction include blunt, penetrating, or acceleration/deceleration trauma; suffocation/hypoxia; pharmacological toxicity; and cerebral vascular accidents.

We commonly see patients who have vision problems caused by head injuries sustained in car accidents, sports, falls and even viral infections that have affected the brain.

Treatment of vision dysfunctions following acquired brain injury consists of rehabilitation based on neuroscience and the principles of neuroplasticity conducted by a developmental optometrist using evidence-based vision therapy.

Did You Know?

The United States Army uses vision therapy provided by developmental optometrists to treat vision dysfunctions caused by brain injuries sustained in combat. We use the same techniques to treat vision problems caused by brain injuries sustained in normal life.

Injury to the eye or the sensory, motor or associated areas of the visual system of the BI patient may result in the development of the following:

- Strabismus
- Reduced visual acuity at far
- Reduced visual acuity at near
- Visual field loss
- Ocular motility disorders
- Binocular vision dysfunctions
- Accommodative disorders
- Difficulties in visual perception
- Deficits in visual motor integration

Since activities of daily living require effective integration of visual information processing and visual motor performance (eye movements), BI patients are frequently handicapped as a consequence of disruption in the visual system. Vision therapy rehabilitation can help restore important daily activities like the ability to drive safely.

A significant number of patients with BI will present with signs and symptoms which indicate a vision problem. These include, but are not limited to, the following:

Symptoms	Signs
<ul style="list-style-type: none"> • Double vision • Blurred vision • Reduced ability to sustain attention on visual tasks • Dizziness • Headaches • Eye strain • Confusion related to visual tasks • Difficulty reading 	<ul style="list-style-type: none"> • Eye turn • Closing or covering one eye • Head tilts or turns • Bumping into objects • Abnormal posture • Balance and coordination problems • Poor judgement of depth • Reduced ability to accurately localize objects

EVALUATION AND MANAGEMENT

The patient with BI should be evaluated by a developmental optometrist like Dr. M.K. Randhawa who has training and clinical experience developmental vision, vision therapy and rehabilitation and experience in the care of eye and vision problems related to brain injury. If you do not live in the metro-Vancouver area, look for doctors who are members of the College of Optometrists in Vision Development.

The evaluation of the patient with brain injury may include, but is not limited to, the following:

- Comprehensive eye and vision examination
- Extended sensorimotor evaluation
- Higher cerebral function assessment of visual information processing
- Low vision evaluation
- Extended visual field evaluation
- Electro-diagnostic testing

Management of the patient with brain injury may incorporate any of the following:

- Treatment of ocular disease or injury either directly or by co-management with other health care professionals
- Treatment of the visual dysfunction utilizing lenses, prisms, occlusion, low vision devices, and/or optometric vision therapy
- Counseling and education of patient, family, or caregiver about the patient's visual problems, functional implications, goals, prognosis, and management options
- Consultation with other professionals involved in the rehabilitation and health care of the patient.

For more information and for references to scientific studies, please visit the following websites:

www.visiontherapy.ca/braininjury.html

www.covd.org

Did You Know?

The most popular medical test for concussions is the King-Devik test, created by optometrists, Dr. Alan King and Dr. Steven Devick. It diagnoses concussions by looking for vision dysfunctions in the way the eyes move.

If you are experiencing vision dysfunctions that may have been caused by a head or brain injury, the first step is to see Dr. M.K. Randhawa by booking an appointment over the phone at **(604) 435-3931** or online at www.visiontherapy.ca.



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