

Traumatic Brain Injury

Managing Persistent Symptoms after a Mild Traumatic Brain Injury (TBI)



PREVENTION. CARE. RECOVERY.

Te Kaporeihana Āwhina Hunga Whara

»» *A distillation of best practice reflecting ACC's current position*

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- Presentations with a 'bang to the head' are very common.
- Psychological problems are common after mild TBI, eg depression and anxiety, and can worsen over time if they are not treated.
- Most people have fully recovered from a mild TBI by 3 months, but 10% may still have symptoms at 6 months.
- There is some evidence that early intervention in mild TBI can positively influence rates of recovery.
- Referral to a specialist clinic (including screening neuropsychological assessment) is recommended if symptoms have not improved at 4-6 weeks following injury.

Introduction

A common issue for GPs is how to best manage persistent symptoms that occur following a 'bang on the head' in someone who either doesn't need to be seen in an emergency department (ED), or has already been assessed and discharged. This ACC Review on TBI is the third in this series.

Size of the problem

A best estimate of 'medically attended TBI' in New Zealand is between 16,000–22,500 per year.¹ Approximately half of these may have persistent symptoms in the first few days that require assessment by a GP.

Common symptoms

Symptoms commonly reported following mild TBI include headache, nausea, dizziness, blurred vision, confusion, fatigue, poor concentration, memory problems, sleep difficulties, irritability, and noise intolerance. For most, the symptoms will resolve within 1–14 days. Deficits in cognitive functions such as memory, attention and speed of processing are common in the first few days and up to a month after the injury.²

There seems to be no reliable relationship between injury severity (within the spectrum of mild TBI) and persistent symptoms. While most people have fully recovered by 3 months post injury, 10% of patients may still have symptoms at 6 months post injury.²

Principles of management

There is debate about whether the underlying process for people with persistent symptoms after a mild TBI is 'organic' or 'psychological'. There is some evidence to support an organic component early on, with a significant psychological component also involved.³ The following 'principles of management' combine these 2 elements to demonstrate that:

- Individuals differ in their response to persistent symptoms following a mild TBI. This response can be influenced by a person's expectation, their past experience of such symptoms, and the attributing of these symptoms to a particular event or events.
- Attention and memory problems can lead to feelings of fear and failure, anxiety, loss of self-esteem, and potentially, work-place difficulties, withdrawal from activity, and social contacts.
- Psychological problems can worsen over time if they are not treated.
- The process surrounding persistent symptoms can be dynamic, ie it can be affected by dysfunctional patterns of thinking and behaving. The more established these patterns become, the more difficult they are to change. One common pattern for example, is the focus on pain and its attempted relief with medication.
- An individual's functional outcome is a product of at least the following:
 1. Extent of any brain damage
 2. Personality
 3. Job/home requirements
 4. Persistent symptoms
 5. Family/social support
 6. Age/medical factors
 7. Adequacy of the medical response.

Management

There is some evidence that providing early and relevant information about common symptoms of mild TBI, can lower the incidence of later persistent symptoms.⁴ Key management points include:

- **Early intervention after injury to prevent dysfunctional scenarios, ie don't wait for failure.**
Assess those who present for the first time more than a day or so after the original injury. Reassess TBI severity for those that re-present after the initial injury, consider alternative diagnoses, and the need for further assessment at hospital.
- **Adequate history and focused exam to rule out the need for onwards referral and/or investigation. Question specifically about:**
 - extent of fatigue and sleep deprivation
 - ability to cope with the possible slowing down of information processing (adaptation and compensatory strategies)
 - the negative impact of alcohol on recovery and possible increased sensitivity to alcohol
 - problems surrounding return to normal activities such as work, study, driving etc.
- **Timely provision of relevant information to increase understanding of symptoms. It is important to reassure that recovery is expected.**
Reassure the patient by explaining that symptoms are common, even after minor blows to the head, and that most should resolve within a short period of time. Advise patients to return to their GP if symptoms persist beyond 4–6 weeks. It is also important to cover information about areas that may be 'barriers to recovery.'
- **Active management of a gradual process of return to functioning, ie homecare, childcare, work etc.**
Early return to activity, rather than bed rest, is helpful. A step-wise increase in activity level can be prescribed. Where fatigue and sleep deprivation are issues, prescribe a regular schedule of activity and sleep patterns. If energy levels are reduced, activity and energy expenditure should be increased at pre-set levels. This can occur in agreement between the GP and patient, and where appropriate, include a care-giver and employer. It is also important to discuss a gradual return to work (RTW) with the employer. Sometimes a health professional (such as an occupational therapist), is necessary to manage the RTW process.

Other important management considerations include:

- The need for early involvement of family, support networks, and social and vocational rehabilitation processes.
- The provision of treatment or referral for specific symptoms (headaches, balance, depression) where necessary.
- The need for referral to a specialist clinic, including screening neuropsychological assessment, if symptoms have not substantially improved by 4–6 weeks following the injury.
- The need to seek information on pre-injury status (where available). It can be used as a measure against which changes in neuropsychological and cognitive function are assessed.

Some of these factors will be dealt with in greater detail in the next TBI review. That review will conclude the series in TBI management.

References

1. New Zealand Guidelines Group. Traumatic Brain Injury Guidelines: Diagnosis, Acute Management and Rehabilitation. Wellington: ACC; 2006.
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3. Rees PM. Contemporary issues in mild traumatic brain injury. *Arch Phys Med Rehabil.* 2003; 84(12): 1885–94.
4. Ruff RM. Two decades of advances in understanding of mild traumatic brain injury. *J Head Trauma Rehabil* 2005; 20(1): 5–18.
5. Wade D, et al. Routine follow-up after head injury: a second randomised controlled trial. *J Neurol Neurosurg Psychiatry* 1998; 65(2): 177–83.