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Initial Management of Concussion/mTBI

How will I feel after I have had a concussion/mTBI?

Concussions can lead to **symptoms** that might appear right away or a few days later. Symptoms can last for days, weeks, or even longer. Some people may experience only one symptom and others may experience many. Concussions can affect how you think and feel, as well as your mood and sleep.

Common symptoms of concussion/mTBI include:

Physical	Cognitive	Behavioural
<ul style="list-style-type: none">• Headache/migraine• Dizziness and balance problems• Nausea• Fatigue• Sleep disturbance• Blurred vision• Sensitivity to light or noise• Hearing problems• Ringing in the ears• Seizure• Temporary problems with smell and/or taste• Numbness and tingling• Neck pain	<ul style="list-style-type: none">• Feeling foggy• Hard time remembering and focusing• Speed of information processing• Trouble thinking clearly• Trouble finding words• Judgement• Executive functioning, such as decision making, planning, and motivation	<ul style="list-style-type: none">• Depression• Nervous or anxious• Agitation• Irritability• Impulsivity• Aggression• Angry• Sad• Sleep more or less than you normally would• Hard time falling asleep or staying asleep

What can concussion/mTBI recovery look like?

The first few days: you will need physical and mental rest for the first 24-48 hours after your injury. Take care of basic needs by eating well, having regular and uninterrupted sleep, and managing stress. Avoid stimulants (e.g. coffee), electronic devices, and any activity that could lead to another concussion or cause symptoms to worsen. Only take medication that your doctor has approved.

The first week: Return to activities that do not cause symptoms to worsen. Conserve your energy. It is important to see your primary healthcare provider again if symptoms get worse. They will give you strategies to help increase your activity levels and maximize your recovery.



Follow-up: Your primary healthcare provider should see you 1 to 2 weeks after your injury to monitor your symptoms and ensure your recovery is going as expected. You may need to see additional healthcare providers who are experienced in treating concussion patients to help manage specific symptoms.

Ongoing concussion care: For you to feel better, healthcare providers involved in your concussion care need to talk to one another and work as a team. It is important for healthcare providers to:

- Explain the treatments that they are providing and the evidence that supports the treatments. They should also give you an idea of how long you might need to be in treatment for the symptoms that you are experiencing
- Work with you on things that may be hard in your day-to-day activities
- Connect with the other team members who are also helping you get better with other symptoms
- Work with your primary healthcare provider who will clear you to go back to work, school, or play

How long does it take to recover?

Most people who experience a concussion make a full recovery within a few days or weeks. Symptoms typically resolve in 1 to 3 months. For some it may take longer. See your primary healthcare provider within 1-2 weeks of your diagnosis. Depending on your symptoms you may want to see a concussion expert. Healthcare providers will check your symptoms, monitor how you are doing, and decide if or when they need to see you again.

How can I recognize my symptoms?

Keep track of your symptoms by writing them down. Keeping a log or journal will allow you to monitor symptoms and notice any changes. Your family member or support person can help with this. Talk with your primary healthcare provider about any change in your symptoms so they can rule out something that might be more serious.

Here are some warning signs that can be linked to more serious brain injury:

- Headaches that won't go away and/or get worse
- Sudden or severe throwing up or nausea
- Fainting or blacking out
- Difficulty waking up or feeling sleepy
- Seizures or convulsions
- Unable to recognize people or places you know
- Feeling confused, restless, agitated



- Feeling weak
- Numbness in different parts of your body
- Poor balance or coordination
- Slurred speech, trouble talking, or not making sense
- Fluid or bleeding from your ears or nose
- Not behaving like your usual self
- Having one pupil in your eye bigger than the other

What can I do to monitor progress?

If you are diagnosed with a concussion/mTBI, your primary healthcare provider should give you a **management plan** to help your recovery. This management plan is personalized based on your signs, symptoms, and assessment results to best accommodate your life and your short-term and long-term goals. It is a good idea for you to share this with your family or support person so they can help you monitor your symptoms and progression.

This information will include the following:

- The recovery process
- Possible symptoms you may experience
- How to manage, monitor, and prevent your symptoms
- How to monitor for complications
- What you can do to manage stress
- How to safely and carefully increase your activity level (within your threshold)
- Recovery expectations
- How to resume life activities (return-to-work/school, return-to-play, daily living activities)

Your primary healthcare provider should explain this information to you. You should get an online or physical copy of the information so that you can read it at home.

What if I am not getting better?

Most people recover by one month. For some, concussion recovery can take longer, with their symptoms lasting 1-3 months. In fewer cases, symptoms can last longer than that. Symptoms that last longer than 3 months are referred to as “prolonged symptoms”. Just because symptoms last for longer than 3 months does not mean that they will not get better.



Getting better from a concussion may take longer if you:

- Are a teenager or older adult
- Are female
- Go back to school, work, or exercise too soon
- Have had a concussion before
- Have a history of migraine headaches
- Have mental health issues such as depression or anxiety
- Have trouble sleeping
- Are showing signs of vestibular or visual abnormalities (e.g. blurred vision, dizziness, difficulty focusing, motor sensitivity)

Taking medication should be avoided in the early phases of recovery. Talk to your primary health care provider if you are currently taking prescription or over the counter medications.

More information on long-term recovery is covered in [Section 5: Managing Prolonged Symptoms](#).

Key Terms

- **Symptoms:** a circumstance that serves as an indication of something (a condition)
- **Management plan:** An individualized plan that allows structure for day-to-day and long-term goals, based on what needs to be accomplished, degree of freedom, resources available, and how the plan fits suits your life.



Key Guideline Recommendations for Healthcare Providers

The following key guideline recommendations for healthcare providers have been included here so you can see what the guideline recommends healthcare providers do in assessing and treating patients after concussion/mTBI.

2.1	Initial treatment of a patient with concussion/mTBI should be based upon a thorough evaluation of signs and symptoms, pre-injury history (e.g., prior concussion(s), premorbid conditions) and concurrent potential contributing factors (e.g., comorbid medical conditions, ADHD, medications, mental health difficulties, impact of associated concurrent injuries).
2.3	A patient with a first-time concussion/mTBI should be advised through early education, support and/ or assurance that a full recovery of their symptoms, including cognitive functioning, is typically seen within as early as a few days up to 1 to 3 months post-injury.
2.4	For patients who have 1) comorbidities or identified health or risk factors and are not on a trajectory of improvement within the first month, or 2) prolonged symptoms greater than 4 weeks post-injury, it is recommended that these patients be referred for more comprehensive interdisciplinary evaluation to specialized concussion services/clinics
2.5	The primary care provider should routinely screen for the risk of depression and/or anxiety in the first few weeks after concussion/mTBI, which may be influenced by psychosocial factors and psychological responses to the injury. Patients who screen positive should be managed and referred to specialist services, if needed, since these conditions commonly complicate recovery.
2.6	<p>On presentation to healthcare professionals, patients and their support persons should be provided with education that includes verbal and printed information. This information should be provided at the initial assessment and ongoing as required. Education should be tailored based on the patient's history and symptoms and include information on:</p> <ul style="list-style-type: none"> a. Symptoms and expected outcomes b. Normalizing symptoms (education that current symptoms are expected and common after injury event) c. Reassurance about expected full recovery in the majority of patients within a few days, weeks or months d. Gradual return to activities as tolerated i.e., in a manner that does not result in a significant or prolonged exacerbation of symptoms and life roles e. Techniques to manage stress



Additional Resources

Brain injury Advice Card – Long Version

<https://braininjuryguidelines.org/concussion/fileadmin/media/appendices/appendix-1-3.pdf>

Brain Injury Advice Card – Short Version

<https://braininjuryguidelines.org/concussion/fileadmin/media/appendices/appendix-1-4-2.pdf>

Concussion Do's and Don'ts

<http://concussionsontario.org/wp-content/uploads/2018/04/ONF-DoDonts-Tearaway-WEB-1.pdf>

Information to bring to your family Dr./Primary Care Provider

<https://braininjuryguidelines.org/concussion/fileadmin/media/information-to-bring-to-your-family-doctor-primary-care-provider.pdf>

Patient Care Pathway

<http://concussionsontario.org/wp-content/uploads/2018/04/ONF-PatientPathway-Tearaway-WEB-1.pdf>

Parkwood Pacing Graphs

<https://braininjuryguidelines.org/concussion/fileadmin/media/appendices/appendix-2-2.pdf>

Appointment tracker

<https://braininjuryguidelines.org/concussion/fileadmin/media/appointment-tracker.pdf>



Cautionary Note to Users

The content of the *Guideline for Concussion/mTBI & Prolonged Symptoms, 3rd Edition: for Adults over 18 years*, is based on the status of scientific knowledge available at the time of their finalization (2017) as well as on the consensus of the experts who participated in the guideline development.

This guideline has been created to provide recommendations and help with management of concussion/mild traumatic brain injury (mTBI). It is only for management for adults over 18 years of age. This guideline is not intended for use by people who have sustained or are suspected of having sustained a concussion/mTBI for any self-diagnosis or treatment.

The guideline can be used by patients when speaking with healthcare providers about their care. It covers getting a diagnosis, managing symptoms in the early phase (acute) and management in the longer recovery phase (prolonged symptoms). Patients may wish to bring their healthcare and other providers' attention to this guideline. It is based on up-to-date, quality research evidence, the expertise of providers and the input of patients.

