Primary care providers are essential in acute concussion diagnosis and management

- Start with a comprehensive examination
- Assess for red flags, identify risk factors, and determine need for CT scan
- Provide patients with education and assurance about symptoms and recovery
- Consider referral to interdisciplinary treatment clinic for persistent post-concussive symptoms

KEY MESSAGE FOR YOUR PATIENTS

Get physical and mental rest after your injury, then gradually return to normal activities

For more information on the clinical practice guidelines and the supporting evidence, visit:

www.braininjuryguidelines.org  www.concussionsontario.org

### Risk Factors for Advanced Imaging

Adapted from Stiegler et al. The Canadian CT Head Rule for Patients with Minor Head Injury. Lancet 2001;357:1391–96

- Glasgow Coma Score < 15 at 2-hours post-injury
- Suspected skull fracture (open or depressed)
- Any sign of basal skull fracture
- >2 vomiting episodes
- ≥ 65 years-old
- Retrograde amnesia to the event > 30 min
- Dangerous mechanism (e.g., car accident, fall)

### Risk Factors for Prolonged Concussion Recovery

Synthesized from the Concussion Recovery Pattern and Pathway (concussionsontario.org) and Table 1.1 Risk Factors Influencing Recovery Post mTBI (braininjuryguidelines.org)

#### Medical Factors
- History of traumatic brain injury, neurological, sleep, or psychiatric problems
- Signs of vestibulo-ocular abnormalities or cognitive difficulties
- Reduced balance or dizziness
- Memory problems post-injury
- Nausea post-injury

#### Contextual Factors
- Student, female, or old age
- Injured in motor vehicle collision
- Low education or socio-economic status
- High levels of symptom reporting
- Secondary gain issues (e.g., litigation)

#### If 1+ risk factors are identified:
- Provide information and assurance about symptoms and recovery
- Consider referral to interdisciplinary treatment clinic for prolonged post-concussive symptoms

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www.concussionsontario.org

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# Concussion Symptom Checklist

Age: ________

Gender: Male □  Female □  Other □__________

Did you lose consciousness? Yes □  No □

How did you get your suspected concussion? _____________________________________________________________

__________________________________________________________________________________________________

Date/time of injury: ___________________________________________________________________________________

How many diagnosed concussions have you had in the past? ___________

When was the most recent concussion before this injury? ____________________________________________________

Have you ever been (check all that apply)?

- diagnosed / treated for a headache disorder or migraines □
- diagnosed with a learning disability/dyslexia □
- diagnosed with ADD/ADHD □
- diagnosed with depression or anxiety □

List all current medications, if any:

__________________________________________________________________________________________________

Please rate the severity of your symptoms from 0 (no symptoms) to 6 (severe symptoms) in each one of the boxes below:

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>no symptoms</td>
<td>mild symptoms</td>
<td>moderate symptoms</td>
<td>severe symptoms</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 1. Physical
- Headache
- “Pressure in head”
- Neck pain
- Nausea or vomiting
- Dizziness
- Visual problems
- Balance problems
- Sensitivity to light
- Sensitivity to noise
- Fatigue or low energy
- Difficulty remembering

## 2. Cognitive
- Difficulty concentrating or remember
- Feeling mentally foggy
- Confusion
- Feeling slowed down

## 3. Emotional
- More emotional
- Irritability
- Sadness
- Nervous or anxious

## 4. Sleep
- Drowsiness
- Changes in sleep patterns

## 5. Exertion
- Symptoms get worse with mental activity
- Symptoms get worse with physical activity
# Concussion Do’s and Don’ts: The first few days of recovery

## The Do’s

<table>
<thead>
<tr>
<th>Do’s</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>See a medical doctor or nurse practitioner for help</td>
<td></td>
</tr>
<tr>
<td>Take it slowly returning to daily activities and sport</td>
<td>Talk with your doctor or nurse practitioner about when you can return to work, school or play. Respect your brain and your body. Have a conversation with your doctor or nurse practitioner about what this can look like for you. As you start to feel better, it’s important to get back to doing your normal activities. Start by doing just a little, and if you feel okay, then you can try to do a bit more. Keep track of how you feel.</td>
</tr>
<tr>
<td>Conserve your energy</td>
<td>After a concussion, your brain has less energy to spare than it normally does. It is important to manage physical and mental energy so that your brain can fully recover. If symptoms return or you get new ones as you become more active, this is a sign that you are pushing yourself too hard.</td>
</tr>
<tr>
<td>Take care of basic needs</td>
<td>Eating well and regularly can improve your mood, sleep and mental focus. Stay away from stimulants such as coffee, caffeine, pop and energy drinks. Stimulants can put added stress on your brain. Keep a regular sleep schedule. Talk to your healthcare provider if you have trouble getting a good night’s sleep.</td>
</tr>
<tr>
<td>Manage stress</td>
<td>Stress and emotional upset can make symptoms feel worse. Try to do things that help you relax and feel calm. Talk about your worries with someone you trust such as your healthcare provider, a family member or friend. Let others know how they can help you.</td>
</tr>
<tr>
<td>Rest 24-48 hours physically AND mentally</td>
<td>Sleep at night, rest during the day.</td>
</tr>
</tbody>
</table>

## The Don’ts

<table>
<thead>
<tr>
<th>Don’ts</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t be woken up every hour</td>
<td>Increased sleep is normal and necessary.</td>
</tr>
<tr>
<td>Don’t be put in a dark room to avoid all activity</td>
<td>In the past, patients were told to have absolute rest. It is now accepted that light and cautious activity with rest as needed can be part of the healing process. Respect your brain and your body. Have a conversation with your doctor or nurse practitioner about what this can look like for you.</td>
</tr>
<tr>
<td>Don’t do activities with risk of falls or reinjury, play sports, do heavy chores or activities that could lead to another concussion or cause symptoms to worsen</td>
<td>Light cardio in a safe setting is encouraged to promote recovery. Be particularly careful in the first few days. Some people who have had repeated concussions may have serious long-term problems including difficulty with concentration, memory, headache and sometimes physical skills (e.g. balance, coordination).</td>
</tr>
<tr>
<td>Don’t be involved in full-time work or study</td>
<td>The demands of work or school can trigger symptoms. You may need to take some time off to rest and recover or reduce your responsibilities for a short period of time.</td>
</tr>
<tr>
<td>Don’t drive, ride a bike or work with machinery or ladders</td>
<td>Reaction time, vision and thinking may be affected by a concussion. Do not drive a car until your doctor or nurse practitioner advises it is okay.</td>
</tr>
<tr>
<td>Don’t use non-prescription drugs, including alcohol</td>
<td>Using non-prescription drugs (including alcohol) may add to concussion symptoms and increase recovery time. Only take drugs that your doctor or nurse practitioner has approved.</td>
</tr>
<tr>
<td>Reduce the use of electronic devices</td>
<td>Prioritize the use and take frequent breaks (e.g. looking at computer, phone, tablet, TV screens).</td>
</tr>
</tbody>
</table>
Follow-up with primary care provider
Majority recover within a few weeks with education about symptom management. Some symptoms may continue.

Further follow-up required
Additional assessment(s) may be needed if symptoms do not resolve.

Prolonged/persistent symptoms need interdisciplinary care
Typically patients with risk factors for prolonged symptoms are identified at the initial medical assessment.

For more information and resources, visit our websites:
www.braininjuryguidelines.org
www.concussionsontario.org