



Concussion Resources for **Workers & Workplaces**





© BCIRPU. All rights reserved | Version 1: Updated June 2019

The Concussion Awareness Training Tool (CATT) is a series of online educational modules and resources with the goal of standardizing concussion recognition, diagnosis, treatment, and management. Good concussion management may decrease the risk of brain damage and potentially reduce long-term health issues.

Developed by Dr. Shelina Babul, Associate Director/Sports Injury Specialist with the BC Injury Research and Prevention Unit, BC Children's Hospital, CATT is based upon the established principles of the Consensus Statement on Concussion in Sport. The 2017 Berlin Concussion in Sport Group Consensus Statement builds on the principles outlined in previous concussion statements and aims to develop better understanding of sport-related concussion.

Research and evidence on concussions is evolving and the knowledge base is continually changing. As a result, this website is updated on a regular basis to provide current information, tools, and resources to support concussion recognition, diagnosis, treatment, and management.

cattonline.com

Table of Contents

CATT Concussion Information Sheet	4
An overview of concussion recognition, response, and management. This resource should be read by workers and their families, and workplace supervisors, managers, and employees.	
CATT Concussion Pathway	7
A pathway guiding appropriate recognition, response, and management following a suspected concussion incident.	
CATT Concussion Incident Report	8
A tool used to document the details of a suspected concussion incident. A completed copy of this document should be given to the injured person's emergency contact and should be brought to all medical appointments.	
CATT Medical Assessment Letter	10
A form completed by a licenced medical professional during the initial medical assessment. This form indicates whether or not a concussion has been diagnosed, and provides outlines for Return to Work or Return to Activity.	
CATT Return to Work	13
A tool providing a gradual, six-stage stepwise strategy for returning to work following a concussion.	
CATT Return to Activity	14
A tool providing a gradual, five-stage stepwise strategy for returning to daily activity following a concussion.	
CATT Medical Clearance Letter	15
A form completed by a licensed medical professional that clears the individual to participate in specific activities.	
CATT Managing Mental Health Symptoms	17
An overview of strategies to manage mental health symptoms during concussion recovery.	
Additional Resources	22

What You Need to Know About Concussion

This information sheet provides a brief overview on the appropriate care for an individual with a concussion. It outlines the three key steps in dealing with concussion to assist recovery from this injury: recognize, respond, and manage. Visit cattonline.com for further information, resources, or to take one of the e-learning courses tailored for medical professionals, workers & workplaces, coaches, school professionals, and parents & caregivers.

Recognize

A concussion is the most common form of brain injury caused by an impact or forceful motion to the head or body that causes the brain to move inside the skull. Common causes of concussion include **falls, motor vehicle crashes, and sport and recreational-related activities**.

There is no way to know for certain whether a particular event will lead to a concussion—a relatively minor impact may result in a concussion while a higher-magnitude impact may not. It is important to note that if there is a history of concussion, even a minor impact or forceful motion can cause a concussion.

The **signs** (observed in individual) **and symptoms** (experienced by individual) consistent with concussion may include, but are not limited to:

- Headaches
- Neck pain
- Dizziness or loss of balance
- Nausea
- Blurred vision or seeing “stars”
- Sensitivity to light or sound
- Ringing in the ears
- Confusion or fogginess

Some symptoms may be **delayed for hours or days** after an injury and can include:

- Frustration or irritability
- Concentration or memory issues
- Sadness
- Anxiety or nervousness
- Fatigue
- Trouble sleeping

Concussion signs to watch for in an **infant or toddler** may include:

- Crankiness and irritability (beyond their usual)
- Cannot be comforted or excessive crying
- Sudden changes in nursing, eating, sleeping or playing patterns
- Loss of balance, unsteady walking (more so than normal)
- Lack of interest in favourite toys or activities
- Listlessness or tiring easily
- Loss of ability to carry on with newly acquired skills (across any social and emotional, language, physical development domains)

Respond

Immediately:










Following a potential concussion-causing event, the individual should be removed from activity and assessed for a **medical emergency**.

If any of the **Red Flags** are present, call 911 or seek immediate medical care.

Next steps if not a medical emergency:

- Do not leave the individual alone
- Notify an emergency contact person
- Continue to monitor for Red Flags and signs and symptoms of concussion
- Do not let the individual return to their activity
- Do not give the individual any immediate medication
- Do not let the individual leave by themselves
- Do not let the individual drive or ride a bike

RED FLAGS

-  Neck pain or tenderness
-  Double vision
-  Weakness or tingling/burning in arms or legs
-  Severe or increasing headache
-  Seizure or convulsion
-  Loss of consciousness
-  Deteriorating conscious state
-  Vomiting
-  Increasingly restless, agitated, or combative

Within 48 hours:

The individual should be monitored before assuming that a concussion has not occurred, including monitoring throughout the night following the initial injury. Do not wake the individual unless you have concerns about their breathing, changes in skin colour, or how they are sleeping. Call 911 or seek immediate medical care if the individual is slow to wake or shows any of the **Red Flags**.

- If any signs or symptoms are present, seek medical attention from a licensed medical professional such as a physician or nurse practitioner.
- If no signs or symptoms appear, the individual can return to normal activity while being monitored for several days. If no signs or symptoms appear, chances are that a concussion was not sustained. If unsure, see a medical professional for guidance.

Manage

A concussion can have a significant impact on physical, cognitive, and emotional functioning. The recovery process involves managing activities in order to not trigger or worsen symptoms—the key is finding the “sweet spot” between doing too much and too little.

The recovery process is best approached in collaboration with key individuals, such as medical professionals, family members, friends, employers, teachers and school staff, and coaches.

Within 48 hours:

The first and most important step in recovery from a concussion is to rest for a maximum of 2 days. The individual will need both physical and cognitive rest in order to allow the brain to heal.

After 48 hours:

- Physical exertion should be limited to activities that do not result in an increased heart rate or breaking a sweat. Restrict: physically strenuous work, exercise, sports, running, biking, rough play, etc.
- Cognitive activity should be limited, minimizing activities that require concentration and learning. Restrict: work or schoolwork, reading, electronics (computers, smartphones, video games, TV), musical instruments, loud music, etc.

Once symptoms start to improve, the individual should begin to increase activities in a step-wise process to return to regular levels of activity, including work, school, and sports.

Symptoms should decrease over time, but some symptoms may return, worsen, or new symptoms may appear as new activity levels are introduced. If this happens, return to a lower level of activity that does not affect or bring on new symptoms. If you are worried that the individual is not improving, follow-up with a licensed medical professional, such as a physician or nurse practitioner.

REMEMBER:
Recovery is a fluctuating process.
The individual can be doing well one day but not the next.

On average, it typically takes 2 to 4 weeks to recover from concussion. However, 15 to 30 percent will continue to experience persistent symptoms beyond this period. Persistent symptoms have the potential to cause long-term difficulties. If there is no improvement or symptoms are worsening 4-12 weeks after a concussion, physician referral to an interdisciplinary clinic is recommended.

The recovery period may be influenced by:

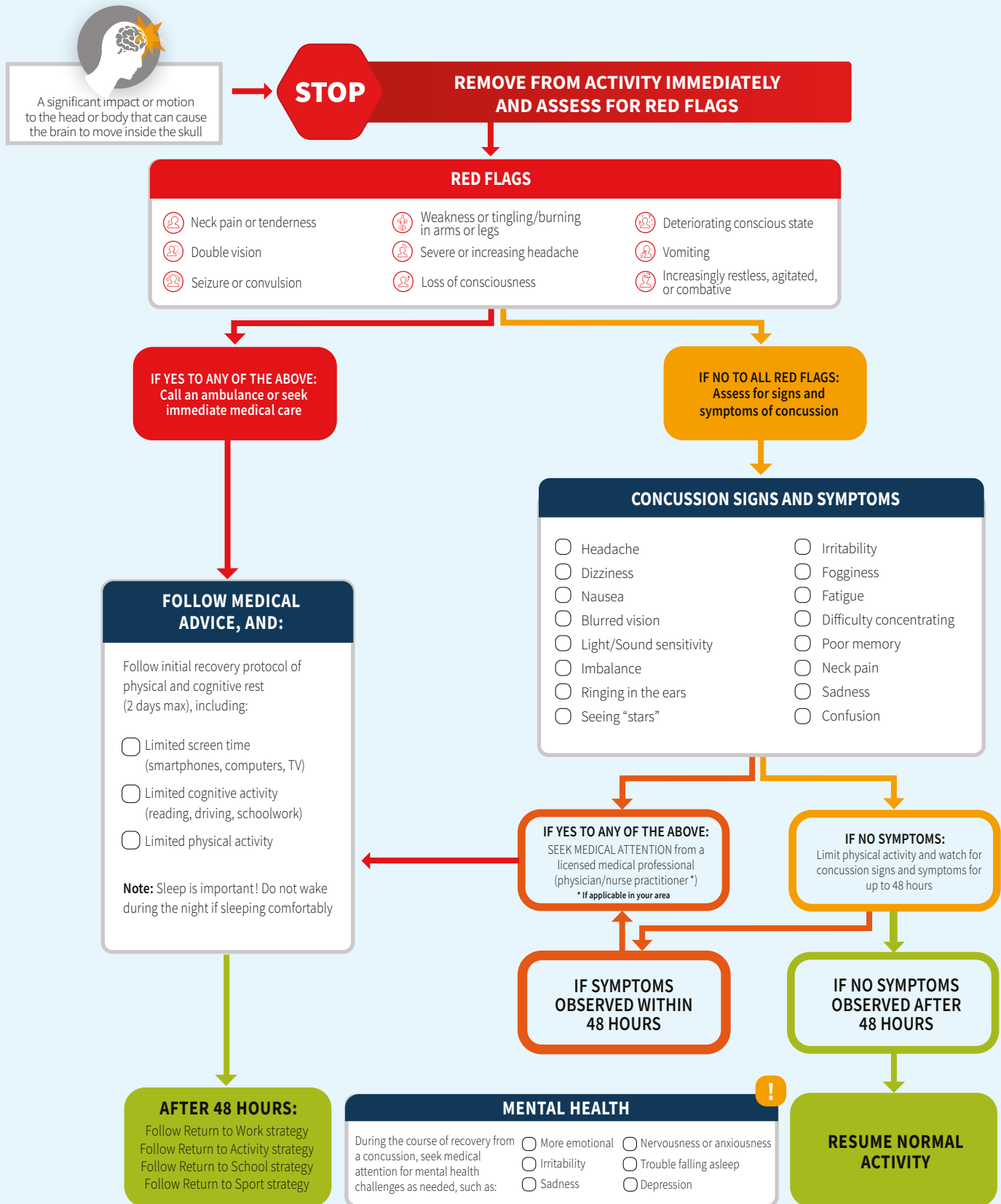
- Previous concussions
- History of headaches or migraines
- Learning disabilities
- Mental health issues
- ADHD
- Use of drugs or alcohol
- Returning to activities too soon
- Lack of family or social supports
- Participating in high-risk sport

Proper management of a concussion can reduce the risk of complications. It is important that the individual has successfully returned to work or school before fully returning to sport and physical recreation activities. Returning to full activity too soon may result in more severe symptoms or long-term problems. As well, returning to high risk activities (contact sports, dangerous job duties) before full recovery and medical clearance can put the individual at risk of sustaining another concussion with more severe symptoms and a longer recovery period.

REMEMBER:
CATT resources to support the recovery process include:

- Return to Work
- Return to Activity
- Return to School
- Return to Sport

CATT Concussion Pathway



CONCUSSION INCIDENT REPORT

Follow the steps on the CATT Concussion Pathway, then document the incident below.

This incident form was completed by:

NAME:	ORGANIZATION:
CONTACT INFORMATION:	DATE (DD/MM/YYYY):
<div>Did you witness the event?</div> <div>Yes</div> <div>No</div>	<div>Please indicate who you are completing this report for; who will receive this incident report? Please check all that apply:</div> <div><div>Injured person</div><div>Supervisor/Employer</div><div>Emergency contact</div><div>Teacher/School</div><div>Ambulance attendant</div><div>Coach/Sports organization</div><div>ER physician</div><div>Other (write below):</div></div>
NAME AND CONTACT OF ADDITIONAL WITNESSES:	

ABOUT THE INCIDENT

DATE OF INCIDENT (DD/MM/YYYY):	LOCATION OF INCIDENT:
TIME OF INCIDENT:	AM PM
NAME OF INJURED PERSON:	NAME OF EMERGENCY CONTACT:
CONTACT INFO OF INJURED PERSON:	CONTACT INFO OF EMERGENCY CONTACT:
<div>Describe the incident. Please include as much detail as possible:</div>	
<div>Did the incident involve any of the following? Please check all that apply:</div> <div><div>Blow to the head</div><div>Motor vehicle collision</div><div>Struck by person</div><div>Hit to the body</div><div>Fall</div><div>Sport-related</div><div>Assault</div><div>Struck by object</div><div>Other:</div></div>	

What was the immediate response to the incident?
Please check all that apply:

Called 911
Called emergency contact
Performed first aid
No response
Other:

What was the immediate outcome of the incident?
Please check all that apply:

Taken to hospital by ambulance
Attended to by paramedics
Left with emergency contact
Left independently
Returned to activity
Other:

Did the person exhibit any immediate signs or symptoms of concussion?

Yes No Don't know

If yes, check all that apply:

Neck pain or tenderness	Imbalance	Light/sound sensitivity
Double Vision	Irritability	Ring in the ears
Weakness or tingling/burning in arms or legs	Poor memory	Seeing "stars"
Severe or increasing headache	Sadness	Fogginess
Seizure or convulsion	Confusion	Fatigue
Loss of consciousness	Headache	Difficulty concentrating
Deteriorating conscious state	Dizziness	Other:
Vomiting	Nausea	
Increasingly restless, agitated or combative	Blurred vision	

To be filled out by administration only

Did this incident result in a concussion diagnosis?

Yes No Don't know

Could this incident have been prevented?

Yes No Don't know

Please describe any follow-up actions that have been taken (e.g., safety risk assessment):

Please describe how this incident could or could not have been prevented:

Please describe any follow-up actions that are needed (e.g., systemic actions to ensure health and safety):



Medical Assessment Letter

Medical Office, please complete:	
M.D. / N.P. Name	
Medical License #	
Email / Contact #	
Date of event / injury	
Date of assessment	

To Whom It May Concern:

Any individual who sustains a blow or impact to the head, face, neck or body and demonstrates any visual signs of concussion or reports any of the symptoms of concussion is recommended to be assessed by a licensed medical professional. Accordingly, I have personally completed a medical assessment on this patient.

Name of Patient: _____

Results of the Medical Assessment

This patient has not been diagnosed with a concussion or other injury and can return, with full participation to work, school, or physical activities without restriction.

This patient has not been diagnosed with a concussion but the assessment led to the following diagnosis and recommendations:

This patient HAS been diagnosed with a concussion. *See below for concussion management protocol.*

This patient has been instructed to avoid all activities that could potentially place them at risk of another concussion or head injury, or activities with implications for the safety of others (e.g., driving, dangerous job duties, and contact sports) until a licensed physician or nurse practitioner provides a Medical Clearance Letter.

Yours Sincerely,

Signature _____ M.D / N.P. (Please circle appropriate designation)¹

Stamp

¹ Depending upon physician or nurse practitioner access, the Medical Assessment Letter may be completed by a nurse with access to a licensed physician or nurse practitioner. Forms completed by other health care professionals (e.g., physiotherapists, chiropractors, and other allied health care professionals) should not be accepted. It is recommended that this document be provided to the patient without charge.

Concussion Management

The goal of concussion management is to allow complete recovery through a safe and gradual return to work, school and physical activities following a staged approach. *Note: a patient's progress through the return to activity stages is unique to the individual.* After Stage 2, if new or worsening symptoms are experienced, the patient may need to return to the previous stage for 24 hours and consider reassessment by their physician/nurse practitioner. For more detailed information on management and resources, please refer to the Concussion Awareness Training Tool (CATT) at cattonline.com.

Stage 1: Initial Rest

In the first 24-48 hours the patient has been instructed to have complete physical and cognitive rest prior to initiating a return to work or activity.

Not yet completed
Completed on (dd/mm/yyyy) _____
Time period has passed

Stage 2: Prepare to return to activity at home

The patient can begin the return to activity process at home by undertaking brief familiar tasks until no new or worsening concussion symptoms are experienced.

Not yet completed
Completed on (dd/mm/yyyy) _____
Time period has passed

Stage 3 & 4: Prepare to return to work, school, and physical activity and gradually resume daily activities

The patient can initiate a graduated return to work, school, and physical activities on a part-time basis, by increasing and gradually resuming usual activities (supported with accommodations, modifications, and restrictions as needed) as tolerated and only at a level that does not bring on new or worsening concussion symptoms.

Not yet completed
Completed on (dd/mm/yyyy) _____
Time period has passed

Restrictions/Accommodations	Details	Timeline

Stage 5 & 6: Full return to work, school, and physical activities

The patient can return with full participation to work, school, and physical activities.

Not yet completed

Completed on (dd/mm/yyyy) _____

Time period has passed

Restrictions/Accommodations	Details	Timeline

Yours Sincerely,

Signature _____ M.D / N.P. (Please circle appropriate designation)²

Stamp

--

² Depending upon physician or nurse practitioner access, the Medical Assessment Letter may be completed by a nurse with access to a licensed physician or nurse practitioner. Forms completed by other health care professionals (e.g., physiotherapists, chiropractors, and other allied health care professionals) should not be accepted. It is recommended that this document be provided to the patient without charge.

Return to Work

This tool is a guideline for managing an individual's return to work following a concussion and does not replace medical advice. The goal for each stage is to find the 'sweet spot' between doing too much and doing too little. Timelines and activities may vary by direction of a health care professional.

AT HOME			AT WORK		
STAGE 1:	STAGE 2:	STAGE 3:	STAGE 4:	STAGE 5:	STAGE 6:
Initial physical and cognitive rest <ul style="list-style-type: none"> Rest in a quiet and calm environment. Try activities that do not aggravate symptoms (e.g., listening to quiet music or colouring). Sleep as much as your body needs while trying to maintain a regular night sleeping schedule. Limit: <ul style="list-style-type: none"> Lengthy social visits. Screen time (smartphone, computer, television) and reading. Avoid: <ul style="list-style-type: none"> Sports or physical activities that increase your heart rate or cause you to break a sweat. <p>NOTE: It is recommended to discuss driving with a licensed medical professional for safety considerations.</p>	Light activity <ul style="list-style-type: none"> Gradually increase cognitive activity by trying simple, familiar tasks (e.g., reading, watching TV, using the computer or drawing). Go for walks or try other light physical activity (e.g., swimming, stationary bike, light housework), without becoming short of breath. Take frequent rest periods; keep napping to a minimum. Begin with brief periods of activity, up to 30 minutes. Start thinking about returning to work: communicating with the workplace, a return to work plan, and your commute. 	Prepare to return to work—at home <ul style="list-style-type: none"> Continue to increase cognitive activity. Continue to return to pre-injury physical activities (e.g., grocery shopping, gardening, jogging, light weight training). Contact workplace to discuss a tailored Return to Work plan. Attempt to commute to work to assess if it aggravates symptoms or drains energy. A regular sleeping schedule supports a successful return to work. Work your way up to 2 hours of activity, with breaks as needed. 	Prepare to return to work—at work <ul style="list-style-type: none"> Work accommodations can include: flexible hours, reduced workload, extra time for tasks, access to a quiet, distraction-free work environment. Arrange to return to work on a graduated basis. Consider number of hours per day and appropriate accommodations. Work your way up to an additional 2 hours of activity, with breaks as needed. Have a plan to leave work and return to Stage 2 if symptoms worsen. 	Begin graduated return to work <ul style="list-style-type: none"> Return to work according to your graduated return to work plan, with the agreed upon number of hours per day and accommodations. At work, start with less demanding activities before more difficult ones. Gradually increase working hours week-to-week, or sooner, as appropriate. 	Regular work hours with modifications, as needed <ul style="list-style-type: none"> Decrease accommodations as energy and capacity increases. Accommodations can be phased out in "trial" periods, to ensure that they are no longer needed. Monitor energy levels for completing household tasks and participating in social or recreational activities after the work day. <p>NOTE: Only return to job duties that may have safety implications for you or others when cleared by a licensed medical professional (e.g., operating heavy equipment, working from heights, driving).</p>
Rest <p>When symptoms start to improve OR after resting for 2 days max, BEGIN STAGE 2</p>	Gradually increase activity <p>When 30 minutes of activity is tolerated, BEGIN STAGE 3</p>	Prepare to return to work <p>When 4 hours of activity is tolerated, with breaks as needed, BEGIN STAGE 4</p>		Adjust workplace accommodations, as needed <p>When regular work hours are tolerated with min. accommodations, BEGIN STAGE 6</p>	Full return to work <p>Once you have COMPLETED STAGE 6, <i>Return to Work</i> strategy completed</p>

Recognizing that workplace environments vary by industry and occupation, returning to work may focus more on a return to cognitive activity, physical activity, or a combination of both. It is normal to experience symptoms during recovery; you do not have to wait to be symptom free before returning to work. However, after Stage 2, if new or worsening symptoms appear at any stage, go back to the previous stage for at least 24 hours. You may need to move back a stage more than once during the recovery process.

www.cattonline.com

Return to Activity

This tool is a guideline for managing an individual's return to activity following a concussion and does not replace medical advice. Timelines and activities may vary by direction of a health care professional.

STAGE 1:	STAGE 2:	STAGE 3:	STAGE 4:	STAGE 5:
Initial rest <ul style="list-style-type: none"> Stay home in a quiet and calm environment. Limit your screen time (computer, television, and smartphone use). Keep any social visits brief. Sleep as much as your body needs while trying to maintain a regular night sleeping schedule. <p>Note: The goal for each stage is to find the 'sweet spot' between doing too much and too little.</p>	Prepare to return to activity <ul style="list-style-type: none"> Test your readiness by trying some simple, familiar tasks such as reading, using the computer, or shopping for groceries. Keep the time on each activity brief (e.g., less than 30 minutes) and take regular rest breaks. Go for walks or try other light physical activity (e.g., swimming, stationary bike), without becoming short of breath. Keep bed rest during the day to a minimum. It is unlikely to help your recovery. 	Increase your activity <ul style="list-style-type: none"> Gradually return to usual activities and decrease rest breaks. Start with less demanding activities before harder ones. Physical activity might include jogging, lifting light weights, or non-contact sport drills, gardening, dancing. <p>Note: You could start returning to school or work on a part-time basis (e.g., a few hours per day).</p>	Gradually resume daily activities <p>Resuming daily activities can be challenging because your energy and capacity for activities may be variable, but should improve day-to-day or week-to-week.</p> <p>Students and workers may require accommodations, such as reduced hours, reduced workload, extra time for assignments, or access to a quiet distraction-free work environment.</p>	Full return to activity <ul style="list-style-type: none"> Full class schedule, with no rest breaks or accommodations. Full work schedule with usual expectations for productivity Student athletes should not return to sport competition until they have fully returned to school. <p>Only return to contact sports or dangerous job duties (e.g., operating heavy equipment, working from heights) when cleared by your doctor.</p>
Rest	Get ready to return	Start your return	Continue your return	
When symptoms start to improve OR after resting for 2 days max, BEGIN STAGE 2	Tolerates simple, familiar tasks, BEGIN STAGE 3	Tolerates further increase in level of activity, BEGIN STAGE 4	Tolerates partial return to usual activities, BEGIN STAGE 5	

If new or worsening symptoms are experienced at any stage, go back to the previous stage for at least 24 hours. You may need to move back a stage more than once during the recovery process.

Each person will progress at his/her own pace. It is best not to "push" through symptoms. If you do too much, your symptoms may worsen. Decrease your activity level and your symptoms should settle. Then continue to gradually increase your activity in smaller increments.

www.catonline.com

Adapted from Noah D. Silverberg, PhD



Medical Clearance Letter

Medical Office, please complete:	
M.D. / N.P. Name	
Medical License #	
Email / Contact #	
Date of Clearance Letter	

M.D. / N.P. / Patient please complete:	
Date of Concussion	
Date of Concussion Diagnosis	
Organization/Individual Requesting Medical Clearance	

To Whom It May Concern:

Patients with a concussion should be assessed and managed by a medical professional. The goal of concussion management is to support the patient's complete recovery from concussion by promoting a safe and gradual return to activity following a staged approach. For more detailed information and resources, please refer to the Concussion Awareness Training Tool (CATT) at cattonline.com.

As part of the strategy, this patient had previously been instructed to avoid all activities that could potentially place them at risk of another concussion or head injury until a medical clearance letter is provided (due to organizational requirements, dangerous job duties, contact sports, etc.). This patient has explained the organizational requirements and the duties/activities they participate in, and I have personally completed a medical clearance on this patient.

Name of Patient: _____

Note that the patient's recovery is individual. After Stage 2, if new or worsening concussion symptoms are experienced the patient has been instructed to return to the previous stage of the strategy for 24 hours.

This patient can return with full participation to work, school, or physical activities **without restriction**.

This patient can return to work, school, or physical activities **with the following restriction(s)**:

Restriction(s) Physical & Cognitive	Details	Timeline

This patient can return with full participation to work, school, or physical activities **without accommodation**.

This patient can return to work, school, or physical activities **with the following accommodation(s)**:

Accommodation(s) Physical & Cognitive	Details	Timeline

Your understanding and support are critical components in this patient’s continuing recovery.

Yours Sincerely,

Signature _____ M.D / N.P. (Please circle appropriate designation)¹

Stamp

1 Depending upon physician or nurse practitioner access, the Medical Clearance Letter may be completed by a nurse with access to a licensed physician or nurse practitioner. Forms completed by other health care professionals (e.g., physiotherapists, chiropractors, and other allied health care professionals) should not be accepted. It is recommended that this document be provided to the patient without charge.

Managing Mental Health Symptoms

According to the Canadian Standard Association (CSA)'s Standard Z1003, Psychological Health and Safety in the Workplace, positive mental health is a state of well-being in which the individual realizes their own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to their community. Mental health symptoms resulting from or increased by concussion are a growing concern. In addition to physical symptoms such as dizziness and headache, concussions can result in cognitive, social, emotional, and behavioural symptoms, such as mood swings, anxiety, memory issues and depression.

The following strategies to manage mental health challenges during concussion recovery are listed in the *Concussion Awareness Training Tool for Workers & Workplaces* e-learning module:

- Physical activity, as tolerated;
- Deep breathing exercises;
- Identifying and reducing sources of stress;
- Meditation;
- Progressive Muscle Relaxation; and,
- Memory aids

This resource will provide more detail on each strategy. As every concussion is unique, these strategies are not a “one size fits all” approach and a few should be tried to find what works best.

This information is best used when combined with the guidance of licensed health professionals experienced in concussion management. When mental health symptoms get to the point of interfering with daily activities or relationships, appropriate care from a doctor or nurse practitioner can help. Additional support from a psychologist, psychiatrist, or other mental health professional may be needed.

Physical Activity, as Tolerated:

After the initial recommended 48 hours of rest, exercise helps hasten recovery from a concussion. Light aerobic exercise such as brisk walking or gentle exertion on an exercise bike, for example, is recommended for up to 30 minutes a day to start. Walking in nature, and/or walking a dog could be beneficial.

Deep Breathing Exercises:

Deep breathing exercises can help you calm down when you are feeling stressed, anxious, dizzy or lightheaded. You can do the exercise standing up, sitting in a chair that supports your back or lying on a bed or yoga mat on the floor. The key is to be as comfortable as you can. If possible, loosen any clothes that may restrict your breathing.

If you're lying down, place your arms slightly away from your sides, palms facing up. Let your legs be straight, or if it is more comfortable for you, bend your knees so your feet are flat on the floor. If you're standing, place your feet about hip-width apart.

Try breathing in through your nose and out through your mouth, gently and regularly. It may be helpful to count steadily from one to four as you breathe in through your nose, count steadily from one to seven as

you hold your breath, and count steadily from one to eight as you exhale through your mouth. Keep doing this for three to five minutes. There are many downloadable computer, tablet, and cell phone applications as well as YouTube videos that can help guide deep breathing exercises.

Identifying and Reducing Sources of Stress:

We all experience stress: daily demands and pressures can be physical, mental, or emotional. The stressful situation is known as *the stressor*, and the symptoms experienced when under stress is known as the *stress response*. Stressors can be both positive and negative: positive stressors are energizing—we are confident that we can complete the necessary tasks, such as planning a wedding or preparing for holidays. Examples of negative stressors include financial issues, divorce, or a conflict between job demands and the amount of control one has over meeting those demands. The process of recovering from an injury, such as a concussion, is also a negative stressor. Further, your brain needs more energy to heal when recovering from a concussion and the smaller daily stresses that you dealt with prior to your concussion, both positive and negative, can feel overwhelming.

Noticing when you have physical, emotional and behavioural stress responses can help identify sources of stress. Physical responses can include muscle aches, increased heart rate, low energy, tight chest or jaw, and dry throat and/or mouth. Emotional responses can include restlessness, agitation, feelings of worthlessness and/or anger, lowered concentration and lack of motivation. Behavioural responses to stress can include skin picking, nail biting, teeth clenching, foot tapping, seeking reassurance, arguing, increasing substance use, spending money, and decreasing relaxing and fun activities.

The following can help to identify and reduce sources of stress:

- **Overscheduling can cause stress.** Write out all of your daily activities. Prioritize the ones that need to be done by you; for activities or tasks that can be done by others, delegate.
- **Failing to be assertive can cause stress.** Give yourself space and time to heal, and say no to requests you do not have the time or energy for.
- **Procrastination and/or failing to plan ahead can cause stress.** Keep note of what you need to accomplish during the day and week – after prioritizing, break the tasks into smaller steps. Free Pomodoro timers, available online, encourage focusing on a task distraction-free for 25 minutes, followed by a 5-minute break, can help structure time. You can also use the Pomodoro timer method by setting an alarm for 25 minutes followed by an alarm for a 5-minute break.
- **Overwhelming amounts of messages can cause stress.** Even messages from well-meaning friends and family members can feel overwhelming. In today's constantly connected society, the expectation of an immediate response to phone calls, text messages and emails may be causing stress during your recovery. It can help to limit checking and responding to correspondence to set time frames. Set your voicemail message to indicate that you will respond in a certain time frame on certain weekdays, and set a responder for your email services with the same.

Meditation:

There are many different ways to meditate, as well as audiobooks, YouTube videos, and computer, tablet and cell phone applications to guide meditation. HealthLinkBC recommends “mindful meditation” to aid relaxation and relieve stress. The goal is to focus attention on the present moment, making note of what you experience without trying to change it. No special tools or equipment are required.

According to HealthLinkBC:

Getting ready

Choose a time and place where you can meditate without being interrupted. Try to find a quiet place, but don't worry if there are some noises, such as traffic. That kind of noise is just part of the present moment.

When you start, try to meditate for only 10 minutes at a time. Then you can increase the time bit by bit. You can also try meditating for 10 minutes in the morning and 10 minutes in the evening.

Before you sit down, remind yourself that you are there to focus on the present moment. This may help keep your mind from wandering. Your daily routine and other distractions will all be waiting for your attention after your meditation session.

The practice

Sit in a comfortable position, either in a chair or on the floor. Or lie down, if that is more comfortable. You can close your eyes, or you can look down, keeping your gaze a few centimetres in front of you on the floor.

As you sit, start to pay attention to your breathing. This is a good way to focus your attention on what is happening right now. Don't try to change your breathing. Just notice how it feels in your lungs and chest.

If your mind wanders, don't worry or feel bad about yourself. Try to notice your thoughts, such as "I wonder what I will need to do at my 10 a.m. work meeting." Then let the thought go, and bring your focus back to the present moment and your breathing. You may do this over and over again during a meditation session. That's okay.

During your meditation, you may feel certain emotions, such as anger, impatience, sadness or happiness. Don't try to hold on to or let go of these feelings. Just notice them. They are part of your experience of the present moment. Keeping your attention on your breathing will help you stay focused and not get lost in the thoughts that your feelings may trigger. For example, if you feel impatient to finish the meditation so you can start the laundry, see if you can focus on the feeling of the impatience rather than thoughts of the laundry. Where do you feel the impatience in your body? Does it feel tight? Does it affect your breathing?

Source: [HealthLinkBC Stress Management: Doing Meditation](#)

Progressive Muscle Relaxation:

Anxiety and stress can cause tense muscles. Progressive Muscle Relaxation (PMR) involves intentionally tensing and then relaxing different groups of muscles, one at a time, to relieve that tension. This can also aid in falling asleep. There are YouTube videos online and audiobooks available at your local library or bookstore to help guide PMR if desired.

During PMR, you should be lying comfortably on your back, on the floor or a bed. You can place a pillow under your head and/or the small of your lower back for support. Your arms should be slightly apart from your torso, with palms facing up. Eyes should be closed and the room should be quiet.

Breathe in, and tense the first muscle group (tightly, but not the point of pain or cramping) for 4 to 10 seconds. Breathe out, and completely relax the muscle group all at once (do not relax it gradually). Relax, focusing on breathing deeply in and out, for 10 to 20 seconds before the next muscle group. Notice the difference between how the muscles feel when they are tensed and how they feel when they are relaxed. Practicing the full technique, wherein each muscle group across the entire body is engaged for a short period of time, takes 10-15 minutes. Finish with a few deep breaths and a mental scan of your body to notice any remaining tension.

The following is a list of the muscle groups in order and how to tense them.

- **Feet:** Stretch toes and tense arches.
- **Lower legs:** Point toes towards your face, and then point toes away from face, curling them downward at the same time.
- **Thighs (front):** Squeeze quadriceps muscles (front of thighs) and imagine pulling your kneecaps up towards you with the force of your clenching. Keep legs flat on the floor.
- **Thighs (back):** Clench your hamstring muscles (back of your thighs), with your legs lying flat.
- **Hips and buttocks:** Squeeze buttocks together tightly.
- **Stomach:** Suck it into a tight knot towards your spine.
- **Back:** Bring your shoulder blades together and arch your back up and away from the floor or bed.
- **Hands:** Squeeze into fists, thumbs over fingers.
- **Forearms:** Clench your hands into fists curl them up towards the ceiling.
- **Upper arms:** Clench your hands into fists, bend your arms at the elbows, and flex your bicep muscles (upper arms).
- **Shoulders:** Raise them in a shrug towards your ears.
- **Back of Neck:** Press the back of your head against the floor or bed.
- **Front of Neck:** Touch your chin to your chest, avoiding tension in the back of your neck and/or head).

- **Face:** Contract face as a whole, or focus on separate features one at a time. Eyes close as tightly as possible. Forehead furrows into a deep frown. Nostrils flare and nose scrunches. Lips purse together.

Memory Aids:

Suggestions in the *Concussion Awareness Training Tool for Workers & Workplaces* to help with memory loss include using a recording device during meetings and phone calls, and writing reminders for tasks and appointments. Essentially, memory aids function as external storage for your brain. Even when we are operating at full capacity, it can be difficult to keep track of all the details of our daily lives. The following may be especially helpful when recovering from a concussion:

- **Applications:** Mobile phones, tablets, and computers have many free reminder apps that can be useful to remember important things.
- **Noticeboards:** Putting up a notice board in an obvious spot in your house can help group written reminders together, and be a way for those who live together to communicate.
- **Sticky notes and labels:** Whether it's reminding you where you keep your keys, to put the recycling out when you leave, or the steps to make coffee, sticky notes and labels can help trigger memories in specific places.
- **Calendars and diaries:** Especially when recovering from concussion, it's useful to use a calendar – whether electronic or one fixed on your wall – to keep track of appointments, events, or the daily tasks you've prioritized.
- **GPS route finders:** If you aren't confident finding your way to a new destination, or you are now using a new transit method during your recovery, using a GPS route finder can help.

It is important during recovery to be patient with yourself. Your brain is healing and mental health symptoms are a normal part of that process for many people who sustain a concussion. If there is no improvement or symptoms are worsening 4-12 weeks after a concussion, physician referral to an interdisciplinary clinic is recommended.

Additional Resources

Ontario Neurotrauma Foundation – Guideline for Concussion/Mild Traumatic Brain Injury & Persistent Symptoms—3rd Edition, for Adults Over 18 Years of Age (2018)

<https://braininjuryguidelines.org/concussion/>

Institute for Work and Health – Red Flags/Green Lights: A Guide to Identifying and Solving Return-to-Work Problems

<https://www.iwh.on.ca/tools-and-guides/red-flagsgreen-lights-guide-to-identifying-and-solving-return-to-work-problems>

Canadian Mental Health Association – Mental Health

<https://cmha.ca/document-category/mental-health>

Acquired Brain Injury Research Lab – TBI in the Workplace: Innovations for Prevention

<http://abiresearch.utoronto.ca/research/workrelatedtbi/>

Canadian Centre for Occupational Health and Safety – Risk Assessment

https://www.ccohs.ca/oshanswers/hsprograms/risk_assessment.html

US Center for Disease Control – Guide to Evaluating the Effectiveness of Strategies for Preventing Work Injuries

<https://www.cdc.gov/niosh/docs/2001-119/pdfs/2001-119.pdf>

For more information and resources on concussion, please visit cattonline.com.

Notes

[illegible]

