



Concussion Resources for Coaches



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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, and Clinical Associate Professor, Department of Pediatrics, University of British Columbia, CATT is based upon the established principles of the Consensus Statement on Concussion in Sport and other evidence-based resources. 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.

The information, including text and images of this package are intended for your information only, does not substitute professional medical advice, and is provided for educational purposes only. Always seek the advice of a physician or other qualified health care provider about any questions you may have regarding a medical condition.

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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 healthcare professionals, workers & workplaces, coaches, athletes, youth, school professionals, parents & caregivers, and women’s support workers (supporting survivors of intimate partner violence).

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.

The following **signs and symptoms** are consistent with concussion. Some signs and symptoms may be delayed for hours or days after an injury:

- Headache / Pressure in head
- Balance problems / Dizziness
- Nausea or vomiting
- Drowsiness
- Blurred vision
- Light / Sound sensitivity
- Fatigue or low energy
- “Don’t feel right”
- Neck pain
- More emotional
- More irritable
- Sadness
- Nervous or anxious
- Difficulty concentrating
- Difficulty remembering
- Feeling slowed down
- Feeling like “in a fog”
- Trouble falling asleep

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

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**.

- The individual should engage in limited physical activity that does not put them at risk for a head impact.
- If any signs or symptoms are present, seek medical attention from a doctor, nurse practitioner, or licensed healthcare professional with relevant training.
- If no signs or symptoms appear within 48 hours, the individual likely does not have a concussion, and can return to normal activities.
- If unsure, seek guidance from a doctor, nurse practitioner, or licensed healthcare professional with relevant training.

Manage

A concussion can have a significant impact on physical, cognitive, and emotional functioning. The recovery process involves managing activities in order to not worsen symptoms beyond mild and brief exacerbation*—the key is finding the balance between doing too much and too little.

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

RED FLAGS	
	Neck pain or tenderness
	Seizure, 'fits', or convulsion
	Loss of vision or double vision
	Loss of consciousness
	Increased confusion or deteriorating conscious state (becoming less responsive, drowsy)
	Weakness or numbness/tingling in more than one arm or leg
	Repeated vomiting
	Severe or increasing headache
	Increasingly restless, agitated, or combative

*Mild exacerbation (worsening) of symptoms: No more than a 2-point increase when compared with the pre-activity value on a 0-10-point symptom severity scale.**"Brief" exacerbation of symptoms: Worsening of symptoms for up to 1 hour.

**0-10 point symptom severity scale: Please see the [Visual Analog Scale](#) for an example of a 0-10 symptom severity scale.

Within 48 hours:

The first and most important step in recovery from a concussion is relative rest for a maximum of 24-48 hours.

The individual will need both physical and cognitive rest in order to allow the brain to heal. Relative rest: activities of daily living including walking and other light physical and cognitive activities are permitted as tolerated. Screen time should be limited for the first 24-48 hours following concussion.

After 48 hours:

- Gradually increase physical and cognitive activity. Continue to increase as long as symptoms remain mild and brief. Examples: Computer work, watching TV, reading, jogging, light weight training
- Goal is to increase heart rate. Start with less demanding activities before harder ones.
- Keep naps during the day to a minimum. It is unlikely to help recovery.

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 worsen symptoms beyond mild and brief exacerbation. If you are worried that the individual is not improving, follow-up with a medical or licensed healthcare professional with relevant training.

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

On average, concussions resolve within 4 weeks. However, up to 30 percent will continue to experience persisting symptoms beyond this period. Persisting symptoms have the potential to cause long-term difficulties. If there is no improvement or symptoms are worsening 2-4 weeks after a concussion, referral to interdisciplinary care is recommended.

The recovery period may be influenced by:

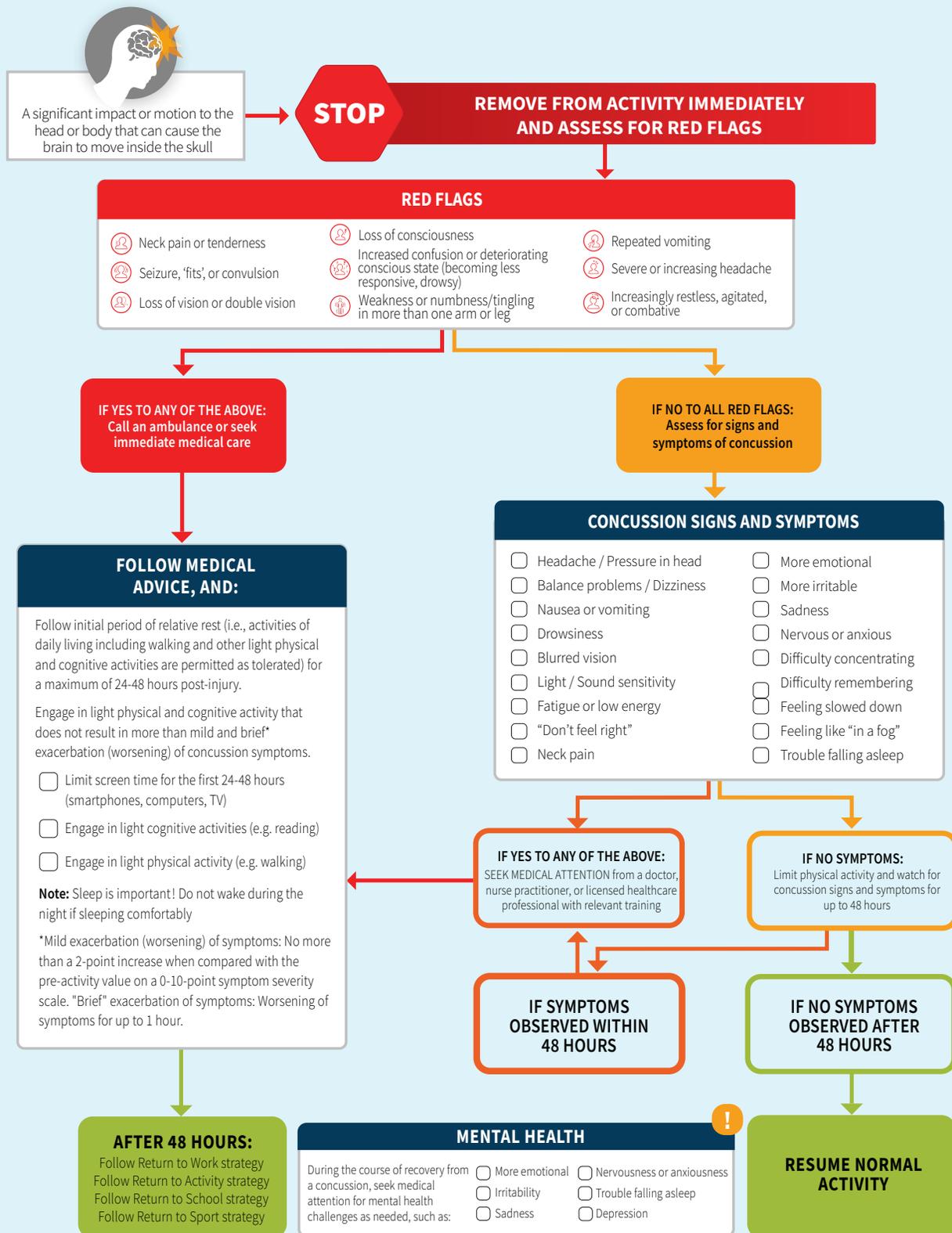
- Previous concussions
- History of headaches or migraines
- Learning disabilities
- Mental health issues
- ADHD
- Use of drugs or alcohol
- Returning to activities too soon
- Lack of family or social supports
- Participating in high-risk sport

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



For more information on concussions, visit cattonline.com.



Concussion Awareness Training Tool (CATT) Preseason Education Signoff Sheet

The following signatures certify that the player or participant and his or her parent or caregiver (if applicable) have reviewed and understand the information included in the *CATT Concussion Information Sheet*.

_____ Name of Player or Participant <i>(please print)</i>	_____ Signature	_____ Date
_____ Name of Parent or Caregiver <i>(please print)</i>	_____ Signature	_____ Date

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

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):

Did you witness the event?

Yes

No

Please indicate who you are completing this report for; who will receive this incident report? Please check all that apply:

Injured person

Supervisor/Employer

Emergency contact

Teacher/School

Ambulance attendant

Coach/Sports organization

Healthcare professional (please specify):

Other (please specify):

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:

Describe the incident. Please include as much detail as possible:

Did the incident involve any of the following? Please check all that apply:

Blow to the head

Motor vehicle collision

Struck by person

Hit to the body

Fall

Sport-related

Assault

Struck by object

Other:

**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 | Headache / Pressure in head | More irritable |
| Loss of vision or double vision | Balance problems / Dizziness | Sadness |
| Weakness or numbness/tingling in more than one arm or leg | Nausea or vomiting | Nervous or anxious |
| Severe or increasing headache | Drowsiness | Difficulty concentrating |
| Seizure, 'fits', or convulsion | Blurred vision | Difficulty remembering |
| Loss of consciousness | Light / Sound sensitivity | Feeling slowed down |
| Increasing confusion or deteriorating conscious state (becoming less responsive, drowsy) | Fatigue or low energy | Feeling like "in a fog" |
| Repeated vomiting | "Don't feel right" | Trouble falling asleep |
| Increasingly restless, agitated or combative | More emotional | |

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., policy change to ensure health and safety):



Medical Assessment Letter

Medical Office, please complete:	
Practitioner Name	
Role and License #	
Email / Contact #	
Date of event / injury	

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 doctor, nurse practitioner, or licensed healthcare professional with relevant training. 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 medical or licensed healthcare professional with relevant training provides a Medical Clearance Letter.

Yours Sincerely,

Signature _____

Stamp

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 step-wise approach. *Note: a patient's progress through the return to activity steps is unique to the individual.* After Step 2, if more than mild and brief symptom exacerbation* occurs, the patient may need to try the activity again the next day, and consider reassessment by their doctor, nurse practitioner, or licensed healthcare professional with relevant training if symptoms beyond mild and brief exacerbation persist. For more detailed guidance on step progression, please refer to the Concussion Awareness Training Tool (CATT) at cattonline.com.

Step 1: Symptom-limited activity

In the first 24-48 hours the patient has been instructed to engage in relative 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

Step 2: Prepare to return to activity

The patient can begin the return to activity process at home, by increasing familiar tasks that do not result in more than mild and brief symptom exacerbation, until no new or worsening concussion symptoms are experienced.

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

Step 3: 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 result in more than mild and brief symptom exacerbation.

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

Restrictions/Accommodations	Details	Timeline

*Mild and brief symptom exacerbation: an increase in current concussion symptoms of no more than 2 points on a 0-10 point scale for less than an hour compared to the resting value prior to the activity (i.e., physical or cognitive).

**Relative rest: activities of daily living including walking and other symptom-limited physical and cognitive activities are permitted, as tolerated.

Step 4: 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 _____

Stamp 

It is recommended that this document be provided to the patient without charge.

Return to Sport

This tool is a guideline for managing an individual's return to sport following a concussion and does not replace medical advice. Timelines and activities may vary based on direction from a doctor, nurse practitioner, or licensed healthcare professional with relevant training. **Begin Step 1 within 24 hours of injury, with progression through each subsequent step taking a minimum of 24 hours.**

STEP 1:	STEP 2:		STEP 3:	STEP 4:	STEP 5:	STEP 6:
<p>Activities of daily living and relative rest*</p> <ul style="list-style-type: none"> Maximum of 24-48 hours Activities at home such as social interactions and light walking that do not result in more than mild and brief** exacerbation (worsening) of concussion symptoms. <p>Examples:</p> <ul style="list-style-type: none"> Preparing meals Housework Light walking <ul style="list-style-type: none"> Minimize screen time for first 24-48 hours following concussion. 	<p>2A: Light effort aerobic exercise</p> <ul style="list-style-type: none"> Up to approximately 55% of maximum heart rate (predicted according to age - i.e. 220-age). In a safe and controlled environment, engage in light aerobic exercise. <p>Examples:</p> <ul style="list-style-type: none"> Stationary cycling Walking at slow to medium pace Light resistance training that does not result in more than mild and brief** exacerbation (worsening) of concussion symptoms. 	<p>2B: Moderate effort aerobic exercise</p> <ul style="list-style-type: none"> Up to approximately 70% of maximum heart rate (predicted according to age - i.e. 220-age). Take a break and modify activities as needed with the aim of gradually increasing tolerance and the intensity of aerobic activities. 	<p>Individual sport-specific activities (that do not have a risk of inadvertent head impact)</p> <ul style="list-style-type: none"> Addition of individual sport-specific activities that are supervised by a teacher/coach/parent. <p>Examples:</p> <ul style="list-style-type: none"> Skating drills (hockey) Running drills (soccer) Change of direction drills Individual gym class activities <p>It is important to get medical clearance before returning to training that involves any risk of inadvertent head impact.</p>	<p>Non-contact training drills and activities</p> <ul style="list-style-type: none"> Progress to exercises at high intensity, including more challenging drills and activities. <p>Examples:</p> <ul style="list-style-type: none"> Passing drills Multi-player training Supervised non-contact gym class activities Practices without body contact 	<p>Return to all non-competitive activities</p> <ul style="list-style-type: none"> Return to all non-competitive activities, all gym class activities, and full-contact practices Participate in higher-risk activities including normal training activities, all school gym-class activities, and full-contact sports practices and scrimmages. Avoid competitive gameplay. 	<p>Return to sport</p> <p>Back to normal, unrestricted competitive game play, school gym class, and physical activities.</p>
	<p>Increase heart rate</p>		<p>Increase intensity of aerobic activities and introduce low-risk sport-specific movements and changing of directions</p>	<p>Resume usual intensity of exercise, coordination, and activity-related cognitive skills</p>	<p>Return to activities that have a risk of falling or body contact, restore game-play confidence, and have coaches assess functional skills.</p>	<p>Note: Returning to full contact, competitive play or high-risk activities before you have recovered increases the risk of delayed recovery and for sustaining another more severe concussion or serious injury.</p>
<p>Activities of daily living, as tolerated</p>						
<p>After a maximum of 24-48 hours after injury, BEGIN STEP 2</p>	<p>If can tolerate moderate aerobic exercise, BEGIN STEP 3</p>		<p>If medically cleared and have fully returned to school, BEGIN STEP 4</p>	<p>If can tolerate usual intensity of activities, BEGIN STEP 5</p>	<p>If can tolerate non-competitive, high-risk activities, BEGIN STEP 6</p>	

If more than mild exacerbation (worsening) of symptoms (i.e., more than 2 points on a 0-10 scale***) occurs during Steps 1-3, stop the activity, and attempt to exercise the next day. Individuals experiencing concussion symptoms during Steps 4-6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of medical clearance should be provided before unrestricted Return to Sport as directed by local laws and/or sporting regulations.

*Relative rest: activities of daily living including walking and other light physical and cognitive activities are permitted as tolerated.

Mild exacerbation (worsening) of symptoms: No more than a 2-point increase when compared with the pre-activity value on a 0-10-point symptom severity scale.*"Brief" exacerbation of symptoms: Worsening of symptoms for up to 1 hour.

***0-10 point symptom severity scale: Please see the [Visual Analog Scale](#) for an example of a 0-10 symptom severity scale.

Medical determination of readiness to return to at-risk activities should occur prior to returning to any activities that pose risk of contact, collision, or fall.

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Adapted from: Zemek, R., Reed, N., Dawson, J., et al. "Living Guideline for Pediatric Concussion Care." www.pedsconcussion.com (the PedsConcussion protocol was modified with permission from the [Amsterdam International Consensus Statement on Concussion in Sport](#)) © BCIRPU. All rights reserved | Version 12: Updated September 2023



CONCUSSION AWARENESS TRAINING TOOL

BC INJURY research and prevention unit

www.injuryresearch.bc.ca



Medical Clearance Letter

Medical Office, please complete:	
Practitioner Name	
Role and License #	
Email / Contact #	
Date of Clearance Letter	
Practitioner / 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 doctor, nurse practitioner, or licensed healthcare professional with relevant training. 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 step-wise 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 Step 2, if more than mild and brief symptom exacerbation* occurs, the patient may need to try the activity again the next day, and consider reassessment by their medical or licensed healthcare professional if symptoms beyond mild and brief exacerbation persist.

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

*Mild and brief symptom exacerbation: an increase of no more than 2 points on a 0-10 point scale for less than an hour when compared with the baseline value reported prior to the activity (i.e., physical or cognitive).

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 _____

Stamp 

It is recommended that this document be provided to the patient without charge.

Additional Resources

BJSM – The Concussion Recognition Tool 6th Edition (CRT6) (2023)

<https://bjsm.bmj.com/content/bjsports/57/11/692.full.pdf>

CATT – Return to School Protocol (2023)

<https://cattonline.com/wp-content/uploads/2023/09/CATT-Return-to-School.pdf>

Parachute – Concussion Guide for Coaches and Trainers (2019)

<https://www.parachute.ca/wp-content/uploads/2019/06/Concussion-Guide-for-Coaches-and-Trainers.pdf>

Parachute – Canadian Guideline on Concussion in Sport (2017)

<https://parachute.ca/en/professional-resource/concussion-collection/canadian-guideline-on-concussion-in-sport/>

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

The Concussion Legacy Foundation Canada HelpLine supports patients and families struggling with the outcomes of brain injury. If you or a loved one are seeking guidance on how to choose the right doctor, struggling with lingering concussion symptoms, or have any other specific questions, submit a HelpLine request and a dedicated member of the Concussion Legacy Foundation Canada team will assist you:

<https://www.concussionfoundation.ca/helpline>

