



# Concussion Procedures in Schools: Prevention, Recognition, and Management

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## Purpose

This document covers the prevention, recognition, and management of suspected concussion in students. It aims to ensure that students with a suspected concussion receive timely and appropriate care, and proper management to allow them to safely return to learning and physical activity. This document may not address every possible scenario that can occur but is intended as a general overview that includes critical elements based on the latest evidence and current expert consensus.

## Who should use this document

This document is intended to be used primarily by policy-makers in the area of education, school boards/districts, school administrators, and school athletic directors. Information in this document will be useful to coaches and to teachers with a role or interest in concussion management.

## How to use this document

This document should be used as a reference to support administrators and educators to further their knowledge of procedures related to prevention, recognition, and management of concussions. The accompanying support tools should be used to facilitate the implementation of concussion procedures in school communities.

- Indicates a helpful tool or resource. All tools/resources referenced in this document are included in the Appendices.

This document may be used as a standalone resource or be included as part of a jurisdiction's Physical Education Safety Guidelines<sup>†</sup>. The contents of this document must be considered within your provincial/territorial context.

## Role of professional judgment

Administrators and educators are expected to use professional judgment to ensure student safety, based on their understanding of the context of their school, classroom and students, their professional knowledge and their training.

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<sup>†</sup> For provinces/territories that have adapted the *Ontario Physical Education Safety Guidelines*, this content replaces Appendices C-1 to C-5 (version 2013 or later) or Appendix D, B-2, and C (versions earlier than 2013).

## Role of clinical judgment

This document is not intended to take the place of medical advice or clinical judgment in diagnosing and treating concussion.

## Introduction

These concussion procedures are based on the *Canadian Guideline on Concussion in Sport*<sup>1</sup> and the *Consensus Statement on Concussion in Sport*<sup>2</sup>. This document has been developed by Parachute in partnership with Ophea.

### What is a concussion?

A concussion:

- is a form of traumatic brain injury that affects how the brain functions, leading to signs and symptoms that can emerge immediately or in the hours after the injury. It is possible for symptoms to take up to 7 days to appear.
  - may be caused by an impact to the head, face, or neck, or an impact to the body that jars the head and causes the brain to move rapidly within the skull.
  - cannot be seen on X-rays, standard CT scans or MRIs.
  - can occur even if there has been no loss of consciousness. In fact, most concussions occur without a loss of consciousness.
  - may have signs and symptoms that are physical (e.g., headache, dizziness), cognitive (e.g., difficulty concentrating or remembering), emotional or behavioural (e.g., depression, irritability), and/or related to sleep (e.g., drowsiness, difficulty falling asleep).
  - is typically expected to last one to four weeks in children and youth (under 18 years), but in some cases symptoms may last longer.
- For an interactive visualization of how different types of impacts might cause concussion, visit: <https://cdn.hockeycanada.ca/hockey-canada/Hockey-Programs/Safety/Concussion/Infographic/english.html>

### Why do we need concussion protocols in schools?

Research shows there are many important reasons to adopt concussion protocols in schools:

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<sup>1</sup> Parachute. (2017). *Canadian Guideline on Concussion in Sport*. Toronto: Parachute.

<sup>2</sup> McCrory et al. (2017). Consensus statement on concussion in sport – the 5th international conference on concussion in sport held in Berlin, October 2016. *British Journal of Sports Medicine*, 51(11), 838-847.

- Adherence to a best practice concussion protocol ensures the safe removal from activity of any student with a suspected concussion in the interest of the student’s health and safety.
- The school environment and the activities students perform at school, such as concentrating and learning new skills, can worsen a student’s concussion symptoms. Many students will require accommodations as they are recovering.
- Concussion symptoms can have a significant impact on a student’s cognitive and physical abilities, thus affecting their school performance.
- It is equally important to develop strategies to assist students as they “return to school” in the classroom, as it is to develop strategies to assist them as they “return to physical activity”. If these are not managed appropriately, a student may have prolonged recovery.
- Schools with concussion policies or protocols tend to offer students recovering from concussion more accommodations<sup>3</sup>.

The most recent research indicates that *prolonged* rest until all concussion symptoms resolve is not beneficial and may even prolong recovery. After a short period of rest, students should begin a gradual return back to daily activities, school, and physical activity. Schools, students, parents/guardians, and healthcare professionals must work together to support a student’s effective return to cognitive and physical activity.

### **What are the components of a school concussion protocol?**

School concussion protocols include the following components:

1. Education and Prevention
2. Recognition and Initial Response
3. Management: Return to School and Return to Physical Activity after a Diagnosed Concussion

Due to the seriousness of concussion, school administrators, educators (including occasional teachers), school staff, students, parents/guardians, and identified school volunteers all have important roles to play in implementing the components of the school board’s concussion protocol.

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<sup>3</sup>Purcell et al. (2018). What factors must be considered in ‘return to school’ following concussion and what strategies or accommodations should be followed? A systematic review. *British Journal of Sports Medicine*, 0, 1–15. doi:10.1136/bjsports-2017-097853.

## **Concussion Diagnosis**

In Canada, only medical doctors and nurse practitioners<sup>4</sup> are licensed to provide a clinical diagnosis of concussion, therefore all students with a suspected concussion should undergo evaluation by one of these professionals. In rural or northern regions with limited access to primary care providers, the medical assessment may be completed by a nurse with pre-arranged access to a medical doctor or nurse practitioner.

## **Concussion Baseline Testing**

Baseline testing is the practice of having an athlete complete certain concussion assessment tools before sport participation - usually before the start of a season - in order to get baseline or 'pre-injury' measurements. In the event of a suspected concussion, assessment is done again, and these post-injury measurements are compared to the baseline measurements. The goal of this testing is to identify cognitive differences in the athlete before and after the injury.

Baseline testing does not refer to one specific tool or test but can refer to many forms of assessment. The most current research indicates that baseline testing is not required for post-injury care of athletes with suspected or diagnosed concussion and is not recommended.<sup>5</sup>

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<sup>4</sup>In the province of Québec, nurse practitioners cannot provide a clinical diagnosis.

<sup>5</sup>Parachute. (2017). Concussion: Baseline Testing. Toronto:  
<http://www.parachutecanada.org/downloads/injurytopics/BaselineTesting-FactSheet-Parachute.pdf>

## 1. Education and Prevention

Any time a student is involved in physical activity, there is a chance of sustaining a concussion. Therefore, it is important to encourage a culture of safety mindedness and take a preventative approach when students are physically active.

Concussion awareness is important. Annual concussion education to all stakeholders responsible for student safety should include information on:

- the definition and seriousness of concussion;
- possible mechanisms of injury;
- common signs and symptoms;
- steps that can be taken to prevent concussions and other injuries from occurring at school and at off-site events;
- what to do when a student has suffered a suspected concussion or more serious head injury (i.e., safe removal of an injured student, obtaining proper Medical Assessment);
- what measures should be taken to ensure proper medical assessment;
- management for a diagnosed concussion, including the Return to School and Return to Physical Activity Plans; and,
- Return to Physical Activity Medical Clearance requirements.<sup>6</sup>

► See a sample education sheet in *Appendix 1. Concussion Awareness Education Sheet*

The injury prevention approach to concussion includes primary, secondary, and tertiary strategies<sup>7</sup>:

- **Primary** – information/actions that prevent concussions from happening (e.g., rules and regulations, minimizing slips and falls by ensuring activity environments provide for safe traction and are obstacle-free).
- **Secondary** – appropriate management to prevent the worsening of a concussion (e.g., removal from activity, gradual return to school).
- **Tertiary** – strategies to help prevent long-term complications, such as advising a participant to permanently discontinue a physical activity/sport based on evidence-based guidelines.

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<sup>6</sup> Parachute. (2017).

<sup>7</sup> Tator, C. (2012). Sport Concussion Education and Prevention. *Journal of Clinical Sport Psychology*, 6, 293-301.

- ▶ Primary and secondary prevention strategies are the focus of *Appendix 2. Sample Concussion Prevention Strategies*

## 2. Recognition and Initial Response

All stakeholders (e.g., school administrators, teachers, coaches, school first aiders, students) are responsible for the recognition and reporting of students who demonstrate observable signs and/or report symptoms of a concussion.

The recognition component includes the following:

- a) **Recognition** and safe removal of an injured student with a suspected concussion;
- b) **Initial response** when a suspected concussion is recognized;
- c) Steps to take **when no signs or symptoms are identified**, but a possible concussion-causing event was recognized.

### a) Recognition

A concussion should be suspected:

- in any student who sustains a significant impact to the head, face, neck, or body and demonstrates *ANY* of the visual signs of a suspected concussion or reports *ANY* symptoms of a suspected concussion as detailed in the *Concussion Recognition Tool 5* (see *Appendix 3*), or
  - if a student reports *ANY* concussion symptoms to one of their peers, parents, teachers, or coaches, or if anyone witnesses an athlete exhibiting any of the visual signs of concussion.
- ▶ Sample tools for concussion recognition can be found in *Appendix 3*

Following a significant impact to the head, face, neck, or body, that is either observed or reported, and where the individual responsible for that student (e.g., teacher/coach) suspects a possible concussion, the following immediate actions should be taken:

- Remove the student from participation. The student must not return to physical activity that day.
- Initiate the school's Emergency Action Plan (e.g., basic principles of first aid).

Next, the student should be checked for Red Flag symptoms or other signs and symptoms of concussion.

**Step 1: Check for Red Flag signs and/or symptoms.**

Red Flag signs and symptoms include:

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

If any Red Flag signs or symptoms are present, this may indicate a more serious injury. Follow the Red Flag Procedure.

Red Flag Procedure:

- Call 911.
- If there has been any loss of consciousness, assume there is a possible neck injury and do not move the student.
- Stay with the student until emergency medical services arrive.
- Contact the student's parents/guardians (or emergency contact) to inform them of the incident and that emergency medical services have been contacted.
- Monitor and document any changes in the student (i.e., physical, cognitive, emotional/behavioural).
- If the student has lost consciousness and regains consciousness, encourage them to remain calm and to lie still.
- Do not administer medication unless the student requires it for a health condition (e.g., insulin for a student with diabetes, inhaler for asthma).
- Refer to your school board's injury report form for documentation procedures.

**Step 2: If there are NO Red Flags, check for other signs and/or symptoms.**

Remove the student from the current activity or game if the student can be safely moved. Observe and question the student to determine if other concussion signs and/or symptoms are present.

If any one or more signs and/or symptoms are present, a concussion should be suspected. The full check should be completed (including the Quick Memory Function

Check) to provide comprehensive information to the student's parent/guardian and medical doctor/nurse practitioner.

If any signs or symptoms worsen, or Red Flags emerge, call 911 and follow the Red Flag Procedure as outlined above.

#### Important Considerations:

- Signs and symptoms can appear immediately after the injury or may take hours to emerge.
- Signs and symptoms may be different for each individual student.
- A student may be reluctant to report symptoms because of a fear that they will be removed from the activity, their status on a team could be jeopardized, or their academics could be impacted.
- It may be difficult for younger students (under the age of 10), students with special needs, or students for whom English/French is not their first language to communicate how they are feeling.
- Signs for younger students (under the age of 10) may not be as obvious as in older students.
- Memory Function Check Questions may need to be modified for very young students, the situation/activity/sport, or for students receiving special education programs and services.

#### **b) Initial response when a suspected concussion is recognized**

The procedures in this section are followed if no Red Flag symptoms are present and one or more concussion signs or symptoms are present (including failing to correctly answer memory check questions).

##### **Response by the responsible teacher, coach, or other supervisor:**

- Do not allow the student to return to physical activity/practice/competition that day even if the student states that they are feeling better.
- Do not leave the student alone until a parent/guardian arrives.
- Contact the student's parent/guardian (or emergency contact) to inform them of the incident, that they need to pick up the student, and that the student needs urgent Medical Assessment (as soon as possible that day) by a medical doctor or nurse practitioner.

- Monitor and document any changes in the student. If any signs or symptoms worsen, call 911.
- Do not administer medication unless the student requires it for a health condition (e.g., insulin for a student with diabetes, inhaler for asthma).
- The student must not operate a motor vehicle.
- Refer to your school board's injury report form for documentation procedures.

**What to provide the parent/guardian:**

- Information about the incident and the student's recorded signs and/or symptoms. (For example, the supervising teacher may complete the *Sample Tool to Identify a Suspected Concussion* and provide a copy to the parent/guardian).
- Documentation of Medical Assessment for completion (see *Appendix A*).
- The following information:
  - The student needs an urgent Medical Assessment (as soon as possible that day) by a medical doctor or nurse practitioner;
  - The student must be accompanied home by a responsible adult;
  - The student must not be left alone;
  - The parent/guardian needs to communicate to the school principal/designate the results of the Medical Assessment (i.e., that the student does or does not have a diagnosed concussion) prior to the student returning to school.

**Responsibilities of the school principal or designate:**

- Must inform all school staff (e.g., classroom teachers, physical education teachers, intramural supervisors, coaches) and volunteers\* who work with the student that the student shall not participate in any learning or physical activities until the parent/guardian communicates the results of the Medical Assessment to the school principal/designate.

*\*Prior to communicating with volunteers refer to your school board protocol for sharing of student information.*

**c) Steps to take when no signs or symptoms are identified, but a possible concussion-causing event was recognized**

The procedures in this section are followed if no signs or symptoms are observed or reported and the student correctly answers all of the Quick Memory Function Check questions, but the teacher/coach/supervisor recognized that a possible concussion-causing event occurred.

Since signs and/or symptom can emerge hours later, the procedures below are suggested:

**Steps followed by the teacher, coach, or other supervisor:**

- Contact the student’s parent/guardian (or emergency contact) to inform them of the incident.
- Allow the student to remain at school, but do not allow the student to return to physical activity.
- The student must be monitored by school staff for delayed signs and/or symptoms.
- If any signs and/or symptoms (observed or reported) emerge during the school day, the student’s parent/guardian must be informed that the student needs an urgent Medical Assessment (as soon as possible that day).
- After 24 hours under observation, if the student has not shown any signs and/or symptoms, they may resume physical activity without Medical Clearance<sup>8</sup>.

**What to provide the parent/guardian:**

- The following information:
  - the student can attend school but cannot participate in any physical activity for a minimum of 24 hours;
  - the student will be monitored following the incident for 24 hours (at school and home) for the emergence of signs and/or symptoms. Continued observation by the parent/guardian beyond 24 hours may be necessary as signs and/or symptoms can take up to 7 days to emerge;
  - if any signs and/or symptoms emerge (observed or reported), the student needs an urgent Medical Assessment (as soon as possible that day) by a medical doctor or nurse practitioner; and
  - if after 24 hours of observation, no signs and/or symptoms emerge, the student may return to physical activity and Medical Clearance is not required.

**Responsibilities of the School Principal/Designate:**

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<sup>8</sup>In the province of Québec, the student must be monitored for 48 hours before they can return to physical activity. See the [Government of Quebec’s Concussion Management Protocol](#).

- The school principal/designate must inform all school staff (e.g., classroom teachers, physical education teachers, intramural supervisors, coaches) and volunteers\* who work with the student that:
  - the student is allowed to attend school
  - the student must not participate in physical activity and must be monitored for 24 hours for the emergence of delayed signs and/or symptoms.
  - if any signs and/or symptoms emerge, the parent/guardian must be informed that the student needs an urgent Medical Assessment (as soon as possible that day) by a medical doctor or nurse practitioner.
  - if no signs and/or symptoms emerge, the student is permitted to resume physical activity after 24 hours and Medical Clearance is not required.

*\*Prior to communicating with volunteers refer to your school board's protocol for sharing of student information.*

### 3. Management: Return to School and Return to Physical Activity after a Diagnosed Concussion

Students with a suspected concussion must be assessed by a medical doctor or nurse practitioner as soon as reasonably possible. The parent/guardian must communicate to the school the results of the Medical Assessment.

► See *Appendix 4. Sample Documentation of Medical Assessment*

*If a concussion is not diagnosed*, the student may resume full participation in learning and physical activity with no restrictions.

*If a concussion is diagnosed*, the student follows a medically-supervised, individualized, and gradual Return to School (RTS) and Return to Physical Activity (RTPA) Plan.

#### **The Return to School and Return to Physical Activity Plan**

Knowledge of how to properly manage a diagnosed concussion is critical in a student's recovery and is essential in helping to prevent the student from returning to school or unrestricted physical activities too soon and risking further complications. Ultimately, this awareness and knowledge could help contribute to the student's long-term health and academic success.

The Return to School and Return to Physical Activity Plan is adapted from the Return-to-School and Return-to-Sport Strategies developed by McCrory et al.<sup>9</sup>

#### **Return to School and Return to Physical Activity Stages**

The stages of the RTS and RTPA Plan are outlined below. In this approach:

- Each stage is a minimum of 24 hours.
- The student moves on to the next stage when they can tolerate activities with no new or worsening symptoms.
- If at any stage the student's symptoms reappear or worsen, or new symptoms emerge, the student should go back to the previous stage for at least 24 hours.
- The stages of RTS must be successfully completed and medical clearance obtained before the student can move on to Stages 5 and 6 of physical activity. At this

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<sup>9</sup> McCrory et al. (2017).

point, the student should be symptom-free. If symptoms reappear after medical clearance, the student should return to their medical doctor or nurse practitioner for reassessment.

- The RTS and RTPA Stages are interrelated, but not interdependent. That is, a student can be at different stages of RTS and of RTPA at any given time.
- Different students will progress at different rates.

This information is provided for school administrators and school collaborative teams to use in the management of a student’s return to school and return to physical activity following a diagnosed concussion. It does not replace medical advice.

Return to School (RTS) Stages	Return to Physical Activity (RTPA) Stages
<p><b><u>Initial Rest at Home</u></b></p> <p>Relative cognitive rest for 24-48 hours or until symptoms start to improve (whichever occurs first).</p> <p><b>Sample activities (if tolerated by student):</b></p> <ul style="list-style-type: none"> <li>✓ Short board/card games</li> <li>✓ Short phone calls</li> <li>✓ Photography (with camera)</li> <li>✓ Crafts</li> </ul> <p><b>Activities that are limited at this stage (depending on symptom tolerance):</b></p> <ul style="list-style-type: none"> <li>✗ TV</li> <li>✗ Technology use (e.g., computer, laptop, tablet, iPad), cell phone use (e.g., texting, games, photography)</li> <li>✗ Video games</li> <li>✗ Reading</li> </ul> <p><b>Activities not permitted:</b></p> <ul style="list-style-type: none"> <li>✗ Attendance at school or school-type work</li> </ul>	<p><b><u>Initial Rest at Home</u></b></p> <p>Relative physical rest for 24-48 hours or until symptoms start to improve (whichever occurs first).</p> <p><b>Sample activities (if tolerated by student):</b></p> <ul style="list-style-type: none"> <li>✓ Moving to various locations in the home</li> <li>✓ Daily hygiene activities</li> <li>✓ Other limited movement that does not increase heart rate or break a sweat</li> </ul> <p><b>Activities not permitted:</b></p> <ul style="list-style-type: none"> <li>✗ Physical exertion (increases breathing or heart rate, causes sweating)</li> <li>✗ Stair climbing other than to move locations throughout the home</li> <li>✗ Sports/sporting activity</li> </ul>

### **RTS – Stage 1 at Home**

Light cognitive (thinking/memory/ knowledge) activities. Gradually increase cognitive activity up to 30 minutes. Take frequent breaks.

#### **Activities permitted (if tolerated by student):**

- ✓ Activities from the previous stage
- ✓ Easy reading (e.g., books, magazines, newspaper)
- ✓ Limited TV
- ✓ Limited cellphone conversations
- ✓ Drawing/building blocks/puzzles
- ✓ Some contact with friends

#### **Activities that are limited at this stage (depending on symptom tolerance):**

- ✗ Technology use (e.g., computer, laptop, tablet, iPad/cell phone)

#### **Activities not permitted:**

- ✗ Attendance at school or school-type work

### **RTS – Stage 2 at Home**

Gradually add cognitive activity. When light cognitive activity is tolerated, introduce school work at home (facilitated by the school).

#### **Activities permitted (if tolerated by student):**

- ✓ Activities from the previous stage
- ✓ School-type work in 30-minute increments
- ✓ Crosswords, word puzzles, Sudoku, word search
- ✓ Limited technology use (e.g., computer, laptop, tablet, iPad)/cell phone (e.g., texting/games/photography) starting with shorter periods and building up as tolerated

#### **Activities not permitted:**

- ✗ School attendance

### **RTPA – Stage 1 at Home**

Light physical activities that do not provoke symptoms. Movements that can be done with little effort (do not increase breathing or heart rate, or cause sweating).

#### **Activities permitted (if tolerated by student):**

- ✓ Daily household tasks (e.g., bed-making, dishes, feeding pets, meal preparation)
- ✓ Slow walking for a short time

#### **Activities not permitted:**

- ✗ Physical exertion (increases breathing and heart rate and sweating)
- ✗ Sports/sporting activity
- ✗ Stair climbing, other than to move locations throughout the home

### **RTPA – Stage 2a\***

Add additional movements that do not increase breathing and/or heart rate or break a sweat.

#### **Activities permitted (if tolerated by student):**

- ✓ Activities from the previous stage
- ✓ Light physical activity (e.g., use of stairs)
- ✓ 10-15 minutes slow walking 1-2x per day inside and outside

#### **Activities not permitted:**

- ✗ Physical exertion (increases breathing and/or heart rate and sweating)
- ✗ Sports
- ✗ Sporting activities

*\*The student may be at home or at school by this stage, depending on their individual case and the school/school board policy.*

**The student is ready to begin school attendance as described in RTS Stage 3.**

### RTS – Stage 3a

Part-time school attendance. The individual RTS Plan is developed by the Collaborative Team following the student conference and assessment of the student's individual needs, determining possible modifications/adaptations for student learning.

#### **Activities permitted (if tolerated by student):**

- ✓ Activities from the previous stage
- ✓ School work for up to 2 hours per day in smaller chunks (completed at school) working up to a half day of cognitive activity

#### **Activities not permitted:**

- ✗ Tests/exams
- ✗ Homework
- ✗ Music class
- ✗ Assemblies
- ✗ Field trips

### RTPA- Stage 2b\*

#### **Activities permitted (if tolerated by student):**

- ✓ Activities from the previous stage
- ✓ 20-30 minutes walking/stationary cycling/recreational (i.e., at a pace that causes some increase in breathing/heart rate but not enough to prevent a student from carrying on a conversation comfortably).

#### **Activities not permitted:**

- ✗ Resistance or weight training
- ✗ Physical activities with others
- ✗ Physical activities using equipment

*\*The student may be at home or at school by this stage, depending on their individual case and the school/school board policy.*

### RTPA – Stage 3

Simple locomotor activities and sport-specific exercise to add movement.

#### **Activities permitted (if tolerated by student):**

- ✓ Activities from the previous stage
- ✓ Simple **individual** drills in predictable and controlled environments with no risk of re-injury (e.g., running or throwing drills, skating drills in hockey, shooting drills in basketball).
- ✓ Restricted recess activities (e.g., walking)

#### **Activities not permitted:**

- ✗ Full participation in physical education or DPA
- ✗ Participation in intramurals
- ✗ Full participation in interschool practices
- ✗ Interschool competitions
- ✗ Resistance or weight training
- ✗ Body contact or head impact activities (e.g., heading a soccer ball)

	<ul style="list-style-type: none"> <li>✘ Jarring motions (e.g., high speed stops, hitting a baseball with a bat)</li> </ul>
<p><b><u>RTS – Stage 3b</u></b></p> <p>Part-time school attendance with a gradual increase in school attendance time, increased school work, and a decrease in learning modifications or adaptations.</p> <p><b>Activities permitted (if tolerated by student):</b></p> <ul style="list-style-type: none"> <li>✓ Activities from the previous stage</li> <li>✓ School work for 4-5 hours per day, in smaller chunks (e.g., 2-4 days of school/week)</li> <li>✓ Homework up to 30 minutes per day</li> <li>✓ Classroom testing with adaptations</li> </ul> <p><b>Activities not permitted:</b></p> <ul style="list-style-type: none"> <li>✘ Standardized tests/exams</li> </ul>	<p><b><u>RTPA – Stage 4</u></b></p> <p>Progressively increase physical activity. Add in more difficult non-contact training drills to add coordination and increased thinking.</p> <p><b>Activities permitted (if tolerated by student):</b></p> <ul style="list-style-type: none"> <li>✓ Activities from the previous stage</li> <li>✓ More complex training drills (e.g., passing drills in soccer and hockey)</li> <li>✓ Physical activity with no body contact (e.g., dance, badminton)</li> <li>✓ Participation in practices for non-contact interschool sports</li> <li>✓ Progressive resistance training may be started</li> <li>✓ Recess – physical activity running/games with no body contact</li> <li>✓ Daily Physical Activity (DPA) (elementary)</li> </ul> <p><b>Activities not permitted:</b></p>
<p><b><u>RTS – Stage 4a</u></b></p> <p>Full day school, minimal modifications or adaptations. Nearly normal workload.</p>	

- Start to eliminate strategies/approaches
- Increase homework to 60 minutes per day
- Limit routine testing to one test per day with adaptations (e.g., supports - such as more time)

**Activities permitted (if tolerated by student):**

- ✓ Activities from previous stage
- ✓ Nearly normal cognitive activities
- ✓ Routine school work as tolerated

**Activities not permitted:**

- ✗ Standardized tests/exams

- ✗ Full participation in physical education
- ✗ Participation in intramurals
- ✗ Body contact or head impact activities (e.g., heading a soccer ball)
- ✗ Participation in interschool contact sport practices, or interschool games/competitions (non-contact and contact)

### RTS – Stage 4b

Full day school, no modifications or adaptations.

#### **Activities permitted (if tolerated by student):**

- ✓ Normal cognitive activities
- ✓ Routine school work
- ✓ Full curriculum load (attend all classes, all homework, tests)
- ✓ Standardized tests/exams
- ✓ Full extracurricular involvement (non-sport/non-physical activity - e.g., debating club, drama club, chess club)

The student has successfully completed the Return to School Plan.

**Before continuing on to RTPA Stages 5 and 6, the student must:**

- have successfully completed the RTS Plan;
- have completed RTPA Stages 1 - 4 and be symptom-free; and
- obtain signed Medical Clearance from a medical doctor or nurse practitioner.

**Note: Premature return to contact sports (full practice and game play) may cause a significant setback in recovery.**

### RTPA – Stage 5

Following medical clearance, full participation in all non-contact physical activities (i.e., non-intentional body contact) and in full contact training/practice for contact sports.

#### **Activities permitted:**

- ✓ Activities from previous stage
- ✓ Physical Education
- ✓ DPA (elementary)
- ✓ Intramural programs
- ✓ Full participation in non-contact interschool sports
- ✓ Full contact training/practice in contact interschool sports

#### **Activities not permitted:**

- ✗ Competition (e.g., games, meets, events) that involves body contact

### RTPA - Stage 6

#### **Activities permitted:**

- ✓ Activities from previous stage
- ✓ Unrestricted return to contact sports. Full participation in games/competition.

The student has successfully completed the Return to Physical Activity Plan.

There are two parts to a student's RTS and RTPA Plan. The first part occurs at home and prepares the student for the second part, which occurs at school.

### **Part I: Home Preparation for Return to School**

Initially, a student with concussion requires cognitive and physical rest, followed by stages of progressive cognitive and physical activity which are best accommodated in the home environment.

The home stages of the RTS and RTPA Plan occur under the supervision of the parent/guardian in consultation with the medical doctor or nurse practitioner, and other licensed healthcare professionals involved in the student's clinical care.

The school is not responsible for monitoring this process.

#### **Responsibilities of the School Principal/Designate:**

Once the parent/guardian has informed the school principal/designate of the results of the medical assessment, the school principal/designate will then:

- Inform all school staff (e.g., classroom teachers, physical education teachers, intramural supervisors, coaches) and volunteers who work with the student that the student has been diagnosed with a concussion.
- Meet with the parent/guardian and, where appropriate, the student, to:
  - explain the stages of the RTS and RTPA Plan that occur at home;
  - explain that the parent/guardian should document the student's progress at home and communicate the student's progress to the school (e.g., using *Appendix 5*).
  - share information about concussion recovery:
    - Most students who sustain a concussion will make a complete recovery and be able to return to full school and sport/physical activities within 1-4 weeks.
    - Approximately 15-30% of individuals will experience symptoms that persist beyond this time frame.
    - If a student's symptoms are persistent (i.e., last longer than 4 weeks for youth under 18), they may benefit from referral to a medically supervised multidisciplinary concussion clinic.
- Ensure all documentation is filed as per school board policy.

- ▶ See Appendix 5. Sample Documentation for Concussion Management – Home Preparation for Return to School and Return to Physical Activity Plan. This resource outlines the stages of the RTS and RTPA Plan that occur at home and may be used as a communication tool between the parent/guardian and the school.

## **Part II: The Return to School and Return to Physical Activity Stages at School**

When the student is ready to begin attending school again, the following actions are taken by the parent/guardian and the school principal or designate.

### **Responsibilities of the Parent/Guardian**

When the student has successfully completed the stages outlined in Table 1, the parent/guardian informs the school principal:

- That the student has completed Stages 1 and 2 of the RTS Plan with no new or worsening symptoms and is ready to begin RTS Stage 3 at school.
- What stage the student is currently at in the RTPA Plan (to help guide appropriate participation in physical activity while at school).

### **Responsibilities of the School Principal/Designate**

The principal or designate must meet with the parent/guardian and, where appropriate, the student, to:

- explain the stages of the RTS and RTPA Plan that will occur at school;
  - explain that the school and the parent/guardian should continue to communicate about the student's progress (e.g., using *Appendix 6*); and explain the Collaborative Team approach and the parent/guardian's role on the team when the student returns to school.
- ▶ See *Appendix 6. Sample Documentation for School Concussion Management –Return to School and Return to Physical Activity Plan*. This resource outlines the stages of the RTS and RTPA Plan that occur at school and may be used as a communication tool between the school and parent/guardian.

## **The Collaborative Team Approach**

The management of a student's concussion is a shared responsibility, requiring regular communication between the home, school, and outside sports team (where appropriate), with consultation from the student's medical doctor or nurse practitioner. Other licensed

healthcare professionals<sup>10</sup> may play a role in the management of a diagnosed concussion, under the supervision of a medical doctor or nurse practitioner. Examples include physiotherapists, occupational therapists, athletic therapists, and chiropractors.

The school collaborative team plays an important role in a student's recovery. In consultation with the parent/guardian, the team assesses the student's needs and provides learning strategies and modifications to support the student through the stages described earlier.

Led by the school principal/designate, the team should include:

- the injured student;
- the student's parents/guardians;
- teachers and volunteers who work with the student; and
- the medical doctor or nurse practitioner and/or appropriate licensed healthcare professional involved in the student's care.

One **school staff lead** (i.e., a member of the collaborative team, either the school principal/designate, or another staff person designated by the school principal) needs to serve as the main point of contact for the student, the parents/guardians, other school staff, and volunteers who work with the student, and the student's healthcare providers. The designated school staff lead will monitor the student's progress through the Return to School and Return to Physical Activity Plan. Ongoing communication between the parent/guardian and the school collaborative team is essential throughout the process.

The members of the collaborative team must factor in any special circumstances that may affect the setting in which the stages of the RTS and RTPA Plan may occur (i.e., at home and/or school), for example:

- if the student has a diagnosed concussion just prior to winter break, spring break or summer vacation; or
- if the student is neither enrolled in Health and Physical Education class nor participating on a school team.

### **Return to School Support Strategies and Approaches**

It is important for the designated school staff lead, in consultation with other members of the collaborative team, to identify the student's symptoms and the ways they respond to various

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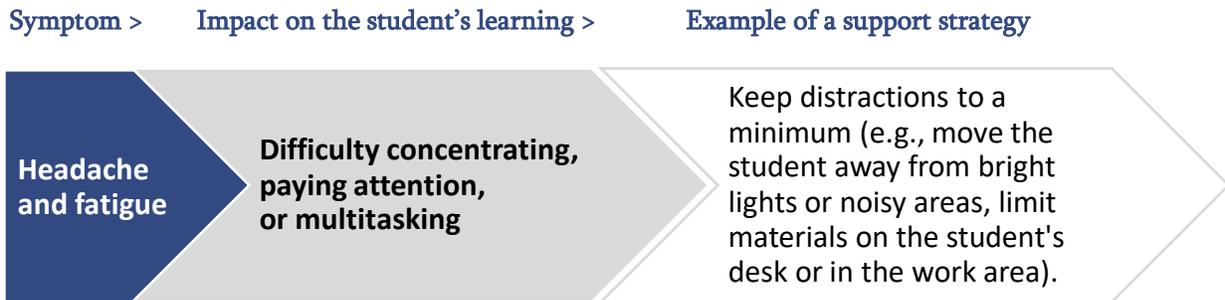
<sup>10</sup>A licensed healthcare professional is a healthcare provider who is licensed by a national/provincial/territorial professional regulatory body to provide concussion-related healthcare services that fall within their licensed scope of practice.

learning activities in order to develop appropriate strategies and/or approaches that meet the changing needs of the student.

School staff and volunteers who work with the student need to be aware of the possible difficulties (i.e., cognitive, emotional/behavioural) a student may encounter when returning to learning activities following a concussion. These difficulties may be subtle and temporary but may significantly impact a student’s performance<sup>11</sup>.

Approaches to accommodate students might consider various aspects of the student’s school experience, such as the activities the student participates in, the student’s course load or timetable, and the physical classroom environment. A few examples are provided below.

Examples of return-to-school support strategies for students experiencing cognitive difficulties<sup>12</sup>:



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<sup>11</sup>Davis, G.A., & Purcell, L.K. (2013). The evaluation and management of acute concussion differs in young children. *Br J Sports Med.* doi:10.1136/bjsports-2012-092132.

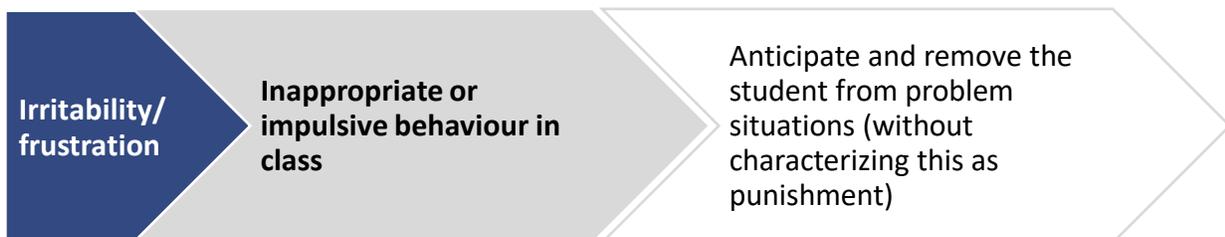
<sup>12</sup>Adapted from: Davis, G.A., & Purcell, L.K. (2013).



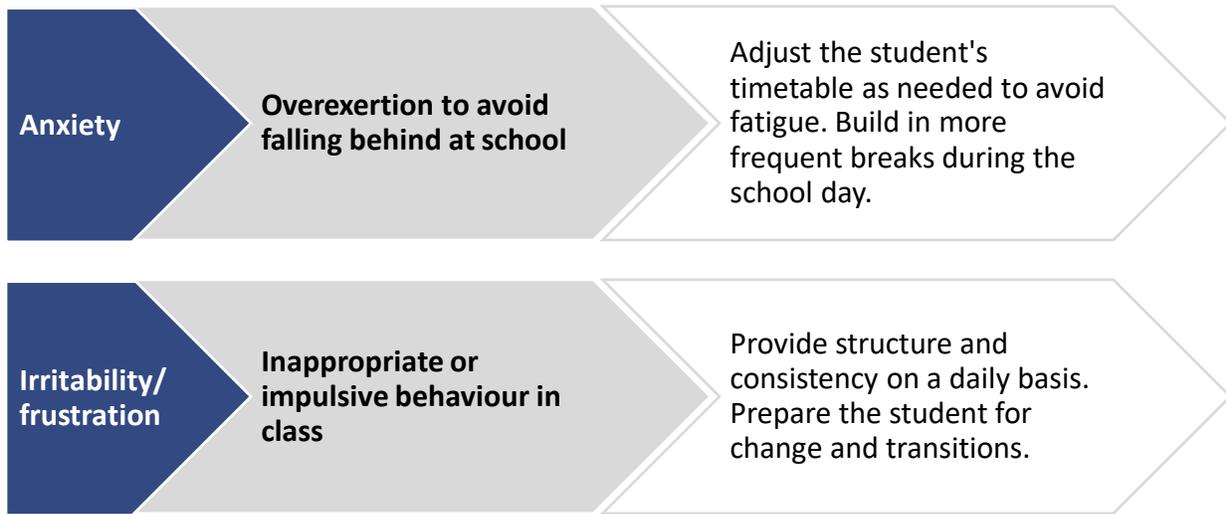
- ▶ For more examples, see *Appendix 8. Sample Return-to-School Support Strategies and/or Approaches*

Examples of return-to-school support strategies for students experiencing emotional and/or behavioural difficulties<sup>13</sup>:

Symptom > Impact on the student’s learning > Example of a support strategy



<sup>13</sup>Adapted from: Davis, G.A., & Purcell, L.K. (2013).



- For more examples, see *Appendix 8. Sample Return-to-School Support Strategies and/or Approaches*

### **Medical Clearance**

The student must successfully return to full-time school and receive Medical Clearance before moving on to Stages 5 and 6 of the RTPA Plan, which include full participation in Physical Education, intramural programs, and interschool sport. If, after receiving Medical Clearance, the student's symptoms reappear, the student should be re-evaluated by a medical doctor or nurse practitioner.

The student's parent/guardian should provide the signed Medical Clearance form to the school principal/designate, and the form should be kept on file (e.g., in the student record).