



Concussion Resource Manual

January 2015

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CONCUSSION RESOURCES

The following web links and organizations have information, videos and interactive games for parents, teachers and students on concussion recognition, prevention and management. Some organizations such as Bikes Boards and Blades will make school visits targeting Grades 2 and 3 students at no cost.

General Concussion Information

[Parachute Canada](#)

<http://www.nytimes.com/2014/10/05/sports/canadian-district-goes-to-school-on-concussions.html?smid=tw-share&r=0>

<http://www.concussionsontario.org>

<http://www.cdc.gov/concussion/sports/prevention.html>

ELearning Modules and Teacher Resources

<http://www.sportconcussionlibrary.com/content/hscep-halton-student-concussion-education-program>

<http://www.ugdsb.on.ca/concussions>

[Coaches Association of Ontario](#)

[Parachute Canada](#)

Online Videos

[Dr. Mike Evans: Concussions 101](#)

<http://brain101.orcasinc.com/1000>

Oregon Center for applied sciences, Inc.

Concussion Research

[Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012](#)

OPHEA Safety Guidelines

[Ontario Physical Education Safety Guidelines](#)

Concussion Tools

[Concussion Recognition Tool](#)

[Sport Concussion Assessment Tool](#)

[Child Sport Concussion Assessment Tool](#)

[Concussion App](#)

Student Education

[Dr. Mike Evans: Concussions 101](#)

[Brain Day](#)

[Hamilton Brain Injury Association: Bikes, Blades and Boards Education Program](#)

info@hbia.ca; 905-538-5251

[Coaching Association of Ontario](#)

Video: Head Games www.slice.com

Brant County Health Unit 519-753-4937

Haldimand Norfolk Health Unit 905-318-5367 ext. 304

PARENT/GUARDIAN RESOURCES

Concussion Toolkit

Roles and responsibilities of parents and athletes:

For further information, please visit www.parachutecanada.org/active-and-safe

Enrolling your child in a team sport program at school or in the community can be a very rewarding experience for everyone. From lacing up your child's first pair of skates to running the team jersey through the washing machine, it all amounts to being part of an active lifestyle. As parents, it is important for children to play safe and have fun.

When it comes to concussions, prevention is key. Prevention involves respect for self in terms of one's own conduct as a spectator and good understanding of the rules of the sport. Equally important is the role of protective equipment:

- Encourage your child to play fair and engage in fair play, within the rules, and within his or her abilities.
- Teach your child to have respect for his or her brain and the brains of their opponents.
- Reinforce wearing the right gear for the right sport, and the importance of having equipment that fits well and is in good condition.
- Helmets prevent skull fractures, brain contusions, lacerations, and blood clots in and around the brain. They do not prevent concussion.
- There is no scientific evidence that mouth guards prevent concussions, but they do prevent dental fractures and jaw fractures.

Ask Questions!

In the event of a concussion, asking questions about your child's concussion is important. There are a number of questions to consider when it comes to the overall sport experience. These questions may address program organization, psychological and developmental factors, adult leadership and, of course, safety.

The purpose of this Tool Kit is to help guide your actions, with respect to home, school and play when your child has had a concussion.

As a parent, you already know it takes a village to raise a child. This is particularly true with respect to ensuring the safe return of your child to his/her normal routines after a concussion. In anticipation of meeting with your child's physician, creating a list of questions and concerns that you have, as well as anticipating what the doctor might ask, will help paint a clearer picture for both yourself and the doctor of your child's concussion. You may find this list of questions at the following website www.parachutecanada.org/active-and-safe/item/concussion-questions-and-answers helpful as they may contribute to your level of confidence with respect to ensuring you have all the information you need at the conclusion of your appointment(s).

Returning to Home, School and Sport

Returning to normal activity at home, school and sport also requires planning. Following your physician's recommendations is important to help your child with each of these environments. Here is an example of a home, school and physical activity work plan:

- We encourage you to take time to meet with your child's teacher for the purpose of establishing a safe and rewarding return to learn plan. Do not assume that your child's teacher or coach has all the tools they need to manage a concussed student/athlete.
- In the case of an older child, it makes good sense to engage their participation as part of the overall return to learn and return to play experience. Help your children help themselves by sharing the Concussion Guidelines: Parent/Caregiver on page 6-7.

- When children suffer from a concussion, their social, physical and learning environments are affected. The concussion experience may result in your child being unable to return to sport or school for a period of time, which may cause them stress and pressure. Children might not have enough knowledge to recognize when they have been concussed; therefore, providing concussion education is important. They might also choose not to report their injury or de-emphasize symptoms because they want to play their sport and they do not want to let their team, coach or parents down.
- When it comes to the learning environment, it is important to provide your son or daughter's teacher with the right concussion information. The stress and pressure that a child might experience in trying to return to school faster than they should might be lessened if the teacher has knowledge of the concussion and its impact.

Reproduced and adapted with permission from Parachute Canada, Concussion Toolkit: Roles and Responsibilities of Parents, 2013.

Concussion Guidelines: Parents/Caregivers

WHAT IS A CONCUSSION?

A concussion is a brain injury that cannot be seen on routine x-rays, CT scans, or MRIs. It affects the way your child may think and remember things, and can cause a variety of symptoms.

WHAT ARE THE SYMPTOMS AND SIGNS OF A CONCUSSION? YOUR CHILD DOES NOT NEED TO BE KNOCKED OUT (LOSE CONSCIOUSNESS) TO HAVE HAD A CONCUSSION.

THINKING PROBLEMS	CHILD'S COMPLAINTS	OTHER PROBLEMS
Does not know time, date, place, period of game, opposing team, score of game General confusion Cannot remember things that happened before and after the injury Knocked out	<ul style="list-style-type: none">• Headache• Dizziness• Feels dazed• Feels “dinged” or stunned; “having my bell rung”• Sees stars, flashing lights• Ringing in the ears• Sleepiness• Loss of vision• Sees double or blurry• Stomach ache, stomach pain, nausea	<ul style="list-style-type: none">• Poor coordination or balance• Blank stare/glassy eyed• Vomiting• Slurred speech• Slow to answer questions or follow directions• Easily distracted• Poor concentration• Strange or inappropriate emotions (e.g. laughing, crying, getting mad easily)• Not playing as well

WHAT CAUSES A CONCUSSION?

Any blow to the head, face or neck, or a blow to the body which causes a sudden jarring of the head may cause a concussion (e.g., a ball to the head, being checked into the boards in hockey).

WHAT SHOULD YOU DO IF YOU SUSPECT YOUR CHILD HAS A CONCUSSION?

YOUR CHILD SHOULD STOP PLAYING THE SPORT RIGHT AWAY. They should not be left alone and should be seen by a doctor as soon as possible that day. If your child is knocked out, call an ambulance to take him/her to a hospital immediately. Do not move your child or remove any equipment such as helmets until the paramedics arrive.

HOW LONG WILL IT TAKE FOR MY CHILD TO GET BETTER?

The signs and symptoms of a concussion often last for 7-10 days, but may last much longer. In some cases, children may take many weeks or months to heal. Having had previous concussions may increase the chance that a person may take longer to heal.

HOW IS A CONCUSSION TREATED?

THE MOST IMPORTANT TREATMENT FOR A CONCUSSION IS REST. The child should not exercise, go to school or do any activities that may make them worse, like riding a bike, play wrestling, reading, working on the computer or playing video games. If your child goes back to activities before they are completely better, they are more likely to get worse, and to have symptoms longer. Even though it is very hard for an active child to rest, this is the most important step.

Once your child is completely better at rest (all symptoms have resolved), they can start a step-wise increase in activities. It is important that your child is seen by a doctor before he/she begins the steps needed to return to activity to make sure that he/she is completely better. If possible, your child should be seen by a doctor with experience in treating concussions.

WHEN CAN MY CHILD RETURN TO SCHOOL?

Sometimes children who have a concussion may find it hard to concentrate in school and may get a worse headache or feel sick to their stomach if they are in school. Children should stay home from school if their symptoms get worse while they are in class. Once they feel better, they can try going back to school part time to start (e.g., for half days initially) and if they are okay with that, then they can go back full time.

WHEN CAN MY CHILD RETURN TO SPORT?

IT IS VERY IMPORTANT THAT YOUR CHILD NOT GO BACK TO SPORTS IF HE/SHE HAS ANY CONCUSSION SYMPTOMS OR SIGNS. Return to sport and activity must follow a step-wise approach:

- STEP 1) No activity, complete rest. Once back to normal and cleared by a doctor, go to step 2.**
- STEP 2) Light exercise such as walking or stationary cycling, for 10-15 minutes.**
- STEP 3) Sport specific aerobic activity (e.g., skating in hockey, running in soccer), for 20-30 minutes. NO CONTACT.**
- STEP 4) “On field” practice such as ball drills, shooting drills, and other activities with NO CONTACT (e.g., no checking, no heading the ball, etc.).**
- STEP 5) “On field” practice with body contact, once cleared by a doctor.**
- STEP 6) Game play.**

NOTE: EACH STEP MUST TAKE A MINIMUM OF 24 HOURS. If your child has any symptoms of a concussion during activity (e.g., headache, feeling sick to his/her stomach), or later that day, your child should stop the activity immediately and rest until symptoms resolve, for a minimum of 24 hours. Your child should be seen by a doctor and cleared again before starting the step wise protocol again

WHEN SHOULD I TAKE MY CHILD TO THE DOCTOR?

Every child who gets a head injury should be seen by a doctor as soon as possible. Your child should go back to the doctor IMMEDIATELY if, after being told he/she has a concussion, he/she has worsening of symptoms such as:

- **Being more confused**
- **Headache that is getting worse**
- **Vomiting more than twice**
- **Strange behaviour**
- **Not waking up**
- **Having any trouble walking**
- **Having a seizure**

Problems caused by a head injury can get worse later that day or night. The child should not be left alone and should be checked throughout the night. If you have any concerns about your child’s breathing or how they are sleeping, wake them up; otherwise, let them sleep. If they seem to be getting worse, you should see your doctor immediately. **NO CHILD SHOULD GO BACK TO SPORT UNTIL THEY HAVE BEEN CLEARED TO DO SO BY A DOCTOR**

Reproduced and adapted with permission from Parachute Canada, Concussion Guidelines: Parent/Caregiver

BOARD EMPLOYEES AND VOLUNTEERS

Initial Response Identification

If a student receives a blow to the head, face or neck, or a blow to the body that transmits a force to the head that causes the brain to move rapidly within the skull, and as a result may have suffered a concussion, the individual (e.g., teacher/coach) responsible for that student must take immediate action as follows:

Unconscious Student (or where there was any loss of consciousness)

- Stop the activity immediately – assume there is a concussion.
- Initiate Emergency Action Plan and call 911.
- Assume there is a possible neck injury and, only if trained, immobilize the student before emergency medical services arrive.
- Do not remove athletic equipment (e.g., helmet) unless there is difficulty breathing.
- Stay with the student until emergency medical services arrive.
- Contact the student's parent/guardian (or emergency contact) to inform them of the incident and that emergency medical services have been contacted.
- Monitor and document any changes (e.g., physical, cognitive, emotional/behavioural) in the student. Refer to your Board's injury report form for documentation procedures.
- If the student regains consciousness, encourage him/her to remain calm and to lie still. Do not administer medication (unless the student requires medication for other conditions, e.g., insulin for a student with diabetes).

Conscious Student

- Stop the activity immediately.
- Initiate Emergency Action Plan.
- When the student can be safely moved, remove him/her from the current activity or game.
- Conduct an initial concussion assessment of the student (e.g., check for common signs and symptoms of concussion using "Tool to Identify a Suspected Concussion")

If Signs are Observed or Symptoms are Reported:

- A concussion should be suspected – do not allow the student to return to play in the activity, game or practice that day even if the student states that he/she is feeling better.
- Contact the student's parent/guardian (or emergency contact) to inform them:
 - of the incident;
 - that they need to come and pick up the student; and,
 - that the student needs to be examined by a medical doctor or nurse practitioner as soon as possible that day.
 - Monitor and document any changes (e.g., physical, cognitive, emotional/behavioural) in the student. If any signs or symptoms worsen, call 911. Refer to your Board's injury report form for documentation procedures.
- Do not administer medication (unless the student requires medication for other conditions, e.g., insulin for a student with diabetes).
- Stay with the student until her/his parent/guardian (or emergency contact) arrives.

The student must not leave the premises without parent/guardian (or emergency contact) supervision.

If Signs are Not Observed or Symptoms are Not Reported and student passes Quick Memory Function Assessment:

- **A concussion is not suspected** - Student may return to physical activity. **However, it is recommended as a precaution to withdraw student from the activity.**
- However, the student's parent/guardian (or emergency contact) must be contacted and informed of the incident.

Reproduced and adapted with permission from OPHEA, Ontario Physical Education Safety Guidelines, Appendix C-4 Documentation for a Diagnosed Concussion – Return to Learn/Return to Physical Activity Plan, 2013.

Concussion Guidelines: Teachers/Coaches

WHAT IS A CONCUSSION?

A concussion is a brain injury that cannot be seen on routine x-rays, CT scans, or MRIs. It affects the way a child may think and remember things, and can cause a variety of symptoms.

WHAT ARE THE SYMPTOMS AND SIGNS OF A CONCUSSION? THE STUDENT DOES NOT NEED TO BE KNOCKED OUT (LOSE CONSCIOUSNESS) TO HAVE HAD A CONCUSSION.

THINKING PROBLEMS	STUDENT'S COMPLAINTS	OTHER PROBLEMS
Does not know time, date, place, period of game, opposing team, score of game	<ul style="list-style-type: none"> • Headache • Dizziness • Feels dazed • Feels "dinged" or stunned; "having my bell rung" • Sees stars, flashing lights • Ringing in the ears • Sleepiness • Loss of vision • Sees double or blurry • Stomach ache, stomach pain, nausea 	<ul style="list-style-type: none"> • Poor coordination or balance • Blank stare/glassy eyed • Vomiting • Slurred speech • Slow to answer questions or follow directions • Easily distracted • Poor concentration • Strange or inappropriate emotions (e.g. laughing, crying, getting mad easily) • Not playing as well
General confusion		
Cannot remember things that happened before and after the injury		
Knocked out		

WHAT CAUSES A CONCUSSION?

Any blow to the head, face or neck, or a blow to the body which causes a sudden jarring of the head may cause a concussion (e.g. a ball to the head, being checked into the boards in hockey).

WHAT SHOULD YOU DO IF YOU SUSPECT A STUDENT HAS A CONCUSSION?

You will most often have students who have sustained a concussion outside of school, but it is important to know how to deal with a student whom you suspect has sustained a concussion while participating in a sport or activity at school. **IF YOU SUSPECT A CONCUSSION, THE STUDENT SHOULD STOP PLAYING THE SPORT OR ACTIVITY RIGHT AWAY.** He/she should not be left alone and should be seen by a doctor as soon as possible that day. If a student is knocked out for more than a minute, call an ambulance to take him/her to a hospital immediately. Do not move him/her or remove athletic equipment like a helmet; wait for paramedics to arrive.

Anyone with a concussion should not go back to play that day, even if he/she says he/she is feeling better. Problems caused by a head injury can get worse later that day or night. He/she should not return to activity until he/she has been seen by a doctor.

HOW LONG WILL IT TAKE FOR THE STUDENT TO GET BETTER?

The signs and symptoms of a concussion often last for 7-10 days, but may last much longer. In some cases, children may take many weeks or months to heal. Having had previous concussions may increase the chance that a person may take longer to heal.

HOW IS A CONCUSSION TREATED?

IT IS CLEAR THAT EXERTION, BOTH PHYSICAL AND MENTAL, WORSENS CONCUSSION SYMPTOMS AND MAY DELAY RECOVERY; THEREFORE, THE MOST IMPORTANT TREATMENT FOR CONCUSSION IS REST.

Many students find that attending school aggravates their symptoms, and may have to stay home and rest. It is not possible to know when symptoms will improve, as each concussion is unique; therefore, a specific return date to school may not initially be possible for the student, their parents, or a doctor to provide. Once they feel better, they can try going back to school, initially part time (e.g., half days at first) and, if their symptoms do not return, then they can go back full time. Remember that mental exertion can make symptoms worse, so the student's workload may need to be adjusted accordingly.

IT IS VERY IMPORTANT THAT A STUDENT DOES NOT GO BACK TO ACTIVITY IF HE/SHE HAS ANY CONCUSSION SYMPTOMS OR SIGNS. Return to sport and activity must follow a step-wise approach:

- STEP 1) No activity, complete rest. Once back to normal and cleared by a doctor, go to step 2.**
- STEP 2) Light exercise such as walking or stationary cycling, for 10-15 minutes.**
- STEP 3) Sport specific aerobic activity (e.g., skating in hockey, running in soccer), for 20-30 minutes. NO CONTACT.**
- STEP 4) "On field" practice such as ball drills, shooting drills, and other activities with NO CONTACT (e.g., no checking, no heading the ball, etc.).**
- STEP 5) "On field" practice with body contact, once cleared by a doctor.**
- STEP 6) Game play.**

NOTE: EACH STEP MUST TAKE A MINIMUM OF 24 HOURS. If a student has any symptoms of a concussion (e.g., headache, feeling sick to his/her stomach) that come back either during activity, or later that day, he/she should stop the activity immediately and rest for a minimum of 24 hours. The student should be seen by a doctor and cleared again before starting the step wise protocol again. The protocol needs to be individualized to the patient--their injury, and the types of activities they are returning to. This protocol is used for all physical activities, including Physical Education classes; therefore, Physical Education teachers should speak with the child's parents in order to determine what kind of participation the child can have in class.

WHEN CAN A STUDENT WITH A CONCUSSION RETURN TO SPORT?

It is very important that a student not play any sports, including Physical Education class activities if he/she has any signs or symptoms of concussion. The student must rest until he/she is completely back to normal. When he/she has been back to normal and has been seen by a doctor, he/she can then go through the steps of increasing activity described above. When the student has progressed through these steps with no symptoms or problems, and has received clearance from a doctor, he/she may return to play. If you are unsure if a student should participate, remember...**when in doubt, sit them out!**

Reproduced and adapted with permission from Parachute Canada, Concussion Guidelines: Teacher/Coach

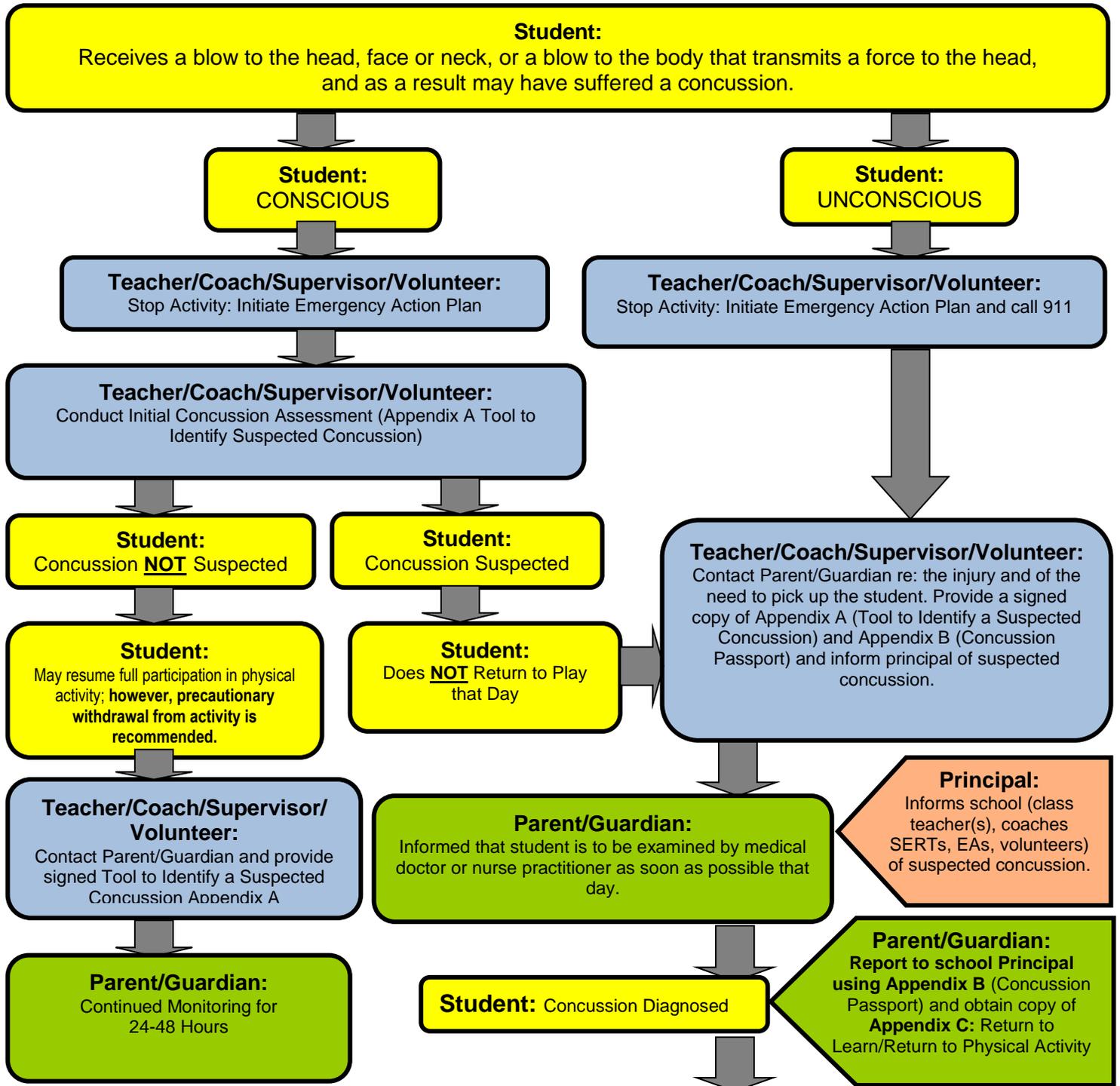
Return To Learn Strategies/Approaches

COGNITIVE DIFFICULTIES		
Post-Concussion Symptoms	Impact on Student's Learning	Potential Strategies and/or Approaches
Headache and Fatigue	Difficulty concentrating, paying attention or multi-tasking	<ul style="list-style-type: none"> • ensure instructions are clear (e.g., simplify directions, have the student repeat directions back to the teacher) • allow the student to have frequent breaks, or return to school gradually (e.g., 1-2 hours, half-days, late starts) • keep distractions to a minimum (e.g., move the student away from bright lights or noisy areas) • limit materials on the student's desk or in their work area to avoid distractions • provide alternative assessment opportunities (e.g., give tests orally, allow the student to dictate responses to tests or assignments, provide access to technology)
Difficulty remembering or processing speed	Difficulty retaining new information, remembering instructions, accessing learned information	<ul style="list-style-type: none"> • provide a daily organizer and prioritize tasks • provide visual aids/cues and/or advance organizers (e.g., visual cueing, non-verbal signs) • divide larger assignments/assessments into smaller tasks • provide the student with a copy of class notes • provide access to technology • repeat instructions • provide alternative methods for the student to demonstrate mastery
Difficulty paying attention/ concentrating	<p>Limited/short-term focus on schoolwork</p> <p>Difficulty maintaining a regular academic workload or keeping pace with work demands</p>	<ul style="list-style-type: none"> • coordinate assignments and projects among all teachers • use a planner/organizer to manage and record daily / weekly homework and assignments • reduce and/or prioritize homework, assignments and projects • extend deadlines or break down tasks • facilitate the use of a peer note taker • provide alternate assignments and/or tests • check frequently for comprehension • consider limiting tests to one per day and student may need extra time or to work in a quiet environment

EMOTIONAL/BEHAVIOURAL DIFFICULTIES		
Post-Concussion Symptoms	Impact on Student's Learning	Potential Strategies and/or Approaches
Anxiety	Decreased attention/concentration Overexertion to avoid falling behind	<ul style="list-style-type: none"> inform the student of any changes in the daily timetable/schedule adjust the student's timetable/schedule as needed to avoid fatigue (e.g., 1-2 hours/periods, half-days, full-days) build in more frequent breaks during the school day provide the student with preparation time to respond to questions
Irritable or frustrated	Inappropriate or impulsive behaviour during class	<ul style="list-style-type: none"> encourage teachers to use consistent strategies and approaches acknowledge and empathize with the student's frustration, anger or emotional outburst if and as they occur reinforce positive behaviour provide structure and consistency on a daily basis prepare the student for change and transitions set reasonable expectations anticipate and remove the student from a problem situation (without characterizing it as punishment)
Light/noise sensitivity	Difficulties working in classroom environment (e.g., lights, noise, etc.)	<ul style="list-style-type: none"> arrange strategic seating (e.g., move the student away from window or talkative peers, proximity to the teacher or peer support, quiet setting) where possible provide access to special lighting (e.g., task lighting, darker room) minimize background noise provide alternative settings (e.g., alternative work space, study carrel) avoid noisy crowded environments such as assemblies and hallways during high traffic times allow the student to eat lunch in a quiet area with a few friends where possible provide ear plugs/headphones, sunglasses
Depression/withdrawal	Withdrawal from participation in school activities or friends	<ul style="list-style-type: none"> build time into class/school day for socialization with peers partner student with a "buddy" for assignments or activities

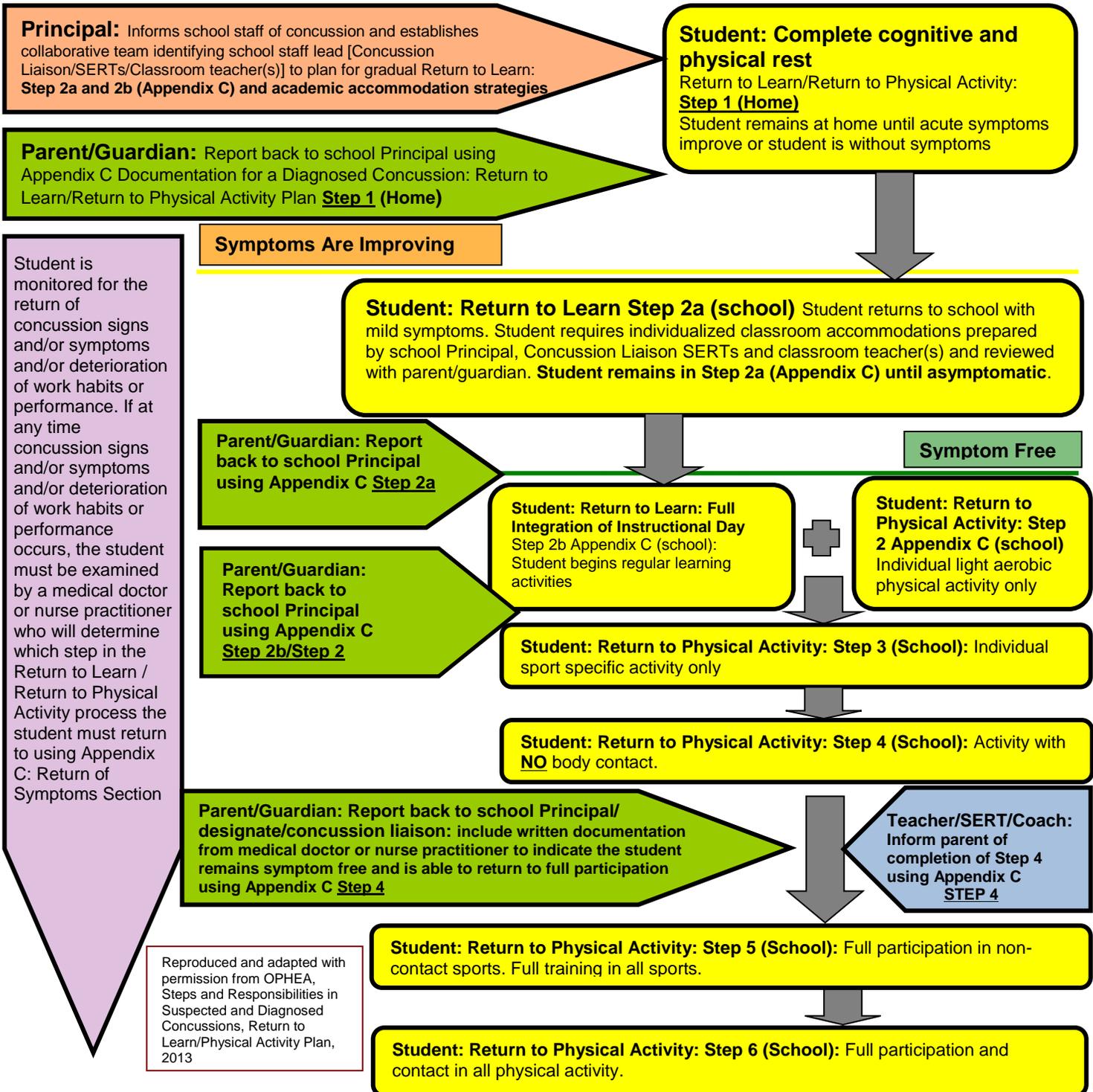
Reproduced and adapted with permission from OPHEA, Ontario Physical Education Safety Guidelines, Appendix C-1 Concussion Management Procedures: Return to Learn - Return to Physical Activity – Return to Learn Strategies/Approaches Table 2, 2013.

Concussion Management Flow Chart
Roles and Responsibilities in Suspected and Diagnosed Concussion



Signs and/or symptoms present – Each Step is NOT a Day

Each Step May Take 24-48 Hours or Longer



STAFF AND STUDENTS

Sample of an Active and Safe Pledge for Student Athletes, Coaches and Parents

Team Name: _____

By signing this paper, as a team and as individuals, we pledge:

- To work towards a safer and better sport.
- To be honest with myself and my teammates with regards to signs and symptoms.
- To give 100% commitment to myself, my team and my sport.
- To report any suspected incidence of brain injury or concussion.
- To follow the proper action steps in the incidence of a suspected injury.
- To follow the six steps of the Return-to-Play Guidelines.
- To commit myself to True Sport, ensuring sport can have a positive impact on all.

Player Code of Conduct

Respect yourself:

- I will wear the proper equipment and wear it correctly.
- I will develop my skill and body strength so that I can play the game to the best of my abilities.
- I understand that a concussion is a serious brain injury that has both short- and long-term effects.
- I understand that I don't need to lose consciousness to have had a concussion.
- I understand that any blow to the head, face, or neck, or a blow to the body which causes a sudden jarring of the head may cause a concussion.
- I understand that if I suspect I might have a concussion, I should stop playing the sport immediately.
- I understand that continuing to play with a suspected concussion increases my risk of more severe, longer lasting concussion symptoms, as well as increases my risk of other injury.
- I will not hide my symptoms. I will tell my coach, trainer, parent, or other responsible person if I am concerned that I have had a concussion and/or experience any signs and symptoms of concussion following a collision.
- I understand I will not be able to return to play following a collision where I experience signs and symptoms of concussion.
- I understand I will have to be cleared by a physician or qualified medical professional, preferably one with experience in concussion management, prior to returning to play.
- I understand I will have to follow the 6-step Return to Learn/Return to Play guidelines when returning to activity.

Respect Others:

- I will respect the rules of the game.
- I will respect my opponents and play fair.
- I will not fight or attempt to injure anyone on purpose.
- I will respect my coaches, trainers, parents and the medical professionals and any decisions made with regards to my health and safety.

Team: _____

Player: _____

Parent/Caregiver: _____

Coach: _____

Date: _____