

Durham Catholic District School Board



Concussion Resource Guide

for

Parents/Guardians

Context

Recent research has made it clear that a concussion can have a significant impact on a student's cognitive and physical abilities. In fact, research shows that activities that require concentration can actually cause a student's concussion symptoms to reappear or worsen. It is equally important to help students as they "return to learn" in the classroom as it is to help them "return to physical activity". Without identification and proper management, a concussion can result in permanent brain damage.

Research also suggests that a child or youth who suffers a second concussion before he or she is symptom free from the first concussion is susceptible to a prolonged period of recovery, and possibly Second Impact Syndrome – a rare condition that causes rapid and severe brain swelling and often catastrophic results.

Awareness of the signs and symptoms of concussion and 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 learning or 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.

Concussion Definition

A concussion:

- is a brain injury that causes changes in how the brain functions, leading to symptoms that can be physical (e.g., headache, dizziness), cognitive (e.g., difficulty concentrating or remembering), emotional/behavioural (e.g., depression, irritability) and/or related to sleep (e.g., drowsiness, difficulty falling asleep);
- may be caused either by a direct 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;
- can occur even if there has been no loss of consciousness (in fact most concussions occur without a loss of consciousness); and,
- cannot normally be seen on X-rays, standard CT scans or MRIs.

Concussion Diagnosis

A concussion is a clinical diagnosis made by a medical doctor or nurse practitioner. It is critical that a student with a suspected concussion be examined by a medical doctor or nurse practitioner.

Concussion Common Signs and Symptoms

Following a blow to the head, face or neck, or a blow to the body that transmits a force to the head, a concussion should be suspected in the presence of **any one or more** of the following signs or symptoms:

Possible Signs Observed A sign is something that will be observed by another person (e.g., parent/guardian, teacher, coach, supervisor, peer)	Possible Symptoms Reported by Student A symptom is something the student will feel/report.
Physical <ul style="list-style-type: none"> • vomiting • slurred speech • slowed reaction time • poor coordination or balance • blank stare/glassy-eyed/dazed or vacant look • decreased playing ability • loss of consciousness or lack of responsiveness • lying motionless on the ground or slow to get up • amnesia • seizure or convulsion • grabbing or clutching of head 	Physical <ul style="list-style-type: none"> • headache • pressure in head • neck pain • feeling off/not right • ringing in the ears • seeing double or blurry/loss of vision • seeing stars, flashing lights • feels “dinged” or stunned • “Having my bell rung” • pain at physical site of injury • nausea/stomach ache/pain • balance problems or dizziness • fatigue or feeling tired, sleepy • sensitivity to light or noise • feels dazed
Cognitive <ul style="list-style-type: none"> • difficulty concentrating • easily distracted • general confusion • cannot remember things that happened before and after the injury • does not know time, date, place, class, type of activity in which he/she was participating • slowed reaction time (e.g., answering questions or following directions) 	Cognitive <ul style="list-style-type: none"> • difficulty concentrating or remembering • slowed down, fatigue or low energy • dazed or in a fog • dizziness
Emotional/Behavioural <ul style="list-style-type: none"> • strange or inappropriate emotions (e.g., laughing, crying, getting angry easily) 	Emotional/Behavioural <ul style="list-style-type: none"> • irritable, sad, more emotional than usual • nervous, anxious, depressed
Sleep Disturbance <ul style="list-style-type: none"> • drowsiness • insomnia 	Sleep Disturbance <ul style="list-style-type: none"> • drowsy • sleeping more/less than usual • difficulty falling asleep

Tool to Identify a Suspected Concussion¹

This tool is a quick reference, to be completed by teachers, to help identify a suspected concussion and to communicate this information to parent/guardian.

Identification of Suspected Concussion

Following a blow to the head, face or neck, or a blow to the body that transmits a force to the head, a concussion must be suspected in the presence of **any one or more** of the signs or symptoms outlined in the chart below **and/or** the failure of the Quick Memory Function Assessment.

1. Check appropriate box

An incident occurred involving _____ (student name) on _____ (date). He/she was observed for signs and symptoms of a concussion.

No signs or symptoms described below were noted at the time. **Note:** *Continued monitoring of the student is important as signs and symptoms of a concussion may appear hours or days later (refer to #4 below).*

The following signs were observed or symptoms reported:

Signs and Symptoms of Suspected Concussion	
Possible Signs Observed A sign is something that is observed by another person (e.g., parent/guardian, teacher, coach, supervisor, peer).	Possible Symptoms Reported by Student A symptom is something the student will feel/report.
<p>Physical</p> <ul style="list-style-type: none"> <input type="checkbox"/> vomiting <input type="checkbox"/> slurred speech <input type="checkbox"/> slowed reaction time <input type="checkbox"/> poor coordination or balance <input type="checkbox"/> blank stare/glassy-eyed/dazed or vacant look <input type="checkbox"/> decreased playing ability <input type="checkbox"/> loss of consciousness or lack of responsiveness <input type="checkbox"/> lying motionless on the ground or slow to get up <input type="checkbox"/> amnesia <input type="checkbox"/> seizure or convulsion <input type="checkbox"/> grabbing or clutching of head 	<p>Physical</p> <ul style="list-style-type: none"> <input type="checkbox"/> headache <input type="checkbox"/> pressure in head <input type="checkbox"/> neck pain <input type="checkbox"/> feeling off/not right <input type="checkbox"/> ringing in the ears <input type="checkbox"/> seeing double or blurry/loss of vision <input type="checkbox"/> seeing stars, flashing lights <input type="checkbox"/> pain at physical site of injury <input type="checkbox"/> nausea/stomach ache/pain <input type="checkbox"/> balance problems or dizziness <input type="checkbox"/> fatigue or feeling tired, sleepy <input type="checkbox"/> feels dazed <input type="checkbox"/> sensitivity to light or noise <input type="checkbox"/> feels “dinged” or stunned <input type="checkbox"/> “Having my bell rung”
<p>Cognitive</p> <ul style="list-style-type: none"> <input type="checkbox"/> difficulty concentrating <input type="checkbox"/> easily distracted <input type="checkbox"/> general confusion <input type="checkbox"/> cannot remember things that happened before and after the injury (see Quick Memory Function Assessment on page 5) <input type="checkbox"/> does not know time, date, place, class, type of activity in which he/she was participating <input type="checkbox"/> slowed reaction time (e.g., answering questions or following directions) 	<p>Cognitive</p> <ul style="list-style-type: none"> <input type="checkbox"/> difficulty concentrating or remembering <input type="checkbox"/> slowed down, fatigue or low energy <input type="checkbox"/> dazed or in a fog
<p>Emotional/Behavioural</p> <ul style="list-style-type: none"> <input type="checkbox"/> strange or inappropriate emotions (e.g., laughing, crying, getting angry easily) 	<p>Emotional/Behavioural</p> <ul style="list-style-type: none"> <input type="checkbox"/> irritable, sad, more emotional than usual <input type="checkbox"/> nervous, anxious, depressed
<p>Other <input type="checkbox"/> _____</p>	<p>Other <input type="checkbox"/> _____</p>

If any observed signs or symptoms worsen, call 911.

Adapted from McCroy et. al, Consensus Statement on Concussion in Sport. Br J Sports Med 47 (5), 2013

2. Perform Quick Memory Function Assessment

Ask the student the following questions, recording the answers below. Failure to answer any one of these questions correctly may indicate a concussion:

- What room are we in right now? *Answer:* _____
- What activity/sport/game are we playing now? *Answer:* _____
- What field are we playing on today? *Answer:* _____
- What part of the day is it? *Answer:* _____
- What is the name of your teacher/coach? *Answer:* _____
- What school do you go to? *Answer:* _____

3. Action to be Taken

If there are **any** signs observed or symptoms reported, or if the student fails to answer any of the above questions correctly:

- a concussion should be suspected;
- the student must be immediately removed from play and must not be allowed to return to play that day even if the student states that he/she is feeling better; and
- the student must not leave the premises without parent/guardian (or emergency contact) supervision.

In all cases of a suspected concussion, the student must be examined by a medical doctor or nurse practitioner for diagnosis and must follow Return to Learn and Return to Physical Activity (Form 6003).

4. Continued Monitoring by Parent/Guardian

- Students should be monitored for 24 – 48 hours following the incident as signs and symptoms can appear immediately after the injury **or may take hours or days to emerge.**
- **If any signs or symptoms emerge**, the student needs to be examined by a medical doctor or nurse practitioner as soon as possible that day.

Adapted from McCroy et. al, Consensus Statement on Concussion in Sport. Br J Sports Med 47 (5), 2013

CONCUSSION TOOL

For Coaches, Teachers, Parents, Students and Athletic Therapists

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 person may think and remember things and can cause a variety of symptoms and signs. You do NOT need to lose consciousness to have a concussion.

What causes a concussion?

Any blow to the head, face or neck, or a blow to the body that transmits a force to the head may cause a concussion, e.g., a ball to the head in soccer, being checked into the boards in hockey.

What are the symptoms and signs of a concussion?

Any one or more of the following symptoms and signs may suggest a concussion:

	Symptoms Reported:	Signs Observed:
Physical	<ul style="list-style-type: none"> • Headache • Neck pain • Stomach ache • Blurred vision 	<ul style="list-style-type: none"> • Pressure in head • Dizziness • Nausea • Sensitivity to light/noise • Loss of consciousness • Nausea/vomiting • Seizure/convulsion • Poor coordination/balance • Amnesia • Slowed reaction time • Slurred speech
Cognitive	<ul style="list-style-type: none"> • Feeling in a fog • Difficulty concentrating 	<ul style="list-style-type: none"> • Difficulty remembering • Difficulty concentrating • Difficulty remembering • Confusion • Slowed reaction time
Behavioural	<ul style="list-style-type: none"> • Irritability • Sad/emotional 	<ul style="list-style-type: none"> • Nervous/anxious • Depressed • Inappropriate emotions • Depression
Sleep	<ul style="list-style-type: none"> • Drowsiness 	<ul style="list-style-type: none"> • Difficulty falling asleep • Drowsiness

Note: It may be more difficult for students under the age of 10, those with special needs or students for whom English or French is not their first language, to communicate how they are feeling. The signs of a concussion for younger students may not be as obvious.

Action plan: What to do if you suspect a student has a concussion

If the student is **unconscious**:

- Initiate the Emergency Action Plan and call 911.
- Assume a possible neck injury and, only if trained, immobilize the student before EMS arrives.
- Do not move the student or remove athletic equipment; wait for EMS to arrive.
- Do not leave the student alone.
- Contact the student's parent/guardian.

If the student is **conscious**:

- Stop the activity immediately.
- When the student can be safely moved, remove from activity.
- Conduct an initial concussion assessment – review Symptoms and Signs, perform Memory Testing and Balance Testing (optional).
 - Following the initial assessment, if a **concussion is suspected**:
 - Do not allow the student to return to activity.
 - Contact the student's parent/guardian to pick up student.
 - Stay with the student until parent/guardian arrives.
 - If any signs or symptoms worsen, call 911.
 - Inform the parent/guardian that the student needs to be examined by a medical doctor or nurse practitioner as soon as possible and provide them with a copy of this tool.
 - Following the initial assessment, if a **concussion is not suspected**:
 - The student may return to activity.
 - Contact the student's parent/guardian to inform them of the incident.
 - Provide the parent/guardian with a copy of this tool and inform them that the student should be monitored for 24-48 hours since signs and symptoms may take hours or days to emerge.

Memory Testing

Failure to answer any one of these questions correctly may suggest a concussion.

- What activity/sport are we playing right now?
- What field/facility are we at today?
- What part of the day is it?
- What is the name of your teacher/coach?
- What school do you go to?

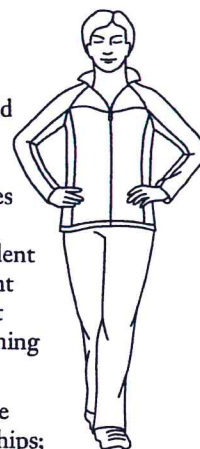
Note: Questions should be geared to student's age and activity.

Balance Testing (OPTIONAL)

Instructions for tandem stance

Ask the student to stand heel-to-toe with non-dominant foot in back. Weight should be evenly distributed across both feet. Student should try to maintain stability for 20 seconds with hands on hips and eyes closed. Count the number of times the student moves out of this position. If student stumbles out of this position, have student open his/her eyes and return to the start position and continue balancing. Start timing when student is set and has eyes closed.

Observe the student for 20 seconds. If the student makes errors (e.g. lifts hands off hips; opens eyes; lifts forefoot or heel; steps, stumbles, or falls; or remains out of the start position for more than 5 seconds), this may suggest a concussion. *SCAT 2 2009*



GUIDELINES FOR STUDENTS RECOVERING FROM A CONCUSSION

It is important for students to be active and play sports. However, a student with a diagnosed concussion needs to follow a medically supervised, individualized Return to Learn/Return to Physical Activity Plan.

Return to Learn and Return to Physical Activity

Step 1 for a student with a diagnosed concussion is the same for Return to Learn and Return to Physical Activity.

Step 1: Rest, with limited cognitive and physical activity. This means limited TV, computer, texting, video games, or reading. The student does not attend school during Step 1. Step 1 continues for a minimum of 24 hours and until the student's symptoms/signs begin to improve or the student is symptom/sign-free.



Return to Learn*

The Return to Learn process is individualized and gradual to meet the particular needs of the student. There is no preset formula for developing strategies to assist a student with a concussion to return to his/her learning activities.

Step 2A: (symptoms improving)

During this step, the student requires individualized classroom strategies and/or approaches to return to full learning activities – these will need to be adjusted as recovery occurs.

At this step, the student's cognitive activity should be increased slowly (both at school and at home) because the concussion may affect his/her academic performance.

Note: Cognitive activities can cause a student's concussion symptoms to reappear or worsen.

Step 2B: (symptom-free)

Student begins regular learning activities without any individualized classroom strategies and/or approaches. Even when students are symptom-free, they should continue to be closely monitored to see if symptoms/signs return and/or there is a deterioration of work habits or performance.

Note: This step occurs at the same time as Step 2 – Return to Physical Activity. Some students may progress from Step 1 directly to Step 2B if they are symptom-free.

Return to Physical Activity

Step 2:

Individual, light aerobic physical activity only such as walking or stationary cycling.

Step 3:

Individual activity related to specific sports, e.g., skating in hockey, running in soccer. No body contact.

Step 4:

Activities where there is no body contact, such as progressive resistance training, non-contact practice and progression to more complex training drills, e.g., passing drills in football and ice hockey.

Note: Clearance by a medical doctor or nurse practitioner is required before Step 5.

Step 5:

Full participation in regular physical activity in non-contact sports following medical clearance. Full training/practice for contact sports.

Step 6:

Full participation in contact sports.

Note: Steps are not days. Each step must take a minimum of 24 hours and the length of time needed to complete each step will vary based on the severity of the concussion and the child/youth.

If at any time concussion signs and/or symptoms return and/or deterioration of work habits or performance occurs, the student needs to be examined by a medical doctor or nurse practitioner.

For more information on concussions visit:

Concussions Ontario: www.concussionsontario.org

Ophea: safety.ophea.net

Parachute: www.parachutecanada.org/active-and-safe

Ontario Government: www.ontario.ca/concussions

** Reproduced with permission from Ophea, Ontario Physical Education Safety Guidelines (updated annually)*

Developed based on tools in the literature including the International Consensus Statement on Concussion in Sport (2013) and the ThinkFirst concussion tool.

This tool has been reviewed by the Parachute/ThinkFirst Canada Concussion Education and Awareness Committee and the Recognition and Awareness Working Group, part of the mTBI/Concussion Strategy, of the Ontario Neurotrauma Foundation who funded the development of this tool.