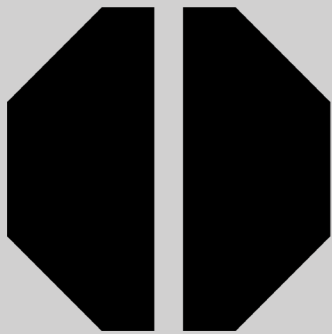


GOVERNMENT OF ONTARIO

CONCUSSION AWARENESS RESOURCE



**ROWAN'S
LAW**

E-BOOKLET: AGES 15 AND UP

Ontario 



Rowan Stringer

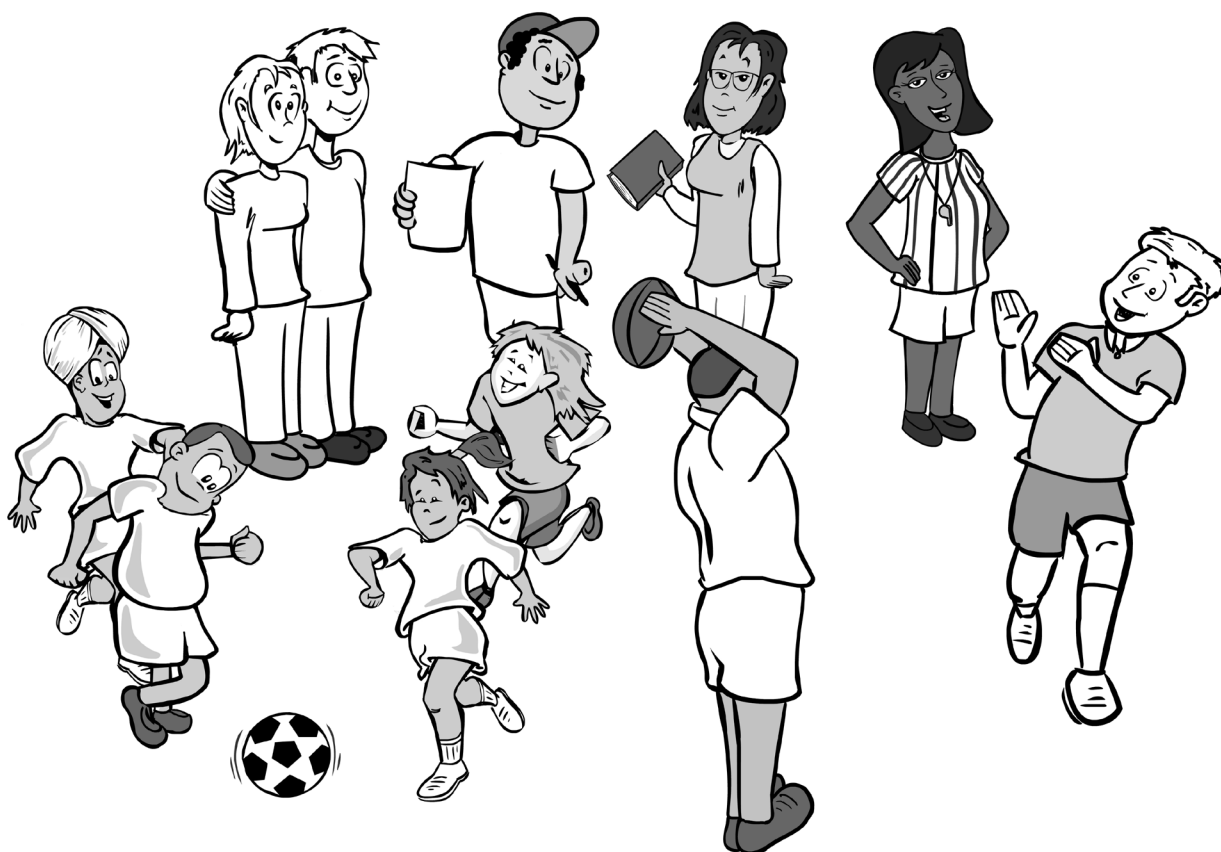
ROWAN'S LAW

This e-booklet is part of a series of Rowan's Law concussion awareness resources. Rowan's Law was named for Rowan Stringer, a high school rugby player from Ottawa, who died in the spring of 2013 from a condition known as second impact syndrome (swelling of the brain caused by a subsequent injury that occurred before a previous injury healed). Rowan is believed to have experienced three concussions over six days while playing rugby. She had a concussion but didn't know her brain needed time to heal. Neither did her parents, teachers or coaches.

These resources are not intended to provide medical advice relating to health care. For advice on health care for concussion symptoms, please consult with a physician or nurse practitioner.

Preventing injuries is important to keeping people active throughout their lives. Some injuries are easy to see and treat but what about an injury inside the head? Brain injuries, such as concussions, don't show on the outside and are not always obvious. Even when you can't see the injury, a person with a concussion still feels the effects and needs the proper care to get better.

This resource will help you learn more about concussions so you can keep yourself and others active and safe – whether you're an athlete, student, parent, coach, official or educator.



WHAT IS A CONCUSSION?



A concussion is a brain injury. It can't be seen on X-rays, CT scans or MRIs. It may affect the way a person thinks, feels and acts.

Any blow to the head, face or neck may cause a concussion. A concussion may also be caused by a blow to the body if the force of the blow causes the brain to move around inside the skull. Examples include being hit in the head with a ball or falling hard onto the floor.

A concussion is a serious injury. While the effects are typically short-term, a concussion can lead to long-lasting symptoms and even long-term effects, such as memory problems or depression.

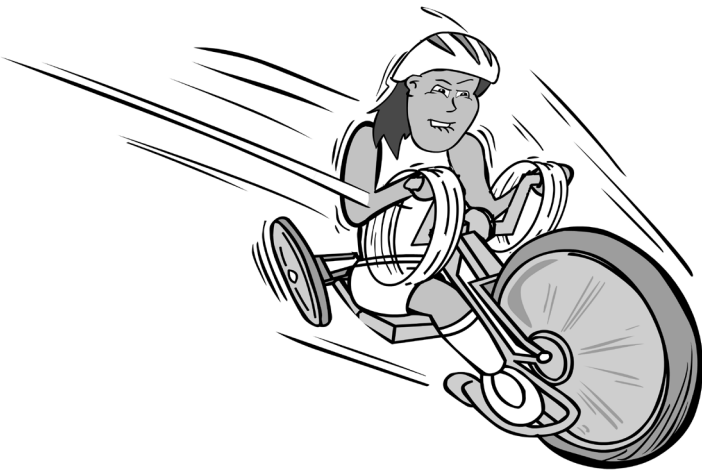


PREVENTING A CONCUSSION

First, educate yourself about concussions.

You should also:

- Ensure you/your athletes use equipment that is in good condition equipment that is in good condition, including helmets and footwear;
- Ensure you/athletes you are supervising wear sports equipment that fits properly;
- Ensure you/your athletes respect the rules of the sport;



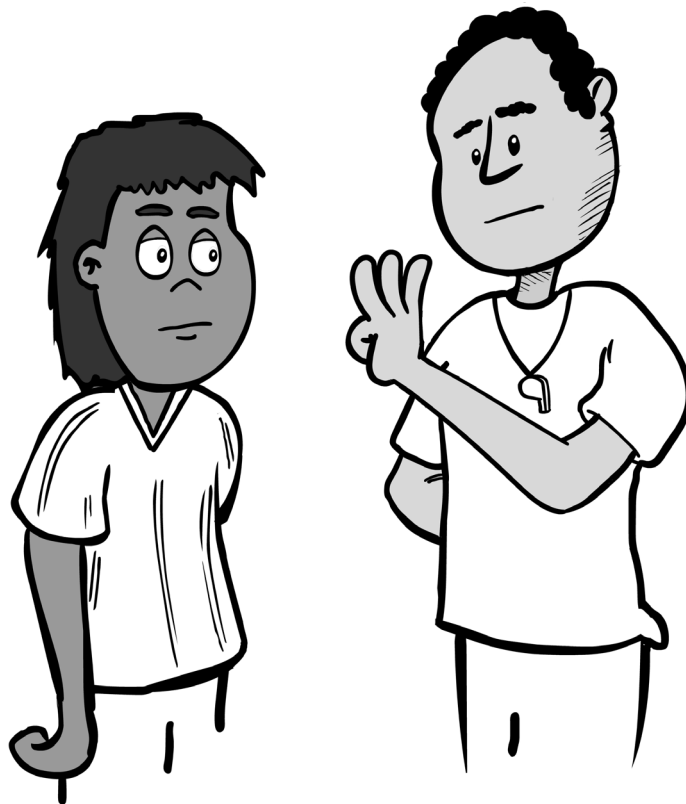
- Commit to your sport organization/school's Concussion Code of Conduct and make sure your athletes do too; and
- Promote a safe and comfortable environment for everyone to report injuries. Make sure everyone understands the risks of not speaking up.

RECOGNIZING A CONCUSSION

▶ HIT. STOP. SIT.

Everyone can help recognize a possible concussion if they know what to look and listen for.

A person with a concussion might have one or more of the signs or symptoms listed below. They might show up right away or hours, even days, later. Just one sign or symptom is enough to suspect a concussion. Most people with a concussion do not lose consciousness.



Common signs and symptoms of a concussion:

PHYSICAL:

- Headache
- Pressure in the head
- Dizziness
- Nausea or vomiting
- Blurred vision
- Sensitivity to light or sound
- Ringing in the ears
- Balance problems
- Tired or low energy
- Drowsiness
- "Don't feel right"

EMOTIONAL:

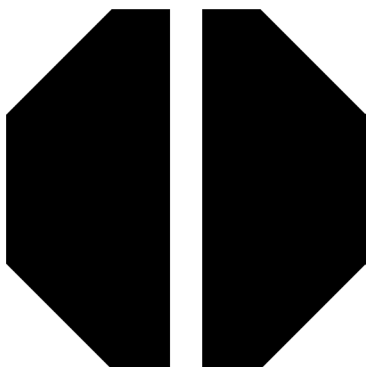
- Irritability (easily upset or angered)
- Depression
- Sadness
- Nervous or anxious

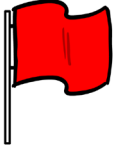
COGNITIVE (THINKING):

- Not thinking clearly
- Slower thinking
- Feeling confused
- Problems concentrating
- Problems remembering

SLEEP-RELATED:

- Sleeping more or less than usual
- Having a hard time falling asleep

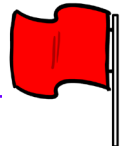




RED FLAGS:

“Red flags” may mean you have a more serious injury. Treat red flags as an emergency and call 911.

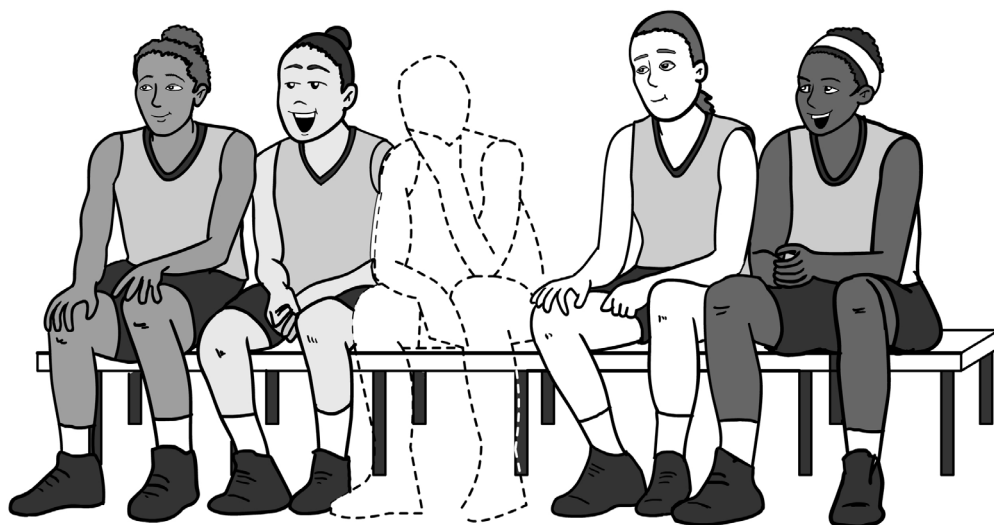
- Neck pain or tenderness
- Double vision
- Weakness or tingling in arms or legs
- Severe or increasing headache
- Seizure or convulsion
- Loss of consciousness (knocked out)
- Vomiting more than once
- Increasingly restless, agitated or aggressive
- Getting more and more confused



WHAT TO DO NEXT?

If you suspect a concussion, remove yourself or the person you are supervising from the activity right away. Continuing to participate puts you or the person with a suspected concussion at risk of more severe, longer-lasting symptoms. Call the parent/guardian (for athletes under 18 years of age) or emergency contact. Don't leave anyone with a suspected concussion alone.

Anyone who has been removed from sport with a suspected concussion should see a physician or nurse practitioner as soon as possible. That person should not return to unrestricted participation in training, practice or competition until they have received medical clearance.



GETTING BETTER

Most people with a concussion get better in one to four weeks. Some people take longer. Each concussion is unique – don't compare one person's recovery to another's.

It's possible for a concussion to have long-term effects. People may experience symptoms, such as headaches, neck pain or vision problems, that last for months, or even years. Some may have lasting changes in their brain that lead to issues such as memory loss, concentration problems or depression. In rare cases, a person who suffers multiple brain injuries without healing in between may develop dangerous swelling in their brain, a condition known as second impact syndrome, that can result in severe disability or death.

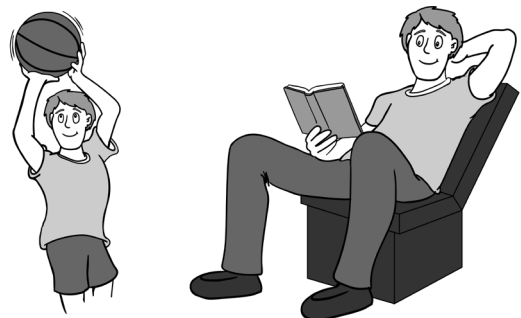
While a person is recovering from a concussion, they may have to

limit certain activities at first and reintroduce them gradually. For the first two days after the injury, the person should minimize time spent using screens, such as a phone, computer, tablet or TV.

Healing from a concussion is a process that takes patience. Rushing back to activities can make symptoms worse and recovery longer.

Anyone who has a concussion should let others know. This includes parents, all sport teams/ clubs, schools, coaches and educators.

And remember, returning to school comes before returning to unrestricted sport.



RETURNING TO SCHOOL AND SPORT

Athletes and students who are diagnosed by a physician or nurse practitioner as having a concussion must proceed through their sport organization's return-to-sport protocol and/or, where applicable, their school board's return-to-school plan.

Athletes and students should work with their healthcare professional and sport organization/school to establish their individual plans to return to sport as well as return to school.

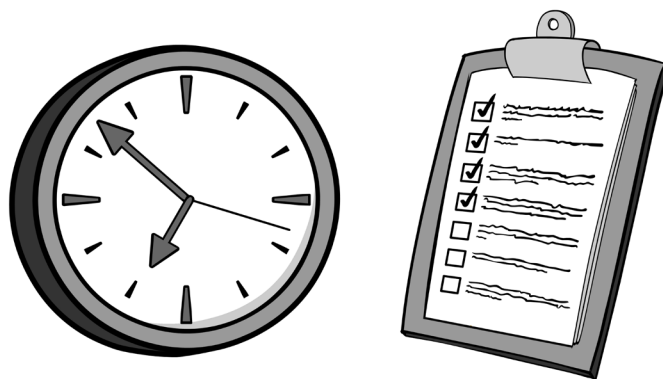
The Return-to-School Plan (Learning and Physical Activity)

Students in elementary and secondary school will need to follow their school board's return-to-school plan, which supports a student's gradual return to learning and return to physical

activity. Contact the school for more information.

The Return-to-Sport Protocol

An athlete must not resume unrestricted participation in training, practice or competition until they have received medical clearance from a physician or nurse practitioner. Before seeking medical clearance, the athlete should have completed all the steps for full return to school, completed steps one to three of return to sport and be symptom-free, even when exercising.



The table below provides a list of steps and activities that are commonly found in most return-to-sport protocols and return-to-school plans.

Table: Common Steps in Graduated Return-to-Sport Protocols

Step	Activity	Description	Goal of Step
1	Activities of daily living and relative rest (first 24 to 48 hours)	Daily activities at home that don't worsen symptoms more than mildly and briefly Minimize screen time	Gradual re-introduction of typical activities
2	Light then moderate effort aerobic exercise	Walking or stationary bicycling, slowly at first then increase the pace May begin light resistance training (if appropriate)	Increase heart rate
3	Individual sport-specific activities, without risk of head impact	Individual physical activity (away from other participants), such as running or simple drills No contact or head impact activities	Increase the intensity of aerobic activities and introduce low-risk sport-specific movements
4	Non-contact training, practice, drills	After medical clearance from a physician or nurse practitioner High intensity exercises and harder training drills, including activities with other participants No contact	Resume usual intensity of exercise, coordination and activity-related thinking skills
5	Unrestricted practice	Unrestricted practice – with contact where applicable	Return to activities that have a risk of falling or body contact, restore confidence and assess functional skills
6	Return to sport	Unrestricted game play or competition	—

Medical clearance is always required prior to the athlete's return to unrestricted practice, training or competition.

Check with your sport club and school for the specific steps that you should follow.

Each step should take at least 24 hours to complete. An athlete is typically ready to progress to the next step when they can tolerate activities. Returning to some activities may make their symptoms feel a little worse. This is common and OK. However, if during steps 1 to 3 their symptoms get worse more than mildly and briefly, the athlete should stop and try again the next day at the same step. “Briefly” means symptoms should settle back down within an hour.

After medical clearance, the athlete's concussion symptoms should not come back. If they do, the athlete should return to step 3 and visit the physician or nurse practitioner to be reassessed.

If symptoms do not improve or if the symptoms continue to worsen, the athlete should return to the physician or nurse practitioner.



REMINDER

Remember:

- 1. Recognize signs and symptoms of a concussion and remove** yourself or the athlete from the sport/physical activity, even if you feel OK or they insist they are OK.
- 2. Get yourself/the athlete checked out** by a physician or nurse practitioner.
- 3. Support gradual return** to school and sport.



This resource includes information adapted from:

Parachute. *Canadian Guideline on Concussion in Sport, 2nd edition*. parachute.ca/guideline;

Patricios, J., et al. *Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport-Amsterdam, October 2022*. <https://doi.org/10.1136/bjsports-2023-106898>;

Zemek, R., Reed, N., Dawson, J., et al. *Living Guideline for Pediatric Concussion*. www.pedsconcussion.com