

## 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 an athlete may think and remember things, and can cause a variety of symptoms.

## What are the signs and symptoms of a concussion?

**An athlete does not need to be knocked out (lose consciousness) to have had a concussion.** The athlete might experience one or more of the following:

Cognitive (thinking)	Physical	Emotional/ behavioural
<ul style="list-style-type: none"><li>• Does not know time, date, place, details about a recent activity</li><li>• Difficulty remembering things that happened before and after the injury</li><li>• Difficulty concentrating</li><li>• Not thinking clearly</li><li>• Feeling like “in a fog”</li></ul>	<ul style="list-style-type: none"><li>• Headache or head pressure</li><li>• Dizziness</li><li>• Stomachache, nausea, vomiting</li><li>• Blank or vacant stare</li><li>• Blurred or fuzzy vision</li><li>• Sensitive to light or sound</li><li>• Sees stars, flashing lights</li><li>• Ringing in the ears</li><li>• Problems with balance or co-ordination</li><li>• Feels tired or no energy</li><li>• “Don’t feel right”</li></ul>	<ul style="list-style-type: none"><li>• Nervousness or anxiety</li><li>• Strange or inappropriate emotions (i.e., laughing, crying, getting mad easily)</li><li>• Slow to answer questions or follow directions</li><li>• Easily distracted</li><li>• Not participating well</li><li>• Changes in sleep patterns</li></ul>

**Get medical help immediately if an athlete has any “red flag” symptoms** such as neck pain, repeated vomiting, growing confusion, seizures and weakness or tingling in their arms or legs. These may be signs of a more serious injury.



## What causes a concussion?

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

## What should I do if I think an athlete might have a concussion?

In all suspected cases of concussion, the athlete should stop playing right away. Continuing to play increases their risk of more severe, longer-lasting concussion symptoms, as well as increases their risk of other injury.

The Concussion Recognition Tool 6 (CRT6) can be used by anyone to help recognize the signs and symptoms of a possible concussion.

The athlete should not be left alone and should be seen by a doctor as soon as possible. They should not drive.

If the athlete loses consciousness, call an ambulance to take them to the hospital right away. Follow basic principles of first aid. Do not move them or remove any equipment such as a helmet.

The athlete should not return to play the same day.

## How long will it take for the athlete to get better?

The signs and symptoms of a concussion often last for up to four weeks but may last longer. In some cases, athletes may take many weeks or months to heal. If the athlete has had a concussion before, they may take longer to heal.

If the athlete's symptoms are persisting (i.e., last longer than four weeks) they should be referred to a licensed healthcare professional who is an expert in the management of concussion.

## How is concussion treated?

For the first 24 to 48 hours after the injury, the athlete can engage in activities of daily living, such as light walking and preparing meals, and social interactions at home. Screen time should be minimized in the first 48 hours. Then, school and sport activities can be introduced and increased gradually.

As the athlete is returning to activities, their symptoms may feel a little worse. This is common and OK as long as it is mild and brief. "Brief" means their symptoms should settle back down within an hour. If activities make their symptoms worsen more than this, they should take a break and adapt activities.

Recovering from concussion is a process that takes patience. If the athlete goes back to activities before they are ready, it is likely to make their symptoms worse, and their recovery might take longer.

## When should the athlete go to the doctor?

Anyone with a possible head injury should be seen by a doctor as soon as possible.

The athlete should go back to the doctor immediately if, after being told they have a concussion, they have worsening symptoms, such as:

- being more confused
- headache that is getting worse
- vomiting more than twice
- not waking up
- having any trouble walking
- having a seizure
- strange behaviour

## When can the athlete return to school?

An athlete with a concussion may miss one or more days of school. Generally, more than one week of complete absence from the school environment is not recommended. Medical clearance is not required to return to school.

The Return-to-School Strategy provides information on the stages of returning to the classroom. **Return to school should be completed before the athlete seeks medical clearance for full return to unrestricted sport activities.**

## When can the athlete return to sport?

Return to sport and physical activity must follow a step-wise approach.

In this approach:

- Each stage is at least 24 hours.
- The athlete moves on to the next step when they can tolerate activities.
- If their symptoms worsen more than mildly and briefly, the athlete should stop and try again the next day at the same step.

**Step 1: Activities of daily living and relative rest (first 24 to 48 hours).** The athlete can start with daily living activities such as moving around the home, preparing meals, light walking and social interactions (e.g., talking with friends or family). Minimize screen time.

### Step 2: Light to moderate effort aerobic exercise

**2A:** Start with light aerobic exercise such as walking or stationary cycling at a slow to medium pace. May begin light resistance training that does not result in more than mild and brief worsening of symptoms.

**2B:** Gradually increase the intensity of aerobic exercise to moderate effort, such as stationary cycling or walking at a brisk pace. Moderate effort means the activity may cause faster breathing and heart rate, but not enough to

prevent you from being able to talk comfortably.

**Step 3: Individual sport-specific activities, without risk of inadvertent head impact.** Add sport-specific activities, such as running, skating or throwing drills, that can be done individually (away from other participants) in a low-risk environment. Activities should be supervised by a coach, trainer, teacher or parent/caregiver. Continue progressing at this step until symptom-free, even when exercising.

### Medical clearance is required before step 4.

**Step 4: Training drills and activities with no contact.** Progress to usual intensity exercise and add in more challenging drills such as passing drills. Participate in multi-athlete training (if applicable) and non-contact practices. There should be no impact activities (e.g., no checking, no heading the ball).

**Step 5: Return to non-competitive activities, full-contact practice and physical education activities.** Progress to typical physical activities, except for competitive gameplay. Restore confidence and skills.

**Step 6: Return to sport and physical activity without restriction.**

## An athlete should never return to activities with risk of contact until cleared by a doctor!

Returning before full recovery from concussion puts athletes at higher risk of sustaining another concussion, with symptoms that may be more severe and last longer.

## Additional resources

Scan the QR code or visit [parachute.ca/concussion](https://parachute.ca/concussion)

