



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:

| Thinking Problems | Athlete's Complaints | Other Problems |
|---|---|---|
| <ul style="list-style-type: none"> • 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 • Feeling dazed • Feeling “dinged” or stunned; “having my bell rung” • Seeing stars, flashing lights • Ringing in the ears • Sleepiness • Loss of vision • Seeing double or blurry vision • Stomachache, stomach pain, nausea | <ul style="list-style-type: none"> • Poor co-ordination or balance • Blank stare/glassy-eyed • Vomiting • Slurred speech • Slow to answer questions or follow directions • Easily distracted • Poor concentration • Strange or inappropriate emotions (i.e., laughing, crying, getting mad easily) • Not playing as well |

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 which 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 5 (CRT5) 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 that day. They should not drive.

If the athlete loses consciousness, call an ambulance to take them to the hospital right away. 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 usually last for one to four weeks, but may last longer. In some cases, it may take many weeks or months to heal. If the athlete has had a previous concussion, they may take longer to heal.

If the athlete's symptoms are persistent (i.e., last longer than two weeks in adults or longer than four

weeks in youth under 18 years old) they should be referred to a healthcare professional who is an expert in the management of concussion.

How is concussion treated?

After an initial short period of rest (24 to 48 hours), light cognitive and physical activity can begin, as long as these don't worsen symptoms.

As the athlete is recovering from concussion, they should not do any activities that may make their symptoms worse. This might mean limiting activities such as exercising, driving, and screen time on their phone or other devices.

Recovering from concussion is a process that takes patience. Going back to activities before the athlete is ready is likely to make their symptoms worse, and their recovery may 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?

On average, students with concussion miss one to four days of school. Each concussion is unique, so the athlete may progress at a different rate than others.

The Return-to-School Strategy provides information on the stages of returning to the classroom. **Return to school must come before full return to sport.**

When can the athlete return to sport?

It is very important that an athlete not go back to full participation in sport if they have any concussion signs or symptoms. 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 stage when they can tolerate activities without new or worsening symptoms.
- If any symptoms worsen, the athlete should stop and go back to the previous stage for at least 24 hours.

Stage 1: After an initial 24 to 48 hours of rest, light cognitive and physical activity can begin, as long as these don't worsen symptoms. The athlete can start with daily activities such as moving around the home and simple chores, such as making their bed.

Stage 2: Light aerobic activity such as walking or stationary cycling, for 10 to 15 minutes. The athlete shouldn't do any resistance training or other heavy lifting.

Stage 3: Individual sport-specific exercise with no contact for 20 to 30 minutes (e.g., running, throwing). The athlete shouldn't do any resistance training.

Stage 4: Begin practising with no contact (no checking, no heading the ball, etc.). Add in more challenging drills. Start to add in resistance training.

Stage 5: Participate in practice with contact, once cleared by a doctor.

Stage 6: Full game play or competition.

The Return-to-Sport Strategy provides more information on the stages of returning to sport.

An athlete should never return to sport 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

Available at parachute.ca/concussion:

- Return-to-School Strategy
- Return-to-Sport Strategy
- Canadian Guideline on Concussion in Sport
- Concussion: Baseline Testing
- Making Headway eLearning (Coaching Association of Canada)