

Guidelines for recognising and managing concussion in grassroot sports

A guide for the general public

If in doubt, sit them out.

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Purpose of this guide

We have written this guide to tell you:

- how to recognise a possible concussion during sport or physical activity; and
- how a concussion should be managed from the time a person is injured until they are safe to return to play.

This information is for the general public and for those taking part in settings where healthcare professionals may not be available to manage concussed athletes.

We developed this guide based on best practice. Read more about best practice in Appendix 1 on page 10 of this guide.

Many sporting organisations have their own concussion guides that work for their particular circumstances. We recommend that you read these guides if you are taking part in a similar type of physical activity.

At all levels and across all aspects of physical activity, if anyone is suspected of having a concussion, they must be immediately removed from play. [If in doubt, sit them out.](#)

Anyone who has any of the symptoms described on pages 4 to 5 below may have a concussion and should be assessed by a healthcare professional with training in concussion.

General Guidelines to Recognise and Manage Concussion

The guidelines are in two sections:

Section 1: Recognising Concussion – page 4

Section 2: How Concussions are Managed– page 10

Section 1 – Recognising Concussion

What is a concussion?

Concussion is a traumatic brain injury that causes a disturbance in how a person's brain works. There are many signs and symptoms of concussion, common ones being headache, dizziness, memory disturbance or balance problems.

Loss of consciousness, being knocked out, occurs in less than 10% of concussions. Loss of consciousness is **not** required to diagnose concussion

What causes concussion?

Concussion can be caused by a blow to the head, neck or body.

Who is at risk?

Concussions can happen to anyone at any age. However, **children and young people:**

- may be more likely to get a concussion
- take longer to recover
- may experience incidents of concussion which, if not managed properly and in rare cases, can have serious consequences, **including death.**

If someone has a history of concussion, this can increase the risk of it happening again.

What factors can impact recovery?

Some factors that can impact recovery include:

- previous concussion(s)
- having a learning difficulty
- having ADHD
- having motion sickness
- having a history of migraines.

Concussion is not specific to any one activity, such as sport, and can occur anywhere.

When do symptoms start?

The symptoms of concussion can be immediate or develop over time, but they typically appear in the first 24–48 hours after a head injury.

How to recognise a concussion

This section is informed by a tool to help identify concussion. It is called the Concussion Recognition Tool (CRT6). This tool was designed to be used by non-medically trained people so they can identify and understand how suspected concussions are managed. It is not designed to diagnose concussion. This is the job of a healthcare professional.

Look for these signs – if present call an ambulance

If you notice **any** of the following signs or someone tells you they are suffering from any of these signs or symptoms after a blow to the head or body, you must immediately remove them from any physical activity and call an ambulance.

Signs and symptoms to look for:

- neck pain or tenderness
- seizure, 'fits' or convulsion
- loss of vision or double vision
- loss of consciousness
- increased confusion or deteriorating conscious state (becoming less responsive, drowsy)
- weakness or numbness or tingling in more than one arm or leg
- repeated vomiting
- severe or increasing headache
- increasing restless, becoming agitated or combative
- visual deformity of the skull.

If an individual does not have any of these signs and symptoms after the injury, they may still have a concussion. If a concussion is suspected, an individual should be immediately removed from play. The following sections describe the signs and symptoms of concussion to look out for.

Visible clues of concussion – what you see

Any one or more of the following visual clues can indicate a concussion:

- dazed, blank or vacant look
- lying motionless on ground

- unsteady on feet; balance problems or falling over; poor coordination; wobbly
- loss of consciousness or responsiveness
- disorientation or confusion; staring or limited responsiveness; or an inability to respond appropriately to questions
- falling unprotected to the playing surface
- slow to get up after a direct or indirect hit to the head
- seizure, fits or convulsions
- facial injury

Signs and symptoms of concussion – what you see or are told

If the person complains of any one or more of the following, they may have a concussion:

Physical symptoms

- headache
- feeling of “pressure in head”
- balance problems
- nausea or vomiting
- drowsiness
- dizziness
- blurred vision
- more sensitive to light
- more sensitive to noise
- fatigue or low energy
- not ‘feeling right’
- neck pain

Changes in emotions

- more emotional
- more irritable
- feeling sad
- feeling nervous or anxious

Changes in thinking

- difficulty concentrating
- difficulty remembering
- feeling slowed down
- feeling as if ‘in a fog’

Remember, symptoms may develop over minutes or hours following the injury, so you need to keep a close eye on the person.

Questions to ask

These questions can be changed to suit your own particular activity and event. If the person struggles to answer these questions correctly, they may have a concussion. Here are some examples of questions you can ask:

Table 1: Questions to ask about the event and general questions

Questions to ask
What event were you doing?
Who scored last in this game?
What team did you play last game?
Did your team win the last game?
Where are we now?
About what time of the day is it?
How did you get here today?
Where were you on this day last week?
What were you doing this time last week?

Section 2: The management of concussion

In this section, we focus on three issues associated with managing concussion. A healthcare professional with training in concussion will be responsible for the guidance of this management, but you can have an important role in the immediate management of a suspected concussion.

Issue 1: Immediate management of a suspected concussion

Issue 2: Manage the concussion or suspected concussion on an ongoing basis

Issue 3: Returning to educational or care settings for young people

Issue 1: Immediate management of a suspected concussion

- **Immediately remove the person from play:** Anyone with a suspected concussion should be immediately removed from play. Teammates, coaches, match officials, team managers, administrators or parents who suspect someone may have concussion must do their best to make sure that they are removed from play in a safe manner.
- **Do not return them to activity that day:** Once safely removed from play, they must not be returned to activity that day. In all cases of suspected concussion, we recommend that the player is referred to a medical or healthcare professional with training in concussion (for example, General Practitioner, Certified Athletic Therapist, Chartered Physiotherapist). This should happen even if the symptoms resolve.
- **Anyone with suspected concussion should not:**
 - be left alone for at least the first 3 hours – if their symptoms get worse, they could need immediate medical attention.
 - be sent home by themselves – they need to be with a responsible adult.
 - drink alcohol, use recreational drugs, or medications not prescribed by their doctor.
 - drive a motor vehicle until cleared to do so by a healthcare professional.

Issue 2: Ongoing management of a concussion or suspected concussion

- 1. Get a healthcare professional's help:** Relative rest is generally recommended in the first 24-48 hours after a concussion. During this time, it is important that the individual with a suspected concussion attend a healthcare professional with training in concussion. The healthcare professional will then bring them through a recovery process. This will include a plan for them to return to education or work and a plan to return to physical activity. . Most concussions typically resolve within a month.
- 2. Think about returning to education or work:** Returning to education/work is the priority. Both the return to learn and return to play/activity strategies include an initial period of relative rest of 24–48 hours. More detail on the return to learn guidance is included in Appendices 1. The healthcare professional may give specific advice on how to return to education and work.
- 3. Think about returning to physical activity including organised sport:** The healthcare professional will guide them through a return to physical activity and organised sport (see Appendices 1). They will then let you know when you can go back to physical activity and organised sport fully. If the person is returning to organised sport, make sure to consult and follow your individual sporting body's own Concussion Guidelines.

Issue 3: Returning to educational or care settings for young people

The recovery from a concussion can take time. To help with a child or young person's recovery, parents and guardians may need to share specific medical advice with education or care authorities. In addition, medical professionals may request updates on how recovery is progressing. Parents and guardians play an important role in supporting these processes.

Recovery may in some instances necessitate a return to educational or care settings on a part-time basis. On other occasions a medical expert may be of the opinion that the patient will recover more quickly. In all instances, parents and guardians should make sure that the appropriate medical advice is sought and brought to the attention of relevant care and educational personnel.

Many young people with a concussion will cope well with the expectations of school work, but some may have difficulties in the following areas:

- Paying attention and concentrating
- Remembering new information
- Completing tasks in a timely way
- Organisation of self and equipment
- Inappropriate or impulsive behaviour
- Irritability, more emotional than previously
- Coping with stress
- Fatigue
- Coping with noise/light
- Headaches, dizziness or nausea

Accordingly, medical advice may recommend a range of modifications, taking into consideration age, level of understanding, pre-injury needs and abilities and, of course, the severity of their concussion symptoms. Actions to be taken in respect of any concussion recovery programme should always be informed by medical advice, but may feature suggestions such as:

- The activities of a young person with a concussion, whether in a childcare facility, during a school day or in participating physical activity may need to be adjusted to avoid fatigue, according to need. This may include a shorter day, attending only specific subjects and/or allowing for rest breaks.
- Capacity for mentally strenuous activity may take time to return, so participating in general and less-taxing routines may be more appropriate during earlier stages of concussion recovery.
- Focusing on what the individual does well, and breaking activities into smaller, more manageable segments, may help minimise mental strain during recovery.

- Medical advice may suggest seating a young person with concussion away from any irritation or distraction (e.g. away from loud noises/bright lights/talkative peers).
- All individuals with a concussion, but particularly younger people, may need extra time for the completion of tasks, or may be advised to participate in less-demanding activities or tasks.
- The peers of those with a concussion may need to be advised of the recovery pathway and of potential roles in organisational, memory or task supports.
- Mental strain may cause frustration and anxiety (particularly during stressful times); medical advice may highlight the importance of cognitive rest in the recovery process.
- The emotional component of recovering from a head injury is often a factor in cases of concussion and recovering individuals may need to be encouraged to take quiet time if they appear overwhelmed.
- Parents, guardians, carers and others involved in the care of younger people with a concussion may be encouraged to regularly check in with them. Understanding how they are feeling and coping, and whether symptoms of concussion are aggravated, provoked or bothersome, may help inform medical or healthcare professionals in relation to their recovery.

Appendix 1 – International guidance about recovery from Concussion

In October 2022, the Sixth International Conference on Concussion in Sport was held. This conference developed the Concussion Recognition Tool (CRT6) which informed the creation of this guideline and is available online. This conference developed the best practice and also produced a Consensus Statement to guide healthcare professionals looking after people who are recovering from concussion. This Consensus Statement is widely available online and includes the following tables, on which the guidance in this document is based:

Return to Learn

Table 1 Return-to-learn (RTL) strategy			
Step	Mental activity	Activity at each step	Goal
1	Daily activities that do not result in more than a mild exacerbation* of symptoms related to the current concussion	Typical activities during the day (eg, reading) while minimising screen time. Start with 5–15 min at a time and increase gradually.	Gradual return to typical activities
2	School activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	Return to school part time	Gradual introduction of schoolwork. May need to start with a partial school day or with greater access to rest breaks during the day.	Increase academic activities
4	Return to school full time	Gradually progress in school activities until a full day can be tolerated without more than mild* symptom exacerbation.	Return to full academic activities and catch up on missed work
Following an initial period of relative rest (24–48 hours following an injury at Step 1), athletes can begin a gradual and incremental increase in their cognitive load. Progression through the strategy for students should be slowed when there is more than a mild and brief symptom exacerbation. *Mild and brief exacerbation of symptoms is defined as an increase of no more than 2 points on a 0–10 point scale (with 0 representing no symptoms and 10 the worst symptoms imaginable) for less than an hour when compared with the baseline value reported prior to cognitive activity.			

Return to Play/Activity

Table 2 Return-to-sport (RTS) strategy—each step typically takes a minimum of 24 hours			
Step	Exercise strategy	Activity at each step	Goal
1	Symptom-limited activity	Daily activities that do not exacerbate symptoms (eg, walking).	Gradual reintroduction of work/school
2	Aerobic exercise 2A—Light (up to approximately 55% maxHR) then 2B—Moderate (up to approximately 70% maxHR)	Stationary cycling or walking at slow to medium pace. May start light resistance training that does not result in more than mild and brief exacerbation* of concussion symptoms.	Increase heart rate
3	Individual sport-specific exercise Note: If sport-specific training involves any risk of inadvertent head impact, medical clearance should occur prior to Step 3	Sport-specific training away from the team environment (eg, running, change of direction and/or individual training drills away from the team environment). No activities at risk of head impact.	Add movement, change of direction
Steps 4–6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.			
4	Non-contact training drills	Exercise to high intensity including more challenging training drills (eg, passing drills, multiplayer training) can integrate into a team environment.	Resume usual intensity of exercise, coordination and increased thinking
5	Full contact practice	Participate in normal training activities.	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play.	
*Mild and brief exacerbation of symptoms (ie, an increase of no more than 2 points on a 0–10 point scale for less than an hour when compared with the baseline value reported prior to physical activity). Athletes may begin Step 1 (ie, symptom-limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0–10 scale) occurs during Steps 1–3, the athlete should stop and attempt to exercise the next day. Athletes experiencing concussion-related symptoms during Steps 4–6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of readiness to RTS should be provided by an HCP before unrestricted RTS as directed by local laws and/or sporting regulations. HCP, healthcare professional; maxHR, predicted maximal heart rate according to age (ie, 220-age).			