



PREVENTION. CARE. RECOVERY.

Te Kaporeihana Āwhina Hunga Whara

CONCUSSION. RECOGNISING THE SIGNS STARTS WITH YOU

A step-by-step guide to concussion and your role in recognising the signs, removing players from play and referring them to a medical doctor.



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The following information is taken from the ACC national guideline and will help you understand your role in identifying the signs of a concussion. Concussion is an injury to the brain, which can be serious. The concussion guidelines have been produced by ACC in consultation with a panel of experts and are based on the 4th Zurich Consensus statement (2012) on concussion in sport.

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WHAT IS CONCUSSION?

Concussion is a brain injury that can occur in any sport, particularly where there is body contact. Concussion is caused by the impact of force (a blow) to a part of the body not necessarily the head. All concussions are serious. Extra caution is required for child and adolescent players.

A successful recovery from a concussion starts with you recognising the signs. Only 10-20% players lose consciousness. It may take several hours (or even days) post injury for some or all of the symptoms of concussion to emerge.

If concussion is suspected, remove from play/activity immediately and seek urgent assessment by a medical doctor. A medical doctor must provide assessment and management for, or exclusion of, a concussion because the diagnosis may be difficult and relies on clinical judgment.

WHAT **YOU SHOULD DO**

RECOGNISE
THE SIGNS AND
SYMPTOMS OF
CONCUSSION

REMOVE
THE PLAYER FROM PLAY

REFER
THEM TO A
MEDICAL DOCTOR
FOR ASSESSMENT

RECOGNISE THE SIGNS AND SYMPTOMS OF CONCUSSION

Concussion presents with a range of signs and/or symptoms that may or may not include loss of consciousness.^[1]



**CONCUSSION SHOULD
BE SUSPECTED IF ONE OR
MORE OF THE FOLLOWING
VISIBLE CLUES, SIGNS,
SYMPTOMS OR ERRORS
IN MEMORY QUESTIONS
ARE PRESENT.**

The following information is based on information provided from the Pocket Concussion Recognition Tool™.

01 **PHYSICAL SIGNS (WHAT YOU SEE)**

- Loss of consciousness or non-responsive
- Lying on the ground not moving or slow to get up
- Loss of balance/co-ordination
- Dazed or vacant look
- Disorientation/confusion
- Visible injury to face or head (especially in combination with any other signs)
- Grabbing/clutching of head

02 **MEMORY (WHAT THEY SAY)**

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

- “What venue are we at today?”
- “Which half/quarter is it now?”
- “Who scored last in this game?”
- “What team did you play last week game?”
- “Did your team win the last game?”

03

CLINICAL SYMPTOMS (WHAT THEY FEEL)

- Blurred vision
- Neck pain
- Nausea
- Dizziness
- Confusion
- Sensitivity to light &/or noise
- Nervous or anxious
- Fatigue
- Irritability
- Headache/pressure in the head
- Drowsiness/trouble sleeping
- More emotional
- Problems with memory
- Reduced ability to think/concentrate
- Difficulty sleeping

04

RED FLAGS (WHAT REQUIRES HOSPITALISATION)

If no qualified medical professional is available, consider transporting by ambulance for urgent medical assessment.

- Player complains of neck pain
- Increasing confusion or irritability
- Repeated vomiting
- Seizure or convulsion
- Double vision
- Weakness or tingling/burning in arms or legs
- Deteriorating conscious state
- Severe or increasing headache
- Unusual behaviour change

**“CONCUSSION
PRESENTS
WITH A RANGE
OF SIGNS
AND/OR
SYMPTOMS”**



REMOVE THE PLAYER FROM PLAY

When a concussion or possible concussion occurs, non-medical personnel like yourself should take responsibility for removing the injured player from the sport/activity. In cases of uncertainty always adopt a conservative approach – “If in doubt sit them out”. Players with a suspected concussion should not be left alone and should not drive a motor vehicle.

**“IF IN DOUBT
SIT THEM OUT”**



TO HELP AN UNCONSCIOUS PLAYER:

- Apply first aid principles: **DRSABC** (Danger, Response, Send for help, Airway, Breathing, Circulation).
- Treat as though they have a **neck injury**.
- **ONLY be moved by a medical professional** trained in spinal immobilisation techniques.
- **Do not remove helmet** (if present) unless trained to do so.
- **Call 111** if there is concern regarding the risk of structural head or neck injury.

AN PLAYER WITH ANY OF THE FOLLOWING SHOULD BE REFERRED TO HOSPITAL URGENTLY:

- Loss of consciousness or seizures.
- Persistent confusion.
- Deterioration after being injured, increased drowsiness, headache or vomiting.
- Report of neck pain or spinal cord symptoms such as numbness, tingling, muscle weakness.

REFER THEM TO A MEDICAL DOCTOR FOR ASSESSMENT

Anyone with a suspected head injury needs to see and be assessed by a medical doctor. Only a qualified medical doctor can assess and diagnose a concussion. This is essential to confirm the diagnosis of concussion and to assess the risk for more serious injury.

It is useful to have a list of local medical doctors, concussion clinics and emergency departments close to where the sport/activity is being played. A pre-activity checklist of the appropriate services could include:

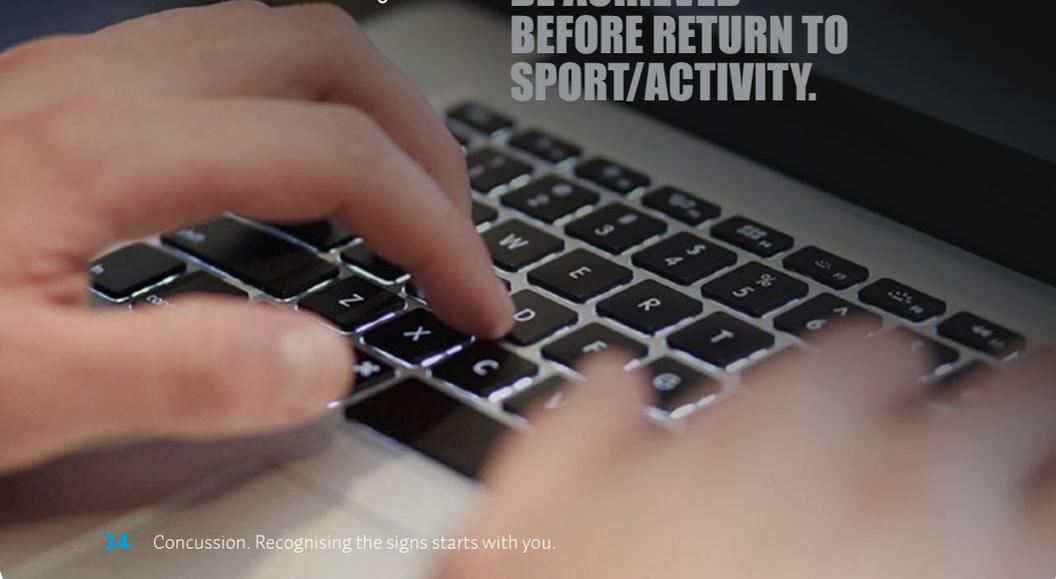
- Local medical doctors or medical centre.
- Local hospital emergency department.
- Ambulance services (111).



WHAT HAPPENS NEXT

REST, RECOVER AND RETURN

It is unanimously agreed that no return to sport/ activity on the day of concussive injury should occur.^[1] Return to school/work may need to be graduated and demands altered to reflect level of function, guided by a medical practitioner experienced in this area.



**RETURN TO SCHOOL/
WORK AND SOCIAL
ACTIVITIES SHOULD
BE ACHIEVED
BEFORE RETURN TO
SPORT/ACTIVITY.**

REST UNTIL SYMPTOM- FREE

Initial concussion management involves physical and cognitive rest until the acute symptoms resolve and then a graded programme of exertion (physical and mental activity), guided by a person trained in concussion management, prior to medical clearance and return to sport.

RECOVER BY FOLLOWING YOUR MEDICAL DOCTOR'S ADVICE AND GRADUALLY BECOMING MORE ACTIVE.

All players diagnosed with concussion must go through a graduated return to activity protocol led by a person trained in concussion management (e.g. coach, physical trainer, teacher, parent etc.) under the supervision of a medical doctor. Players should have fully returned to school or work and social activities before returning to physical activity.

RETURN TO THE FULL DEMANDS OF YOUR SPORT WHEN FULLY RECOVERED & CLEARED BY YOUR MEDICAL DOCTOR.

Clearance by a medical doctor is required before return to sport/activity. Overleaf is an example of a graduated return to sport protocol based on the best available evidence and expert experience.

GRADUATED RETURN TO SPORT PROTOCOL

Return to activity stage	Functional exercise at each stage of rehabilitation	Objective of each stage
No activity	Avoid all physical and mental exertion including the use of technology (e.g. use of phones, computers, reading, watching TV).	Recovery.
Light aerobic exercise	Walking, swimming or stationary bike keep intensity of exercise very low/easy. No resistance training.	Increase heart rate.
Sport specific exercise	Running drills. No head impact activities.	Add movement.
Non-contact training drills	Progression to more complex training drills e.g. passing, drills.	Exercise, co-ordination and cognitive load.
Full contact practice	Following clearance from medical doctor, participate in normal training activities.	Restore confidence and assess functional skills by coaching staff.
Return to play	Normal sport.	Full return to sport.

It is important to note that different sports have different rules and return to play guidelines. Before returning it is important to check with your sports code on the rules for your sport.

It is unanimously agreed that no return to sport/activity on the day of concussive injury should occur.^[1]

Return to activity should be particularly cautious where children and adolescents are concerned.

Each individual international sports federation may have specific rules which must be considered (e.g. International Rugby Board rules for New Zealand Rugby).

The safety of the player is the priority and must NOT be compromised.

The decision regarding return to school/work and clearance to return to restricted activity should always be made by a medical doctor.

The decision regarding the timing of return to sport/activity should always be made by a medical doctor.

In some cases, symptoms may be prolonged or graded activity may not be tolerated. If recovery is prolonged, evaluation by a concussion specialist or clinic may be warranted to determine if there are other aspects of the concussion that could respond to rehabilitation.

**“THE SAFETY OF THE PLAYER
IS THE PRIORITY”**

REFERENCE

1. McCrory P, Meeuwisse WH, Aubry M et al. Consensus statement on concussion in sport: The 4th International Conference on Concussion in Sport held in Zurich, November 2012. *British Journal of Sports Medicine*. 2013;**47**(5):250-8.

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