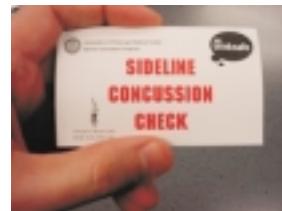


WHAT YOU'LL FIND IN THIS BROCHURE

- [What is concussion?](#)
- [Concussion signs/concussion symptoms.](#)
- [What should you do if concussion occurs?](#)
- [Immediate management for a suspected concussion.](#)
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What is concussion?

- Concussion is the most common head injury in sport and is caused by a temporary disturbance in brain function due to trauma
- Concussion can occur following sudden violent movement of the head, usually in a tackle or collision. Most damage is caused by rotation and acceleration (e.g. spinning of the head caused by a blow to the side of the head)
- Concussion may occur with or without loss of consciousness.
- A free resource - 'Sideline Concussion Check' - contains information about managing a suspected concussion



Concussion signs

Does the player show any of these signs?

- A vacant stare
- Slow responses (e.g. slow to answer questions or follow instructions)
- Slurred or incoherent speech
- Forgets events prior to impact
- Forgets events after impact
- Unable to focus attention (e.g. easily distracted)
- Disorientated (e.g. walking in wrong direction, unaware of time, date, place)
- Uncoordinated (e.g. stumbling, unable to walk in a straight line). If player reports any of these symptoms, they should not return to play
- Emotionally confused (e.g. aggressive, appearing distraught, crying for no apparent reason)
- Dazed or stunned

If player shows any of these signs, ask the player the questions contained in the 'Sideline Concussion Check' card.

Concussion symptoms

Does the player show any of these signs?

- Feelings of nausea (sickness)
- Double vision or fuzzy vision
- Ringing in the ears
- Any period of loss of consciousness
- Headache
- Pupils appear different in size
- Sensitivity to light or noise
- Feeling sluggish, groggy or dizzy
- Concentration or memory problems

What should you do if concussion occurs?

- ALWAYS assume a cervical spine injury if the player is unconscious
- If there is any risk of a neck injury, stabilise the player's head and neck, then get help
- When appropriate support (doctor or ambulance crew) has stabilised the neck with a collar, the player may be taken from the field on a scoop stretcher or spinal board
- A doctor or sports medic should make a thorough medical assessment, record the symptoms and events leading to the injury, and make further hospital referral if required
- No concussed player should return to their sport until they have been cleared by a medical professional

Immediate management for a suspected concussion

REDUCE IMMEDIATE DANGER

- Stop play



IF UNCONSCIOUS:

- ALWAYS assume a spine injury if the player is unconscious
- If there is any risk of a neck injury, stabilise the player's head and neck, then get help
- When appropriate support (doctor or ambulance crew) has stabilised the neck with a collar, the player may be taken from the field on a scoop stretcher or spinal board
- A doctor or sports medic should make a thorough medical assessment, record the symptoms and events leading to the injury, the state of the player immediately following the injury, and make further hospital referral if required
- Check ABCs
 - **Airways** – remove anything blocking airway
 - **Breathing** – is player breathing? If not, start mouth to mouth resuscitation
 - **Circulation** – is there a pulse? If not, start Cardio Pulmonary Resuscitation (CPR)



IF CONSCIOUS:

- Check 'Concussion Signs and Symptoms' (Above)
- Assess Orientation, Memory and Concentration state by asking questions contained in the '[Sideline Concussion Check](#)'.

LATER IN THE DAY



THE NEXT 24 HOURS

- A responsible adult should stay with the concussed player for at least the next 24 hours and follow the advice contained in the '[Sideline Concussion Check](#)'.

THE PLAYER

- The player may feel irritable, tired and nauseous
- They may behave unusually or seem confused.

SEEK URGENT MEDICAL ATTENTION FOR:

- Convulsions, or seizures (arms and legs jerk uncontrollably)
- Very drowsy or can't be woken up
- Severe or worsening headache
- Vomiting more than three times
- Deterioration in level of consciousness
- Weakness in arms or legs and are unsteady on feet.
- Unequal pupil size
- Slur speech
- Pass out or have a blackout

ALCOHOL AND DRUGS SHOULD BE AVOIDED

What rehabilitation should follow a concussion?

- It may take days or weeks to fully recover from concussion. There is no pre-determined way of knowing how long recovery will take
- No concussed player should return to training or play for a period of three weeks after they were concussed. After this period the player may only resume participation when they are symptom free and have received a medical clearance. Coaches should sight the medical clearance before permitting the player to take part in training or play
- Many symptoms are made worse by exercise so rest is the most advisable

- Once acute symptoms pass, a gradual return to low level aerobic training followed by non-contact drills and finally contact play is recommended. This should only occur after receiving a medical clearance
- If symptoms persist for a few weeks to six months or more this is called 'post-concussion syndrome'. This may be associated with headaches, a reduced concentration span, slow decision-making, dizziness, fatigue, irritability, impaired memory and personality changes
- If post-concussion syndrome occurs, the player should not be allowed to return to competition until completely symptom-free
- View video information on concussion from the RugbySmart video

What are the effects of repeated concussion?

- There is no definitive number of times a person can be concussed before retiring from play. Thus it will be dependent on the player involved, the medical treatment and advice they receive
- Definitive arguments around this issue are difficult to make given the equivocal nature of the literature and insufficient research having been conducted in relation to this issue in sport. Some research would argue that the likelihood of serious sequelae increases when a mild traumatic brain injury is repeated, with longer term effects more evident with repeat concussions. Cumulative effects of repeated brain trauma is also believed to play a significant role in the development and persistence of post-concussion syndrome
- In athletes with symptoms from a previous concussion, a second blow to the head may cause brain swelling, coma or even death. This is called 'second impact syndrome' and may cause death in up to 50% of cases

When can the player return to sport?

- No concussed player should return to training or play for a period of three weeks after they were concussed
- After this period the player may only resume participation when they are symptom free and have received a medical clearance. Coaches should sight the medical clearance before permitting the player to take part in training or play
- The only exception to the three-week stand down is some senior player in international competition. These players can return to competition before three-weeks have elapsed if they are symptom-free and received a clearance from a recognised neurological specialist

What is computer based testing for concussion and how is it used?

- Neurologists and other brain injury specialists have developed a number of standardised tests that assist in examining the impact concussion has on brain functions. Computer software containing versions of these tests have recently become available. For more information visit www.impact.com or www.cogsport.com. Players must be tested prior to the season to establish a baseline and are tested again if they receive any head injury. Players are not permitted to resume play until their score on the tests returns to their baseline levels.



Concussion – guidelines for return to sport

→ NOTE: This is a guide only. Timeframes for rehabilitation and return to play vary depending on the nature and severity of the injury. Always seek the advice of a medical professional for a rehabilitation programme specific to you and your injury.

SYMPTOMS

Persistent concussion symptoms include:

- Headache
- Dizziness
- Nausea (feeling sick or vomiting)
- Blurred or double vision
- Incoordination
- Ringing in the ears

AEROBIC EXERCISE

Aerobic exercise works your heart and lungs and includes exercises such as:

- Cycling
- Swimming
- Rowing
- Jogging should not be started until symptom-free

POST INJURY	
<ul style="list-style-type: none"> • Symptom-free at rest? • Cleared by a medical specialist? 	
↓ Yes	↓ No
Start low-impact aerobic exercise	Continue rest for one week then seek medical clearance
Symptom-free during aerobic exercise?	
↓ Yes	↓ No
Perform agility drills (no body contact), skill drills, resistance training only	Continue rest then seek medical clearance
Symptom-free during skill and agility training?	
↓ Yes	↓ No
Perform agility drills, skill drills, and resistance training for 1 week	Continue aerobic exercise only
Still symptom-free during and after skill and agility drills?	
↓ Yes	↓ No
See your doctor	Return to reduced level aerobic exercise and agility/skill drill training only
Granted medical clearance?	
↓ Yes	↓ No
Return to training	Return to level of training advised by doctor or referral to neurological specialist

How can you reduce the risk of another concussion?

- Rugby head gear is NOT designed to reduce concussion
- Correct/safe tackling techniques should be practised at all times in high contact sports
- Wearing a custom-made mouth guard may reduce the risk of concussion
- A player must be free of ALL symptoms before a return to sport or training is possible
- If unsure, always follow the minimum stand-down guidelines established by your national sporting organisation (e.g. three weeks and no symptoms with physical activity)
- If concussion continues to occur, consult a medical professional for advice on other possible contributing factors