

## CONCUSSION PROCEDURE (RUGBY PUBLIC – STANDARD CARE PATHWAY)

### INTRODUCTION

The advice within this document is based on the World Rugby Concussion Guidance. This document incorporates the changes to the World Rugby Concussion Laws (Regulation 10, Law 3.11 - Implementation August 1, 2015), and World Rugby's Operational Definition of Concussion (British Journal of Sports Medicine, March 2016). The advice in this document has been adapted to reflect best practice for the management of concussion for rugby at community levels of the game in Australia.

### BACKGROUND

Our vision is to **inspire all Australians** to enjoy our great **global game**. One of the four key pillars of our strategy is to make Rugby **a game for all**. To achieve this, Rugby must be as **safe, inclusive and fair** as possible. Rugby, like many other activities, involves an element of risk. This procedure references the Rugby Australia Safety Policy which states that **'The primary consideration in all participation decisions must be the safety of all participants as a requirement that overrides all others.'**

### RESPONSIBILITIES

This document is prepared for the rugby public, it is not a medical document. Please refer to the Rugby Australia Medical Doctor Information document when speaking with medical practitioners.

At all times, players, parents/guardians, team officials, match officials, first aid attendants and medical staff need to act in the best interest of player safety and welfare by;

- i. taking responsibility for the recognition, removal and referral of players to an independent medical doctor (independent is defined as not being a family relative of the player).
- ii. ensuring concussion is appropriately managed as per this procedure.

It is a requirement that all players who suffer a concussion seek the highest level of medical care reasonably available to ensure concussion is managed appropriately.

**ADULTS AGED 19 AND OVER – the MINIMUM period before RETURN TO PLAY is 12 days**

**CHILDREN AND ADOLESCENTS AGED 18 AND UNDER – the MINIMUM period before RETURN TO PLAY is 19 days**

### OVERVIEW

In this document the term "potential head injury" refers to an injury that has the potential to cause concussion or a more severe injury to the brain. This can be caused by:

1. a direct blow to the head; or
2. indirect force transmitted to the head from a blow to another part of the body that transmits force to the head (e.g. a whiplash injury).

Potential head injury or concussion must be considered possible whenever a player receives an injury to the head, either from a direct blow or indirectly.

Please note, minor bumps and grazes to the head may not necessarily require medical review but any injury to the head or face that requires medical attention (e.g. a laceration requiring suturing or a fractured facial bone/nose) must also be assessed for possible concussion.

This document outlines the Standard Care Pathway applicable to the vast majority of rugby participation in Australia.

World Rugby defines exceptions to the Standard Care Pathway are for adult players only, who can access an Advanced Care Pathway. In Australia, the Advanced Care Pathway is only available for professional players playing Test Rugby, Super Rugby, National Sevens Rugby, National Rugby Championship or National U20s, and who can access Rugby Australia approved practitioners.

Similarly, the Head Injury Assessment process is available only for the elite levels of the game; in Australia it is limited to Test rugby, Super Rugby, Sevens World Series and Under 20s Junior World Cup playing internationally.

### **WHAT IS CONCUSSION?**

Concussion is a brain injury that causes a disturbance of brain function. Children and adolescents are more susceptible to concussion, take longer to recover, have more significant memory and mental processing issues, and are more susceptible to rare and dangerous neurological complications, including death caused by a single or second impact. All concussion should be taken seriously but children and adolescents must be treated more conservatively than adults.

Concussion usually follows a head collision but can occur with a collision to other parts of the body. Symptoms can come on at any time but occur usually within 24-48 hours following a collision. Concussion can occur without the player being “knocked out” i.e. losing consciousness however if a player is “knocked out” they have a concussion.

Most concussions recover with both physical and mental rest however concussion that is ignored or not recognised can be fatal.

All players with potential head injury or concussion must be removed from the field and are not permitted to return to play or any training on the same day.

### **BLUE CARD**

In matches of U13 and older, when a player leaves the field due to signs and symptoms of concussion or suspected concussion, the referee will show the player a Blue Card. This card is a visual cue for team support staff, it must be recorded by team officials, and triggers an off-field medical process to begin.

This off-field process (which applies to all rugby, not just U13s and older) is detailed in this document.

Rugby Australia has the following Law change ‘a tactically replaced player may return to play to replace a player who has been shown a Blue Card.’

## CONCUSSION MANAGEMENT

The management of concussion involves the following steps; each step must be completed before moving to the next step. This document includes key information about each of the concussion management steps, a summary of these steps can be found in the Rugby Australia Concussion Management Procedure Summary.

### ON THE DAY OF THE INJURY

**RECOGNISE**  
**REMOVE**  
**RECORD**  
**REFER**

### ON THE DAYS FOLLOWING THE INJURY

**REST**  
**RECOVER**  
**RECORD**  
**RETURN**

## STEP BY STEP PROCEDURE INFORMATION

### STEP 1 RECOGNISE

A potential head injury or concussion must be acknowledged if a player has any of the following signs, symptoms, or fails to answer any of the orientation or memory questions after a head or body collision.

Signs (what may be seen)	Symptoms (players may report)	Memory (questions to ask)
<ul style="list-style-type: none"> <li>▪ Dazed, blank or vacant look</li> <li>▪ Lying motionless on ground / Slow to get up</li> <li>▪ Unsteady on feet / Balance problems or falling over / Uncoordinated</li> <li>▪ Loss of consciousness or unresponsive</li> <li>▪ Confused / Not aware of plays or events</li> <li>▪ Grabbing / Clutching of head</li> <li>▪ Seizure (fits)</li> <li>▪ More emotional / Irritable than normal for that person</li> </ul>	<ul style="list-style-type: none"> <li>▪ Headache</li> <li>▪ Dizziness</li> <li>▪ Mental clouding, confusion, or feeling slowed down</li> <li>▪ Visual problems</li> <li>▪ Nausea or vomiting</li> <li>▪ Fatigue</li> <li>▪ Drowsiness / Feeling like ‘in a fog’ / Difficulty concentrating</li> <li>▪ “Pressure in head”</li> <li>▪ Sensitivity to light or noise</li> </ul>	<ul style="list-style-type: none"> <li>▪ “What venue are we at today?”</li> <li>▪ “Which half is it now?”</li> <li>▪ “Who scored last in this game?”</li> <li>▪ “What team did you play last week / game?”</li> <li>▪ “Did your team win the last game?”</li> </ul>

Behavior that is not 'normal' or expected for the individual is also a sign that should be looked for.

The key determinant in acknowledging a player as being concussed or suspected of concussion is the presence of signs and symptoms. Please note a player who suffers a 'head knock' and exhibits no signs and symptoms, should be monitored for the development of any potential signs and symptoms.

### **STEP 2 REMOVE**

Any player with signs or symptoms of a potential head injury or concussion **must** be removed from the rugby field immediately. The player **must not** take further part in any rugby training or games (including other sports) on this day.

Any player with a potential head injury or concussion may also have a neck injury. If a neck injury is suspected, the player must only be removed by experienced health care providers with spinal care training.

**ONCE A PLAYER HAS BEEN REMOVED FROM THE TRAINING OR PLAYING FIELD WITH SIGNS OR SYMPTOMS OF A POTENTIAL HEAD INJURY OR CONCUSSION, NO PERSON (E.G. PHYSIO, COACH, TRAINER, OR DOCTOR) CAN OVER-RIDE THE REQUIREMENT OF A PLAYER TO REMAIN OFF THE FIELD.**

### **STEP 3 RECORD**

Any concussed player **must** be recorded on the team match scorecard. This information is then entered into the Competition Management System as an injury.

Competition Managers and Management System Administrators are notified of any concussion injury entered into the system.

Competition Managers enter the length of exclusion subject to GRTP protocols and any Player who has confirmed concussion is automatically excluded for this period and not allowed to be selected on the team list/match scorecard.

### **STEP 4 REFER**

All players with potential head injury or concussion must be referred to an independent medical doctor or emergency department as soon as practical (within 72 hours of the injury).

A minimum of two sleeps (following the incident) must be observed before any player can be assessed to exclude concussion, hence NO player can be cleared in a time frame less than this. The referral must happen even if symptoms or signs have disappeared. Ideally, the medical doctor who reviews the player should have experience in the assessment and management of sports concussion.

The player must at all times:

- ✓ Be in the care of a responsible adult
- ✓ Must not consume alcohol
- ✓ Must not drive a motor vehicle
- ✓ Be cooperative and provide complete and accurate information to the medical practitioner

If there are serious concerns about the player or **warning signs (“red flags”)** of **significant** head injury appear, the player must be taken to the closest Emergency department immediately or a responsible adult must call an ambulance (000):

- ✓ Deteriorating conscious state (i.e. becoming drowsier)
- ✓ Increasing confusion or irritability
- ✓ Behaving unusually or a change in their normal behavior
- ✓ Fit, seizure or convulsions
- ✓ Double vision
- ✓ Slurred speech
- ✓ Continuing unsteadiness on their feet
- ✓ Weakness or tingling/burning in arms or legs
- ✓ Severe or increasing headache
- ✓ Repeated vomiting – more than once etc.
- ✓ Severe or unusual neck pain

**RUGBY AUSTRALIA HEAD INJURY FACT SHEET AND RUGBY AUSTRALIA CONCUSSION REFERRAL AND RETURN FORM (WITH SECTION 1 COMPLETED) MUST BE GIVEN TO THE PLAYER OR FAMILY MEMBER/GUARDIAN.**

The **Rugby Australia Head Injury Fact Sheet** provides information on concussion including signs and symptoms and management processes (i.e., what to do and what not to do). It also includes information on red flags, which may indicate a more serious injury requiring immediate attention.

The **Rugby Australia Concussion Referral and Return Form** comprises three sections. Each section must be completed;

- (i) signs and symptoms noted by first-aider, referee, coach, managers, players, or medical professional at the time of injury;
- (ii) information for and acknowledgement of the initial consultation with the medical doctor;
- (iii) final clearance from the medical doctor to return to full-contact training.

A medical doctor who assesses a player for concussion should be experienced in the assessment and management of sport-related concussion. They must have read Rugby Australia’s Concussion Management Medical Doctor document (including World Rugby’s Operational Definition of Concussion) and should have a good working knowledge of World Rugby Concussion Guidance (August 2015).

If any player is diagnosed as having concussion, the following stepwise process must be followed:

- For the purpose of this document, adults are all players aged 19 and over
- Children and adolescents are all players aged 18 and under
- For the avoidance of doubt, anyone playing schools rugby must follow the guidelines for children and adolescents.
- Players aged 18 or under playing adult rugby including “Colts” rugby must follow the guidelines for children and adolescents.

## STEP 5 REST

Rest is crucial to recover from concussion. The player must completely rest for a **minimum of 24 hours** after injury. The aim of this ‘complete rest’ is to reduce sign and symptoms to a level where the player no longer needs medication (e.g. pain killers for a headache).

### What does rest mean?

- Reducing physical and mental activity to the level that symptoms can settle
- The first 24 hours following a concussion must be complete physical and cognitive rest (‘complete rest’) but a longer period of modified activity (‘relative rest’) may be required to allow symptoms to settle
- This means avoiding any physical and mental activity that worsens symptoms
- Examples of rest include:
  - Resting quietly at home
  - Missing a day or two from school, study or work.
  - Going for a walk outside / around the block
  - Limit any tasks that require prolonged focus, memory or concentration
  - Avoid excessive TV, use of mobile devices, gaming, computers and phones as these can aggravate symptoms.

### How long should the player reduce physical and mental activity?

- Players must rest (that is reduced physical and mental activity) until all their signs and symptoms have disappeared **AND** they have stopped all medication required for treatment for their concussion symptoms (e.g. pain killers for headaches).
- The minimum ‘complete rest’ time is **24 hours for adults, children and adolescents**.
- **Adults** minimum total rest time (complete and relative) is **7 days**.
- **Children and adolescents** require a longer total rest period (complete and relative) of **14 days** as sometimes it can take a long time for symptoms to settle.
- The required time of rest will vary from player to player, so a medical doctor will specify the minimum time of total rest for each player.

## STEP 6 RECOVER & RETURN TO EXERCISE (refer to GRTP Stages 2-4)

Light exercise **can only** start after a player has returned to **activities of normal daily living** without increased signs or symptoms of concussion and **does not require** medication for their symptoms. The focus in the recovery phase is about getting back to normal life, school, study or work, but NOT hard physical exercise.

If any **symptoms re-occur or worsen** during recovery, the player will need more rest time and the player should be reviewed by their medical doctor.

## STEP 7 RECORD & RETURN TO CONTACT TRAINING (refer to GRTP Stage 5)

The player must complete the Rugby Australia Concussion Referral & Return Form and provide it to their team manager before contact training. It is then sent to the Competition Manager. Failure to complete any section of the form will result in the player being excluded indefinitely from full contact training and match play.

Ideally the same medical doctor who consulted the player after the initial injury will review the player and decide on their fitness to return to contact training. Alternatively, this form may be provided by a medical doctor with experience in assessment and management of sports concussion and knowledge

of Rugby Australia Concussion Management. It is not ideal to seek medical clearance from inexperienced medical doctors who do not know the medical history of the player.

- Players 18 years and under (regardless of the competition they are playing in) **cannot** return to **contact** training (Stage 5) for **at least 18 days** after all symptoms and signs have disappeared.
- Adult players, 19 years and over, **cannot** return to **contact** training (Stage 5) for **at least 11 days** after all symptoms and signs have disappeared.

### **STEP 8 RETURN TO PLAY (refer to GRTP Stage 6)**

A player should only return to play when they have fully recovered from concussion. This means the player **must** have successfully completed the GRTP without any signs or symptoms of concussion (during or after training and contact training).

- Players 18 years and under **cannot** return to **play** (GRTP Stage 6) for **at least 19 days** after all symptoms and signs have disappeared.
- Adult players, 19 years and over, **cannot** return to **play** (GRTP Stage 6) for **at least 12 days** after all symptoms and signs have disappeared.

## GRADUATED RETURN TO PLAY (GRTP)

The best way to return to sport is to follow a gradual re-introduction of exercise in a step-wise progression known as a GRTP programme as per the following:

Rugby AU Concussion Procedure Step	GRTP Stage	Exercise Mode	Example of Exercise Activity	Progression
5	1	Rest	Complete rest followed by relative rest of the brain and body	Minimum rest period mandatory. Medical doctor decides on any additional amount of time needed.
6	2	Light cardiovascular exercise	Light jogging for 10-15 minutes, swimming or stationary cycling at low to moderate intensity. No weights training	If no increased symptoms, start Stage 3 after minimum of 24 hours. If symptoms occur, rest 24 hours & repeat Stage 2.
6	3	Rugby specific exercise	Individual running drills and skills without contact No weights training	If no increased symptoms, start Stage 4 after minimum of 24 hours. If symptoms reoccur or worsen, rest 24 hours & repeat Stage 2, then progress
6	4	Rugby specific non-contact training	More complex training drills e.g. passing drills May start progressive (low level) weights training	If no increased symptoms, review by a medical doctor and presentation of a completed Rugby Australia Concussion Referral & Return Form required before Stage 5. If symptoms reoccur or worsen, rest 24 hours & repeat Stage 3, then progress
7	5	Rugby practice	Full contact practice following completed Rugby Australia Concussion Referral & Return Form being provided to the club or school sport master	Player, coach, parent to report any symptoms to medical doctor. If symptoms reoccur or worsen, then medical doctor to review
8	6	Rugby game	Full contact game	Monitor for recurring symptoms or signs

The day-to-day oversight of the player during the GRTP may be conducted by a sports physiotherapist, parent/guardian, team trainer, or any other responsible adult. However, the commencement and conclusion of the GRTP process must be signed off by a medical doctor.

The player must be monitored to ensure no return of signs or symptoms before and whilst progressing through the GRTP. It is recommended that the GRTP process is documented for the purpose of providing objective information to the medical doctor for the sign off at the conclusion of the GRTP.

The following tables outline the minimum and expected graduated return to play processes after a diagnosed uncomplicated concussion injury occurring on a Saturday game with no progressing signs or symptoms, these tables are examples only.



**Table 1: Children and Adolescents (aged 18 years and under)**

SAT MATCH – PLAYER shows Signs and Symptoms of Concussion							
Week	SUN	MON	TUES	WED	THUR	FRI	SAT
1	Rest GRTP Stage 1	Rest GRTP Stage 1	Recover GRTP Stage 2	Recover GRTP Stage 2	Recover GRTP Stage 2	Recover GRTP Stage 2	Recover GRTP Stage 2
2	Recover GRTP Stage 3	Recover GRTP Stage 3	Recover GRTP Stage 3	Recover GRTP Stage 4	Recover GRTP Stage 4	Recover GRTP Stage 4	Recover GRTP Stage 4
3	Recover GRTP Stage 4	Recover GRTP Stage 4	Recover GRTP Stage 4	<b>RETURN GRTP Stage 5</b>	<b>RETURN GRTP Stage 6</b>		<b>PLAY MATCH</b>

**Table 2: Adult Participants (aged 19 years and over)**

SAT MATCH – PLAYER shows Signs and Symptoms of Concussion							
Week	SUN	MON	TUES	WED	THUR	FRI	SAT
1	Rest GRTP Stage 1	Recover GRTP Stage 2	Recover GRTP Stage 2	Recover GRTP Stage 2	Recover GRTP Stage 3	Recover GRTP Stage 3	Recover GRTP Stage 3
2	Recover GRTP Stage 4	Recover GRTP Stage 4	Recover GRTP Stage 4	<b>RETURN GRTP Stage 5</b>	<b>RETURN GRTP Stage 6</b>		<b>PLAY MATCH</b>

## COMPLEX CONCUSSION SCENARIOS

The Standard Care Pathway only applies to players who have suffered their first concussion in a 12 - month period.

Players must see an independent medical doctor experienced in sports concussion management to follow an individualised management plan if they have:

- ✓ ≥ 2 concussions in 12 months.
- ✓ Multiple concussions over their playing career.
- ✓ Concussions occurring with less collision force.
- ✓ Concussion symptoms lasting longer than expected i.e. a few days.

The management of every concussion case should be individualised, but the occurrence of a second, or more concussions in a 12-month period infers that a greater duration of recovery may be needed.

It is a requirement that all players suffering two or more concussions in a season be assessed by an independent medical doctor experienced in sports concussion management and confirmed that they have fully recovered from concussion prior to returning to contact sport participation. The appropriate Competition Manager or Member Union should be contacted for advice on the designated Concussion consultant to see in such cases.

If a player suffers three concussions in any season or 12-month period, they should strongly consider not playing contact sport for the remainder of that season and should receive appropriate clearance to return in future seasons by a doctor experienced in the management of concussion.

## CONCUSSION CASE REVIEWS

In very rare occurrences it is possible that concussion or suspected concussion was incorrectly reported. This can be either from an alternative diagnosis or a reporting error. In such circumstances, the concussion case can be reviewed.

- Alternative diagnosis - if a player shows signs and symptoms of concussion and in subsequent assessments (3 hours after injury and 36-48 hours after injury) the independent medical doctor making these assessments determines that the abnormal assessment is not related to a concussion, the following procedure MUST be followed;
  - Doctor must identify and document an alternative diagnosis for the abnormal assessment(s).
  - This documentation is provided to the appropriate Competition Manager or Member Union.
  - The Competition or Member Unions appointed Concussion consultant will then review and either uphold or overturn the concussion decision.
  - Upon satisfaction that there is no evidence to suggest the players signs and symptoms were not associated with concussion the case is updated to 'not confirmed' and the player may return to contact training and match play.
- Reporting error
  - The Match Official, Medical/First Aid Staff, Team Manager/Coach are contacted by the Competition Manager to verify that the player did not show any signs or symptoms of concussion.
  - Upon satisfaction that there is no evidence to suggest the player suffered a concussion the case is updated to 'not confirmed' and the player may return to contact training and match play.

## SANCTION(S)

This Rugby Australia Concussion Procedure is considered a Rugby Australia Safety Policy and/or Guideline for the purpose of Rugby Australia's Code of Conduct. Intentional or reckless disregard for this may result in disciplinary action pursuant to Rugby Australia's Code of Conduct.

## RELATED DOCUMENTS

- Rugby Australia Head Injury Fact Sheet
- Rugby Australia Concussion Referral and Return Form
- Rugby Australia Concussion Management Medical Doctor Information
- Rugby Australia Safety Policy
- Rugby Australia Code of Conduct
- World Rugby Documents - <http://playerwelfare.worldrugby.org/concussion>