

# Concussion Management in Domestic Rugby

An Operational Model – Knowledge in Practice

*This resource is for the*

## Healthcare Professionals

*working in the amateur  
game in Ireland.*



- ▶ Concussion **MUST** be taken extremely seriously.
- ▶ Any player with a suspected concussion **MUST** be removed immediately from training/play and not return that day.
- ▶ They **MUST** complete the Graduated Return to Play Protocol.
- ▶ Concussion is treatable.



RECOGNISE AND REMOVE





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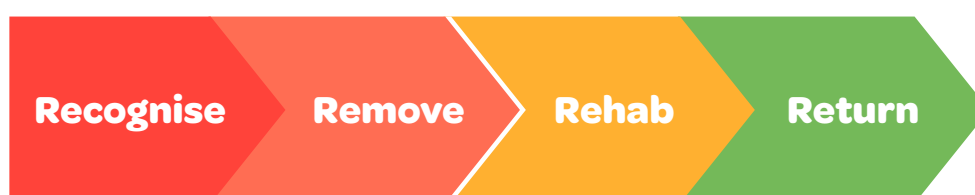


## OVERVIEW

**This resource provides an operational guideline to the on-field and post-match management of a suspected concussive event in the amateur Irish rugby game. Outlined is an operational model to apply the guidelines for concussion management and is not meant to be prescriptive, but rather provide helpful guidance to a healthcare practitioner.**

**At all times practitioners should use their clinical judgement and where there is any doubt about a diagnosis, should err on the side of caution.**

A comprehensive IRFU Graduated Return to Play (GRTP) Protocol has been developed following the latest evidence from the 6<sup>th</sup> *International Consensus Conference on Concussion in Sport*, Amsterdam 2022. <sup>(1)</sup> This is outlined in a separate resource and follows the operational guidance document on the pitch-side and post-match management of suspected concussive events, where a concussion has been confirmed or a suspected concussion where medical clearance has not been confirmed.



- ▶ IRFU Guide to Concussion
- ▶ IRFU Operational Management of Concussion

- ▶ IRFU Concussion Graduated Return to Play
- ▶ ENGAGE



## KEY UPDATES FROM AMSTERDAM 2022

- ▶ Low intensity mental and physical activity in first 48 hours can treat concussion symptoms and help recovery
- ▶ **STRICT** absolute mental and physical rest (i.e. cocooning) in first 48 hours delays recovery
- ▶ **HIGH** intensity vigorous activity can exacerbate symptoms and delay recovery
- ▶ Early removal from pitch helps recovery
  - Playing on for even 5 minutes can delay return to play by 3 days
  - Players are 9 times more likely to have a delayed return to play, longer than 21 days, if they play on with concussion signs or symptoms
- ▶ Early medical assessment and management can identify symptoms and help recovery

Sport-related concussion is a traumatic brain injury caused by a direct blow to the head, neck or body resulting in an impulsive force being transmitted to the brain that occurs in sports and exercise-related activities. This initiates a neurotransmitter and metabolic cascade, with possible axonal injury, blood flow change and inflammation affecting the brain. Symptoms and signs may present immediately, or evolve over minutes or hours, and commonly resolve within days, but may be prolonged.





Before the season starts, the team medical personnel should inform players and coaches about how concussion is managed in the domestic game and that any player with a suspected concussion should immediately be removed from play and must not return to the field of play the same day. Make sure your club has the Concussion and Graduated Return to Play wallet cards, as these are a useful resource when managing a concussion in-season.

#### PRE-SEASON ACTIONS:

- ☐ Inform players and coaches of Recognise & Remove policy.
- ☐ Have IRFU concussion wallet cards available in your club.
- ☐ Consider baseline SCAT6 or symptom scores.
- ☐ Attend a SAFE Level 2 course.

Recovery from concussion depends on a number of factors, however the important ones to highlight to players and coaches are:

- ▶ **Immediate removal** from play helps recovery.
  - Playing on, even for five minutes, can delay full return to sport by three days. <sup>(2)</sup>
  - Young athletes who play on with signs and symptoms of concussion are 9 times more likely to have a delayed recovery longer than 21 days. <sup>(3)</sup>
- ▶ **Early management** by a healthcare professional with experience in concussion. Early appropriate medical assessment and management can help treat symptoms.
- ▶ You **do not have to lose consciousness** to sustain a concussion.
- ▶ The effects of a concussion cannot be seen on standard structural neuroimaging.
- ▶ At time of writing, current technologies (e.g. neuroimaging, biomarkers, genetic testing, instrumented mouthguards) have little evidence to support or recommend their use in routine clinical practice. <sup>(1)</sup>



At the start of season, a SCAT6 assessment may be carried out on all players to give a baseline (or pre-injury) score. <sup>(4)</sup> If a player sustains a potential head injury during the season a repeat SCAT6 should be conducted. You can then compare this baseline score to their post-injury score and see if there is a change in symptoms or functional scores. The SCAT is most effective in discriminating between concussed and non-concussed athletes in the first 72 hours following injury. While it can be used up to 7 days post-injury, it has diminishing clinical utility after the first 72 hours. If healthcare professionals are assessing an athlete after 3 days, they should use the SCOAT6 (Sports Concussion Office Assessment Tool). <sup>(5)</sup> Healthcare professionals should use their clinical judgement when interpreting the SCAT6, alongside relevant medical history, injury mechanism and bio-social factors.

**There is **no** HIA in the Domestic Game, any suspected concussion should be immediately removed from play and the player should not return the same day.**

*The match referee has the power to remove any player from the game whom they suspect has a concussion. This is Law 3 'Recognise and Remove'.*





During a match or training, if medical personnel / team management / referee sees **ANY** of the below signs, the player should be immediately removed from play with a **CONFIRMED** concussion. This player must not return to the field of play and should enter the GRTP protocol for a minimum of 21 days (adult) or 23 days (Under 20s):

- ▶ Actual suspected loss of consciousness
- ▶ Seizure activity
- ▶ Tonic posturing
- ▶ Balance disturbance / ataxia
- ▶ Clearly dazed
- ▶ Player not orientated in person, time, or place
- ▶ Confusion
- ▶ Behavioural changes
- ▶ Oculomotor signs
- ▶ On field signs or symptoms of concussion.

In addition to the above signs, the following signs **may** also indicate that a player has sustained a concussion. If medical personnel see any of the following, they should **SUSPECT a concussion** and the player should be removed and not return to the field of play the same day:

- ▶ Head impact event where the diagnosis is not immediately apparent
- ▶ Possible behavioural change
- ▶ Possible confusion
- ▶ Possible balance disturbance
- ▶ Suspicion of signs or symptoms of concussion



**There is no such thing as a minor concussion or 'knock to the head'. If there is any doubt, remove the player and do not let them return the same day.**



## KEY DEFINITIONS

### CONFIRMED LOSS OF CONSCIOUSNESS:

A player has a confirmed loss of consciousness if they are not responding to orders and not moving, regardless of length of time, apart from reflex movement such as tonic posturing and / or convulsions.

### SUSPECTED LOSS OF CONSCIOUSNESS:

Usually involves at least one of the following:

- Cervical hypotonia (this causes loss of neck / head control) immediately post impact.
- Lying without movement for > 5 seconds.
- Transient tonic posturing / transient ataxia (loss of coordination / balance).
- Co-player concern.

### TONIC POSTURING:

Extension of one or both forearms (typically into the air) for a period lasting up to several seconds after a head impact event.

### CLEARLY DAZED:

Stunned, having a blank or vacant stare following a head impact event. Usually associated with other signs for example staying on the ground, returning to ground or transient ataxia.

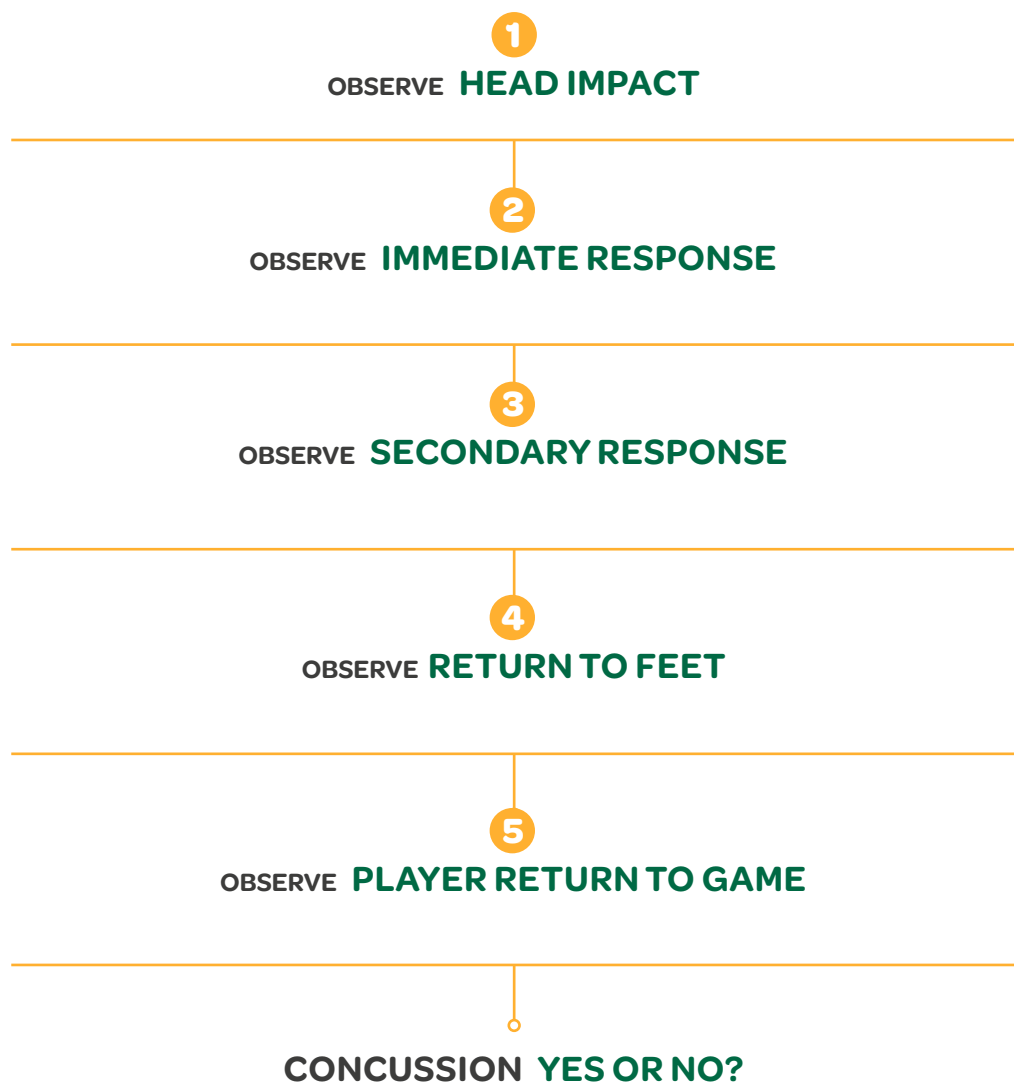


## Recognising Concussion In-Game

When you see an on-field event with the potential to cause a concussive injury, look for the following 5 steps:

1. Was there a head impact event – direct blow or whiplash?
2. What was the immediate response of injured player?
3. In the first 5 seconds following the event, what was the secondary response of injured player?
4. What was the player's late response – usually after return to feet?
5. Was the player's return to play appropriate?

Tracking the play can help you see an on-field event with the potential to cause a concussive injury. This next section will take you through each of the 5 steps in detail.





## Know the Risk Events

### STEP 1 Observe for HEAD IMPACT EVENT – direct blow or whiplash.

Identified risk events in rugby:

- A. Tackle – both players upright.
- B. Event where player's head is in area of opponent's hip / knee / feet.
- C. Ball catcher tackled in the air.
- D. Tackler – ball carrier speed differential (one fast, one slow).

If you see any of these events – **CONSIDER SUSPECTED** concussion.

### STEP 2 Observe IMMEDIATE RESPONSE of injured player.

Identified immediate observed signs:

- A. Falling in uncontrolled manner (loss of head control, player doesn't protect themselves as they fall or in a ruck / maul).
- B. Clutching of head.
- C. Apparent not moving.

If you observe any of these – remove player with **SUSPECTED** concussion.

### STEP 3 Observe first 5 seconds for SECONDARY RESPONSE of injured player.

Looking for secondary response of player:

- A. Apparent not moving > 5 seconds ? Loss of consciousness.

**Suspected loss of consciousness usually involves more than one of the following:**

- ▶ Cervical hypotonia immediately post impact (i.e. loss of neck / head control).
- ▶ Lying without movement for > 5 seconds.
- ▶ Transient tonic posturing – i.e. extension of one or both forearms (typically into the air) for a period lasting up to several seconds after a head impact.
- ▶ Transient ataxia (uncoordinated movement).
- ▶ Co-player concern.
- B. Slow to get up (in context e.g., not another player on top, not winded, tired etc.).
- C. Unsteady getting up (needing support or stumbling, in context, e.g., no lower limb injury causing unsteadiness).
- D. Tripod position to get up - consider possible ataxia.

If you observe any of these – remove player with **CONFIRMED** concussion.



## STEP 4 Observe players late response usually AFTER RETURN TO FEET.

### Identified observed signs:

- A. Unsteady gait (ataxia).
- B. Falls back to ground.
- C. Apparent disorientation.  
If you observe any of these – remove player with **CONFIRMED** concussion.
- D. Clutching head.

If you observe any of these – remove player with **SUSPECTED** concussion.

## STEP 5 Observe PLAYERS RETURN TO THE GAME – is it appropriate?

### Identified observed signs:

- A. Running aimlessly.
- B. Not returning to correct position for next play.

If you observe any of these – remove player with **CONFIRMED** concussion.

## ON-FIELD

### TYPICALLY IDENTIFIED ON ARRIVAL TO PLAYER OR SHORTLY AFTER:

- ▶ Player not orientated in time, place, and person.
- ▶ Definite confusion.
- ▶ Definite behavioural changes.
- ▶ Oculomotor signs (e.g. spontaneous nystagmus)  
Nystagmus is an involuntary rhythmic side-to-side, up, and down or circular motion of the eyes that occurs with a variety of conditions.
- ▶ On field identification of signs or symptoms of concussion.

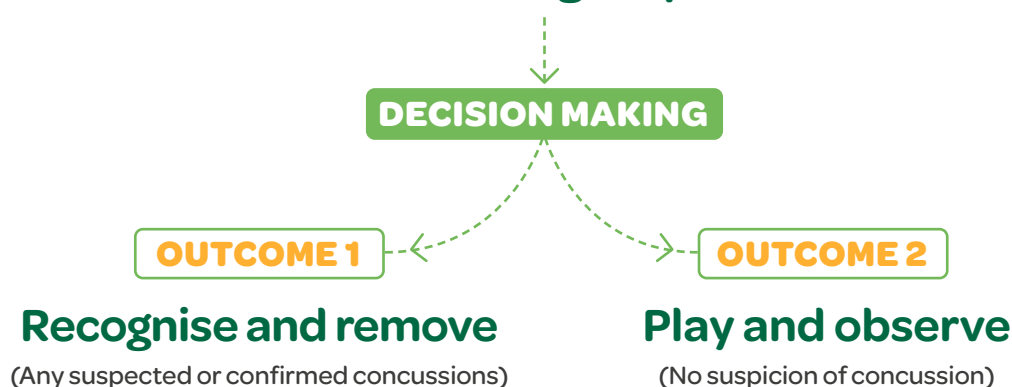
If you observe any of these – remove player with **CONFIRMED** concussion.

- ▶ Possible confusion.
- ▶ Possible behavioural changes.
- ▶ Team medic 'just not happy' with player.

If you observe any of these – remove player with **SUSPECTED** concussion.



## After Following Steps 1 to 5



### OUTCOME 1

#### What to do if a player is removed with **SUSPECTED / CONFIRMED** concussion:

Once a player is removed from the field of play, they should be observed by a responsible adult.

**Post-game** the team doctor or physiotherapist should complete an assessment with the player in a quiet place. The assessment should include the following:

1. The team medic should discuss with the player the possible head injury event and review the mechanism of injury.
2. A clinical exam should also look at potential other causes of symptoms such as neck injury, dehydration, illness etc.
3. A SCAT6 should be completed.
4. Where available, the team medic should review video of the game to see if an injury event can be identified that would help with a diagnosis.  
See the 'IRFU Guide to Video Review' at the end of this document.
5. When a player has a suspected or confirmed concussion, they should be handed over to a responsible adult who is informed of the medical concern and any other relevant information.
  - See the 'Medical Handover' at the end of this document.
  - Give advice on management for the next 24–48 hours post-injury.
6. All players who have a diagnosis of concussion or suspected concussion following the post-game evaluation should seek medical advice.
7. The concussion should be reported on the IRFU online injury report form and a copy of this report should be kept with the club's medical records.
8. If an underage player sustains a concussion, there should be an appropriate handover to their parent or guardian. The concussion event can be documented on the IRFU concussion wallet cards and given to the player / parent / guardian as a record.



## OUTCOME 2

### What to do if a player plays on with no suspicion of a concussion:

**Where a player has an event during the game that involved playing on with observation, they should have a post-game assessment, as outlined in Outcome 1, to ensure that they do not have any signs or symptoms of concussion.**

The player and responsible adult should be advised about the possibility of delayed onset of symptoms and that early assessment by a healthcare professional can aid recovery. The SCAT6 is most effective in discriminating between concussed and non-concussed athletes in the first 72 hours post injury, so the post-game assessment provides a good opportunity to complete this.

## POST-GAME PRESENTATION

**The same process outlined above in Outcome 1 is carried out if a player presents to the team medical personnel post-game and reports that they have symptoms suggestive of a concussion or that they are concerned about a possible head injury.**

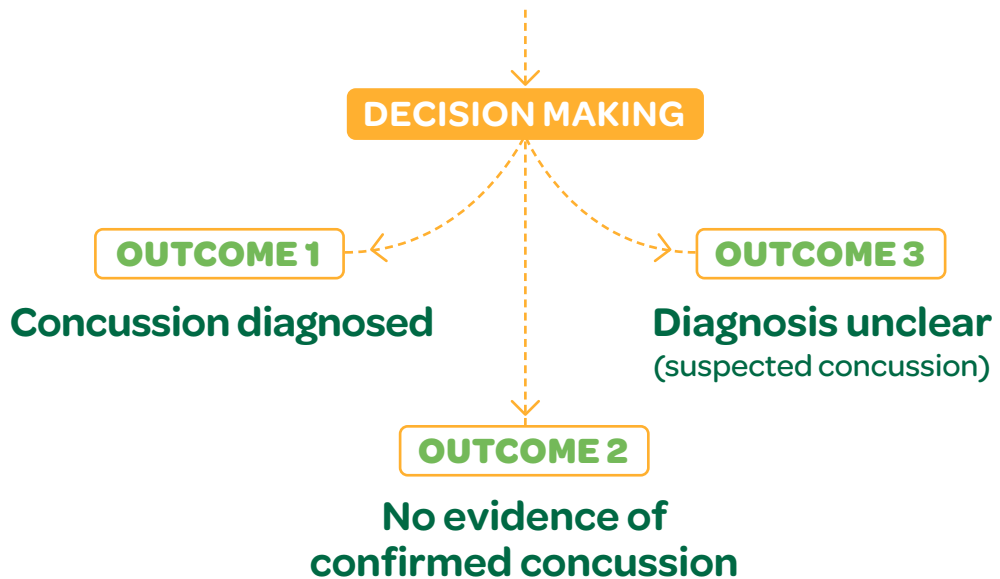
The earlier a player seeks medical assessment and management, the better for their recovery. The SCAT6 or Child SCAT6 can be used up to 3 days post-injury however, it demonstrates diminishing clinical utility after the first 72 hours following an injury.<sup>(4)</sup> If healthcare professionals are assessing a player after 3 days, they should use the SCOAT6 or Child SCOAT6.<sup>(5)</sup>

### POST-MATCH ACTIONS

- ☐ Complete SCAT 6.
- ☐ Handover possible event to a responsible adult.
- ☐ Advise medical follow up if symptoms develop.
- ☐ Advise player and responsible adult on early concussion management.
- ☐ Give written information or refer to IRFU website.



## AFTER MEDICAL REVIEW AND SCAT6 COMPLETION



### The following are the possible outcomes after completion of a SCAT and the above process

- 1. OUTCOME 1 – CONCUSSION DIAGNOSED:** If a concussion is diagnosed the player cannot return to play for a minimum 21 days for an adult and 23 days for any player U20 years of age and should complete the IRFU GRTP Protocol. The player should be reviewed by a healthcare professional at the time of diagnosis and again before progressing to Stage 4 of the IRFU GRTP.
- 2. OUTCOME 2 – NO EVIDENCE OF CONFIRMED CONCUSSION:** If no concussion diagnosis is made during the post-match assessment, follow up by a doctor or physiotherapist the next day may be appropriate. Ideally the follow up should be by either the doctor or physiotherapist who was involved in the initial assessment. Concussion symptoms may take 24-48 hours to present.
- 3. OUTCOME 3 – DIAGNOSIS UNCLEAR (suspected concussion):** If you are unsure whether a player has sustained a concussion following the above process, the player should be treated as having a confirmed concussion and reviewed by a doctor within 24-48 hours or sooner if the player develops symptoms. Concussion symptoms may take 24-48 hours to present.

The team medic should EDUCATE the player and / or their guardian in relation to concussion signs and symptoms, and what to do if these worsen when at home.

**! If at any stage the player is diagnosed with a concussion, they must enter the GRTP process and cannot play for a minimum of 21/23 days as per IRFU guidelines.**



If the team medical personnel have removed a player with a suspected concussion, however subsequently feel that the player did not sustain a concussion they should send the player to a medical doctor, with experience in concussion, for further assessment and to clear them to return to play. The team medical personnel should provide the medical doctor with detailed information of the injury event, injury management, video footage (if available) and any concussion assessments (e.g., SCAT6 baselines and post-game results) to assist in the assessment. This assessment should be carried out within 24–48 hours following the injury event. If the medical doctor is assessing an athlete after 3 days, they should use the SCOAT6, as the SCAT6 has diminishing clinical utility after the first 72 hours. <sup>(4,5)</sup>

**To clear someone from a diagnosis of suspected or confirmed concussion you will need:**

1. No evidence on video (where available) of concussion signs and/or no reliable collateral history / eyewitness concern of concussion.
2. Clinical assessment at time of injury provides no evidence of concussion.
3. A normal SCAT6 assessment post-game.
4. A normal clinical review at 24–48 hours post-event (including a SCAT6 assessment where possible).
5. No clinical concern that the player sustained a concussion.

**Considerations for team medics to aid in diagnosis and safe removal of players from a pitch with confirmed or suspected concussion and / or associated injuries are:**

- An up to-date completion of IRFU SAFE Rugby Level 2 course.
- Completion of World Rugby online concussion education.
- Completion of the GAINLINE medical module – Concussion Management in the Domestic Game.

**Medics working in the domestic game are also advised to complete the IRFU GAINLINE medical module ‘Graduated Return to Play Protocol’.**

IRFU SAFE Rugby Level 1 courses are also available for non-medical personnel, including: coaches, club officials, referees, parents / guardians.

**! All involved in rugby should review the latest ‘IRFU Guide to Concussion’ and the ‘IRFU Graduated Return to Play Protocol’. These are available as downloadable resources, wallet cards and interactive educational modules, tailored to your specific role in concussion, whether you are a player, coach, referee or parent / guardian.**



## Medical Handover in Concussive Events

**When a player has been removed under the suspicion of a concussion, the team medical personnel / coach / management should ensure that an appropriate handover is given to a responsible adult. This should happen at the time the player is removed and again after the post-game assessment.**

### IMMEDIATE HANDOVER

Once a player has been removed from the field of play, you should ensure that a responsible adult is available to watch out for any concussion symptoms that may develop while the match is on-going, or any sign that a player's condition is worsening. If the player is medically well enough, they should wait and complete the post-game assessment outlined above.

**Key points to highlight during this handover include:**

- ▶ Notify the person that the player has been removed with a suspected concussion and may not return to the field of play that day.
- ▶ Should the player develop any of the following symptoms, seek medical assistance immediately:
  - Loss of consciousness
  - Vomiting / nausea
  - Confusion / not aware of surroundings / memory problems
  - Dizziness
  - Headache
  - Balance problems
  - Behavioural issues (aggression / irritation)
  - Feeling drowsy
  - Feeling 'not right'





## POST-MATCH HANDOVER

Following the post-match assessment, an appropriate handover should be given to a responsible adult regardless of the outcome of the assessment. This is particularly important when you are dealing with underage players. Signs and symptoms of a concussion may develop over 24-48 hours and early assessment and management of these can aid in recovery.

### Key considerations for the post-match handover include:

- ▶ Document the concussion event on the IRFU Concussion wallet card and give this to the player and / or the parent / guardian.
- ▶ Give the player the IRFU Graduated Return to Play wallet card.
- ▶ Specify that the player was removed from the match with a suspected concussion.
- ▶ Specify the outcome of the post-game assessment and reinforce the knowledge that symptoms of a concussion may take 24-48 hours to develop.
- ▶ Advise that the player must not drive and should not consume alcohol in the first 24 hours.
- ▶ The player should not be left alone, they should be observed for 24-48 hours and a medical review should occur if symptoms worsen in that time.
- ▶ Remind the player of the importance of reporting symptoms honestly as early assessment and management helps aid recovery times.
- ▶ An immediate medical review should be sought if the player develops any of the following symptoms:
  - Loss of consciousness
  - Vomiting / nausea
  - Confusion / not aware of surroundings / memory problems
  - Dizziness
  - Headache
  - Balance problems
  - Behavioural issues (aggression / irritation)
  - Feeling drowsy
  - Feeling 'not right'
- ▶ Encourage reduced physical and cognitive activities for the first 48 hours (i.e. reduced screen time and only light aerobic activities).
- ▶ STRICT rest (i.e. cocooning) should be avoided as can delay recovery.
- ▶ Ensure that player does not return to play until the IRFU GRTP protocol has been completed (minimum 21 days for adults and 23 days for U20s).
- ▶ This includes no return to other sports and not just rugby.
- ▶ Advise regarding further information on Irish Rugby website regarding managing concussion as well as the GRTP protocol.
- ▶ **Return to learn/work should be prioritised prior to full return to sport:**  
Most young athletes (93%) will have full return to school by day 10 post injury. Players should not be fully returning to sport if they have not fully returned to school or work.



## Acute Concussion Management

### THE FIRST 24–48 HOURS

Players will enter the GRTP Protocol as soon as they are removed from the field with a concussion. The first 24–48 hours are a key timeframe to help recovery and safely and efficiently progress players through the GRTP.

#### Remove player immediately if you suspect a concussion:

Delayed removal can increase the time until symptom-free and full return to sport.

#### Early medical assessment:

Delayed access to a healthcare professional, for appropriate assessment and management of concussion symptoms can increase the time until symptom-free and full return to sport. If you are a physiotherapist / athletic therapist managing the acute concussion, you may need to refer the player to a medical doctor for a follow-up within the first 48 hours.

There are a number of simple things that can positively influence recovery following a concussion. You should advise the player / parent / guardian of the following practices, which are applicable from the time of injury right throughout the entire GRTP Protocol.

#### Reduce screen-time in the first 48 hours:

Screen-time (phones, laptops etc.) should be reduced in the first 48 hours, however there is little additional benefit of reducing screen-time beyond this.

#### Avoid STRICT absolute physical and cognitive rest in the first 24–48 hours:

- ▶ Early light physical and mental activity can treat concussion symptoms and help recovery.
- ▶ Symptoms should be monitored carefully, and only mild symptom exacerbation is tolerated.

#### Avoid HIGH intensity / vigorous exercise in the first 24–48 hours:

Physical activity that strongly exacerbates symptoms should be avoided and can increase the time until symptom free and full return to sport.

#### Maintain regular sleeping pattern:

Players should try to maintain a normal sleep pattern (i.e. going to bed and waking at usual hours). Sleep disturbances can impair recovery from concussion.

#### Maintain a healthy diet:

Maintain your normal eating regime. A healthy diet should include foods rich in quality protein, complex carbohydrates, essential fats, fibre, fruit and vegetables, and can support cognitive function, help with recovery and sleep quality. Advice on nutrition for rugby players can be found on [www.irishrugby.ie](http://www.irishrugby.ie)

#### Remain socially interactive:

Players should be encouraged to keep engaged with the squad, even rehabbing at team training times to help with mental health and well-being. Players should avoid any training activities where there is a risk of a head impact event, until they have had an assessment by a healthcare professional at the appropriate time in the GRTP.



## ! NOT ALL CONCUSSIONS ARE THE SAME

**In some cases, medical intervention may be required during the player's recovery from concussion. Where possible, a healthcare professional with experience managing sports-related concussion should be sought.**

Symptoms of concussion may require a specific intervention. For example an impact to the head or body may cause a disturbance to the inner ear (vestibular system) that can cause vertigo-type symptoms (dizziness, headaches, blurred vision, balance issues), and players experiencing these symptoms should see a healthcare professional trained in the assessment and management of vestibular issues. Similarly, many symptoms of concussion could also be caused by issues with the neck (headaches, dizziness, pain) and seeing a healthcare professional who can appropriately assess the neck can help with your recovery. A thorough assessment can categorise a concussion based on the signs and symptoms. This can help direct effective and targeted treatment and rehabilitation. Currently, there are five concussion clinical profiles:

- 1. Cognitive / Fatigue:** Can cause trouble with prolonged or complex mental tasks and long days. It can cause increased fatigue as the day goes on. Cognitive issues include decreased concentration, decreased ability to multi-task, increased distractibility and trouble learning or retaining new information.
- 2. Vestibular:** Can cause trouble with balance, motion and vision. Impairment of the vestibular system (the balance centre of the brain) affects one's ability to coordinate head and eye movements, steady or balance vision and interpret motion.
- 3. Ocular:** Can cause trouble with visual tasks like reading, looking at a computer screen or mobile phone.
- 4. Migraine:** Can cause changes in your normal routine such as sleeping in or avoiding loud concerts or sporting events. Symptoms include headache, nausea, sensitivity to light or noise.
- 5. Anxiety / Mood:** Can make it hard to turn your thoughts off and causes excessive worry or concern. This can cause problems with social interactions and may worsen if you avoid routine activities because of your concussion.

A combination of medical history, individual risk factors, injury information and assessments of the neck and sleep can help inform the concussion clinical profile. Some profiles may overlap, and assessment of these profiles will help direct the most effective treatment.

### Consider seeking medical advice in the following situations:

- ▶ If you are on medications such as pain killers, anti-depressants and / or sleeping medication.
  - Medications may mask the symptoms of the concussion.
  - Medical advice around through the GRTP protocol may be needed.
- ▶ If you have 2 or more concussions in a 12-month period.  
See a medical specialist with experience of managing sports-related concussion.
- ▶ If you have symptoms beyond Day 10-14 of the GRTP Protocol.  
See a medical specialist with experience of managing sports-related concussion.
- ▶ If you have symptoms continuing to occur with a specific activity within the GRTP Protocol.  
See a medical specialist with experience of managing sports-related concussion.
- ▶ If you are failing to improve or progress through the GRTP as expected.  
See a medical specialist with experience of managing sports-related concussion.

**If you are unsure where to seek advice, contacting a concussion specialist (e.g. the UPMC Concussion Network in Ireland) may be a good starting point to help direct you to targeted interventions more appropriate.**



## IRFU Guide to Video Review

! There is **no HIA** in the Domestic Game, any suspected concussion should be immediately removed from play and the player should not return the same day.

After the match the team medic should assess the player and if video footage is available this should be reviewed to aid in the diagnosis.

Ideally, the video footage should clearly show the event, the player's immediate and delayed reaction, and their return to feet. There is a 5-step approach to the video review, similar to the 5-step decision making process of what you may observe at the time of event, described above.

### 5-Step Approach to Video Review:

When you review video footage of an on-field event with the potential to cause a concussive injury, complete the following 5 steps:

1. Look for **head impact** event – time 0.
2. Look at **immediate response** of injured player – 0-2 seconds.
3. Look for the **secondary response** of injured player – 3-7 seconds.
4. Watch for player's late response usually **after return to feet**.
5. Watch for **return to play** or leaving the pitch.





## HEAD IMPACT

TIME: 0

- ▶ **Direct**
- ▶ **Whiplash**
- ▶ **Contact with ground**
- ▶ **Contact with second player**



## IMMEDIATE RESPONSE

TIME: 0–2 SECS

### CONFIRMED CONCUSSION SIGNS

- Falls with no protection
- Cervical hypotonia
- Tonic posturing
- Convulsion
- Abnormal postural response

### SUSPECTED CONCUSSION SIGNS

- Referee/player concern
- Sub-threshold fall no protection
- Remains on ground
- Sub-threshold no protection on ground

### ASSESS

- Holds head
- Impact reaction 1–2 secs



## DELAYED RESPONSE

TIME: 3–7 SECS

- Motionless >5 secs
- No purposeful movement >5 secs
- No protection on ground
- Vacant or blank stare
- Unusual postural reaction
- Unsteady on ground

- Motionless 3–5 secs
- On ground >30 secs
- Medical attention >1 min
- Team-mate concern
- Crawling
- Tripod position

- Holds head
- Slow to rise



## RETURNING TO FEET

- Unsteady on rising

- Slow rise
- Hands to balance on rising
- Tripod position
- Crawling
- Appears unsteady rising



## RETURN TO PLAY

- Unsteady on feet
- Confused return to play

- Returns to ground 2nd time
- Avoids game participation
- Poor performance
- Tripod position
- Slow return to play



## AIL Concussion Reporting Process

**This guidance document covers the management of a concussion across all levels of the domestic game in Ireland.**

However, in the All Ireland League (AIL) there is an additional process in place for concussions reported by the referee. This process is **ONLY for AIL matches** and any queries outside of the AIL should be raised with your own provincial branch.

If a player has been removed by the referee under Law 3 'Recognise and Remove', they will report this injury event to the IRFU Medical Department. Once this report has been received, the IRFU Medical Department will contact the team medical personnel / team management and make sure they are aware of the report. If the team medical personnel / team management do not feel the player sustained a concussion, they may appeal this decision so that the player can return to play without entering the GRTP process.

**The following steps need to be taken in order to appeal the decision:**

1. A letter from a registered medical doctor, on headed paper, must be emailed to the IRFU stating that in his / her opinion the player has not been concussed and it is safe for them to return to play without entering the GRTP process.
  - ▶ **This review must take place within 48 hours of the suspected incident.**
  - ▶ The following should be made available to the medical doctor who is asked to clear a player who has been removed by the referee with a suspected concussion:
    - i. The referee's report (from the initial email from the IRFU).
    - ii. Video footage of the event.
    - iii. The post-match SCAT6 results.
    - iv. Any other relevant information from the team medical personnel or person(s) who witnessed the event or managed the player at the time.
2. The IRFU Medical Department will review the medical doctor's letter, the SCAT6 scores, the video footage and all other pertinent information and confirm, **in writing**, whether or not clearance has been given for the player to return to play without following the GRTP.
3. On receipt of the above information, if the IRFU considers that the player should still enter the GRTP, they will write to the club outlining the reasons for their decision.
 

If the club disagree with the IRFU's decision and wish to appeal it, the case will be reviewed by an independent AIL Concussion panel which will consist of: a lawyer, a medical doctor with experience in sports-related concussion in rugby, and a member of the IRFU Disciplinary Panel.

The appeals, including all relevant information, need to be submitted to the IRFU by midday on the Wednesday following the incident. Incomplete appeals will be sent back to the team medical personnel / team management requesting any missing information to be submitted. If the appeal is still incomplete at this stage, the appeal will not be considered and the player must enter the GRTP.



## REFERENCES

**All of the consensus publications are available on the IRFU Medical E-learning platform, Gainline. Below are the main sources of information for the purposes of developing this guideline.**

1. Patricios JS, Schneider KJ, Dvorak J, et al. Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport–Amsterdam, October 2022. *British Journal of Sports Medicine* 2023;57:695-711.
2. Charek, DB, Elbin, RJ, Sufrinko, A, et al. Preliminary Evidence of a Dose-Response for Continuing to Play on Recovery Time After Concussion. *Journal of Head Trauma Rehabilitation* 2020;35(2), 85–91.
3. Putukian M, Purcell L, Schneider KJ, et al. Clinical recovery from concussion–return to school and sport: a systematic review and meta-analysis. *British Journal of Sports Medicine* 2023;57:798-809.
4. Echemendia RJ, Brett BL, Broglio S, et al Introducing the Sport Concussion Assessment Tool 6 (SCAT6). *British Journal of Sports Medicine* 2023;57:619-621.
5. Patricios JS, Davis GA, Ahmed OH, et al. Introducing the Sport Concussion Office Assessment Tool 6 (SCOAT6). *British Journal of Sports Medicine* 2023;57:648-650.



## Appendix 1



## APPENDICES

## Medical handover

Date of incident: .....

Player name: .....

Team/Club: .....

Event: ☐ Match ☐ Training ☐ Other: .....Time of injury: ☐ 1<sup>st</sup> half ☐ 2<sup>nd</sup> half ☐ Other: .....

Mechanism of injury: ☐ Tackling ☐ Tackled ☐ Collision

☐ Lineout ☐ Maul ☐ Ruck

☐ Scrum ☐ Unknown ☐ Other: .....

Who removed player: ☐ Medic ☐ Coach/Team staff ☐ Referee

☐ Player ☐ Parent/Guardian ☐ Other: .....

Medical assessment ☐ On-field ☐ Post-match ☐ Not completed

Completed by: ..... (Name) ..... (Role)

Signs/Symptoms: ☐ Loss of consciousness ☐ Unsteady on feet ☐ Seizure/convulsion

☐ Headache ☐ Slow to get up ☐ Confused/disoriented

☐ Grabbing/clutching head ☐ Dizziness ☐ Nausea/vomiting

☐ Drowsiness/fatigue ☐ Blurred vision ☐ Amnesia

☐ Other: .....

Video footage available: ☐ Yes ☐ NoProvided IRFU Guide to Concussion ☐ Yes ☐ NoProvided IRFU GRTP protocol ☐ Yes ☐ No

Handed over to: ..... (Name) ..... (Relationship to player)

Signed: ..... Date: .....

## Appendix 2

## Recognise and Remove Poster



## APPENDICES

**SAFE RUGBY**  
IRFU

# CONCUSSION

## RECOGNISE & REMOVE

Concussion **MUST** be taken extremely seriously.  
Any player with a suspected concussion **MUST** be removed immediately from training/play and not return.  
They should be **medically assessed**.  
They **MUST** not be left alone and **MUST** not drive a vehicle.

**IF YOU OR ANOTHER PLAYER EXPERIENCE ANY OF THE SIGNS AND SYMPTOMS YOU SHOULD:**

- 1 STOP** ▶ Training or playing immediately.
- 2 INFORM** ▶ Your team medic, coach, family member, teammates.
- 3 REHAB** ▶ Rest for 24–48 hours followed by activity that doesn't bring on or worsen symptoms. Complete the graduated return to play protocol (GRTP).
- 4 RETURN** ▶ **PLAYERS CAN RETURN TO PLAY WHEN THEY:**
  - Are symptom free.
  - Have completed the GRTP.
  - Have been medically cleared to return.

**SIGNS TO LOOK FOR ON THE FIELD ARE:**  
(A sign of concussion is something seen by you)

- A player lying motionless on the ground
- A player who is slow to get up, unsteady or falling over
- A player who is grabbing or clutching their head
- A player who has a dazed, blank or vacant look
- A player who is confused or not aware of their surroundings

**SYMPTOMS TO LOOK OUT FOR ON OR OFF THE FIELD ARE:**  
(A symptom of concussion is something the player might complain of to you)

| PHYSICAL<br>(How the player is)                                                                                                                             | COGNITIVE<br>(How the player THINKS)                                                                                                                                                       | EMOTIONAL<br>(How the player FEELS)                                                                                                                                     | SLEEP<br>(How ALERT the player IS)                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| A player may complain of: <ul style="list-style-type: none"> <li>• Headache</li> <li>• Sickness</li> <li>• Balance problems</li> <li>• Dizziness</li> </ul> | A player may have: <ul style="list-style-type: none"> <li>• Memory problems</li> <li>• Confusion or forgetfulness</li> <li>• Feel slowed down</li> <li>• Anxiety or nervousness</li> </ul> | A player may feel: <ul style="list-style-type: none"> <li>• Irritable</li> <li>• Aggressive</li> <li>• More emotional</li> <li>• More anxiety or nervousness</li> </ul> | A player may be: <ul style="list-style-type: none"> <li>• Drowsy</li> <li>• Sleeping more or less than normal</li> </ul> |

Symptoms of concussion can come on immediately or up to 48 hours later, meaning players might be at school or work when they experience them.

For further information on concussion check out our concussion videos for coaches, referees, family members, senior and junior players on [irishrugby.ie/concussion](http://irishrugby.ie/concussion) or do a SAFE Rugby course [irishrugby.ie/playingthegame/safe\\_rugby](http://irishrugby.ie/playingthegame/safe_rugby)

## IRFU Guide to Concussion (1/2)

## Appendix 3



## What is Concussion?

Sports-related concussion is a traumatic brain injury that is caused by a direct blow to the head, neck or body resulting in an impulsive force being transmitted to the brain. Concussion results in an impairment of brain function.

### Why MUST concussion be taken extremely seriously?

- ▶ The Irish Rugby Injury Surveillance (IRIS) reports indicate that, on average, there is one concussion every four matches in the amateur game. Ignoring the signs and symptoms of concussion may result in a prolonged recovery period, a more serious brain injury or death. This is why players should have a comprehensive medical assessment and follow-up until the concussion has fully resolved.
- ▶ Delayed removal from play and delayed access to healthcare professionals can increase the length of time before a player is able to fully return to sport.
- ▶ Returning to play before complete resolution of the concussion and without completion of a Graduated Return to Play (GRTTP) protocol increases the risk of recurrent concussions.
- ▶ Repeat concussions could mean that a player must stop playing all contact sports earlier than expected and may have some potential to result in permanent neurological (brain) impairment.



## How to recognise a concussion

If a player has **any one** of the following signs or symptoms, they must be **immediately removed from play and must not return that day**.

### What you may see when the player is on field

- ▶ Suspected/actual loss of consciousness
- ▶ Seizure (fit) or convulsion
- ▶ Tonic posturing (abnormal movement of arms or legs)
- ▶ Balance problems / falling over (ataxia)
- ▶ Lying motionless on the ground
- ▶ Grabbing / clutching head
- ▶ Slow to get up / tripod position (on hands and knees for support)
- ▶ Unsteady on feet

### What you may notice when talking to the player

- ▶ Confusion / dazed
- ▶ Disorientated
- ▶ Player is 'just not right'
- ▶ Player is more emotional / behavioural changes
- ▶ Complaining of any of the signs and symptoms listed above

### What the player may tell you

- ▶ Nausea (feeling sick) or vomiting
- ▶ Headache
- ▶ Drowsiness
- ▶ Dizziness
- ▶ Irritability
- ▶ Feeling slowed down / "in a fog"
- ▶ Sadness
- ▶ "Pressure in head"
- ▶ Fatigue or low energy
- ▶ Blurred vision
- ▶ Player is more nervous or anxious
- ▶ Sensitivity to light
- ▶ "Doesn't feel right"
- ▶ Amnesia (memory loss)

### Later on (at home or next day), the player may tell you or you may notice

- ▶ Any of the above mentioned
- ▶ Drowsiness
- ▶ Fatigue or low energy
- ▶ Trouble sleeping
- ▶ Trouble concentrating

The signs and symptoms of concussion usually start at the time of the injury but the onset of these may be delayed for up to 24–48 hours.

**There is no HIA in the domestic game, any player with a suspected / confirmed concussion should be removed from play and may not return that day**

## What to do if you suspect concussion

- ▶ **RECOGNISE & REMOVE:** If, at any point during a match or training, a player is concussed or has a suspected concussion, that player must be **immediately and permanently removed from the field of play**. This is known as "Recognise and Remove".
- ▶ **It's the law (Law 3).** The referee may enforce this rule with or without the support of the coaches to ensure that **the player's welfare is always the primary concern**.
- ▶ The player **MUST NOT be left alone**. A player with suspected concussion should be left in the care of a responsible adult who has been informed of the player's suspected concussion.
- ▶ They **MUST NOT drive a vehicle** in the first 24 hours.
- ▶ They **MUST NOT consume alcohol** in the first 24 hours.
- ▶ They **should be medically assessed** as soon as possible. **Early medical management can help with recovery and return to sport.**

### What the coach must do:

1. Safely remove player from field of play
2. Observe or assign responsible adult to monitor player
3. Ensure player gets home safely
4. Handover to responsible adult
5. If player is U18 contact parent or guardian to inform of injury
6. Ensure an IRFU Injury report form is completed
7. Ensure player follows the IRFU GRTTP Protocol

### What the player/teammate must do:

1. STOP playing / training if you feel you have a suspected concussion
2. Be honest with how you feel and report to coach or parent
3. Inform your school / work
4. Follow the IRFU GRTTP Protocol
5. Encourage a teammate to be honest and report symptoms if they have a suspected concussion.

### What the parent / guardian or family member must do:

1. Ensure you have full details of the incident.
2. Get player medically assessed
3. Monitor player for signs and symptoms of concussion for 48 hours.
4. Encourage reduced mental and physical activities for first 24–48 hours.
5. Inform school / work / other sports of the suspected concussion.
6. Ensure player follows the IRFU GRTTP.
7. Prioritise return to school / college/work before return to sport.

### Report the concussion / suspected concussion to Club / School

Click here to go to the IRFU website and report a concussion.



### Head Injury Card:

PLAYER NAME .....

has had a suspected concussion on: .....

DATE AND TIME .....

VENUE .....

Describe event: .....

Symptoms: .....

Completed by: .....

NAME .....

ROLE .....

### NOT ALL HEAD INJURIES ARE CONCUSSIONS

#### RED FLAGS FOR MORE SERIOUS HEAD INJURY

- ▶ Unresponsive or becoming less alert
- ▶ Seizures (fits) or convulsions
- ▶ Loss of vision or double vision
- ▶ More than one episode of vomiting
- ▶ Severe or increasing headache
- ▶ Increasing or worsening of any symptom of the concussion



If a player has a suspected spinal injury, then this becomes the primary concern.

#### IF THERE ARE ANY RED FLAGS

- Call an ambulance
- Do not move an unconscious player unless in harm's way
- Do not move a player with suspected serious spinal injury
- Player should be medically assessed as soon as possible

#### RED FLAGS FOR SERIOUS SPINAL (NECK) INJURY

- ▶ Player is unresponsive
- ▶ Significant neck pain or tenderness
- ▶ Reluctant to move
- ▶ Loss of normal sensation or movement in the arms or legs (weakness or numbness / tingling)

## IRFU Guide to Concussion (2/2)

## Appendix 3



## Concussion is treatable

**Immediate removal from the field of play and early access to healthcare professionals with experience in concussion assessment and management improves recovery timelines.**

- ▶ Playing on even for just 5 minutes after sustaining a concussion can delay full return to sport by approximately 3 days.
- ▶ Young adults who continue playing on with signs or symptoms of a concussion are nine times more likely to have a delayed recovery longer than 21 days.

### Not all concussions are the same

A thorough assessment can categorise a concussion based on the signs and symptoms. Treatment and rehabilitation may need to be tailored to the specific clinical profile. Currently there are five concussion clinical profiles:

1. **Cognitive / Fatigue:** This profile typically causes trouble with prolonged or complex mental tasks and long days. It can cause increased fatigue. Cognitive issues include decreased concentration, decreased ability to multi-task, increased distractibility and trouble learning.
2. **Vestibular:** This profile typically causes trouble with balance, motion and vision. Impairment of the vestibular system (the balance centre of the brain) affects one's ability to coordinate head and eye movements, steady or balance vision and interpret movement. Treatment for vestibular issues is required and will not resolve with rest alone.

3. **Ocular:** This profile typically causes trouble with visual tasks like reading, looking at a computer screen or mobile phone. Treatment for ocular issues is required and will not resolve with rest alone.
4. **Migraine:** This profile typically causes trouble with your normal routine, such as sleeping in or avoiding loud concerts or sporting events. Symptoms include headache, nausea, sensitivity to light or noise.
5. **Anxiety / Mood:** This profile typically causes trouble with your mood, makes it hard to turn your thoughts off and causes excessive worry or concern. This can cause problems with social interactions and may worsen if you avoid routine activities because of your concussion.

Profiles may overlap or you may have more than one profile at a time.

**! There is no such thing as a minor concussion or 'knock to the head'.**

## Recovery from concussion

Normal clinical recovery of symptoms occurs in 10-14 days for the majority of adults. In children it may take up to 4 weeks. Some players may take longer to recover and may need medical advice

### How is concussion managed?

- ▶ Stop playing immediately after sustaining a concussion.
- ▶ Seek medical advice early.
- ▶ **Early light physical and mental activity helps treat symptoms.**
- ▶ **Reduce screentime in the first 48 hours.**
- ▶ **Avoid STRICT absolute physical and mental rest in first 48 hours.**
- ▶ **Avoid HIGH intensity vigorous exercise in first 48 hours.**

### When to seek medical advice after sustaining a concussion

- ▶ At time of injury.
- ▶ Before Stage 4 of the GRTP or return to full contact activities.
- ▶ If you are on medications such as pain killers, anti-depressants and / or sleeping medication.
- ▶ If you have 2 or more concussions in a 12-month period.
- ▶ If you have symptoms beyond Day 10-14 of the GRTP Protocol.
- ▶ If you have persistent or worsening symptoms with a specific activity within the GRTP Protocol.
- ▶ If you are failing to improve or progress through the GRTP as expected.

### General advice

- ▶ Gradually and progressively increase activity levels as shown in the GRTP Protocol.
- ▶ Maintain regular sleeping pattern.
- ▶ Remain socially interactive.
- ▶ Maintain your normal eating regime.

**Prolonged rest is NOT encouraged. Return to learn BEFORE return to play.**

## Current concussion facts

**You do not have to lose consciousness to sustain a concussion.** Less than 1 in 10 concussions involve a loss of consciousness.

**You do not have to have a direct blow to the head to sustain a concussion.** Concussion can be caused by a direct blow to the head, neck or body, or from a whiplash type movement that can occur when a player is tackled or collides with another player or the ground.

**Concussion is treatable.**

Several effective treatments are available especially if symptoms last more than a few days. Treatment, from a healthcare professional experienced in concussion, should be tailored to each player depending on their symptoms.

**Early light physical and mental activity treats symptoms and helps recovery.**

Prolonged rest delays recovery.

**The effects of concussion CANNOT be seen on standard x-ray, CT scan or MRI.**

**Concussions can occur in a match or at training.**

**The onset of concussion symptoms may be delayed for up to 24-48 hours.**

**Symptoms generally resolve over a period of days or weeks, but sometimes can be prolonged.**

| STAGE                                                                                                  | ACTIVITY                                                                                                    | DAYS   |       |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|--------|-------|
|                                                                                                        |                                                                                                             | ADULTS | U20   |
| 1 <b>Symptom limited activity</b>                                                                      | Daily activities that do not provoke symptoms<br>Light aerobic linear activities                            | 0-1    | 0-1   |
| 2 <b>Aerobic exercise</b>                                                                              | Progressively increase aerobic activity<br>Moderate aerobic & light resistance activities                   | 2-6    | 2-6   |
| 3 <b>Rugby specific exercise</b>                                                                       | Speed & skill work without risk of head impact<br>Progressively challenging aerobic & resistance activities | 7-9    | 7-9   |
| <b>Players must be symptom-free and should be assessed by a healthcare professional before stage 4</b> |                                                                                                             |        |       |
| 4 <b>Non-contact drills</b>                                                                            | Agility, decision making & complex skill work<br>Progressively challenging rugby specific drills            | 10-13  | 10-15 |
| 5 <b>Full contact practice</b>                                                                         | Full uncontrolled contact training<br>Intense exercise & conditioning drills                                | 14     | 16    |
| 6 <b>Return to play</b>                                                                                | Full unrestricted match play<br>Full return to pre-injury status                                            | 21     | 23    |

Concussion Treatment

Rugby-specific Competencies

## Graduated return-to-play (GRTP) Protocol

The GRTP Protocol is a treatment for concussion. It also provides a development opportunity to enhance performance.

**The GRTP takes a minimum of 21 days for adults and 23 days for players under the age of 20 years old.**

Some players may take longer to complete the GRTP. The full protocol can be found on the IRFU website and the IRFU GRTP wallet card.

[Click here to find out more.](#)

**PLAYERS SHOULD NOT RETURN TO PLAY UNTIL THEY:**

|                               |                  |                                  |                                                     |
|-------------------------------|------------------|----------------------------------|-----------------------------------------------------|
| Have returned to learn / work | Are symptom-free | Have completed the GRTP Protocol | Have had an assessment by a healthcare professional |
|-------------------------------|------------------|----------------------------------|-----------------------------------------------------|

### CRT6™

#### Concussion Recognition Tool

To Help Identify Concussion in Children, Adolescents and Adults

**What is the Concussion Recognition Tool?**

A concussion is a brain injury. The Concussion Recognition Tool 6 (CRT6) is to be used by non-medically trained individuals for the identification and immediate management of suspected concussion. It is not designed to diagnose concussion.

**Recognise and Remove**

**Red Flags: CALL AN AMBULANCE**

ANY of the following signs are observed or symptoms are reported after an impact to the head or body the athlete should be immediately removed from play/immobilised and transported for urgent medical care by a healthcare professional (HCP).

- Neck pain or tenderness
- Seizure, 'fit', or convulsion
- Loss of vision or double vision
- Loss of consciousness
- Increased confusion or deteriorating conscious state (becoming less responsive, drowsy)
- Weakness or numbness/tingling in more than one arm or leg
- Repeated Vomiting
- Severe or increasing headache
- Increasingly restless, agitated or combative
- Visible deformity of the skull

**Remember**

- Individuals at highest risk of not being followed-up are those at greatest risk of serious injury or death. These include:
  - Do not attempt to move the athlete unless they are in danger of further injury or unless they are in a life-threatening situation.
  - Do not remove helmet or padding or other equipment.
  - Assume a possible spinal cord injury in all cases of head injury.
  - Athletes with known physical or developmental disabilities should have a lower threshold for removal from play.

**If there are no Red Flags, identification of possible concussion should proceed as follows:**

Concussion should be suspected after an impact to the head or body when the athlete shows different than usual. Such changes include the presence of any one or more of the following visible signs of concussion, signs and symptoms (such as headache or unsteadiness, impaired brain function (e.g. confusion), or unusual behaviour).

This tool may be freely copied in its current form for distribution to individuals, teams, groups and organisations. Any alteration (including translation and digital re-formatting), re-branding, or sale for commercial gain is not acceptable without the express written consent of IRFU.

Developed by: The Concussion in Sport Group (CISG)

Reviewed by:

### CRT6

#### Concussion Recognition Tool

To Help Identify Concussion in Children, Adolescents and Adults

**1: Visible Clues of Suspected Concussion**

Visible clues that suggest concussion include:

- Loss of consciousness or responsiveness
- Lying motionless on the playing surface
- Falling uncontrolled to the playing surface
- Disorientation or confusion, staring or limited responsiveness, or an inability to respond appropriately to questions
- Cloned, blank, or vacant look
- Seizure, fit, or convulsion
- Slow to get up after a direct or indirect hit to the head
- Unusually on foot / balance problems or falling over / poor coordination / wobbly
- Facial injury

**2: Symptoms of Suspected Concussion**

| Physical Symptoms       | Changes in Emotions                                                          |
|-------------------------|------------------------------------------------------------------------------|
| Headache                | More emotional                                                               |
| 'Pressure in head'      | More irritable                                                               |
| Balance problems        | Drowsiness                                                                   |
| Nausea or vomiting      | Nervous or anxious                                                           |
| Dizziness               | Changes in Thinking                                                          |
| Blurred vision          | Difficulty concentrating                                                     |
| More sensitive to light | Difficulty remembering                                                       |
| More sensitive to noise | Falling worried down                                                         |
| Fatigue or low energy   | Feeling like 'it's a fog'                                                    |
| 'Don't feel right'      | Remember: symptoms may develop over minutes or hours following a head injury |
| Neck Pain               |                                                                              |

**3: Awareness**

Identify each question appropriately for each sport and age of athlete.

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

- "Where are we today?"
- "What event were you doing?"
- "Who scored last in this game?"
- "What team did you play last week/game?"
- "Did your team win the last game?"

Any athlete with a suspected concussion should be - IMMEDIATELY REMOVED FROM PRACTICE OR PLAY and should NOT RETURN TO ANY ACTIVITY WITH RISK OF HEAD CONTACT, FALL OR COLLISION, including SPORT ACTIVITY until ASSESSED MEDICALLY, even if the symptoms resolve.

Athletes with suspected concussion should NOT:

- Be left alone initially (at least for the first 3 hours). Worsening of symptoms should lead to immediate medical attention.
- Be sent home by themselves. They must be with a responsible adult.
- Drink alcohol, use recreational drugs or drugs not prescribed by their HCP.
- Drive a motor vehicle until cleared to do so by a healthcare professional.



## IRFU Graduated Return to Play Protocol (2/2)

## Appendix 4



## G RTP Activity Chart



Click here to access  
exercise ideas at  
IRFU ENGAGE



Click here to access  
Rugby Contact Skills  
videos



|                                                                                                                              | Stage                         | Timeline   |            | Aerobic Fitness                                                                           | Resistance                                                                         | Balance                                                                                                                 | Agility                                                                                             | Rugby Contact Skills                                                                                                   | Performance Skills                                                                               | Systems Challenged                                      |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------|
|                                                                                                                              |                               | Adult      | U20        |                                                                                           |                                                                                    |                                                                                                                         |                                                                                                     |                                                                                                                        |                                                                                                  |                                                         |
| Stages 1-3: Concussion Treatment                                                                                             | 1<br>Symptom-limited Exercise | 0-1 day    | 0-1 day    | Light aerobic linear exercise:<br>E.G. 5-15 min on stationary bike <50% HRmax             | Isometric exercise:<br>E.G. Static neck strengthening                              | Static/stable exercise:<br>E.G. Double leg balance with small base of support or tandem stance with eyes open or closed | Mobility and movement exercise:<br>E.G. Static stretching with head in stable position              |                                                                                                                        |                                                                                                  | Cardiovascular<br>Musculoskeletal<br>Balance/Vestibular |
|                                                                                                                              | 2<br>Aerobic Exercise         | 2-6 days   | 2-6 days   | Light to moderate aerobic exercise:<br>E.G. 20-30 min jogging <70% HRmax                  | Bodyweight exercise:<br>E.G. Bodyweight squats, hip hinges                         | Static/unstable exercise:<br>E.G. Single leg balance with eyes open or closed                                           | Single direction movement exercise:<br>E.G. Forwards or backwards jogging                           | <b>RECONNECT PHASE:</b><br>E.G. Static tackle profile with resistance, change of profile angles                        |                                                                                                  | Cardiovascular<br>Musculoskeletal<br>Balance/Vestibular |
|                                                                                                                              | 3<br>Rugby-specific Exercise  | 7-9 days   | 7-9 days   | Moderate exercise:<br>E.G. 30-40min running 70-80% HRmax                                  | Light resistance exercise:<br>E.G. Gym work at 60-70% of normal load               | Dynamic/stable exercise:<br>E.G. Double leg jumps, single leg hops, arabesque                                           | Multi-direction movement exercise:<br>E.G. Change of direction, T-test, side-stepping               | <b>MOVEMENT PHASE:</b><br>E.G. Tackle profile at speed, varied approach & entry angles                                 | Simple position-specific skills:<br>E.G. Lineout throwing, passing drills, kicking               | Musculoskeletal<br>Balance/Vestibular<br>Visual/Ocular  |
| <b>Player <b>MUST</b> be symptom-free and should have an assessment by a healthcare professional before entering Stage 4</b> |                               |            |            |                                                                                           |                                                                                    |                                                                                                                         |                                                                                                     |                                                                                                                        |                                                                                                  |                                                         |
| Stages 4-6: Rugby Performance                                                                                                | 4<br>Non-contact Drills       | 10-13 days | 10-15 days | Intense exercise:<br>E.G. Interval training 90% HRmax, acceleration & deceleration drills | Moderate resistance training:<br>E.G. Gym work at 70-80% of normal load            | Dynamic/unstable exercise:<br>E.G. Hopping drills, ladder drills, bear crawls                                           | Complex movement exercise:<br>E.G. T-test to coloured or numbered cones, down ups, cariocas         | <b>CHALLENGE PHASE:</b><br>E.G. Tackle profile at speed, open chain decision-making & entries                          | Dynamic position-specific skills:<br>E.G. Passing drills, partner pummel & mat wrestling         | Balance/Vestibular<br>Visual/Ocular<br>Cognition        |
|                                                                                                                              | 5<br>Full-contact Practice    | 14 days    | 16 days    | Intense exercise & conditioning:<br>E.G. Full training session                            | Dynamic/complex exercise:<br>E.G. Gym work up to pre-injury strength & power loads | Dynamic/complex exercise:<br>E.G. Plank press-up wrestling, mat wrestling                                               | Dynamic/complex positions-specific:<br>E.G. Down-ups, sprint drills with varying starting positions | <b>PERFORMANCE PHASE:</b><br>E.G. Linear approach to entry Vs tackle shield, angled approach to entry Vs tackle shield | Dynamic/complex skills:<br>E.G. Full contact training session, ball fend, back-to-back wrestling | Cognition<br>Decision-making                            |
|                                                                                                                              | 6<br>Return to Play           | 21 days    | 23 days    | Full aerobic fitness                                                                      | Full strength & power                                                              | Full balance ability & control                                                                                          | Full co-ordination & decision-making                                                                | <b>FULL TACKLE PERFORMANCE COMPETENCE:</b><br>E.G. Tackle at speed with intent & confidence                            | Full performance competence                                                                      | Psychological (fear avoidance, confidence)              |



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