



## **Head Injury, Concussion, Suspected Concussion**

### **Recovery and Return to Play**

**Concussion is a brain injury** and must be taken extremely seriously to safeguard the short and long term health and welfare of all players.

The majority (80-90%) of concussions resolve in a short (7-10 days) period. The recovery time is longer in children and adolescents and because their brains are still developing a more conservative approach needs to be taken with them. While symptoms may resolve the brain takes a bit longer to recover fully so this needs to be factored into the recovery protocols.

During this recovery period, the brain is more vulnerable to further injury, and if a player returns too early, before they have fully recovered, this may result in:

- **Prolonged concussion symptoms**
- **Increased risk of developing Post-Concussion Syndrome ( PCS) with symptoms lasting over 3 months**
- **Possible increased risk of long term health consequences e.g. mild cognitive impairment or degenerative brain disorders in later life.**
- **Further concussive events before recovery, especially in adolescents, while very rare and poorly understood, can be FATAL, due to severe brain swelling. This is known as second impact syndrome.**

### **What should players do to return to play ?**

The routine graduated return to play pathway is shown in the diagram on Page 3.

These Graduate Return to Play (GRTP) guidelines can be used across sports and are specifically used in managing GRTP for all rugby players even when the concussion occurred in another sport or in everyday activities.

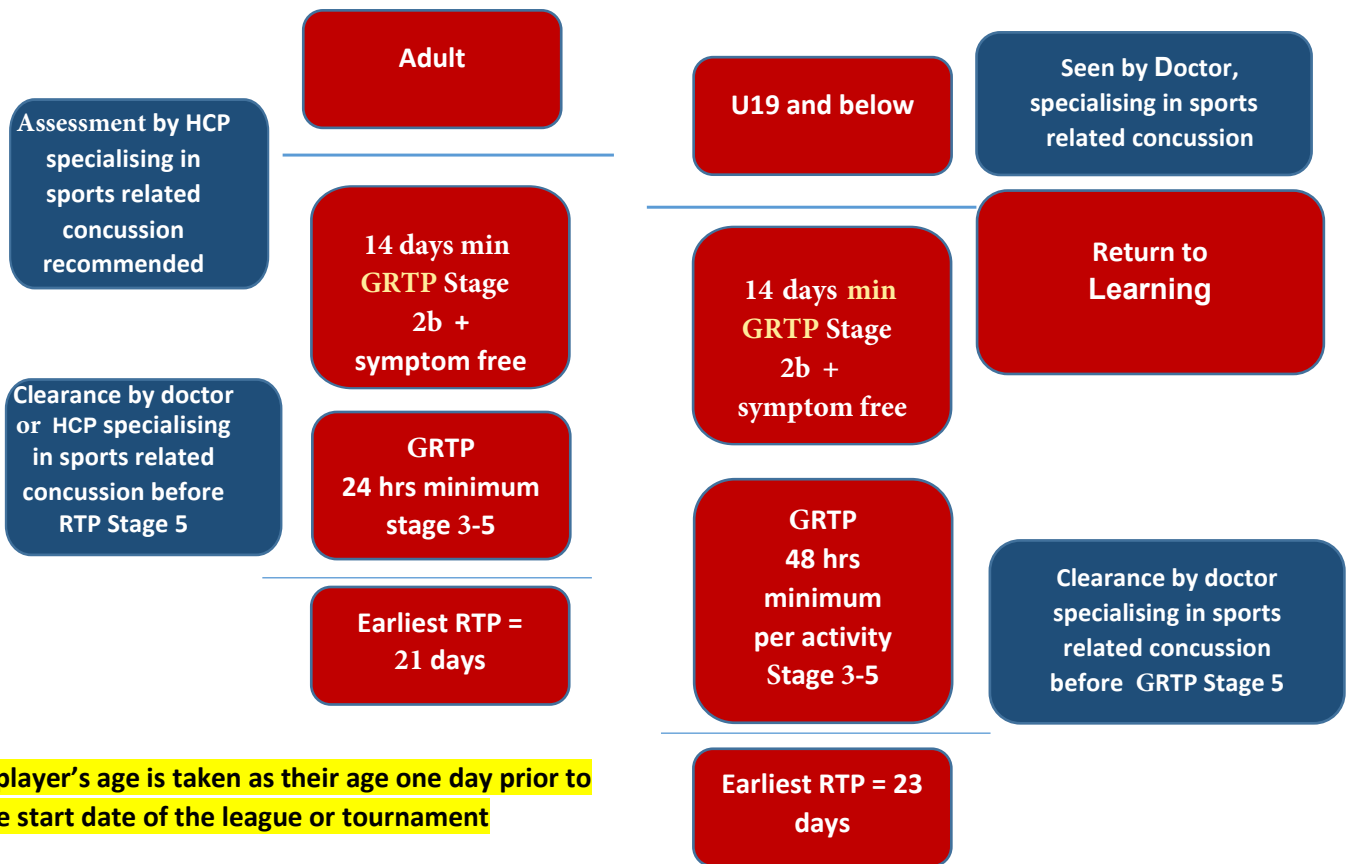
For the GRTP protocols the players age is determined by their age at the day before the start of the domestic league or any tournaments.

**PLEASE NOTE** that age group players cleared to play senior rugby must still follow the protocol for their actual age at time of the incident.



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Looking at these in more detail, there are some important things to note and be aware of:

1. All those with **suspected or diagnosed concussion** should follow this pathway.
2. If a player, in whom those present at the game when the injury occurred, clearly identified signs and/or symptoms of concussion is subsequently seen by a healthcare practitioner and by then is free of signs/symptoms, they must still follow this GRTP pathway.
3. The timing starts from the day after the concussive or suspected concussive injury.
4. Players or parents/guardians are responsible for informing all sporting clubs and schools they play at of their concussion.
5. It is good practice for the coach/manager of the team/club to advise the school and/or other clubs the player attends of the concussion – this can only be done with the players/parents/guardians consent.
6. Head impact avoidance during recovery – see below.
7. Review by a Doctor – see below.



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### Rest and Return to Academic Studies

One of the most important aspects of recovery is to have an expectation of recovery and a positive, open and honest approach. This should be reinforced with the player and the parents/guardians.

After a concussion the brain needs to rest, so initially the player should have relative rest and modified level of brain activities such as; reading, television, computer, video games and smart phones. Sleep is good for recovery. There is however a balance needed and too much complete rest is thought to delay recovery, so returning to light activities of daily living as soon as the symptoms have started to reduce is advised. No more than 24hrs relative rest is all that is needed in most cases.

Once symptoms have resolved they can gradually re-introduce normal activities but during this time they should **NOT** return to sport or activities with a predictable risk of further head injury. If symptoms return then reduce the levels of provoking activity, rest and then reintroduce them more gradually.

School<sup>1</sup> absence - It is reasonable for a child to miss a day or two of school after a concussion if they feel unwell, or if on returning to lessons their symptoms return. Extended absence is rarely needed.

Children and young people should return to academic studies before they return to sport:

- **Good communication with the school is important and the school may have a support worker who can help and advise.**
- **Pupils should undertake a graded return to academic studies. Consideration should be given to managed return to full study days i.e. part days initially.**
- **Gradual re-introduction of homework is advised to avoid long days of work.**
- **Consideration should be given to delaying tests and exams until fully recovered. If this is not possible then the school should advise the Examinations Board accordingly.**
- **In a small number of cases, symptoms may be prolonged and this may impact on the child's studies. In such cases, early referral back to their Doctor and educational support services is advised.**

<sup>1</sup> The term school is used but the principles also apply to College, Poly Tech and University students



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### Head Impact Avoidance During Recovery

There may be situations where a young player's GRTP is not closely supervised by a Doctor experienced in managing concussion. In these cases to ensure complete recovery before returning to activities with a risk of head impacts, once they are symptom free, children and adolescents in particular avoid such activities for a minimum of 14 days from the resolution of symptoms.

It is now clear that the brain is still recovering and remains vulnerable for a period after symptoms have resolved.

**It must be emphasised that that the timelines used are minimum return to play times and in players who do not recover fully within these time frames, these will need to be longer. It is important to adjust to the individuals recovery.**

### Graduated Return to Play (GRTP)

Following the recommended rest period detailed above the player should continue return to sport by following a graduated return to play (GRTP) protocol as shown on page 5.

This should only be progressed beyond Stage 2 b when the person:

- **Is symptom free.**
- **Is off all medication that modifies symptoms e.g. painkillers.**
- **Has returned to normal studies or work.**
- **Should not be involved in activities with a risk of further head impact until a minimum of 14 days symptom free.**

**Children and young people** should have an extended GRTP compared to adults and a **minimum of 48 hours** for each activity stages 3-5

**The GRTP should be undertaken on a case by case basis** and with the full cooperation of the player and their parents/guardians.

Where a club/school has their own medical resources the GRTP process should be carried out by the club/school coach, and overseen by the club/school health care professional/doctor.



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It must be emphasised that these are minimum return to play times and in players who do not recover fully within these time frames, these will need to be longer.

If a player develops symptoms while doing any of these activities they should stop doing the activity and report this to a doctor

A summary of the **GRADUATED RETURN to PLAY (GRTP)** is shown in the following diagram. Stage 1 is Initial Rest (Physical and Cognitive) No driving or exercise. Minimise screen time. Consider time off or adaptation of work or study **Min 24 hrs.**

Stage	Aim	Activity	Goal of each step
<b>2a</b>	Symptom-limited activity <b>Min 24 hrs</b>	Daily activities that do not provoke symptoms	Gradual reintroduction of work/school activities
2b	Light aerobic exercise <b>Min 14 days</b>	Walking or stationary cycling at slow to medium pace. No resistance training	Increase heart rate
3	Sport-specific exercise	Running drills. No head impact activities	Add movement
<b>4</b>	Non-contact training drills	Harder training drills, eg, passing drills. May start progressive resistance training	Exercise, coordination and increased thinking
<b>5</b>	Full contact practice	<b>Following medical clearance,</b> participate in normal training activities	Restore confidence and assess functional skills by coaching staff
<b>6</b>	Return to play (RTP)	Normal game play	

Before a player can commence the Stage 3 elements of the GRTP they must:

- **Been a minimum of 16 days post concussion**
- **Adults - be symptom free for a period of 24 hours**
- **Under 19's - be symptom free for a period of 48 hours**

The player can then progress through each stage as long as no symptoms or signs of concussion return. Where the player completes each stage successfully without any symptoms, the player would normally proceed through each stage on successive days.

**U19's: progression for each stage must take minimum 2 days.**





If it is not feasible for the coach to conduct Stage 2 a,b, these may be done by the player in their own time or in children supervised by parents with appropriate guidance. Alternatively the protocol may simply be extended with each level being conducted by the coach at training sessions or in school setting by other PE staff during PE lessons, when they are able.

**It is the player's or parent's responsibility to obtain appropriate medical clearance before starting GRTP Stage 5**

On completion of Stage 5 without the presence of symptoms, the player may after 24hrs ( adults), 48hrs (U 19's) , after submitting SRU GTRP tracking form to SRU medical, return to playing in full contact rugby games (Stage 6).

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**CRT6**

## Concussion Recognition Tool

To help identify concussion in children, adolescents and adults



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**1. Visible Signs of Suspected Concussion**

Visible signs that suggest concussion include:

- Loss of consciousness or responsiveness
- Falling backwards on the playing surface
- Falling forwards on the playing surface
- Disorientation or confusion, sitting or lying disoriented, or an inability to respond appropriately to questions
- Slumped head, or closed eyes
- Nausea, or vomiting
- Slow to get up after a fall or to respond to the coach
- Continues to feel forehead pain or feeling over pain medications (aspirin)
- Fight injury

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**2. Symptoms of Suspected Concussion**

Physical Symptoms	Changes in Senses
Headache	Blurred vision
Head and/or body "fog"	Black or white spots
Balance problems	Dizziness
Nausea or vomiting	Weakness or fatigue
Drowsiness	
Annoyance	
Abnormal vision	
Slow reaction to light	Difficulty concentrating
Slow reaction to touch	Difficulty remembering
Finger to nose struggle	Feeling spaced out
"Overhead leg"	Feeling like "fog"
Weak knee	

**Remember:** symptoms may develop over minutes or hours following a head injury.

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**3. Awareness**

**Modify each question appropriately for each sport and age of athletes.**

*I plan to answer any of these questions currently was suggest a concussion.*

- "Where are we today?"
- "What event were you doing?"
- "Who were you in this game?"
- "What team did you play last week/game?"
- "Did you learn anything last game?"

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**Any athlete with a suspected concussion should be - IMMEDIATELY REMOVED FROM PRACTICE OR PLAY AND A QUALIFIED RETURN TO ANY ACTIVITY WITH A RISK OF HEAD CONTACT, FALL OR COLLISION (INCLUDING SPORT ACTIVITY) UNTIL ASSESSED BY MEDICAL STAFF, even if the symptoms resolve.**

**Athlete with suspected concussion MUST NOT:**

- Be left alone without an adult for the first 2 hours. Monitoring of symptoms should be immediate medical attention.
- Be sent home by themselves. They need to be with responsible adult.
- Drink alcohol, use recreational drugs or drugs not prescribed by their M.D.
- Drive a motor vehicle until cleared to do so by a healthcare professional.



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The following should be referred back to their doctor for review:

- **Children and young people who struggle to return to their studies.**
- **Those who persistently fail to progress through the GRTP because symptoms return.**
- **Children and young people who sustain two or more concussions in a 12-month period should be referred to their doctor for specialist review.**

### Correcting Player Technique and Behaviour

If a player's concussion resulted from poor tackle technique, their coach must also ensure that this is corrected before return to play.

If there are concerns about the player's behaviour and approach to the game when playing or training that appears to put them at increased risk of concussion, then this should be addressed before return to play.

### SUMMARY

Most players make an uneventful recovery from their concussion but it is important that we all work to ensure that they are managed properly for their short and long term health.

It is recognised that players will often want to return to play as soon as possible following a concussion. Players, coaches, management, parents and teachers must exercise vigilance and caution to ensure a safe Return to Play:

- Ensure that all symptoms have subsided and students have returned to academic studies successfully before commencing GRTP Stage 2b**
- Ensure that the GRTP protocol is followed.**
- Ensure that the advice of Medical Practitioners and other Healthcare Professionals is sought.**

After returning to play all involved with the player, especially coaches and parents must remain vigilant for the return of symptoms even if the GRTP has been successfully completed.

**If symptoms reoccur the player must consult a Healthcare Practitioner as soon as possible as they may need referral to a specialist in concussion management.**



## Head Injury, Concussion, Suspected Concussion Recovery and Return to Play



It is recognised that players will often want to return to play as soon as possible following a concussion. Players, coaches, management, parents and teachers must exercise caution to:

- a. Ensure that all symptoms have subsided before commencing GRTP Stage 3 .
- b. Ensure that the GRTP protocol is followed.
- c. Ensure that the advice of Medical Practitioners and other Healthcare Professionals is strictly adhered to.

After returning to play all involved with the player, especially coaches and parents must remain vigilant for the return of symptoms even if the GRTP has been successfully completed.

**If symptoms reoccur the player must consult a Healthcare Practitioner as soon as possible as they may need referral to a specialist in concussion management.**





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### Additional resources

- Coaches, First Aiders, Match Officials and Administrators concussion education module  
Concussion Guide  
Module - Concussion Management for the General Public  
<https://passport.world.rugby/player-welfare-medical/concussion-management-for-the-general-public/> and  
<https://passport.world.rugby/player-welfare-medical/first-aid-in-rugby/>
- Club/School Health Care Professionals concussion educational module.  
<https://passport.world.rugby/player-welfare-medical/concussion-management-for-doctors-and-health-care-professionals/> Module “ Concussion Management for Doctors and Health Care Professionals” and  
<https://passport.world.rugby/player-welfare-medical/first-aid-in-rugby/> and/or <https://passport.world.rugby/player-welfare-medical/immediate-care-in-rugby/>
- Pocket Concussion Recognition Tool (Pocket SCAT 6 )  
<https://bjsm.bmj.com/content/bjsports/57/11/692.full.pdf>
- SCAT 6  
<https://bjsm.bmj.com/content/bjsports/57/11/622>
- Paediatric SCAT 6 (age 5-12 yrs.)  
<https://bjsm.bmj.com/content/bjsports/57/11/636>

These SRU Concussion resources have been developed based on the World Rugby Guidelines and the Amsterdam Guidelines published in the Consensus Statement on Concussion in Sport 2022

**The information contained in this resource is intended for educational purpose only and is not meant to be substituted for appropriate medical advice or care. If you believe that you or someone under your care has sustained a concussion we strongly recommend that you contact a qualified health care professional for appropriate diagnosis and treatment. The authors have made responsible efforts to include accurate and timely information. However they make no representations or warranties regarding the accuracy of the information contained and specifically disclaim any liability in connection with the content on this site.**