England Rugby

RUGBY SAFE

DON'T BE A HEADCASE

STOP! CHECK FOR CONCUSSION

HEADACHE EMOTIONAL APPEARANCE DROWSINESS CONFUSION AGITATED SEIZURE EARS AND EYES

EXTENDED GUIDELINES



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ENGLANDRUGBY.COM/HEADCASE

INTRODUCTION

INTRODUCTION

The England Rugby HEADCASE Concussion Guidelines provide comprehensive information and guidance including how to recognise a suspected concussion, how a suspected concussion should be managed, and good practice to reduce the risk of concussion in players.

At all community levels of rugby, if a player displays one or more observable signs or symptoms of concussion, they should be removed from the pitch immediately irrespective of whether it is a match or training session. The player should then follow the appropriate Return to Play programme (either U19 and below or adult).

REMEMBER.... IF IN DOUBT, SIT THEM OUT

These guidelines are intended to give guidance to those managing concussion at all levels of adult and age grade community game. Professional and elite level players typically have access to an enhanced care setting which means that their concussion and return to play can be managed in a slightly different way by experienced doctors.

The guidelines in this document should be followed unless specific permission has been granted by the RFU to a club or team to access the enhanced care setting.

The **HEADCASE online awareness module** accompanies these guidelines. The module provides more detailed information to help you understand what concussion is and how it should be effectively managed. To access the free module, visit the HEADCASE homepage.

The England Rugby HEADCASE and other concussion resources have been developed based on current evidence and examples of best practice from a wide range of peer reviewed sources that include the 2017 Consensus Statement on Concussion in Sport and consultation with other sports and organisations, including, World Rugby, the Department of Education and the Football Association. Advice has also been provided by the **RFU's Independent Concussion Expert Panel (ICEP)** which is made up of the leading independent medical practitioners in this area.

The RFU continues to carry out it's own research, monitors the science and new knowledge as it emerges and updates the guidance as and when appropriate.

The information contained in this document is intended for educational purposes only and is not meant to be a substitute 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 RFU has made responsible efforts to include accurate and timely information. However, it makes no representations or warranties regarding the accuracy of the information contained and specifically disclaims any liability in connection with the content on this site.

This version has been updated as of February 2021.

SECTION ONE

ROLES & RESPONSIBILITIES

ROLES & RESPONSIBILITIES

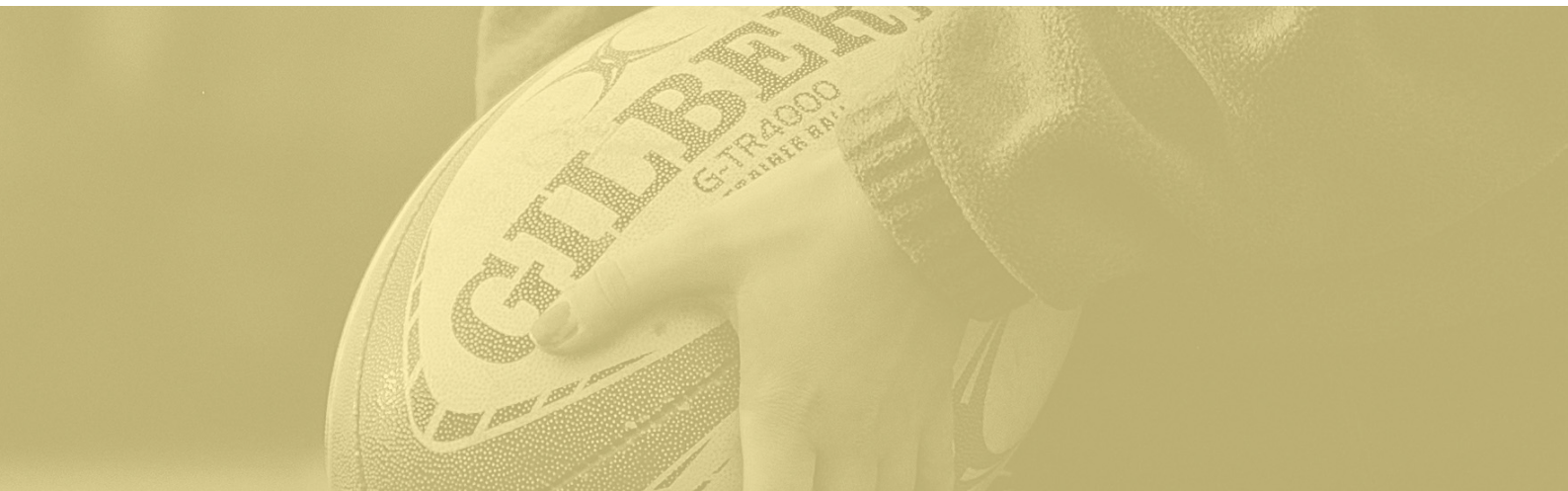
The welfare of players is paramount. Everyone has responsibility to ensure that they are appropriately informed and understand what role they play in the prevention, recognition and management of a suspected concussion.

Concussion is not always a visible injury, so it is important that a cautious approach is taken following a suspected concussion and that it is treated appropriately.

- **Concussion must be taken extremely seriously** to safeguard the safety and long-term health of players.
- Players suspected of having concussion **should be removed from play/training immediately.**
- All players suspected of having concussion **should be assessed by a Healthcare Professional.**
- Players suspected of having concussion or diagnosed with concussion **should go through a Graduated Return to Play programme (GRTP).**
- Players **should be reviewed by a Healthcare Professional** before returning to play.

Key Responsibilities:

- Clubs should utilise the RFU's HEADCASE resources and training module to ensure that coaches, parents, players and all those involved are appropriately informed and understand how to recognise and manage a suspected concussion.
- Players may also get concussion outside of rugby but present with the symptoms and signs at training or before a match. It is important that these situations are recognised, as it may put them at risk of more serious consequences if they sustain another concussion before recovery.
- Coaches, teammates, teachers and parents should encourage players to report all concussions whether they occur during games and training sessions or outside of rugby.
- It is important that relevant parties communicate following a concussion to ensure there is full understanding and cooperation in the management of any suspected concussion, along with returning to learning/work and playing. For example, in age grade rugby, the club, parents and school should work closely together to support the player. Adult players should engage with the club and their workplace/university for support.



SECTION TWO

GENERAL INFORMATION

GENERAL INFORMATION

WHAT IS CONCUSSION?

Concussion is a traumatic brain injury typically resulting from a blow to the head or body which results in forces being transmitted to the brain. The symptoms can present immediately and be short-lived or the onset of symptoms may be delayed and start to occur some time after the initial injury. A range of signs and symptoms are often seen, affecting the player's thinking, memory, mood, behaviour, level of consciousness, alongside various physical effects. Clear loss of consciousness occurs in only 10-15% of cases.

Concussion must be taken seriously to safeguard the short- and long-term health and welfare of players. The **majority (80-90%) of concussion symptoms resolve in around 7-10 days**, with symptoms resolving within 1 - 2 days in around a third of cases. However, irrespective of how quickly symptoms resolve, everyone should go through the full appropriate Graduated Return to Play programme (GRTP, see Section 4).

Children and adolescents can take longer to recover because their brains are still developing. Therefore, a more conservative approach should be taken with them (see the U19s and below RTP programme). During the recovery period, the brain is more vulnerable to further injury. If a player returns to rugby/sport (where there is a risk of further injury) before they have fully recovered, there is a risk of further complications including:

- Prolonged concussion symptoms.
- Possible increased risk of long-term health consequences e.g., mild cognitive impairment or degenerative brain disorders in later life.

A further concussive event before recovery can in very rare cases be FATAL, due to severe brain swelling (this has been described as "second impact syndrome").

SIGN AND SYMPTOMS

A suspected concussion can present in a player in a number of different ways.

ANY ONE OF THE FOLLOWING OBSERVABLE SIGNS:	PRESENCE OF ANY ONE OR MORE OF THE FOLLOWING SYMPTOMS:	RED FLAGS IF ANY OF THE FOLLOWING ARE REPORTED OR DEVELOP, MEDICAL ATTENTION SHOULD BE SOUGHT AS A PRIORITY (E.G. CONSIDER CALLING AN AMBULANCE)
• Loss of consciousness or responsiveness • Lying motionless on ground / Slow to get up • Unsteady on feet / Balance problems or falling over / Incoordination • Grabbing / Clutching of head • Dazed • Blank or vacant look • Confused / Not aware of plays or events	• Loss of consciousness • Headache, or "Pressure in head" • Seizure or convulsion • Dizziness or balance problems • Confusion • Difficulty concentrating or feeling like"in a fog " • Nausea or vomiting • Drowsiness, feeling slowed down, fatigue or low energy • More emotional or sadness • Blurred vision, or sensitivity to light or noise • Nervous, anxious or irritable • Difficulty remembering or amnesia • Neck pain • "Don't feel right"	• Deteriorating conscious state • Increasing confusion or irritability • Severe or increasing headache • Repeated vomiting • Unusual behaviour change • Seizure or convulsion • Double vision or deafness • Weakness or tingling/burning in arms or legs

SHORT/MEDIUM-TERM CONSEQUENCES

Individuals have different thresholds and responses to a suspected concussion and a player can experience a variety of effects. Recovery can often be rapid; this can increase the potential for players to ignore concussion symptoms at the time of injury or return to play before they have fully recovered.

Most people make a full recovery from their concussion within a few days or weeks; however, a small minority of individuals may have persistent symptoms. In such situations, a concussion with persistent symptoms can be a complex & challenging condition to treat, therefore assessment by a specialist with specific expertise in this area is recommended.

LONG-TERM CONSEQUENCES

The strength of any link between concussion and rare neurodegenerative conditions such as Chronic Traumatic Encephalopathy (CTE) is still not well understood. It is thought that the risk is related to repeated concussions and head impacts in susceptible individuals who have genetic and other individual risk factors.

It is widely agreed that the benefits of exercise outweigh the risks. The NHS recommends rugby as a way to undertake vigorous exercise, which is linked to better general health, stronger bones and muscles, as well as higher levels of self-esteem. More information on the health benefits of rugby is available on the Rugby Health and Wellbeing website.

Minimising any potential future risk of neurodegeneration is why it is so important to manage concussion in accordance with best practice. Not doing this may put a player at higher risk of developing progressive neurodegenerative problems that may lead to problems with memory, other mild cognitive impairments or CTE in later life.
(Position Statement from RFU Independent Concussion Expert Panel)

SECOND IMPACT SYNDROME

Exposure to further head impacts before full recovery can increase the risk of a more serious brain injury and lead to Second Impact Syndrome.

It is known that children's or adolescents' brains are still developing, there is therefore a particular concern that concussion can have more of an impact, and that a second concussion occurring before recovery from the first can result in prolonged symptoms that can have a significant impact on the player.

It can be difficult in the initial stages to differentiate concussion from other serious brain injuries, which at its most extreme, can lead to death. Therefore, the "Recognise and Remove" approach to any suspected concussion is promoted and should be applied across the community game.

MULTIPLE/REPEATED CONCUSSIONS

Players who experience two or more concussion in 12 months or multiple concussions over the course of their career should be reviewed on an individual basis. The severity of the concussion, nature, timescale and recovery can affect the approach that is taken; some players may require an extended period out of the game. It may also be important to look at the mechanism of injury/how the concussions are occurring, for example is it due to poor tackle technique and if so, how can this be addressed by the coach/player or should there be a focus on neck muscle strengthening?
If a player has repeated concussions, it is recommended that they are seen by a doctor specialising in concussion management (through a GP referral). Each concussion should be considered on its own merits but a more conservative timescale for recovery or directed rehabilitation may be recommended especially if each time the force required to cause the concussion is lessened and/or the symptoms are prolonged.

HEAD INJURY ASSESSMENT

There is **NO Head Injury Assessment (HIA) process in the community game**. The World Rugby HIA process is much more than what you see on the TV during the game and is governed by strict protocols. It is only permitted to be used in World Rugby approved elite adult competitions where there are the appropriate player welfare processes and systems in place with doctors with the necessary expertise available to implement the process.

More details can be found on the World Rugby Concussion page

All other matches and training involving adult players and all age grade activities should adhere to the **RECOGNISE and REMOVE** principle, that being: any individual who exhibits one of more of the signs or symptoms of concussion should be immediately and permanently removed safely from the field of play.

This should be adhered to irrespective of the qualification/profession of the individual providing the pitch-side first aid and/or immediate care provision.

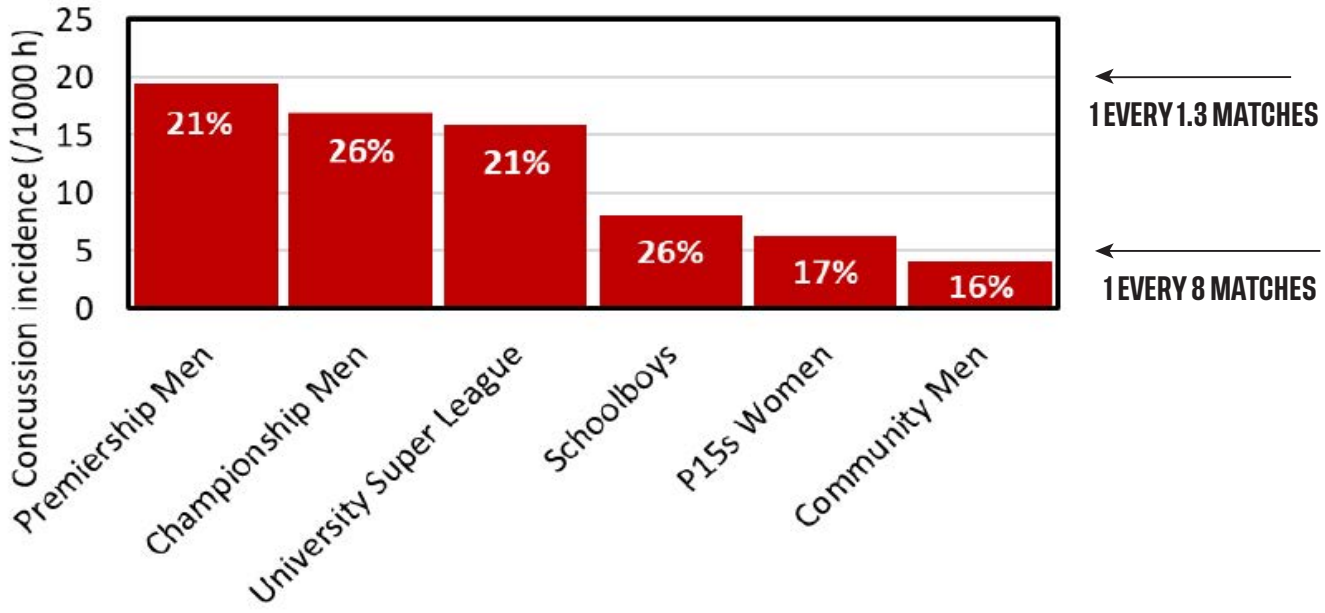
REMEMBER.... IF IN DOUBT, SIT THEM OUT

CONCUSSION IN RUGBY

Concussions occur in everyday life and not just in sport. As a contact sport, rugby does involve frequent body impacts and a risk of accidental head impacts, and therefore a risk of concussion.

According to data collected through the RFU's Community Rugby Injury Surveillance & Prevention (CRISP) programme, in age grade rugby (age 15 – 18) on average there is one concussion per team every 10 games and one concussion per team every 25 games in adult male community rugby. In professional rugby the rate is one every 2-3 team games.

CONCUSSION AT DIFFERENT LEVELS OF THE GAME



The heights of the red bars and percentage figures in the graph above express the percentage of all time-loss injuries that are suspected concussions.

There has been at notable rise in concussion rate over the last 10 years or so, is likely due in large part to the increased awareness of, and a lower threshold for suspecting concussion, which reflects the success of awareness and education programmes, and media coverage.

REFERENCE: CONCUSSION IN RUGBY UNION IN ENGLAND: A GAME WIDE PERSPECTIVE

SECTION THREE

PREVENTION

PREVENTION

Concussion occurs every day in the street, on school playgrounds and in the workplace. Rugby is a contact sport and, while it is impossible to completely remove the risk of concussion, there are a number of measures which can help to reduce the risk and prevent concussions occurring.

ACTIVATE

Activate is the England Rugby Injury Prevention Exercise Programme.
The programme is based on evidence that showed the conditioning of players significantly contributes to reducing the risk of injury, including concussion. The specific exercises in the programme have been shown to improve functional conditioning, movement control and activation of muscles, all of which improve playing performance, prepare players for the physical demands of the game and reduce the risk of injury



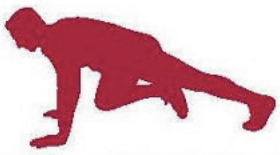
FUNCTIONAL CONDITIONING

Improves muscle activation and enables them to respond better to the demands of exersise



GENERAL MOVEMENT CONTROL

Develops adaptability allowing for better 'physical' decisions and reaction around contact areas



PRE-ACTIVATION

Improves muscle activation and enables them to respond better to the demands of exercise



Aids activation of stabilising hed and neck muscles reducing the potential "whiplash" effect that can cause concussion

THE FREE ACTIVATE RESOURCES AND VIDEOS ARE AVAILABLE ON THE ACTIVATE PAGE.

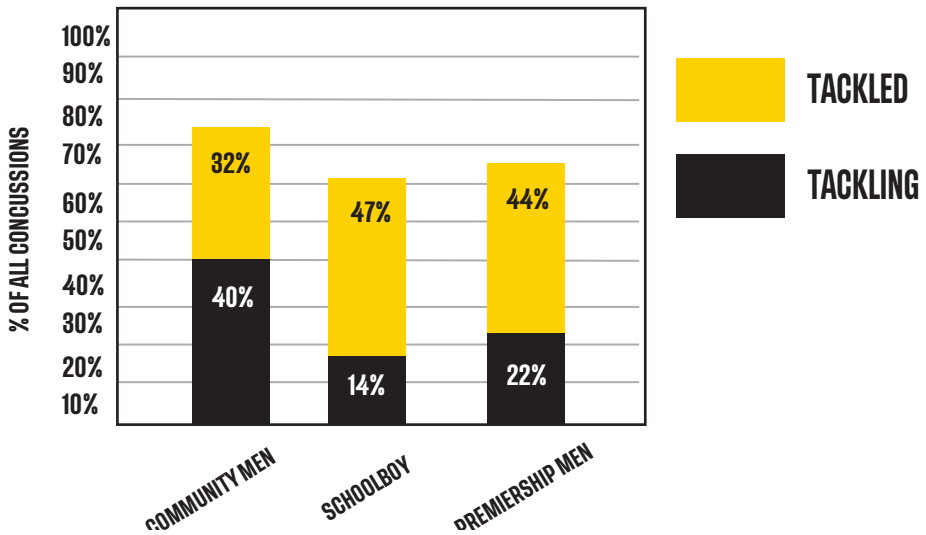
RESEARCH FINDINGS

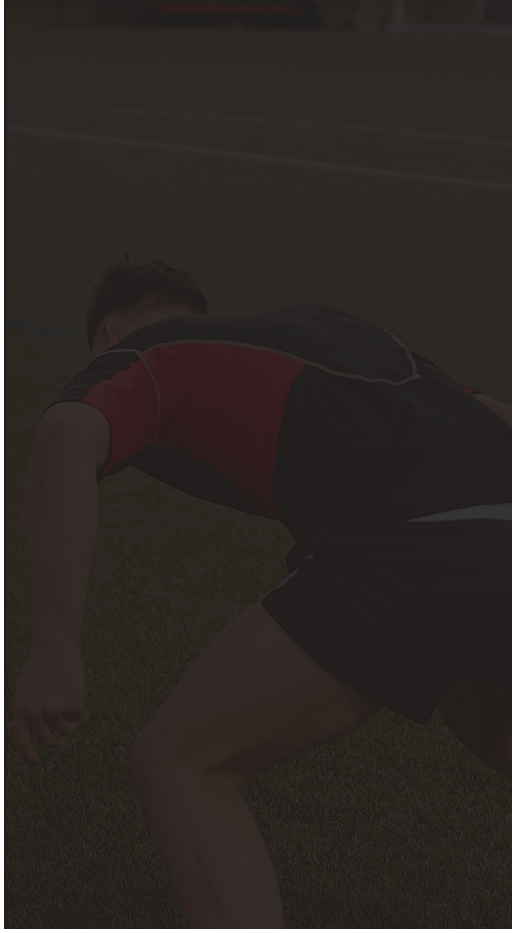
SCHOOL BOY STUDY	ADULT MALE COMMUNITY STUDY
72% ↓ IN OVERALL MATCH INJURIES*	40% ↓ IN LOWER LIMB INJURIES*
59% ↓ IN CONCUSSION*	59% ↓ IN CONCUSSION*

*WHEN PLAYERS WERE HIGHLY COMPLIANT WITH THE PROGRAMME (3 TIMES A WEEK)

TACKLE TECHNIQUE

The tackle is the highest risk event during matches and training. 54% of all injuries occur in the tackle and 60%-70% of concussions occur during the tackle. In school boy rugby it is actually the tackler rather than the tackled player that is at more risk of a concussion, with 47% of all concussions occuring when a player is tackling, compared to 14% when being tackled.





If a player's concussion resulted from poor tackle technique or if there are concerns about the player's behaviour and approach to the game, putting them at increased risk of concussion, then this must also be addressed. It is important to know what good technique is and how it can be developed and performed consistently.

Tackle technique is a skill that players should practice little and often to ensure that they are developing safe and effective technique and in varying ways and intensities. The free Tackle Safe eLearning module provides information and ideas for developing safe tackle practice and techniques, click here to sign up.

ENVIRONMENT

Ensure the playing/training area is safe. It is important to ensure that playing/training areas are set up appropriately with:

- Suitable run–offs by the touchlines.
- Appropriate protection padding on all posts and barriers on or close to the pitch.
- Fit for purpose and regularly checked equipment.
- Appropriate first aid / immediate care provision
- Check the ground conditions – it may not be safe to play or train if the ground is frozen or very hard.



LAWS

Laws and regulations are in place to make the game as safe as possible.

The emphasis for referees should be on safety, enjoyment, equity and learning to support the development of the players and good technique. Where foul play is clearly evident, the referee should take immediate action appropriate to address the issue and maintain safety.

Dangerous play and/or inappropriate behaviours by players could lead to a concussion and/or other injury. Law 9 covers foul play, it is important that high, tip and spear tackles and tackling players in the air are penalised immediately as falling from height increases the risk of concussion and neck injuries.



SECTION FOUR

CONCUSSION MANAGEMENT GUIDELINES

CONCUSSION MANAGEMENT GUIDELINES

REMEMBER:

- The majority (80-90%) of concussion symptoms resolve in around 7-10 days, with symptoms resolving within 1 - 2 days in around a third of cases.
- Children and adolescents typically take longer to recover because their brains are still developing, and a more conservative approach should be taken.
- The brain is more vulnerable to further injury if it hasn't had time to fully recover.
- It is important that players are open and honest about how they are feeling, any on-going symptoms and their recovery.
- Players should be not forced/pressured to return to play until they have no on-going symptoms, have fully recovered and have completed the RTP.

THE IMMEDIATE DOS AND DON'TS FOLLOWING A SUSPECTED CONCUSSION.

DO ✓	DO NOT ✗
Remove from play immediately.	Be left alone in the first 24 hours.
Get assessed by a health care professional within 24 hours of the incident to ensure that there are no significant underlying medical issues.	Consume alcohol in the 24 hours and/or until symptom free.
Rest & Sleep – this is good for recovery.	Drive a motor vehicle in the first hours and/or until symptom free.

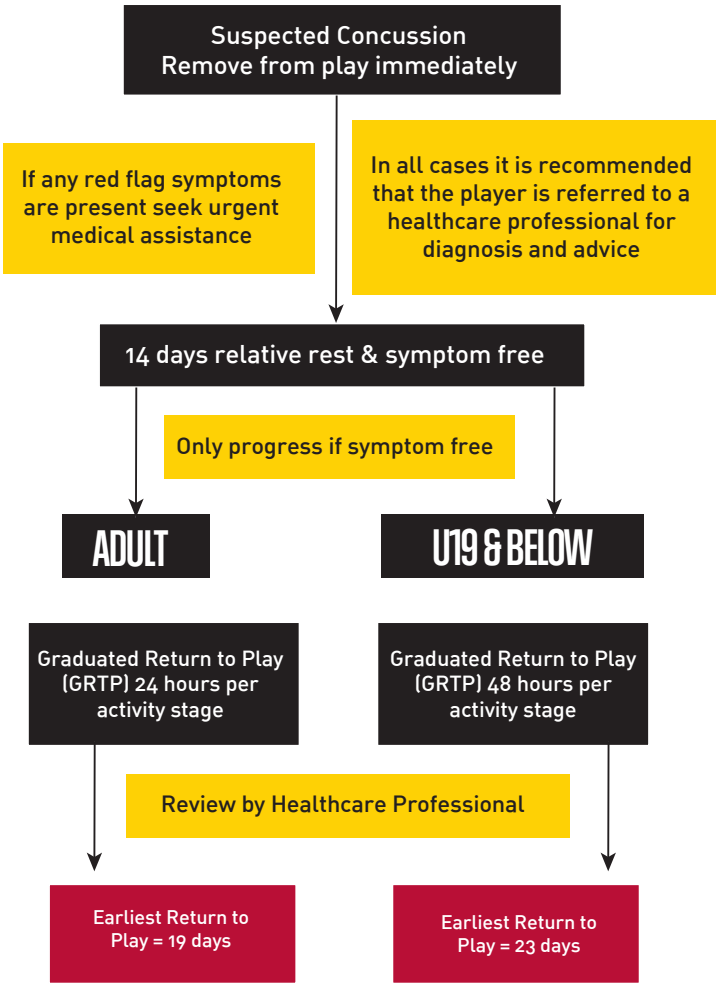
RETURN TO PLAY (RTP)

There are 2 different Graduated Return to Play programmes, one for adults and one those playing at U19s and below. The Return to Play is aligned across other sports in the UK, with NHS guidelines and are endorsed by the Sport and Recreational Alliance.

These guidelines can therefore be used across sports and in managing return to play in rugby when the concussion occurred in another sport or in everyday activities.



RETURN TO PLAY – PROGRAMMES



RETURN TO PLAY – KEY POINTS

- All those with suspected or diagnosed concussion should follow the relevant programme (Adult or U19 & below).
- All players should be assessed by a health care professional within 24 hours of the incident to ensure that there are no significant underlying medical issues (see Review by a Healthcare Professional section).
- If signs or symptoms of concussion are clearly identified at the time of injury but have resolved by the time of the subsequent assessment by a healthcare professional, the player should still follow the RTP programme.
- Day 1 of the RTP starts from the day after the concussive injury.
- Each phase of the RTP are "minimums". Players who do not recover fully within these timeframes should undertake a longer RTP.

Players or parents/guardians are responsible for informing all sporting clubs and schools/employers of the suspected concussion.

REST:

Following a suspected concussion, the best thing to help with recovery is appropriate rest!

Initial Rest means:
- No physical activities e.g., running, cycling, swimming and other forms of exercise.
- No cognitive (brain) activities e.g. reading, television, computer, video games and smart phones.
- Get some sleep, this is good for recovery.

However, balance is needed and too much complete rest is thought to delay recovery; 24-48hrs of complete rest is all that is needed in most cases.

In some cases, it may be appropriate for the player to miss a day or two of work/study after a concussion if they feel unwell or if on returning to work/studies their symptoms return. The player should have returned to work/academic studies before starting physical activity (see GRTP Stage 2b).

In a small number of cases, symptoms may be prolonged, and this may impact on work/studies. In such cases, early referral back to a doctor is advised.

Where extended absence from work/study is needed the following should be considered:
- Good communication with the workplace/place of study is important
- A gradual return to work/academic studies more be required
- Consideration should be given to a managed return to full work/study days i.e., part days initially

For children in school specifically:
- Communicate with the school, which may have a support worker who can help and advise.
- 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.

RELATIVE REST

After the 24-48hrs of initial rest, the player undertakes a period of relative rest (minimum 14 days) and should gradually look to return to their normal daily activities during this time.

- If symptoms are found to worsen during the relative rest stage, activities should be limited to a level where this does not occur, and activities are reintroduced on a more gradual basis.

- If symptoms do not resolve with Rest (Stage 1) then progression to symptom limited activities (Stage 2) is recommended.

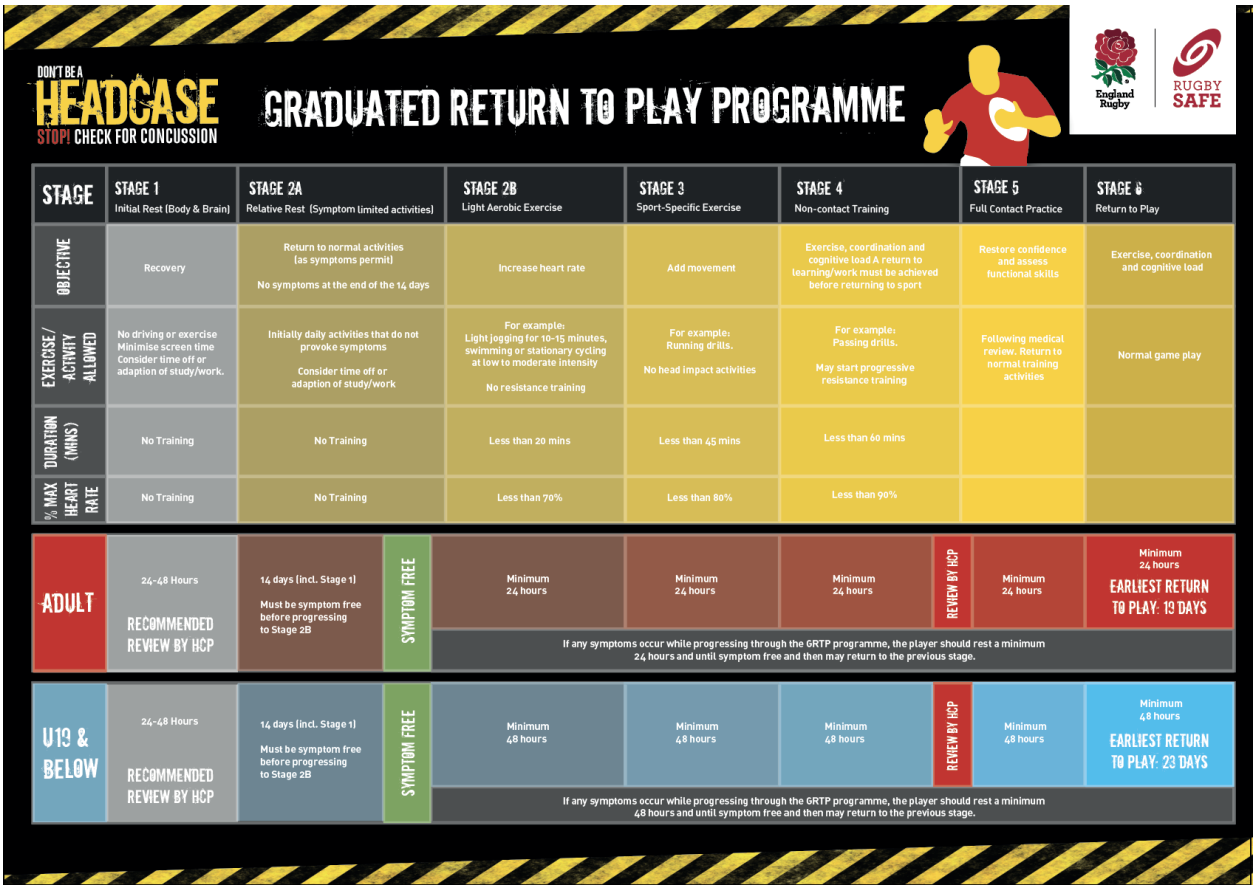
GRADUATED RETURN TO PLAY

Following the relative rest stage, the player should return to sport by following a graduated return to play (GRTP) programme.

The GRTP Stage 2b should only be started when the person:

- Has had 14 days of symptom free relative rest
- Is off all medication that modifies symptoms e.g. painkillers
- Has returned to normal studies or work

CLICK HERE FOR FULL GUIDE



GRADUATED RETURN TO PLAY – KEY POINTS:

- The GRTP should be undertaken on a case-by-case basis.
- Provided the player has no symptoms or signs of concussion at each stage they can progress through each stage.
- If any symptoms occur while progressing through the GRTP programme, the player should rest for a minimum of 24 hours (adults) and 48 hours (U19s) or until symptom free and then may return to the previous stage.
- If it is not feasible for the coach to conduct stages 2 - 4, these may be done by the player in their own time (or under parental supervision with appropriate guidance for U19's and below). Alternatively, the programme may simply be extended with each level being conducted by the coach/teacher at training sessions or (if appropriate) in the school setting by other PE staff during PE lessons.
- A review by a healthcare professional (see Review by a Healthcare Professional section) should be undertaken at Stage 4-5 before the player return to playing in full contact rugby games (stage 6).

CONCUSSION MANAGEMENT GUIDELINES 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 and management, parents and teachers should exercise vigilance and caution to ensure a safe "Return to Play":

- Ensure that all symptoms have subsided and the individual has returned to academic studies/work successfully before commencing the GRTP.

- Ensure that the appropriate GRTP programme is followed.

- Ensure that the advice of healthcare professionals is sought when appropriate.

- After returning to play all involved with the player, should remain vigilant for the return of symptoms even if the GRTP has been successfully completed.

- IF SYMPTOMS REOCCUR THE PLAYER SHOULD CONSULT A HEALTHCARE PRACTITIONER AS SOON AS POSSIBLE AS THEY MAY NEED REFERRAL TO A SPECIALIST IN CONCUSSION MANAGEMENT.



SECTION FIVE

REVIEW BY A HEALTHCARE PROFESSIONAL

REVIEW BY A HEALTHCARE PROFESSIONAL

INITIAL REVIEW – IMMEDIATELY AFTER A SUSPECTED CONCUSSION

Following a suspected concussion, all players should be initially assessed by a health care professional to ensure that there are no significant underlying medical issues.
It is important that all signs and symptoms of a suspected concussion are noted and communicated to the HCP directly or via the player/parents to pass on. Signs and symptoms are often short lived and may only be witnessed at the time of injury or immediately afterwards. If this is the case, even if the HCP confirms that there are no underlying issues, and the player has no ongoing symptoms the player should undertake the RTP.

Healthcare practitioners should use the SCAT 5 symptom check list to monitor recovery. The SCAT 5 is available to download from the HEADCASE resources page. Where players are paid and they would therefore be considered an employee, the club may wish to consider putting private arrangements in place to review players to return to full contact training.

HCP RETURN TO PLAY REVIEW

Having completed the 14 days of relative rest and up to Stage 5 of the GRTP, all players should be reviewed/assessed by a healthcare professional before returning to contact activities and other activities with a predictable risk of head injury e.g. football, gymnastics, horse riding, combat sports etc.
It is not necessary for a player to get "clearance to return to play" from a HCP, however a review by a HCP should confirm recovery and that there are no other underlying conditions or ongoing issues.
The HCP/GP does not need to provide a letter, verbal confirmation by a player / parent/guardian for U19s is acceptable. Clubs are advised to make a record of this verbal confirmation. GPs may charge a fee for providing a letter.

The following should also return to their GP for review:
- Children and young people who struggle to return to their studies.
- Individuals who struggle to return to their work or studies.
- Those who persistently fail to progress through the GRTP because symptoms return.
- It is recommended that anyone who sustains two or more concussions in a 12-month period should seek advice from their GP for a specialist opinion in case they have an underlying pre-disposition or risk factors.



SECTION SIX

RESOURCES & SIGNPOSTING

SECTION: RESOURCES & SIGNPOSTING

ALL HEADCASE AND RELATED RESOURCES ARE AVAILABLE TO DOWNLOAD ON THE HEADCASE RESOURCES PAGE, INCLUDING:

- HEADCASE Infographic
- HEADCASE Pitch-side Advice Card
- HEADCASE Changing Room Poster

- Pocket Concussion Recognition Tool (for general use)
- SCAT 5 Adult (for use for a Health Care Professional only)
- SCAT 5 Child (for use for a Health Care Professional only)

USEFUL INFORMATION

- RFU Regulations 9 and 15 (including concussion management)
- World Rugby Laws
- World Rugby Regulations
- World Rugby Concussion Guidance and Education
- 5th International Conference Consensus statement on Concussion in Sport

OTHER SOURCES OF INFORMATION:

Please note that these are external websites and the RFU is not responsible for the content of those websites.

- NHS Concussion Advice
- Headway
- Supporting Head Injured pupils in Schools
- Child Brain Injury Trust
- Brain and Spine
- Brain Injury Rehabilitation Trust