

# If in doubt, sit them out: Concussion guidelines

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#### 1 Introduction

In recent years, there has been increased recognition that American football players are at a higher than normal risk of suffering concussion. Like many other sports, we need to ensure that everyone who participates knows:

- 1. what concussion is and how serious it can be
- 2. how to tell when they or a teammate might have a concussion
- 3. what to do if they recognise the signs or symptoms of a concussion
- 4. the graduated return to play process

If someone is suspected of having a concussion, they must be **immediately** removed from play or practice. If you are uncertain about whether the athlete is concussed or not you must follow the guidance. IF IN DOUBT, SIT THEM OUT.

We should also emphasis that this document applies to flag football as well as contact football. Head injuries are not unknown in that version of the game.

This document tries to address the above points. It is based on guidance issued by the UK Government and other sports. It has been developed in conjunction with advice from BAFA's Sports Science and Medical Committee consisting of doctors and wider healthcare professionals experienced in the sport and care of its participants. It is intended to be read by everyone in the sport, but especially players, coaches and officials. Parents and team managers should also familiarise themselves with this guidance.

Note that in this and later sections, where we use the term "player" it also applies to any other participant in the game who might be at risk of concussion. This includes officials, coaches and sideline staff who might be hit or knocked down on or near the field.

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## 2 What is concussion?

#### 2.1 Definition

A concussion is a traumatic brain injury that results in a disturbance to the normal working of the brain.

In American football, it is most commonly caused by a blow to the head, or by the head forcefully hitting the ground, or a whiplash type effect when the head is shaken by a blow to another part of the body.

Concussions most commonly occur without loss of consciousness. Typically, there are subtle indications that a concussion has occurred, such as the player shaking their head, stumbling, or appearing dazed or stunned. Further signs and symptoms are noted in section 4.1 below.

The symptoms of concussion might appear immediately, but sometimes they are delayed and can appear at any time after the initial injury.

Playing sport is recognised as one of the main causes of concussion.

#### 2.2 Is concussion serious?

Concussion must be taken seriously, however its effects are not often serious.

Most people who sustain a concussion do not require any treatment, as they normally get better by themselves and recover quickly, without long-term effects.

"While the medical term 'traumatic brain injury' can sound serious, the actual extent of damage to the brain is usually minimal and does not usually cause long-term problems or complications." – NHS Choices

While for most the symptoms usually last for a few days, they may last for a few weeks or in a small number of cases longer, when it may be called Post-concussion Syndrome. Research suggests that most adults recover fully by about 7-10 days after the initial injury.

The brain is vulnerable when concussed and if further head trauma is sustained, the risk of more severe and prolonged symptoms is increased, especially in young players. This is why it is so important to recognise concussion, remove the player immediately from play, and not allow them to return to play until their brain function has returned to normal and they have been medically cleared.

There is however evidence that repeated episodes of concussion could cause long-term problems with mental abilities and trigger dementia. This type of dementia is known as chronic traumatic encephalopathy (CTE). If you have watched the film *Concussion* (starring Will Smith) about how the risk to NFL players was discovered, you will understand the potential long-term effects. There is evidence that players with a history of only two concussions within a year are at greater risk of further brain injury and slower recovery. It is therefore especially important that anyone who suffers repeated concussion should seek specialist medical help.

If managed correctly, concussion rarely has serious consequences, and full recovery can be expected. Most doctors would therefore argue that the physical benefits of taking part in contact sports outweigh the potential risks associated with concussion.

### 2.3 Is concussion different in young or female players?

Concussions can happen at any age. However, children and adolescents:

- are more susceptible to concussion
- take longer to recover
- have more significant memory and mental processing issues
- are more susceptible to rare and dangerous neurological complications, including death caused by a single or second impact

This is because children's brains are still developing, and there is concern that concussion can have more of an impact on brain function.

There is also evidence that women suffer higher concussion rates than men.

# 3 How do you prevent concussion?

Concussion cannot be totally prevented, but the risks of it can be reduced. Part of this is by the choice and correct use of helmets, and part of it is by appropriate coaching and playing.

#### 3.1 Helmets

The type and condition of a player's helmet is thought to affect the risk of sustaining a concussion, due to the transmission of forces to the head and brain. Researchers at Virginia Tech University provide helmet ratings that show different levels of impact protection. More information on their work can be found at <a href="http://www.beam.vt.edu/helmet/">http://www.beam.vt.edu/helmet/</a>. (Note that their advice for "youth" helmets covers the age range 10-14.) Helmets with more stars provide a reduction in concussion risk compared to helmets with fewer stars.

## 3.2 Playing by the rules

Rules Committees have placed increased emphasis on concussion prevention in recent years. Relevant rules include:

- A player must not use the crown of the helmet to make forcible contact against an opponent. As well as a concussion risk, this can also pose a high risk of spinal injury to the player inflicting the blow.
- A player must not make forcible contact against an opponent's head or neck in many situations where the
  opponent is "defenceless" and unable to avoid or reduce the impact of any blow.

Both of the above are fouls that result in immediate disqualification of the offending player.

It is also a foul for a player to continue playing if their helmet comes off. It must not be replaced while the ball is live – the player must go to the sideline to replace it properly.

Coaches have the utmost responsibility to ensure that players block and tackle opponents safely. The correct techniques need to be taught and practiced until they can be executed reliably. (See also section 6.2 below.)

# 4 How do you recognise concussion?

### 4.1 Suspecting concussion

Everyone involved in the game, including players, coaches, officials and sideline staff, should be aware of the signs and symptoms of concussion. Parents and guardians of young players should also be aware.

### Clear indicators of concussion include when a player:

- appears dazed or stunned; has a blank or glassy-eyed stare
- appears confused or incoherent
- cannot remember things that happened (amnesia)
- seems slow to answer questions or follow directions, or is easily distracted
- shakes head, grabs or clutches head
- stumbles, has to be physically supported by teammates or loses balance
- moves clumsily or awkwardly
- shows behaviour or personality changes (e.g. becomes more emotional or irritable)

## Other signs include:

- seizure or convulsion
- loss of consciousness
- disoriented; not aware of where they are
- lying motionless on the ground or very slow to get up off the ground
- blood or clear fluid leaking from the nose or ears

## A player might have suffered a concussion if they complain of:

- headache
- dizziness
- feeling dazed
- loss or blurring of vision, double vision, or seeing stars or flashing lights
- more emotional or irritable than normal
- ringing in the ears or sudden deafness
- sleepiness or fatigue
- stomach ache or pain, nausea or vomiting
- poor coordination
- slurred speech
- poor concentration

#### 4.2 Immediate action on suspicion

- 1. If concussion is suspected on the field, the attention of the officials should be drawn to the player in question. The game will be stopped while the player is removed from the field.
- 2. Anyone who recognises the signs should raise an alert with medical personnel (at a game) or a first aider (at training, for example). The player's coach should also be informed.
- 3. The decision as to whether the player is concussed or not should not be left to the player, as they are usually not thinking correctly. The decision to remove a player by a coach, first aider or official should always supersede the injured players opinion.

Sometimes the symptoms do not become apparent for some time, so in the days following an injury, concussion should be suspected in someone who:

- suffers a drop in work, training or academic performance
- has difficulties with problem solving
- has poor attention or concentration
- has unusual drowsiness or sleep disturbance
- has inappropriate emotions or unusual irritability
- is more nervous or anxious than usual

They should seek medical advice from the team's designated medical practitioner (if available), GP or call NHS 111.

# 4.3 Confirming concussion

Anyone can use the Pocket Concussion Recognition Tool to check symptoms and signs. This can be downloaded from <a href="https://passport.world.rugby/media/nlnhp1es/the-concussion-recognition-tool-6.pdf">https://passport.world.rugby/media/nlnhp1es/the-concussion-recognition-tool-6.pdf</a> or

https://cisgstg.wpengine.com/wp-content/uploads/2023/07/CRT6.pdf . It is recommended that the first aider and coaches should keep a copy of this with them at every football event.

Healthcare practitioners should use the SCAT6 to monitor recovery. This can be downloaded from <a href="https://passport.world.rugby/media/laxlusar/scat6.pdf">https://passport.world.rugby/media/laxlusar/scat6.pdf</a> or <a href="https://cisgstg.wpengine.com/wp-content/uploads/2023/07/SCAT6-v7.pdf">https://cisgstg.wpengine.com/wp-content/uploads/2023/07/SCAT6-v7.pdf</a>.

Other useful documents can be found courtesy of the Concussion in Sport Group (CISG) at <a href="https://www.concussioninsportgroup.com/scat-tools/">https://www.concussioninsportgroup.com/scat-tools/</a>

# 5 How do you manage concussion when it happens?

## 5.1 Immediate removal from play

If you suspect concussion, you **MUST REMOVE** the player from play immediately. Do not allow them to just "shake it off".

Always respond to concerns expressed by parents, officials or spectators about a player.

Continuing to play increases their risk of more severe, and/or longer lasting concussion symptoms, as well as increases their risk of other injury. In young players in particular, it puts them at risk of a fatal brain injury.

#### 5.2 Assessment

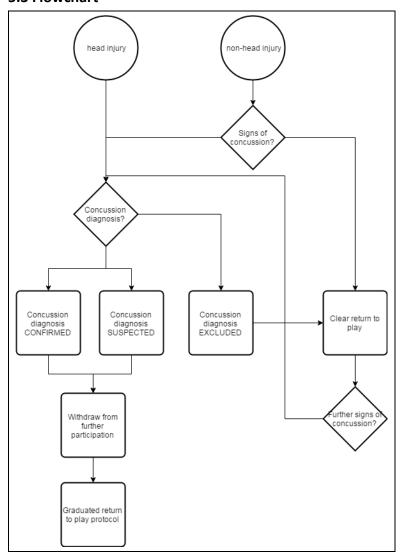
Anyone suspected of sustaining a concussion should be assessed by a healthcare practitioner or by calling NHS 111 within 24 hours of the injury event.

Should there be any suspicions of a medical emergency or the presence of red flags, immediate management is required by a healthcare professional and/or in A&E (call 999).

#### A player removed with suspected or confirmed concussion:

- must not return to play (or any other physical activity) that day
- should not be left alone
- should not drive or ride a bike/motorbike
- should not drink alcohol
- needs to rest their body (so avoid running, cycling, swimming, etc.)
- needs to rest their brain (so no reading, television, computer, video games, homework, etc.)

#### 5.3 Flowchart



## 5.4 More serious injury/Red Flags/medical emergency

If any of the following are reported or known, then the player should be transported for urgent hospital attention:

- severe neck pain
- losing consciousness because of the injury
- deteriorating consciousness (more drowsy)
- amnesia (no memory) for events before or after the injury
- increasing confusion, agitation or irritability
- severe or increasing headache
- any suspicion of a skull fracture (e.g. cut, bruise, swelling, severe pain at site of injury)
- repeated vomiting
- unusual behaviour change
- seizure or convulsion
- limb twitching or lying rigid/motionless due to muscle spasm
- any new neurological deficit. e.g.:
  - difficulties with understanding speaking, reading or writing
  - decreased sensation
  - o loss of balance
  - o double vision
  - weakness or tingling/burning in arms or legs
- difficulty walking
- suspicion of a skull fracture (e.g. cut, bruise, swelling, severe pain at site of injury)
- previous history of brain surgery or bleeding disorder

- current "blood-thinning" therapy
- current drug or alcohol intoxication

Dial 999 for an ambulance if in doubt about the seriousness of any of these.

If a neck injury is suspected, the player should only be moved by healthcare professionals with the appropriate level of training. Otherwise, the player should continue to be monitored while an ambulance is called (call 999).

## 5.5 Excluding concussion

The participant may return to play if a suitable professional healthcare practitioner (not a first aider) has cleared them of a concussion and is confident in that assessment. This decision must be communicated to the referee by the professional practitioner.

If in doubt, keep them out.

Anyone who is cleared to return to play should still be monitored in case symptoms recur.

### 5.6 Looking after someone with suspected concussion

Coaches or other team managers must:

- safely remove the individual from the field of play and ensure that they do not return to play in that game even
  if they say that their symptoms have resolved
- observe the individual or assign a responsible adult to monitor them once they are removed no concussed player should be allowed to be alone
- if the participant is under 18 years old, contact parent/guardian to inform them of the possible concussion
- arrange for the individual to get home safely they should not be allowed to drive within the first 24 hours
- arrange for a responsible adult to supervise the individual over the next 24-48 hours
- ensure any relevant injury report form is completed and stored by the club/school/organisation
- ensure the individual follows a graduated return to activity (education/work) and sport programme with an emphasis on initial relative rest and returning to education/work before returning to training for sport
- advise the individual not to consume alcohol within the first 24 hours and/or if symptoms persist

#### A child's parents or carers should:

- obtain full details of the incident
- do not leave your child alone for the first 24 hours
- have your child assessed by an appropriate healthcare professional within 24 hours or by accessing the NHS by calling 111
- monitor your child for worsening signs and symptoms of concussion for at least 24-48 hours
- encourage initial rest/sleep as needed and limit smartphone/computer and screen use for the first 24-48 hours
- inform school/work/other sports clubs of the suspected concussion
- support your child to follow a graduated return to activity (education/work) and sport programme

### Participants should:

- stop playing/training immediately if you experience any symptoms of concussion
- be honest with how you feel and report any symptoms immediately to your coach, medic and/or parent
- not delay in reporting and underreporting of symptoms have been associated with a longer recovery and delayed return to activity and could risk incomplete recovery of the brain
- if you have continuing symptoms, do not return to training or sport activities until evaluated by an appropriate healthcare professional
- inform your school/work/sports clubs
- follow the graduated return to activity (education/work) and sport programme
- during training and matches, always watch out for teammates and encourage them to be honest and report any concussion symptoms
- if you question whether another participant may have symptoms of concussion, report this to the coach, match official or appropriate healthcare professional

## 6 When can players return to play?

### 6.1 General principles

After a concussion, the brain needs to rest, so this means a complete break from physical and brain activities. Sleep is good for recovery, but a balance has to be achieved because too much complete rest is thought to delay recovery. A return to normal light activities of daily living is advised as soon as symptoms have reduced. No more than 24 hours complete rest is needed in most cases. In the first 24-48 hours, it is OK to perform mental activities like reading, and activities of daily living as well as walking.

However, they should not return to sport or physical activity, or any other activity that risks further head injury, for some time. This is normally at least two weeks (see below).

The prohibitions above about being left alone, consuming alcohol or driving apply until all symptoms have gone.

A player may need a day or two off work/study to rest. An employer or education provider may need to be informed of the existence of the injury and reasonable adjustments made to the player's normal work/study pattern (e.g. assigned desk duties or excused PE).

At all times, if symptoms return, the player must reduce the level of activity, rest and if necessary seek further medical advice. However, despite being symptom-free, the brain is still recovering and remains vulnerable for a period of time.

## 6.2 Graduated return to play (GRTP)

BAFA (in common with many other sports governing bodies) mandates the following return to play protocol. This is different from our previous protocol in that it no longer requires an initial 14-day rest period. Also, the protocol for adults and children is now the same.

Sta	ge	Daily activities	Sporting activities		
1.	Relative rest for 24- 48 hours	Take it easy for the first 24-48 hours after a suspected concussion. It is best to minimise any activity to 10 to 15-minute slots. You may walk, read and do some easy daily activities provided that your concussion symptoms are no more than mildly increased. Phone or computer screen time should be kept to the absolute minimum to help recovery.	Gentle exercise (e.g. walking) provided symptoms are no more than mildly increased. If symptoms increase, rest until the following day.		
2	Return to daily activities	Gradually increase mental activities through easy reading, limited, television, games, and limited phone and computer use.  Gradually introduce school and work activities at home.  Advancing the volume of mental activities can occur as long as they do not increase symptoms more than mildly.	After the initial 24–48 hours of relative rest, gradually increase light physical activity.  Increase daily activities like moving around the house, simple chores and short walks. If these activities more than mildly increase symptoms, rest until they subside.		
3	Sport- specific exercise	Once normal level of daily activities can be tolerated then explore adding in some home-based school or work-related activity, such as homework, longer periods of reading or paperwork in 20 to 30-minute blocks with a brief rest after each block.  Discuss with school or employer about returning part-time, time for rest or breaks, or doing limited hours each week from home.	Walking or stationary cycling for 10–15 minutes. Start at an intensity where able to easily speak in short sentences. The duration and the intensity of the exercise can gradually be increased according to tolerance.  If symptoms more than mildly increase, or new symptoms appear, stop and briefly rest. Resume at a reduced level of exercise intensity until able to tolerate it without more than mild symptom exacerbation.  Brisk walks and low intensity, body weight resistance training are fine but no high intensity exercise or added weight resistance training.		
4	Non- contact training	May need to consider a part-time return to school or reduced activities in the workplace (e.g. half-days, breaks, avoiding hard physical work, avoiding complicated study).	Start training activities once not experiencing symptoms at rest from the recent concussion. It is important to avoid any training activities involving risk of head impacts. Now increase the intensity of exercise and resistance training. Running drills are fine, but no contact drills should be undertaken.		
5	Full contact practice	Return to full activity and catch up on any missed work.	When free of symptoms at rest from the recent concussion for 14 days can consider commencing training activities involving risk of head impacts (e.g. contact drills).  Start with walk-throughs and gradually work up to full speed. Introduce decision-making drills, but ensure good technique. Stop if any symptoms recur. Return to the previous stage where the level of activity does not more than mildly worsen symptoms.		

Sta	ge	Daily activities	Sporting activities		
6	Return to play	This stage should <b>not</b> be reached before day 21 (at the earliest) and only if no symptoms at rest have been experienced from the recent concussion in the preceding 14 days and now symptom free during pre-competition training.	Full activities in game situations.  Resolution of symptoms is only one factor influencing the time before a safe return to competition with a predictable risk of head injury. Approximately two-thirds of individuals will be able to return to full sport by 28 days, but children, adolescents and young adults may take longer.		

Progressing too quickly through stages 2 - 5 whilst symptoms are significantly worsened by exercise may slow recovery. Although headaches are the most common symptom following concussion and may persist for several months, exercise should be limited to that which does not more than mildly exacerbate them. Symptom exacerbation with physical activity and exercise is generally safe, brief and is self-limiting typically lasting from several minutes to a few hours.

Players must have returned to work/study before starting physical activity (stage 3).

If it is not feasible for a coach to supervise stages 2-4, these may be done by the player in their own time, or by children supervised by parents with appropriate guidance. Alternatively, the protocol may be extended with each stage being completed at successive training sessions.

If any symptoms recur while going through the stages, a player must rest until the following day (without more than mildly-increased symptoms) and return to the previous stage where the level of activity does not more than mildly worsen symptoms.

If symptoms recur after return to play the player must consult their healthcare professional as soon as possible as they may need a referral to a specialist in concussion management.

Medical advice should be sought from NHS 111 if symptoms do not resolve within 14 days.

Those players who suffer symptoms after 28 days should see their own GP for advice and management.

Any player with a second concussion within 12 months, a history of multiple concussions, with an unusual presentation or a prolonged recovery should be assessed and managed by a healthcare professional with experience in sports related concussions working within a multi-disciplinary team.

## 6.3 Summary of return to play pathway duration

Stage	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Minimum elapsed days since injury	1-2	2-3	3-4	8	15	Day 21 earliest return to play

#### 6.4 Responsibilities

The responsibility for managing a graduated return to play is shared by the player, their parents/guardians (where appropriate), their coaches and their club's management. Depending on the circumstances, BAFA may take disciplinary action against anyone who is party to a breach of this protocol without specialist medical advice.

Players must remember their duty to inform their coach of their condition and any recurrence of it. Teammates should be alerted to watch out for signs.

Coaches must be particularly aware of the stage of a player's recovery and not ask them to do too much. They must always be alert for returning signs of a concussion and cease the player's activity immediately if they are observed.

Where a player has received specific individual advice or restrictions from a medical practitioner, these should be reported to their club and coach, and must be adhered to at all times until lifted.

Even after a graduated return to play has been completed, the player and their coaches must remain vigilant for any return of symptoms.

## 7 What should coaches and club officers do now?

#### 7.1 Awareness

Clubs should ensure that all personnel are aware of the signs of concussion, the actions to take if concussion is suspected and the graduated return to play protocol if concussion is not cleared. This should be covered at least once per season at a team meeting or training activity. Personnel who miss that meeting/activity should be made aware by other means.

There are a number of resources available to support the education of personnel. Those provided by England Rugby (<a href="http://www.englandrugby.com/concussion">http://www.englandrugby.com/concussion</a>) and the England Football (<a href="https://www.englandfootball.com/participate/learn/Brain-Health/Concussion">https://www.englandfootball.com/participate/learn/Brain-Health/Concussion</a>) are recommended.

BAFRA should ensure that all officials are familiar with this policy, the signs of concussion and the procedures to be followed if concussion is suspected (Rule 13-1-3 and Appendix C of the rulebook). Officials have a key role to play in identifying players on the field who may have suffered a concussion. Officials should be encouraged to complete the England Rugby *Concussion Awareness* training course for match officials

(<a href="http://www.englandrugbyfiles.com/concussion/courses/match-officials/">http://www.englandrugbyfiles.com/concussion/courses/match-officials/</a>) and/or the one created by the US Centers for Disease Control and Prevention (CDC) and endorsed by NASO (<a href="https://www.train.org/cdctrain/course/1105618/details">https://www.train.org/cdctrain/course/1105618/details</a>).

### 7.2 Training

Clubs must ensure that they have adequate first aid cover available for all practice sessions where contact will take place. Club personnel, including coaches, should be encouraged to complete first aid courses appropriate to their role. The more first aid trained people available the better. If no first aider is available, practice with contact must not take place.

## 7.3 Planning

Clubs should ensure their emergency action plan covers what they will do if one of their players suffers a concussion. Who will look after them on the sideline? Who will take them home? Who will check up on them during the graduated return to play period? Who will keep an eye on them when they return to practice and ultimately play?

#### 7.4 Coach education

Several resources are available to support coaches increase their knowledge and awareness of concussion, including:

- BAFCA has utilised resources from USA Football Coach Certification, RFU Headcase, UK Coaching and Crashcourse to develop educational resources that are focus elements of the BAFCA Level 1 coaching qualification. These resources focus on Cause, Signs, Symptoms and Return to Play procedures.
- Concussion may be the result of a player's poor blocking or tackling technique. Therefore, BAFCA has also
  utilised the expert knowledge from USA Football and promoted resources and educational material/packages on
  Safe Blocking and Tackling fundamentals. These are a mandatory part of the BAFCA education framework and
  have also been used as part of coaches' Continued Professional Development.
- BAFCA has delivered Concussion awareness session as part of our annual convention using experts from USA Football and BAFA's medical teams.
- BAFCA has also delivered Safe Blocking and Tackling fundamental sessions as part of the annual convention using experts from USA Football and World Rugby. These resources are available online.

The cause of a concussion in American Football can be varied. Regardless of the cause of the concussion, if a player is suspected of having a concussion, their coach is responsible for ensuring the appropriate actions are taken to protect the long-term health and wellbeing of the player.

The following preventative measures should be addressed by coaches to reduce the risk of concussion:

- Concussion education for all players, coaches and support staff.
- Clear guidance on concussion protocols and return-to-play procedures.
- Correct instruction, monitoring and delivery of safe blocking and tackling techniques.
- Ensuring equipment is fitted correctly and maintained.
- Ensure that the playing environment does not pose particular concussion risks (e.g. low headroom, short runoff areas).
- Managing player's behaviour and approach to the game when playing or training.

# 8 Future work

## 8.1 Injury surveillance

A major part of improving the safety profile for the sport of American football in Britain is continuing to monitor the rate of injuries sustained during participation. Previously this has been accomplished by evaluating data that has been compiled by those liaising with the sport's insurers. However, the less than comprehensive nature of this data has raised questions regarding its validity in assessing injury risk.

Therefore, in order to improve our understanding for the benefit of the sport and its participants, we will gradually be bringing in higher levels of injury reporting. Mandatory recording of concussions would constitute part of a nationwide injury surveillance system and a specific injury-reporting tool should be completed to aid these efforts.

## 8.2 Safety of the game

BAFA continually examines areas within the game where risk for injuries may inform decisions regarding rule changes to eliminate the injury-prone actions or events.

We also recognise that sportsmanship plays a crucial role in maintaining player safety, avoiding unnecessary or defenceless contact and collisions, in order to maximise safety and minimise injury risk for all.

## 9 Sources

More information can be found at:

- If in doubt, sit them out: UK Concussion Guidelines for Non-Elite (Grassroots) Sport
- Appendix C of the BAFA Rules
- NHS Head injury and concussion page

## **10 Document history**

March 2024	Revised to incorporate updated advice from UK government: "If in doubt, sit them out: UK Concussion Guidelines for Non-Elite (Grassroots) Sport". Return to play protocol no longer mandates 14 days of complete rest.
March 2017	Initial publication