INTERNATIONAL RUGBY BOARD
Putting players first

Concussion Guidance for the General Public

CONCUSSION FACTS

- A concussion is a brain injury.
- All concussions are serious.
- Concussions can occur without loss of consciousness.
- All athletes with any symptoms following a head injury must be removed from playing or training and must not return to activity until all symptoms have cleared.
- Specifically, return to play on the day of any suspected concussion is forbidden.
- Recognise and remove to help prevent further injury or even death.
- Concussion can be fatal.
- Most concussions recover with physical and mental rest.

What is concussion?

Concussion is a traumatic brain injury resulting in a disturbance of brain function. There are many symptoms of concussion, common ones being headache, dizziness, memory disturbance or balance problems.

Loss of consciousness, being knocked out, occurs in less than 10% of concussions. Loss of consciousness is not a requirement for diagnosing concussion.

Typically standard brain scans are normal.

What causes concussion?

Concussion can be caused by a direct blow to the head, but can also occur when blows to other parts of the body result in rapid movement of the head, e.g. whiplash type injuries.

Who is at risk?

Concussions can happen at any age. However, **children and adolescent athletes:**

- 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

Athletes with a history of **two or more concussions** within the past year are at greater risk of further brain injury and slower recovery and should seek medical attention from practitioners experienced in concussion management before return to play.

Onset of symptoms

It should be noted that the symptoms of concussion can present at any time but typically become evident in the first 24-48 hours following a head injury.

How to recognise a concussion

If any of the following signs or symptoms are present following an injury the player should be suspected of having a concussion and immediately removed from play or training.

Visible clues of concussion - what you see

Any one or more of the following visual clues can indicate a concussion:

- Dazed, blank or vacant look
- Lying motionless on ground/slow to get up
- Unsteady on feet/balance problems or falling over/incoordination
- Loss of consciousness or responsiveness
- Confused/not aware of plays or events
- Grabbing/clutching of head
- Seizure (fits)
- More emotional/Irritable than normal for that person

Symptoms of concussion - what you are told

Presence of any one or more of the following signs and symptoms may suggest a concussion:

- Headache
- Dizziness
- Mental clouding, confusion, or feeling slowed down
- Visual problems
- Nausea or vomiting
- Fatigue
- Drowsiness/feeling like “in a fog“/difficulty concentrating
- “Pressure in head”
- Sensitivity to light or noise

Questions to ask - what questions to ask

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

- “What venue are we at today?”
- “Which half is it now?”
- “Who scored last in this game?”
- “What team did you play last week/game?”
- “Did your team win the last game?”

Recognise and remove and if in doubt, sit them out.

On field management of a suspected concussion at training or during a match

Any athlete with a suspected concussion should be **IMMEDIATELY REMOVED FROM PLAY**, using appropriate emergency management procedures.

Once safely removed from play, the injured player must not be returned to activity that day and until they are assessed medically.

If a neck injury is suspected, the player should only be removed by emergency healthcare professionals with appropriate spinal care training.

Team mates, coaches, match officials, team managers, administrators or parents who suspect a player may have concussion MUST do their best to ensure that the player is removed from the field of play in a safe manner.

Side line management of a suspected concussion

Athletes with a suspected concussion:

- should not be left alone in the first 24 hours
- should not consume alcohol in the first 24 hours and thereafter should avoid alcohol until provided with medical or healthcare professional clearance or, if no medical or healthcare professional advice is available, the injured player should avoid alcohol until symptom free
- should not drive a motor vehicle and should not return to driving until provided with medical or healthcare professional clearance or, if no medical or healthcare professional advice is available, should not drive until symptom free

If ANY of the following are reported, then the player should be transported for urgent medical assessment at the nearest hospital:

- Athlete complains of severe neck pain
- Deteriorating consciousness (more drowsy)
- Increasing confusion or irritability
- Severe or increasing headache
- Repeated vomiting
- Unusual behaviour change
- Seizure (fit)
- Double vision
- Weakness or tingling/burning in arms or legs

In all cases of suspected concussion, it is recommended that the player is referred to a medical or healthcare professional for diagnosis and guidance, even if the symptoms resolve.

Managing a concussion or suspected concussion - REST THE BODY, REST THE BRAIN

Rest is the cornerstone of concussion treatment. This involves resting the body - ‘physical rest’ - and resting the brain - ‘cognitive rest’. This means avoidance of:

- Physical activities such as running, cycling, swimming, etc
- Cognitive activities, such as school work, homework, reading, television, video games, etc

This complete rest should be for a minimum of 24 hours.

Before restarting activity, the player must be symptom free at rest. Medical or approved healthcare provider clearance is recommended before restarting activity.

Children and adolescents should be managed more conservatively. The International Rugby Board recommend children and adolescents should not play or undertake contact training for a minimum of 2 weeks following cessation of symptoms. Students must have returned to school or full studies before recommencing exercise.

After the minimum rest period AND if symptom free at rest, a graduated return to play (GRTP) programme should be followed.

Graduated return to play (GRTP) programme

A graduated return to play (GRTP) programme is a progressive exercise programme that introduces an athlete back to sport in a step wise fashion. This should only be started once the athlete is symptom free and off treatments that may mask concussion symptoms, for example drugs for headaches or sleeping tablets.

The GRTP programme consists of six distinct stages:

- The first stage is the recommended rest period
- The next four stages are training based restricted activity
- Stage 6 is a return to play

Under the GRTP programme, the player can proceed to the next stage only if there are no symptoms of concussion during rest and at the level of exercise achieved in the previous GRTP stage.

If any symptoms occur while going through the GRTP programme, the player must return to the previous stage and attempt to progress again after a minimum 24-hour period of rest without symptoms.

The International Rugby Board recommends that a medical practitioner or approved healthcare professional confirm that the player can take part in full contact training before entering stage 5.

Table 1: GRTP protocol - each stage is a minimum of 24 hours

Rehabilitation stage	Exercise allowed	Objective
1. Minimum rest period	Complete body and brain rest without symptoms	Recovery
2. Light aerobic exercise	Light jogging for 10-15 minutes, swimming or stationary cycling at low to moderate intensity. No resistance training. Symptom free during full 24-hour period	Increase heart rate
3. Sport-specific exercise	Running drills. No head impact activities	Add movement
4. Non-contact training drills	Progression to more complex training drills, e.g. passing drills. May start progressive resistance training	Exercise, coordination, and cognitive load
5. Full contact practice	Normal training activities	Restore confidence and assess functional skills by coaching staff
6. Return to play	Player rehabilitated	Recover

It is recommended that, in all cases of suspected concussion, the player is referred to a medical professional for diagnosis and guidance as well as return to play decisions, even if the symptoms resolve.

A comprehensive medical concussion evaluation may include:

- An analysis of symptoms
- A general and neurological examination
- Verbal cognitive (memory) tests
- A balance assessment
- Computerised brain function tests

Each of these is useful in contributing to a diagnosis and return to play decision but no one test stands alone in determining return to play.