IF IN DOUBT, SIT THEM OUT.

Scottish Sports Concussion Guidance: Grassroots sport and general public

Modified from World Rugby's 'Guidelines on Concussion Management for the General Public'

Introduction

The following guidance is intended to provide information on how to recognise sports concussion and on how sports concussion should be managed from the time of injury through to safe return to play.

This information is intended for the general public and for grassroots sports participants where specialists in Sports and Exercise Medicine are not available to manage concussed athletes.

At all levels in all sports, if an athlete is suspected of having a concussion, they must be immediately removed from play. If in doubt, sit them out.

Any player with a second concussion within 12 months, a history of multiple concussions, players with unusual symptoms or prolonged recovery should be assessed and managed by health care providers (multidisciplinary) with experience in sports-related concussions.

CONCUSSION FACTS

A concussion is a brain injury.

All concussions are serious.

Most concussions occur without loss of consciousness.

Anyone with any symptoms following a head injury must be removed from playing or training and must not take part in any physical activity until all concussion symptoms have cleared.

Specifically, there must be no return to play on the day of any suspected concussion.

Return to education or work takes priority over return to play.

If in doubt, sit them out to help prevent further injury or even death.

Concussion can be fatal.

Most concussions recover with rest.

The following pages detail:

- **What is concussion?**
- **What causes concussion?**
- **Who is at risk?**
- **How to recognise a concussion**
- **Visible clues of concussion – what you see**
- **Symptoms of concussion – what you are told**
- **Questions to ask**
- **Immediate management of a suspected concussion**
- **Ongoing management of a concussion or suspected concussion**
- **Returning to play after a concussion**
- **Graduated return to play (GRTP) protocol**
- **Minimum return to play intervals when following GRTP Protocol**
- **GRTP Protocol**
- **How are recurrent or multiple concussions managed?**

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** required to diagnose concussion.

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 adolescents (18 and under):

- 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**

A history of previous concussion increases risk of further concussions, which may take longer to recover.

Onset of symptoms

The first symptoms of concussion can present at any time, but typically appear 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.

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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 & 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

These should be tailored to the particular activity and event, but failure to answer any of the questions correctly may suggest a concussion. Examples with alternatives include:

“What venue are we at today?”
or “Where are we now?”

“Which half is it now?”
or “Approximately what time of day is it?”

“Who scored last in this game?”
or “How did you get to here today?”

“What team did you play last game?”
or “Where were you on this day last week?”

“Did your team win the last game?”
or “What were you doing this time last week?”

Immediate management of a suspected concussion

Anyone with a suspected concussion should be **IMMEDIATELY REMOVED FROM PLAY.**

Once safely removed from play they must not be returned to activity that day.

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** someone may have concussion **MUST** do their best to ensure that they are removed from play in a safe manner.

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

- 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 advice, even if the symptoms resolve.

Ongoing management of 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' and avoidance of:

- **Physical activities** such as running, cycling, swimming, some work activities etc.
- **Cognitive activities**, such as **school work, homework, reading, television, video games** etc. Students with a diagnosis of concussion may need allowance for impaired cognition during recovery, such as additional time for classwork, homework and exams

For adults, a minimum rest period of 72 hours is recommended before restarting exercise.

For anyone aged 18 or under, it is recommended this **rest period should be for a minimum of 2 weeks** before restarting physical activity.

Anyone with a **concussion or suspected concussion should not:**

- **be left alone** in the first 24 hours
- **consume alcohol** in the first 24 hours, and thereafter should avoid alcohol until free of all concussion symptoms
- **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 free of all concussion symptoms

Returning to play after a concussion

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

Students must have returned to school or full studies before restarting physical activity.

Graduated return to play (GRTP) protocol

A graduated return to play (GRTP) protocol is a progressive exercise program that introduces an individual back to sport in a step wise fashion.

This should only be started when:

- symptom free at rest,
- returned to normal education or work, where appropriate,
- off treatments that may mask concussion symptoms, e.g. drugs for headaches or sleeping tablets.

The GRTP Protocol contains six distinct stages:

- Stage 1 is the recommended rest period
- The next four stages are restricted, training based activity
- Stage 6 is a return to play

Under the GRTP Protocol, the individual can advance to the next stage only if **there are no symptoms** of concussion at rest and at the level of physical activity achieved in the previous GRTP stage.

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

It is recommended that a medical practitioner or approved healthcare professional confirm that an individual can take part in full contact training before entering Stage 5.

MINIMUM RETURN TO PLAY INTERVALS WHEN FOLLOWING GRTP PROTOCOL

AGE GROUP	GRTP STAGE 1 MINIMUM REST PERIOD	CAUTION! Return to play protocol should be started only if the player is symptom free and off medication that modifies symptoms of concussion	GRTP STAGES 2 to 5	CAUTION! Contact sport should be authorized only if the player is symptom free and off medication MEDICAL CLEARANCE RECOMMENDED	GRTP STAGE 6 MINIMUM RETURN TO PLAY INTERVAL
Children and Adolescents (aged 18 and under)	14 days		4 Stage GRTP Progression every **48 hours,** if symptom free		**14 day rest + 8 day GRTP = Day 23 post injury**
Adults	3 days		4 Stage GRTP Progression every **24 hours,** if symptom free		**3 day rest + 4 day GRTP = Day 8 post injury**

CAUTION! Any player with a second concussion within 12 months, a history of multiple concussions, players with unusual presentations or prolonged recovery should be assessed and managed by health care providers with experience in sports-related concussions.

GRTP PROTOCOL: EACH STAGE IS A MINIMUM OF 24 HOURS IN ADULTS, 48 HOURS IN THOSE AGED 18 AND UNDER

Stage	Rehabilitation Stage	Exercise Allowed	% Max Heart rate	Duration	Objective
1	Minimum rest period	Complete body and brain rest			Recovery
2	Light exercise	Walking, light jogging, swimming, stationary cycling or equivalent No resistance training, weight lifting, jumping or hard running	<70%	<15min	Increase heart rate
3	Sport-specific exercise	Simple movement activities e.g. running drills Limit body and head movement NO head impact activities	<80%	<45min	Add movement
4	Non-contact training	Progression to more complex training activities with increased intensity, coordination and attention e.g. passing May start resistance training NO head impact activities	<90%	<60min	Exercise, coordination and skills/tactics
5	Full Contact Practice	Normal training activities e.g. tackling			Restore confidence and assess functional skills by coaching staff
6	Return to Play	Player rehabilitated			Return to play

How are recurrent or multiple concussions managed?

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 returning to play.

Any player with a second concussion within 12 months, a history of multiple concussions, players with unusual presentations or prolonged recovery should be assessed and managed by health care providers (multidisciplinary) with experience in sports-related concussions.

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