Concussion Information

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 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**

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.

How soon after injury do the symptoms of concussion start?
The first symptoms of concussion can present at any time, but typically appear in the first 24-48 hours following a head injury.

How do I recognise a concussion?
If there is **any suspicion** a player might be concussed, they should **immediately be removed from play or training**.

What are the 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

What are the 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

What questions should I 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 include:*

"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?"

Remember, concussion symptoms can be delayed

What is the immediate management of a suspected concussion?
If in doubt, sit them out

If there is **any suspicion** of concussion, the player should be immediately **removed from play or 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 a neck injury is suspected the player should only be removed by emergency healthcare professionals with appropriate spinal care training.

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

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.

How should a concussion or suspected concussion be managed after the player is removed from play?
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 24 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 exercise.

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

What is the advice for 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 exercise.

What is a 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:

- once 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 Program contains of 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 Program, the individual can proceed to the next stage **only if there are no symptoms** of concussion at rest and at the level of exercise 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.

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 return 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.

DO NOT RETURN TO PLAY TRAINING IF YOU HAVE ANY SYMPTOMS.

The following protocols are to be followed by all individuals **diagnosed with concussion or suspected of having concussion** during an activity where there is no appropriately qualified person present.

Graduated return to play (GRTP) should only be commenced after the completion of the minimum rest period and only if symptom free and off medication that modifies symptoms of concussion.

Return to education and work take priority over return to play

A second head impact in someone who has not fully recovered from concussion could lead to dangerous complications, including death

GRTP Protocol: each stage is a minimum of 24 hours in adults, 48 hours in those <19 years old

Stage	Rehabilitation Stage	Exercise Allowed	Objective
1	Minimum rest period	Complete body and brain rest	Recovery
2	Light exercise	Light jogging for 10-15 minutes, swimming or stationary cycling at low to moderate intensity. No resistance training.	Increase heart rate
3	Sport-specific exercise	Running drills. No head impact activities.	Add movement
4	Non-contact training	Progression to more complex training e.g. passing drills. May start progressive resistance training.	Exercise, coordination, and cognitive load
5	Full Contact Practice	Normal training activities	Restore confidence
6	Return to Play	Player rehabilitated	Return to play

AGE GROUP	GRTP STAGE 1 MINIMUM REST PERIOD	⚠	GRTP STAGES 2 to 5	⚠	GRTP STAGE 6 MINIMUM RETURN TO PLAY INTERVAL
Children and Adolescents (those aged <19 years)	2 weeks	**Caution! Return to play protocol should be started only if the player is symptom free and off medication that modifies symptoms of concussion**	4 Stage GRTP Progression every **48 hours,** if asymptomatic	**Caution! Contact sport should be authorized only if the player is symptom free and off medication MEDICAL CLEARANCE RECOMMENDED**	**2 week rest + 8 day GRTP = Day 23 post injury**
Adults	1 day		4 Stage GRTP Progression every **24 hours**, if asymptomatic		**1 day rest + 4 day GRTP = Day 6 post injury**

⚠ **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. It is recommended that if this expertise is unavailable then management should follow the protocol for Children and Adolescents**