

POLICY	Sports Services
TITLE:	Concussion Guidelines
AREA:	Sports Services
RESPONSIBILITY:	Chief Executive Officer
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NEXT REVIEW:	

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1. OVERVIEW

The Concussion Guidelines sets out the procedures for dealing with an athlete that has suffered a suspected concussion whether at training or an event.

2. INTRODUCTION

Paddle Australia (PA) has a responsibility to educate and increase the awareness to our members of the dangers of physical activity that may result in concussion. PA's main concern is the welfare of our members and has a duty of care to ensure the safety of participants, particularly in events conducted by and/or on behalf of PA.

These guidelines have been developed to support our association, its affiliated States, Clubs and members in identifying the signs and symptoms of concussion and assisting an athlete if concussion is suspected.

Under this policy, any athlete with a suspected concussion must be immediately removed from any competition, event or training exercise they are participating in until cleared by a suitable medical authority.

Concussion is a mild brain injury, caused by trauma that results in temporary dysfunction of the brain. When it occurs, an athlete may experience symptoms and temporary loss of brain skills such as memory and thinking abilities. It is important for athletes, partners, family and friends to be aware of possible signs of concussion that are often subtle. In this state the brain is highly vulnerable to serious injury from apparently minimal trauma.

When concussion is suspected, ask team mates, coaches or others present whether they observed the athlete to be unconscious, dazed or confused at the time of the incident.

An athlete who has sustained a mild brain injury is at risk of serious brain injury if any further head impact were to occur. All athletes who have had concussion, or suspected of having concussion, will not be allowed to return to their sporting activity (training or competing) until cleared by a doctor.

2.1 KEY MESSAGE

- Concussion is a temporary dysfunction of the brain following trauma.
- Suspect concussion if you are irritable, sick, extensively fatigued, have a headache, or just not feeling your usual self, or there is damage to a helmet, and/or if there is evidence of impact to the head having occurred.
- Seek medical attention.
- Rest is the best treatment followed by a gradual return to physical activity and work/study.

These guidelines shall apply to all events conducted in Australia under the auspices of, and sanctioned, by PA for consideration.

3. DEFINITIONS

In this Policy the following words have the following meaning:

“PA” means Paddle Australia.

“Concussion” is a disturbance in brain function caused by direct or indirect force to the head.

“Constitution” and **“By-Laws”** respectively mean the Constitution and By-Laws of PA.

“Event” means an event, competition and/or training run by a Club, State Member Association or PA.

“Members” means the members of PA as defined in the Constitution.

“Policy” means this Policy.

4. CONCUSSION

Concussion is a disturbance in brain function caused by direct or indirect force to the head. Concussion results in a variety of signs and symptoms. Most concussions do not involve loss of consciousness.

The most important steps in the management of concussion are:

1. Recognising the injury;
2. Removing the athlete from further participation in the event;
3. Referring the athlete to a medical doctor for assessment;
4. Rest;
5. Recover and Return.

4.1 RECOGNISING THE INJURY

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

- Obvious signs of impact having occurred to the athlete, this would include damage to the helmet;
- Loss of consciousness;
- Dazed, blank or vacant look;
- Headache, blurred vision, dizziness;
- Confused/not aware of surroundings or events;
- Balance problems (unsteadiness);
- Lying motionless on ground/slow to get up;
- Grabbing or clutching head.

Tools such as the Sport Concussion Assessment Tool SCAT3 (see Annexure A) and the Pocket Concussion Recognition (see Annexure B) can be used to help recognise concussion.

It is important to note however that brief sideline evaluation tools are designed to recognise a concussion, but they cannot replace a comprehensive medical assessment.

4.2 REMOVING THE ATHLETE FROM PARTICIPATION

Initial management must adhere to the first aid rules, including airway, breathing, circulation and spinal immobilisation.

Any athlete with a suspected concussion must be removed from their event (see section below for management of the unconscious player).

Removing the athlete from their event allows the opportunity to properly evaluate the athlete.

Any athlete who has suffered a concussion must not be allowed to return to compete on the same day and must receive a medical clearance before they can return.

Athletes with a suspected concussion **should not:**

- Be left alone;
- Drive a motor vehicle until medically cleared;
- Drink alcohol;
- Have prescription or non-prescription drugs without medical supervision. Specifically:
 - No sleeping tablets;
 - Do not use aspirin, anti-inflammatory medication or sedating pain killers.

It is important not to be influenced by the athlete, coaching staff, trainers, parents or any others suggesting that they return to compete.

If there is any doubt, sit them out!

4.3 UNCONSCIOUS ATHLETE

Unconscious athletes must be managed according to acute life support principles, with resuscitation and protection of the cervical spine as indicated. An unconscious athlete must only be moved (onto a stretcher) by qualified health professionals trained in spinal immobilisation techniques.

4.4 REFERRING THE ATHLETE

All athletes with concussion or a suspected concussion need a medical assessment by a registered medical doctor. If a doctor is not present at the event, then the athlete should be sent to a local general practice or local hospital emergency department.

Urgent transfer to hospital by ambulance is required if the player displays any of the following symptoms:

- Loss of consciousness or seizures;
- Confusion;
- Deterioration following their injury (e.g. vomiting, increased headaches or drowsiness);
- Neck pain or spinal cord symptoms (e.g. numbness, tingling or weakness).

If there is any doubt on the player's condition, they should be referred to hospital.

4.5 REST

- Rest is the cornerstone of concussion management.
- Rest is very important after a concussion because it helps the brain to heal. Concussions affect people differently. While most athletes with a concussion recover quickly and fully, some will have symptoms that last for days or even weeks, hence it is important to follow your Doctor's advice on rest and recovery.
- A more serious concussion can last for months or longer. It is important that athletes do not ignore their symptoms and in general a more conservative approach be used in cases where there is any uncertainty.

4.6 RECOVER AND RETURN

- A concussed athlete must not be allowed to return to training before having a medical clearance from a medical doctor. In every case, the decision regarding the timing of return to training should be made by a medical doctor with experience in managing concussion.
- An athlete should not return to competition until they have returned to training. An athlete should returned to sport in a graduated manner that should be supervised by their medical practitioner, through a Gradual Return to Play Programme (see Annexure C)

The stages of a Gradual Return to Play Programme are:

Stage 1	Rest until all symptoms resolve.
Stage 2	Light aerobic activity 24 hours after symptoms resolve.
Stage 3	Light non-contact training.
Stage 4	Non-contact training drills.
Stage 5	Full training.
Stage 6	Return to competition.

It is important to note there should be approximately 24 hours between stages. If an athlete becomes symptomatic at any stage they should drop back to the previous symptom free level and try to progress again after 24 hours.

- If an athlete continues to be symptomatic for more than 10 days they should be reviewed again by a medical practitioner.

4.7 MULTIPLE AND MORE COMPLEX CONCUSSIONS

This policy applies only to athletes who have suffered their first concussion in a 12 month period.

The policy does not apply to athletes with potentially more complex injuries.

It is a recommendation of this policy that the following athletes must see a medical doctor experienced in sports concussion management:

- ≥ 2 concussions in 12 months;
- Multiple concussions over their career;
- Concussions occurring with less collision force;
- Concussion symptoms lasting longer than expected i.e. a few days.

ANNEXURE A: SPORT CONCUSSION ASSESSMENT TOOL (SCAT3)

SCAT3

Sport Concussion Assessment Tool – 3rd Edition

For use by medical professionals only

Name: _____ Date/Time of Injury: _____ Examiner: _____
 Date of Assessment: _____

What is the SCAT3?¹

The SCAT3 is a standardized tool for evaluating injured athletes for concussion and can be used in athletes aged from 13 years and older. It supersedes the original SCAT and the SCAT2 published in 2005 and 2009, respectively². For younger persons, ages 12 and under, please use the Child SCAT3. The SCAT3 is designed for use by medical professionals. If you are not qualified, please use the Sport Concussion Recognition Tool¹. Preseason baseline testing with the SCAT3 can be helpful for interpreting post-injury test scores.

Specific instructions for use of the SCAT3 are provided on page 3. If you are not familiar with the SCAT3, please read through these instructions carefully. This tool may be freely copied in its current form for distribution to individuals, teams, groups and organizations. Any revision or any reproduction in a digital form requires approval by the Concussion in Sport Group.

NOTE: The diagnosis of a concussion is a clinical judgment, ideally made by a medical professional. The SCAT3 should not be used solely to make, or exclude, the diagnosis of concussion in the absence of clinical judgement. An athlete may have a concussion even if their SCAT3 is “normal”.

What is a concussion?

A concussion is a disturbance in brain function caused by a direct or indirect force to the head. It results in a variety of non-specific signs and/or symptoms (some examples listed below) and most often does not involve loss of consciousness. Concussion should be suspected in the presence of **any one or more** of the following:

- Symptoms (e.g., headache), or
- Physical signs (e.g., unsteadiness), or
- Impaired brain function (e.g. confusion) or
- Abnormal behaviour (e.g., change in personality).

SIDELINE ASSESSMENT

Indications for Emergency Management

NOTE: A hit to the head can sometimes be associated with a more serious brain injury. Any of the following warrants consideration of activating emergency procedures and urgent transportation to the nearest hospital:

- Glasgow Coma score less than 15
- Deteriorating mental status
- Potential spinal injury
- Progressive, worsening symptoms or new neurologic signs

Potential signs of concussion?

If any of the following signs are observed after a direct or indirect blow to the head, the athlete should stop participation, be evaluated by a medical professional and **should not be permitted to return to sport the same day** if a concussion is suspected.

Any loss of consciousness?	<input type="checkbox"/> Y	<input type="checkbox"/> N
“If so, how long?” _____		
Balance or motor incoordination (stumbles, slow/laboured movements, etc.)?	<input type="checkbox"/> Y	<input type="checkbox"/> N
Disorientation or confusion (inability to respond appropriately to questions)?	<input type="checkbox"/> Y	<input type="checkbox"/> N
Loss of memory:	<input type="checkbox"/> Y	<input type="checkbox"/> N
“If so, how long?” _____		
“Before or after the injury?” _____		
Blank or vacant look:	<input type="checkbox"/> Y	<input type="checkbox"/> N
Visible facial injury in combination with any of the above:	<input type="checkbox"/> Y	<input type="checkbox"/> N

1 Glasgow coma scale (GCS)

Best eye response (E)	
No eye opening	1
Eye opening in response to pain	2
Eye opening to speech	3
Eyes opening spontaneously	4
Best verbal response (V)	
No verbal response	1
Incomprehensible sounds	2
Inappropriate words	3
Confused	4
Oriented	5
Best motor response (M)	
No motor response	1
Extension to pain	2
Abnormal flexion to pain	3
Flexion/Withdrawal to pain	4
Localizes to pain	5
Obeys commands	6
Glasgow Coma score (E + V + M)	_____ of 15

GCS should be recorded for all athletes in case of subsequent deterioration.

2 Maddocks Score³

“I am going to ask you a few questions, please listen carefully and give your best effort.”

Modified Maddocks questions (1 point for each correct answer)

At what venue are we at today?	0	1
Which half is it now?	0	1
Who scored last in this match?	0	1
What team did you play last week/game?	0	1
Did your team win the last game?	0	1
Maddocks score	_____ of 5	

Maddocks score is validated for sideline diagnosis of concussion only and is not used for serial testing.

Notes: Mechanism of Injury (“tell me what happened?”):

Any athlete with a suspected concussion should be REMOVED FROM PLAY, medically assessed, monitored for deterioration (i.e., should not be left alone) and should not drive a motor vehicle until cleared to do so by a medical professional. No athlete diagnosed with concussion should be returned to sports participation on the day of injury.

BACKGROUND

Name: _____ Date: _____
 Examiner: _____
 Sport/team/school: _____ Date/time of injury: _____
 Age: _____ Gender: M F
 Years of education completed: _____
 Dominant hand: right left neither
 How many concussions do you think you have had in the past? _____
 When was the most recent concussion? _____
 How long was your recovery from the most recent concussion? _____
 Have you ever been hospitalized or had medical imaging done for a head injury? Y N
 Have you ever been diagnosed with headaches or migraines? Y N
 Do you have a learning disability, dyslexia, ADD/ADHD? Y N
 Have you ever been diagnosed with depression, anxiety or other psychiatric disorder? Y N
 Has anyone in your family ever been diagnosed with any of these problems? Y N
 Are you on any medications? If yes, please list: Y N

SCAT3 to be done in resting state. Best done 10 or more minutes post exercise.

SYMPTOM EVALUATION

3

How do you feel?

"You should score yourself on the following symptoms, based on how you feel now".

	none	mild	moderate	severe			
Headache	0	1	2	3	4	5	6
"Pressure in head"	0	1	2	3	4	5	6
Neck Pain	0	1	2	3	4	5	6
Nausea or vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Blurred vision	0	1	2	3	4	5	6
Balance problems	0	1	2	3	4	5	6
Sensitivity to light	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feeling slowed down	0	1	2	3	4	5	6
Feeling like "in a fog"	0	1	2	3	4	5	6
"Don't feel right"	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Difficulty remembering	0	1	2	3	4	5	6
Fatigue or low energy	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep	0	1	2	3	4	5	6
More emotional	0	1	2	3	4	5	6
Irritability	0	1	2	3	4	5	6
Sadness	0	1	2	3	4	5	6
Nervous or Anxious	0	1	2	3	4	5	6

Total number of symptoms (Maximum possible 22) _____

Symptom severity score (Maximum possible 132) _____

Do the symptoms get worse with physical activity? Y N
 Do the symptoms get worse with mental activity? Y N

self rated self rated and clinician monitored
 clinician interview self rated with parent input

Overall rating: If you know the athlete well prior to the injury, how different is the athlete acting compared to his/her usual self?

Please circle one response:

no different very different unsure N/A

Scoring on the SCAT3 should not be used as a stand-alone method to diagnose concussion, measure recovery or make decisions about an athlete's readiness to return to competition after concussion. Since signs and symptoms may evolve over time, it is important to consider repeat evaluation in the acute assessment of concussion.

COGNITIVE & PHYSICAL EVALUATION

4

Cognitive assessment

Standardized Assessment of Concussion (SAC)⁴

Orientation (1 point for each correct answer)

What month is it?	0	1
What is the date today?	0	1
What is the day of the week?	0	1
What year is it?	0	1
What time is it right now? (within 1 hour)	0	1

Orientation score _____ of 5

Immediate memory

List	Trial 1	Trial 2	Trial 3	Alternative word list					
elbow	0	1	0	1	0	1	candle	baby	finger
apple	0	1	0	1	0	1	paper	monkey	penny
carpet	0	1	0	1	0	1	sugar	perfume	blanket
saddle	0	1	0	1	0	1	sandwich	sunset	lemon
bubble	0	1	0	1	0	1	wagon	iron	insect

Total _____

Immediate memory score total _____ of 15

Concentration: Digits Backward

List	Trial 1	Alternative digit list			
4-9-3	0	1	6-2-9	5-2-6	4-1-5
3-8-1-4	0	1	3-2-7-9	1-7-9-5	4-9-6-8
6-2-9-7-1	0	1	1-5-2-8-6	3-8-5-2-7	6-1-8-4-3
7-1-8-4-6-2	0	1	5-3-9-1-4-8	8-3-1-9-6-4	7-2-4-8-5-6

Total of 4 _____

Concentration: Month in Reverse Order (1 pt. for entire sequence correct)

Dec-Nov-Oct-Sept-Aug-Jul-Jun-May-Apr-Mar-Feb-Jan	0	1
--	---	---

Concentration score _____ of 5

5

Neck Examination:

Range of motion Tenderness Upper and lower limb sensation & strength

Findings: _____

6

Balance examination

Do one or both of the following tests.

Footwear (shoes, barefoot, braces, tape, etc.) _____

Modified Balance Error Scoring System (BESS)⁵ testing⁵

Which foot was tested (i.e. which is the non-dominant foot) Left Right

Testing surface (hard floor, field, etc.) _____

Condition

Double leg stance: _____ Errors

Single leg stance (non-dominant foot): _____ Errors

Tandem stance (non-dominant foot at back): _____ Errors

And/Or

Tandem gait^{6,7}

Time (best of 4 trials): _____ seconds

7

Coordination examination

Upper limb coordination

Which arm was tested: Left Right

Coordination score _____ of 1

8

SAC Delayed Recall⁴

Delayed recall score _____ of 5

INSTRUCTIONS

Words in *Italics* throughout the SCAT3 are the instructions given to the athlete by the tester.

Symptom Scale

"You should score yourself on the following symptoms, based on how you feel now".

To be completed by the athlete. In situations where the symptom scale is being completed after exercise, it should still be done in a resting state, at least 10 minutes post exercise.

For total number of symptoms, maximum possible is 22.

For Symptom severity score, add all scores in table, maximum possible is 22x6=132.

SAC⁴

Immediate Memory

"I am going to test your memory. I will read you a list of words and when I am done, repeat back as many words as you can remember, in any order."

Trials 2 & 3:

"I am going to repeat the same list again. Repeat back as many words as you can remember in any order, even if you said the word before."

Complete all 3 trials regardless of score on trial 1 & 2. Read the words at a rate of one per second. **Score 1 pt. for each correct response.** Total score equals sum across all 3 trials. Do not inform the athlete that delayed recall will be tested.

Concentration

Digits backward

"I am going to read you a string of numbers and when I am done, you repeat them back to me backwards, in reverse order of how I read them to you. For example, if I say 7-1-9, you would say 9-1-7."

If correct, go to next string length. If incorrect, read trial 2. **One point possible for each string length.** Stop after incorrect on both trials. The digits should be read at the rate of one per second.

Months in reverse order

"Now tell me the months of the year in reverse order. Start with the last month and go backward. So you'll say December, November ... Go ahead"

1 pt. for entire sequence correct

Delayed Recall

The delayed recall should be performed after completion of the Balance and Coordination Examination.

"Do you remember that list of words I read a few times earlier? Tell me as many words from the list as you can remember in any order."

Score 1 pt. for each correct response

Balance Examination

Modified Balance Error Scoring System (BESS) testing⁵

This balance testing is based on a modified version of the Balance Error Scoring System (BESS)⁵. A stopwatch or watch with a second hand is required for this testing.

"I am now going to test your balance. Please take your shoes off, roll up your pant legs above ankle (if applicable), and remove any ankle taping (if applicable). This test will consist of three twenty second tests with different stances."

(a) Double leg stance:

"The first stance is standing with your feet together with your hands on your hips and with your eyes closed. You should try to maintain stability in that position for 20 seconds. I will be counting the number of times you move out of this position. I will start timing when you are set and have closed your eyes."

(b) Single leg stance:

"If you were to kick a ball, which foot would you use? [This will be the dominant foot] Now stand on your non-dominant foot. The dominant leg should be held in approximately 30 degrees of hip flexion and 45 degrees of knee flexion. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

(c) Tandem stance:

"Now stand heel-to-toe with your non-dominant foot in back. Your weight should be evenly distributed across both feet. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

Balance testing – types of errors

1. Hands lifted off iliac crest
2. Opening eyes
3. Step, stumble, or fall
4. Moving hip into > 30 degrees abduction
5. Lifting forefoot or heel
6. Remaining out of test position > 5 sec

Each of the 20-second trials is scored by counting the errors, or deviations from the proper stance, accumulated by the athlete. The examiner will begin counting errors only after the individual has assumed the proper start position. **The modified BESS is calculated by adding one error point for each error during the three 20-second tests. The maximum total number of errors for any single condition is 10.** If a athlete commits multiple errors simultaneously, only one error is recorded but the athlete should quickly return to the testing position, and counting should resume once subject is set. Subjects that are unable to maintain the testing procedure for a minimum of **five seconds** at the start are assigned the highest possible score, ten, for that testing condition.

OPTION: For further assessment, the same 3 stances can be performed on a surface of medium density foam (e.g., approximately 50cm x40cm x6cm).

Tandem Gait^{6,7}

Participants are instructed to stand with their feet together behind a starting line (the test is best done with footwear removed). Then, they walk in a forward direction as quickly and as accurately as possible along a 38mm wide (sports tape), 3 meter line with an alternate foot heel-to-toe gait ensuring that they approximate their heel and toe on each step. Once they cross the end of the 3m line, they turn 180 degrees and return to the starting point using the same gait. A total of 4 trials are done and the best time is retained. Athletes should complete the test in 14 seconds. Athletes fail the test if they step off the line, have a separation between their heel and toe, or if they touch or grab the examiner or an object. In this case, the time is not recorded and the trial repeated, if appropriate.

Coordination Examination

Upper limb coordination

Finger-to-nose (FTN) task:

"I am going to test your coordination now. Please sit comfortably on the chair with your eyes open and your arm (either right or left) outstretched (shoulder flexed to 90 degrees and elbow and fingers extended), pointing in front of you. When I give a start signal, I would like you to perform five successive finger to nose repetitions using your index finger to touch the tip of the nose, and then return to the starting position, as quickly and as accurately as possible."

Scoring: 5 correct repetitions in < 4 seconds = 1

Note for testers: Athletes fail the test if they do not touch their nose, do not fully extend their elbow or do not perform five repetitions. **Failure should be scored as 0.**

References & Footnotes

1. This tool has been developed by a group of international experts at the 4th International Consensus meeting on Concussion in Sport held in Zurich, Switzerland in November 2012. The full details of the conference outcomes and the authors of the tool are published in The BJSM Injury Prevention and Health Protection, 2013, Volume 47, Issue 5. The outcome paper will also be simultaneously co-published in other leading biomedical journals with the copyright held by the Concussion in Sport Group, to allow unrestricted distribution, providing no alterations are made.
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3. Maddocks, DL; Dicker, GD; Saling, MM. The assessment of orientation following concussion in athletes. Clinical Journal of Sport Medicine. 1995; 5(1): 32-3.
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7. Schneiders, A.G., Sullivan, S.J., Kvarnstrom, J.K., Olsson, M., Yden, T.&Marshall, S.W. The effect of footwear and sports-surface on dynamic neurological screening in sport-related concussion. Journal of Science and Medicine in Sport. 2010; 13(4): 382-386

ANNEXURE B: POCKET RECOGNITION TOOL

The following pocket guide, produced by Sports Medicine Australia, highlights the critical information for recognising concussion and the action to be taken to assist an athlete with concussion symptoms.

Pocket CONCUSSION RECOGNITION TOOL



To help identify concussion in children, youth and adults








RECOGNIZE & REMOVE

Concussion should be suspected **if one or more** of the following visible clues, signs, symptoms or errors in memory questions are present.

1. Visible clues of suspected concussion

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

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

2. Signs and symptoms of suspected concussion

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

<ul style="list-style-type: none"> • Loss of consciousness • Dizziness • Nausea or vomiting • "Pressure in head" • Irritability • Amnesia • Nervous or anxious • Sensitivity to noise 	<ul style="list-style-type: none"> • Headache • Balance problems • Feeling slowed down • More emotional • Sensitivity to light • Fatigue or low energy • Neck Pain • Difficulty remembering 	<ul style="list-style-type: none"> • Seizure or convulsion • Confusion • Drowsiness • Blurred vision • Sadness • Feeling like "in a fog" • "Don't feel right" • Difficulty concentrating
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3. Memory function

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?"

Any athlete with a suspected concussion should be IMMEDIATELY REMOVED FROM PLAY, and should not be returned to activity until they are assessed medically. Athletes with a suspected concussion should not be left alone and should not drive a motor vehicle.

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.

RED FLAGS

If ANY of the following are reported then the player should be safely and immediately removed from the field. If no qualified medical professional is available, consider transporting by ambulance for urgent medical assessment:

<ul style="list-style-type: none"> ▶ Athlete complains of neck pain ▶ Increasing confusion or irritability ▶ Repeated vomiting ▶ Seizure or convulsion ▶ Weakness or tingling / burning in arms or legs 	<ul style="list-style-type: none"> ▶ Deteriorating conscious state ▶ Severe or increasing headache ▶ Unusual behaviour change ▶ Double vision
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Remember:

- In all cases, the basic principles of first aid (danger, response, airway, breathing, circulation) should be followed.
- Do not attempt to move the player (other than required for airway support) unless trained to do so.
- Do not remove helmet (if present) unless trained to do so.

from McCrory et. al, Consensus Statement on Concussion In Sport. Br J Sports Med 47 (5), 2013

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ANNEXURE C: GRADUAL RETURN TO PLAY PROGRAMME (EXAMPLE)

STAGE	EXERCISE MODE	EXAMPLE OF EXERCISE ACTIVITY	PROGRESSION
1	Rest	Complete rest of the brain and body	Medical doctor decides on amount of time needed.
2	Light cardiovascular exercise	Light jog for 10-15 minutes; swimming or stationary cycling at low to moderate intensity. No weight training.	If no symptoms, start Stage 3 after minimum of 24 hours. If symptoms occur, rest 24 hours & repeat Stage 2.
3	Paddling specific exercise (non-contact)	Individual skills and drills (non-contact). No weight training.	If no symptoms, start Stage 4 after minimum of 24 hours. If symptoms occur, rest 24 hours & repeat Stage 2, then progress.
4	Paddling specific training (non-contact)	More complex training drills. May start progressive (low level) weights training.	If no symptoms, medical certificate required before Stage 5. If symptoms occur, rest 24 hours & repeat Stage 3, then progress.
5	Paddling practise	Following medical clearance participation in normal training activities.	Athlete/ coach/ parent to report any symptoms to medical doctor. If symptoms occur, then medical doctor to review.
6	Competition/Event	Return to competition/events.	Monitor for recurring symptoms or signs.