Head Injury Assessment – Form 2

HIA2

Player's name		Player's number	
Date of injury		Physician's name	
Team		Opposition	
Competition		Round	
Kick off time		Assessment time	

HIA1 COMPLETED - OUTCOME

	Criteria 1 sign or symptom confirmed		Player returned after completion of the HIA1 screen
	Off-field HIA1 screen abnormal		Clinical judgement over-ruled abnormal off-field HIA1 screen
	Clinical suspicion despite normal off-field HIA1 screen		Game finished – player would have been returned to play
	Player removed for another injury		Game finished – player would have been returned to play
	Recognise and Remove		Completed but not available at time of HIA2

HIA1 NOT COMPLETED

	Symptoms appeared after completion of the game		Training injury
	Off-field HIA1 screen not completed despite an indication		Training injury – Criteria 1 Criteria 1 indicator:
	Suspicious event identified by video or direct observation after the game		Player injured in non-competition game
	Unrecorded Criteria 1 Criteria 1 indicator:		Criteria 1 in non-competition game Criteria 1 indicator:
	Symptoms appeared 24-48 hours after the game		Non Rugby Injury

UNABLE TO COMPLETE HIA2		CURRENT CLINICAL OUTCOME	
	Player taken to hospital		Clinical judgement of no concussion
	Player not in appropriate condition		Clinical suspicion of concussion
	Player unavailable for other reason		

SECTION 1: SYMPTOM CHECKLIST – <u>HAND TO PLAYER</u>

Ask the player to rate their symptoms below base on how they feel now, symptoms should be rated that is not usually experienced by the player following a rugby match or training.

SYMPTOM		Mild		Moderate		Severe		SYMPTOM		Mild		Moderate		Severe	
	0	**1**	**2**	**3**	**4**	**5**	**6**		**0**	**1**	**2**	**3**	**4**	**5**	**6**
I have **Headaches**								I **'Don't feel right'**							
I have **'Pressure in my head'**								I have **Difficulty concentrating**							
I have **neck pain**								I have **Difficulty remembering**							
I feel **nauseated or like vomiting**								I have **Fatigue or low energy**							
I have **Dizziness**								I am **Confused**							
I have **Blurred vision**								I am **Drowsy**							
I have **Balance problems**								I feel **Excessively Tiredness**							
I have **Sensitivity to light**								I feel **More Emotional**							
I have **Sensitivity to noise**								I feel **Irritable**							
I am **Feeling slowed down**								I feel **Sad**							
I **Feel like I am 'in a fog'**								I am **Nervous or Anxious**							
								Total number of symptoms							
								Severity of Symptoms							

SECTION 2: COGNITIVE ASSESSMENT -Standardised Assessment of Concussion (SAC)

Immediate Memory (ABNORMAL result is a score less than 16 or less than baseline)
Randomly select a list of 10 words and use this same 10-word list, three times to assess Immediate Memory.
Identify the number of correct answers with a maximum of 30 possible.'

List	Alternate 10-word lists					Trial 1	Trial 2	Trial 3
A	Jacket	Arrow	Pepper	Cotton	Movie			
	Finger	Penny	Blanket	Lemon	Insect			
B	Baby	Monkey	Perfume	Sunset	Iron			
	Candle	Paper	Sugar	Sandwich	Wagon			
C	Dollar	Honey	Mirror	Saddle	Anchor			
	Carpet	Saddle	Elbow	Bubble	Apple			

Immediate Memory Score: | **Out of 30** |

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Orientation (1 point for each correct answer)	Incorrect	Correct
What month is it?		
What is the date today?		
What is the day of the week?		
What year is it?		
What time is it right now? (within 1 hour)		
Orientation score:	**Out of 5**	

CONCENTRATION Digits backwards (1 point for each correct digit string)		Abnormal	Normal
List A	Trial 1: 4-3-9 / 3-8-1-4 / 6-2-9-7-1 / 7-1-8-4-6-2		
	Trial 2: 6-2-9 / 3-2-7-9 / 1-5-2-8-6 / 5-3-9-1-4-8		
List B	Trial 1: 3-8-2 / 2-7-9-3 / 4-1-8-6-9 / 6-9-7-3-8-2		
	Trial 2: 5-1-8 / 2-1-6-9 / 9-4-1-7-5 / 4-2-7-9-3-8		

CONCENTRATION MONTHS IN REVERSE ORDER (1 point for entire sequence correct)	Incorrect	Correct
Dec-Nov-Oct-Sep-Aug-Jul-Jun-May-Apr-Mar-Feb-Jan		
Digits + Months reverse score:	**Out of 4**	

SECTION 3: Balance and Delayed Recall

Balance Examination ABNORMAL score: • **Tandem Stance- 4 errors or more, or more errors than baseline** • **Single Leg Stance- 6 errors or more, or more errors than baseline**		Abnormal	Normal
Tandem Stance – Identify total errors			
Single Leg Stance – Identify total errors			
SAC – DELAYED RECALL – must be asked at least 5 minutes after Immediate Memory test		Abnormal	Normal
Record number of words recalled out of 10			
Delayed Recall Score:		**Out of 10**	

SECTION 4: MODE RESULTS

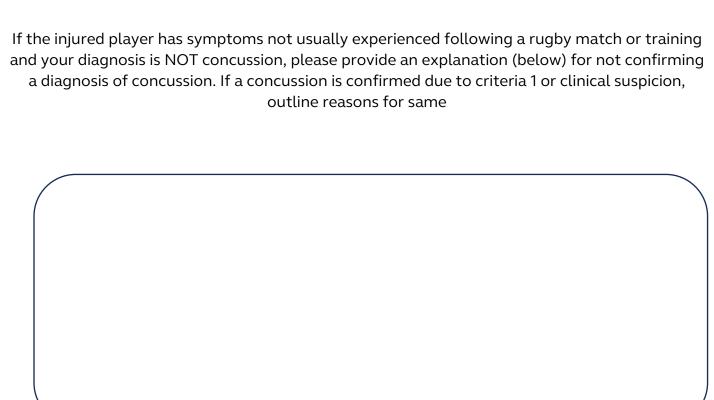|	
Symptoms present (number 0-22)	**/22**
Symptoms severity (0-132)	**/132**
Orientation	**/5**
Immediate Memory:	**/30**
Concentration: Digits backwards & Months reverse order	**/5**
Single leg stance errors recorded	
Tandem stance errors recorded	
Delayed recall - 10-word list	**/10**

NORMATIVE DATA

Players with baseline SCAT should be assessed against their own baseline. For players where no baseline is available the following results are indicative of a concussion

1. Orientation score of less than 4
2. Immediate memory score less than 16.
3. Concentration score (digits backwards and months reverse order) less than 3
4. Delayed recall result less than 4.
5. Balance testing: tandem stance 4 or more errors, single leg stance 6 or more errors

SECTION 5 – CLINICAL SUMMARY

HIA2 RESULT		DIAGNOSIS TO DATE	
	Normal, concussion not confirmed		Concussion not confirmed
	Normal but clinical suspicion supports a concussion		Concussion confirmed
	Abnormal, concussion confirmed		
	Clinical judgement overruled abnormal HIA2		
	Abnormal due to non-concussive injury or illness		

Concussion confirmed (as identified by the presence of Criteria 1, an abnormal HIA2 or clinical suspicion)

If the injured player has symptoms not usually experienced following a rugby match or training and your diagnosis is NOT concussion, please provide an explanation (below) for not confirming a diagnosis of concussion. If a concussion is confirmed due to criteria 1 or clinical suspicion, outline reasons for same

Note: The presence of any symptom in the symptom list which is not usually experienced following a rugby match or training is a strong indicator of concussion.

Notes on implementation

The symptoms score is determined by counting the number of individual symptoms reported. The result should be compared to each individual's baseline score. **For athletes without a baseline score,** if any symptom is declared in the symptom list which is not usually experienced by the player following a Rugby match or training, this is strongly indicative of concussion.

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 and 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 three trials regardless of score on trial 1 and 2. Read the words at a rate of one per second. Score one point for each correct response. Total score equals sum across all three 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."
Start with the 3-digit string length from trial 1. If correct, move to increasing string lengths, scoring one point for each correct sequence. If an incorrect sequence is given, move onto the same digit length in the next trial. Stop the test if incorrect answers are given in two consecutive trials.

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."
Score one point for entire sequence correct.

BALANCE TEST
This balance testing is based on a modified version of the Balance Error Scoring System (BESS). 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."

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."

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."

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."*

An error in the balance test is any one of the following:
- Hands off hips
- Opens eyes
- Stumbles or falls
- Lifts forefoot or heel or remains out of test position for more than five seconds.

UPPER LIMB CO-ORDINATION
Finger-to-nose (FTN) task:
"I am going to test your co-ordination 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). 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 as quickly and as accurately as possible."
Scoring: Unable to complete 5 correct repetitions in less than 4 seconds = 1 point

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 1.

DELAYED RECALL
The delayed recall should be performed after completion of the balance and co-ordination 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 one point for each correct response.

THIS TOOL MUST BE USED FOR POST-MATCH, SAME DAY DIAGNOSIS