

## Sport Concussion Assessment Tool (SCAT)





**The SCAT Card**  
(Sport Concussion Assessment Tool)  
**Medical Evaluation**

Name: \_\_\_\_\_ Date \_\_\_\_\_

Sport/Team: \_\_\_\_\_ Mouth guard? Y N

**1) SIGNS**

Was there loss of consciousness or unresponsiveness? Y N  
 Was there seizure or convulsive activity? Y N  
 Was there a balance problem / unsteadiness? Y N

**2) MEMORY**  
*Modified Maddocks questions (check correct)*

At what venue are we? \_\_; Which half is it? \_\_; Who scored last? \_\_

What team did we play last? \_\_; Did we win last game? \_\_?

**3) SYMPTOM SCORE**  
Total number of positive symptoms (from reverse side of the card) = \_\_\_\_\_

**4) COGNITIVE ASSESSMENT**

5 word recall	(Examples)	Immediate	Delayed
			(after concentration tasks)
Word 1 _____	cat	___	___
Word 2 _____	pen	___	___
Word 3 _____	shoe	___	___
Word 4 _____	book	___	___
Word 5 _____	car	___	___

*Months in reverse order:*  
 Jun-May-Apr-Mar-Feb-Jan-Dec-Nov-Oct-Sep-Aug-Jul (circle incorrect)  
**or**  
*Digits backwards (check correct)*  
 5-2-8      3-9-1      \_\_\_\_\_  
 6-2-9-4    4-3-7-1      \_\_\_\_\_  
 8-3-2-7-9   1-4-9-3-6      \_\_\_\_\_  
 7-3-9-1-4-2   5-1-8-4-6-8      \_\_\_\_\_

*Ask delayed 5-word recall now*

**5) NEUROLOGIC SCREENING**

	Pass	Fail
Speech	___	___
Eye Motion and Pupils	___	___
Pronator Drift	___	___
Gait Assessment	___	___

*Any neurologic screening abnormality necessitates formal neurologic or hospital assessment*

**6) RETURN TO PLAY**  
**Athletes should not be returned to play the same day of injury.**  
 When returning athletes to play, they should follow a stepwise symptom-limited program, with stages of progression. For example:

- rest until asymptomatic (physical and mental rest)
- light aerobic exercise (e.g. stationary cycle)
- sport-specific exercise
- non-contact training drills (start light resistance training)
- full contact training after medical clearance
- return to competition (game play)

There should be approximately 24 hours (or longer) for each stage and the athlete should return to stage 1 if symptoms recur.  
 Resistance training should only be added in the later stages.  
**Medical clearance should be given before return to play.**

**Instructions:**  
 This side of the card is for the use of medical doctors, physiotherapists or athletic therapists. In order to maximize the information gathered from the card, it is strongly suggested that all athletes participating in contact sports complete a baseline evaluation prior to the beginning of their competitive season. This card is a suggested guide only for sports concussion and is not meant to assess more severe forms of brain injury. **Please give a COPY of this card to the athlete for their information and to guide follow-up assessment.**

**Signs:**  
 Assess for each of these items and circle Y (yes) or N (no).

**Memory:** If needed, questions can be modified to make them specific to the sport (e.g. "period" versus "half")

**Cognitive Assessment:**  
 Select any 5 words (an example is given). Avoid choosing related words such as "dark" and "moon" which can be recalled by means of word association. Read each word at a rate of one word per second. The athlete should not be informed of the delayed testing of memory (to be done after the reverse months and/or digits). Choose a different set of words each time you perform a follow-up exam with the same candidate.  
 Ask the athlete to recite the months of the year in reverse order, starting with a random month. Do not start with December or January. Circle any months not recited in the correct sequence.  
 For digits backwards, if correct, go to the next string length. If incorrect, read trial 2. Stop after incorrect on both trials.

**Neurologic Screening:**  
 Trained medical personnel must administer this examination. These individuals might include medical doctors, physiotherapists or athletic therapists. Speech should be assessed for fluency and lack of slurring. Eye motion should reveal no diplopia in any of the 4 planes of movement (vertical, horizontal and both diagonal planes). The pronator drift is performed by asking the patient to hold both arms in front of them, palms up, with eyes closed. A positive test is pronating the forearm, dropping the arm, or drift away from midline. For gait assessment, ask the patient to walk away from you, turn and walk back.

**Return to Play:**  
 A structured, graded exertion protocol should be developed; individualized on the basis of sport, age and the concussion history of the athlete. Exercise or training should be commenced only after the athlete is clearly asymptomatic with physical and cognitive rest. Final decision for clearance to return to competition should ideally be made by a medical doctor.

**For more information** see the "Summary and Agreement Statement of the Second International Symposium on Concussion in Sport" in the April, 2005 Clinical Journal of Sport Medicine (vol 15), British Journal of Sports Medicine (vol 39), Neurosurgery (vol 59) and the Physician and Sportsmedicine (vol 33).  
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