

# Performance Training Systems Inc. Sport Concussion Management

*Resources for the Athlete, Coach, Athlete Support Personnel and Parents*

## Methods and Processes for On-Field or Sideline Evaluation of Suspected Concussion

The diagnosis of acute concussion involves the assessment of a range of domains including clinical symptoms, physical signs, behaviour, balance, sleep and cognition. Furthermore, a detailed concussion history is an important part of the evaluation both in the injured athlete and when conducting a pre-participation examination. The Sport Concussion Group, as described in the 2008 Sport Concussion Consensus, recommends that a detailed clinical assessment of concussion is outlined by using the Sport Concussion Assessment Tool 2nd Edition (SCAT2) form. A Downloadable SCAT2 form is available on [www.performancetrainingsystems.net/PTSCconcussion.php](http://www.performancetrainingsystems.net/PTSCconcussion.php).

The suspected diagnosis of concussion can include one or more of the following clinical domains and symptoms:

Cognitive	Somatic	Affective
Confusion	Headache	Emotional lability
Post-traumatic amnesia	Fatigue	Irritability
Retrograde amnesia	Disequilibrium	
Loss of consciousness	Nausea / vomiting	
Disorientation	Visual disturbances	
Feeling 'in a fog', or 'zoned out'	Phonophobia	
Vacant stare		
Inability to focus		
Delayed verbal and motor responses		
Slurred / incoherent speech		
Excessive drowsiness		

It is strongly recommended, and the position of Performance Training Systems that a suspected concussed athlete must sit out 20 minutes and be reassessed before being allowed to resume physical activity. If any of the above symptoms persist or increase, a concussion should be suspected, the athlete should be processed through the On-Field Guidelines presented below, or sent to an emergency clinic where the appropriate management strategy is instituted.

## SPORT-SPECIFIC CONDITIONING CONSULTANTS

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When a player shows ANY of the above mentioned features of a concussion it is recommended that the coach, parents, or team support staff follow the protocol outlined below.

<b>On-Field or Sideline Evaluation of Acute Concussion</b>	
When a player shows any sign of a concussion	
a)	The player should be medically evaluated onsite using standard emergency management principles and particular attention should be given to excluding a cervical spine injury.
b)	The appropriate disposition of the player must be determined by the treating healthcare provider in a timely manner. If no health care provider is available, the player should be safely removed from practice or play and urgent referral to a physician arranged.
c)	Once first aid issues are addressed, than an assessment of the concussive injury should be made using the SCAT2 form.
d)	The player should not be left alone following the injury and serial monitoring for deterioration is essential over the initial few hours following injury.
e)	A player with diagnosed concussion should generally not be allowed to return to play on the day of injury.

It is strongly recommended that sufficient time for assessment and adequate facilities be provided for the appropriate medical assessment both on and off the field for all injured athletes. In some sports this may require rule change to allow an off-field medical assessment to occur without affecting the flow of the game or unduly penalizing the injured player's team.

Sideline evaluation of cognitive function is an essential component in the assessment of this injury. Brief neuropsychological test batteries that assess attention and memory function have been shown to be practical and effective. Such tests include the Maddock's questions and the SCAT2 form. It is worth noting that standard orientation questions (eg, time, place, person) have been shown to be unreliable in the sporting situation when compared with memory assessment.

<b>Maddocks Questions</b>
Which field are we at / on?
Who are we playing?
Who is your opponent at present?
What half / period is it?
How far into the half?
Who scored last?
Who did we / you play last week?
Did we / you win last week?

Performance Training Systems Inc. strongly recommends that all Sport Organizations develop policies for managing suspected on-field concussion injury, and that these policies are distributed to all teams at all levels of competition in formats that act to educate all stakeholders involved in their game.

Performance Training Systems Inc., through our Consulting and Management Services work with sport administrators in developing organization and sport 'Best-Practice' policies and procedures specific to On- and Off-Field Concussion Management.

Performance Training Systems is an athletic conditioning consulting firm based out of Brampton, ON, Canada. We provide athlete development, exercise nutrition, performance psychology, athletic training, and management and consulting services to clients within the greater Toronto area and around the world. We are committed to ethical sport values based training, and promote sport as a vehicle for developing healthy bodies, healthy minds, and healthy communities.

'Training is our Focus, Performance is our Goal'