

### 4.33 The Role of the Physiotherapist in the Assessment and Management of Concussions

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#### **Purpose:**

Concussion is a traumatic brain injury induced by biomechanical forces. The resulting signs, symptoms and impairments can be quite broad, including headaches, emotional symptoms, loss of consciousness, balance impairments, cognitive and behavioural changes and sleep/wake disturbances.<sup>1</sup> Because the impairments caused by concussion can be complex and involve co-morbidities, the comprehensive assessment and management of concussion is best managed by a multidisciplinary team of professionals, including physiotherapists.

#### **Policy:**

Physiotherapists have an ethical responsibility to practice the profession of physiotherapy according to their own competence and limitations, referring the client to others as necessary.<sup>2</sup>

Physiotherapists participating in the prevention, assessment and management of concussions, or suspected concussions, are required to have the training, education and experience to do so safely. When they do not, they must refer the individual to other healthcare professionals who do.

The legal scope and definition of physiotherapy or physical therapy may vary slightly from jurisdiction to jurisdiction. Some jurisdictions may also have legislation specific to the assessment and management of concussion. Physiotherapists must comply with the respective governing legislation, regulations, standards of practice and code of ethics applicable to them. For guidance specific to your jurisdiction, please contact your college.

Because the science regarding concussion management continues to evolve, this position statement may from time to time require modification to incorporate new knowledge.

#### **Education**

Physiotherapists may play a valuable role in providing concussion awareness education to the public. This may include, but is not limited to, a definition of concussion, common mechanisms of injury, common signs and symptoms and prevention strategies.

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<sup>1</sup> McCrory P, et al; Consensus statement on concussion in sport – the 5th international conference on concussion in sport held in Berlin, October 2016. *British Journal of Sports Medicine* 2017; 51:838-847

<sup>2</sup> Canadian Alliance of Physiotherapy Regulators, Code of Ethical Conduct, November 2017.

## **Baseline Testing**

Baseline testing refers to the practice of assessing an athlete, using a concussion assessment tool, prior to sports participation to provide baseline measurements that can be utilized in the event of a suspected concussion.<sup>3</sup>

Current evidence does not support a significant added benefit from baseline testing. Baseline testing is not required to provide post-injury care to those who have sustained a suspected or diagnosed concussion. Mandatory pre-season testing is not recommended.<sup>4</sup>

However, baseline testing is sometimes used in established concussion protocols with elite, national team or professional athletes. Additionally, some schools or athletic teams require mandatory baseline testing prior to participation. In these cases, physiotherapists with the appropriate training, education and experience have the skills to carry out these assessments.

## **Screening and Assessment**

Physiotherapists may screen or assess for suspected concussions. The use of evidence-based tools such as the Sport Concussion Assessment Tool 5 (SCAT 5) or Child SCAT5, as part of a clinical assessment, is recommended.

All suspected concussions should be referred to a medical doctor or nurse practitioner for a more comprehensive assessment.

Where indicated, a person with a concussion may benefit from a physiotherapist assessment of the cervical spine, the sensorimotor and neuromotor control systems (including the balance and vestibulo-ocular systems), a neurological scan or the assessment of physical injuries or co-morbidities that accompany a concussion.

## **Diagnosis**

A comprehensive, medical assessment is required to diagnose a concussion. Only medical doctors and nurse practitioners are qualified to provide a concussion diagnosis.<sup>5</sup>

In conjunction with a concussion management team, physiotherapy diagnosis is appropriate in cases of symptoms and physical injuries or impairments that are associated with cervical spine, the sensorimotor and neuromotor control systems or the physical injuries, impairments or symptoms related to common concussion co-morbidities resulting from falls, whiplash, spinal cord injury or assault etc.<sup>6</sup>

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<sup>3</sup> Parachute. Statement on Concussion Baseline Testing in Canada, Update November 2018.

<sup>4</sup> Ibid.

<sup>5</sup> Parachute, Canadian Guideline on Concussion in Sport, July 2017, pg. 9.

<sup>6</sup> Physiotherapy Alberta – College + Association, Concussion Management: A Toolkit for Physiotherapists

## **Treatment**

The treatment of persistent signs and symptoms of concussion is best managed using a multidisciplinary approach.

Rehabilitation by a physiotherapist may be indicated in the management of signs and symptoms or loss of function relating to cervical spine, sensorimotor control or neuromotor control retraining, sport-specific and occupational-specific retraining and for deconditioning associated with concussion or for physical co-morbidities that may accompany a concussion.

For the management of impairments beyond the scope of practice and competencies of a physiotherapist, referral to another member of the multidisciplinary team is required.

## **Return to Sport/Play**

Based on current consensus, patients with a concussion should be progressed through a graduated return to activity protocol as they recover. Physiotherapists with expertise and experience in concussion management can provide valuable guidance to the patient. Patients with a concussion should be assessed and medically cleared by a physician or nurse practitioner before returning to any contact activity or full sport participation.

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