

Concussion Overview

This section is intended to provide school boards with evidence-informed information regarding the definition of a concussion (including Second Impact Syndrome), who can diagnose and/or assist with a concussion, and base-line testing.

Concussion is the term for a clinical diagnosis of a traumatic brain injury that is communicated by a medical doctor or a nurse practitioner. School staff, board staff, or volunteers cannot make a concussion diagnosis, but must advise students who are suspected of having sustained a concussion and their parents/guardians to seek a medical assessment by a medical doctor or a nurse practitioner. (Ontario Ministry of Education PPM 158, 2020)

Definition:

A concussion is a traumatic brain injury that causes changes in how the brain functions, leading to visible clues (signs) and symptoms that can emerge immediately or in the hours or days after the injury. (Parachute, 2024)

A concussion:

- may be caused by a jarring impact to the head, face, neck or body, with an impulsive force transmitted to the head, that causes the brain to move rapidly within the skull (Parachute, 2024);
- can occur even if there has been no loss of consciousness (in fact most concussions occur without a loss of consciousness (Parachute, 2024);
- cannot normally be seen on X-rays, standard CT scans, or MRIs (Parachute, 2024); and
- is typically expected to result in symptoms lasting up to 4 weeks, but in some cases, symptoms may be prolonged (Parachute, 2024; Patricios et al., 2023).

Second Impact Syndrome

Research suggests that a person who suffers a second concussion before they are symptom-free from the first concussion is susceptible to a prolonged period of recovery, and possibly Second Impact Syndrome. This is a rare condition that causes rapid and severe brain swelling and often has catastrophic results.

Who Can Diagnose and/or Assist with the Management of a Concussion?

In Canada, medical doctors and nurse practitioners are the only licensed healthcare professionals whose scope of practice matches the requirements to provide comprehensive evaluation and diagnosis of a suspected concussion. In geographic regions of Canada with limited access to medical doctors and nurse practitioners (i.e., rural, remote, or northern communities), a licensed healthcare professional, such as a nurse with pre-arranged access to a medical doctor or nurse practitioner, can fulfill this role. (Parachute, 2024)

Other licenced healthcare providers (e.g., nurses, physiotherapists, chiropractors, and athletic therapists) can assist in the management of a student's recovery; however, they may not diagnosis a concussion.

Baseline Testing

Baseline testing is the practice of having an athlete complete certain concussion assessment before sport participation, usually before the start of a season, to get baseline or 'pre-injury' measurements. The most current research indicates that "baseline testing is not required for post-injury care of youth athletes with suspected or diagnosed concussion and is not recommended." (Parachute, 2024)

References

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