

FIVE THINGS TO KNOW ABOUT ...

Concussion

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See also practice article by Tator on page 975 and at www.cmaj.ca/lookup/doi/10.1503/cmaj.120039

Loss of consciousness is not required to have a concussion

Concussions result from brain trauma that affects brain function. Most concussions do not result in a loss of consciousness. Signs and symptoms vary and may include somatic (e.g., headache, dizziness), cognitive (e.g., difficulty concentrating and remembering), emotional (e.g., irritability, depression) and sleep disturbances.¹ Symptoms typically last for 10 days but may last for weeks to months.¹ Children may take longer to recover.² Anyone with a possible concussion should not be left alone and should be evaluated by a physician as soon as possible.

The keystone of management is rest

Management of acute concussion involves physical and mental rest.^{1,5} Anyone with a concussion should avoid physical activities (sports, exercise, recreational activities) and limit cognitive activities (reading, video games, television) until symptoms are improving. Work or school absence may be required until symptoms start to abate, followed by gradual return.²

Resources

- Parachute Canada: www.parachutecanada.org/injury-topics/topic/C9
- Canadian Paediatric Society, Healthy Active Living and Sports Medicine Committee: www.cps.ca/en/documents/position/concussion-evaluation-management
- Sport Concussion Library: www.sportconcussionlibrary.com
- Sport Concussion Assessment Tool 3 (SCAT3): <http://links.lww.com/JSM/A30>
- ChildSCAT3: <http://links.lww.com/JSM/A31>

Tools to evaluate concussion include the Sport Concussion Assessment Tool 3 (SCAT3) and the ChildSCAT3

Assessment of possible concussion should consist of neurologic, concentration and memory evaluations as soon as possible after injury.¹ Balance and coordination tests are also useful.¹ The SCAT3 is designed to assess patients 13 years and older on the field and in the office. The ChildSCAT3 is designed specifically for children 5–12 years of age. (See Resources box.)

Return to activity should be gradual and follow a medically supervised stepwise exertion protocol

An athlete suspected of having a concussion should be promptly removed from play and not return until symptoms have completely resolved. Once asymptomatic, the athlete should follow a stepwise protocol of increasing physical activity before being cleared by a physician to return to play.¹ Decisions around returning to play should be cautious and individualized.^{1,2} A similar protocol can be followed for non-athletes.

Imaging is not necessary to diagnose concussion

Concussive injury occurs at a cellular level, resulting in changes in brain function. Diagnosis is based on a careful clinical evaluation. Standard imaging usually yields normal results and is not routinely recommended for possible concussion unless a structural injury is suspected (e.g., because of seizure or focal neurologic findings).^{1,3–5} Imaging should also be considered if the clinical course is atypical.

For references, please see Appendix 1, available at www.cmaj.ca/lookup/suppl/doi/10.1503/cmaj.120511/-/DC1

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