



# “Doc, my head hurts!”

## Concussion Management for the Family Physician

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*Jeremy, an 18-year-old hockey player, gets body checked at centre ice during a game. His head hits the ice, but he doesn't lose consciousness. He struggles to the bench. His coach asks him if he is okay, and he just shakes it off. By the time his next shift comes around, he says he is ready to go back on the ice. Is he okay to return to play?*

This scenario is extremely common, occurring medically unsupervised in many sports each week. Clearly, Jeremy has appeared to have suffered a concussion and should not return to play. Rather, he should be taken to the dressing room and examined by the medical/training staff. It would not take long to diagnose his injury.

*As it turns out, Jeremy is unable to complete his next shift due to a headache and a feeling of not fully being within his body. While the coach insists on Jeremy walking it off, the astute trainer says no.*

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The peer pressure to return to action is huge. There has to be a united effort among coaches, training staff, medical staff, players, parents, and the media to emphasize the importance of proper concussion management. The danger of returning to action too soon could be fatal.

### Are there any radiologic investigations that will help make the diagnosis of a concussion?

For the most part, no! Concussions are a functional injury to the brain, and not usually a structural one. If an epidural or subdural hemorrhage is of concern, then a magnetic resonance imaging/computed tomography (MRI/CT) is worth pursuing. A history of loss of consciousness is a strong indication for an MRI/CT.

Cont'd on page 62 →



For example, the Second Impact Syndrome (SIS), when a second concussion occurs before the first is fully healed, can cause the brain to herniate through the foramen magnum, causing instant death. Therefore, when in doubt, keep him/her out!

*One week later, Jeremy is feeling better, with the exception of fatigue and a bit of a headache. He is also feeling a little down.*

Clearly, he is still not able to return to play. The Post Concussion Symptoms Scale (PCSS), an easy-to-use survey of questions, is an effective way of following the ongoing symptoms that the patient/athlete complains of. The athlete is more apt to write a symptom down than to verbalize it to his coach/trainer. The patient completes the survey every week and brings it to the next medical visit. The survey from each preceding week is compared to the present survey. Judgments of management will ensue from this comparative analysis. It's important to remember, the management of concussion is universal, and doesn't just apply to the sport of hockey

**Once an individual suffers a concussion, are they at increased risk for future ones?**

This is a very good question and it is hard to know. We know the longer it takes to recover from concussion, the greater the chance the next one will be even more difficult to recover from. The greater the frequency of concussion doesn't necessarily mean long-term deficits. In general, the severity is more of an issue than the quantity.

*Two weeks after the initial injury, Jeremy is feeling more nauseated.*

As you take further history from Jeremy, he has been playing pick-up basketball, but not hockey. Clearly, he is not ready for any type of sport or activity. Subsequently, he should refrain from any of these activities until all of his symptoms have resolved.

*Can I just prescribe pain medication and allow him to resume playing?*

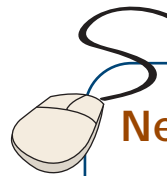
Pain is an important parameter to follow for this patient's status. Don't mask the symptoms representing the problem. In any case, pain medication that traditionally helps an ordinary headache does not relieve a headache resulting from a concussion. It is too dangerous to return to competition on a pain killer.

*Six weeks after the injury, Jeremy is feeling virtually 100%. However, he has not been tested physically. How is this done?*

Physical testing is done in a step-wise manner. Start with simple tasks (*i.e.*, walking, light calisthenics, jogging on the spot) and, over a period of days, work up to full-scale exercise (*i.e.*, sprinting). The Canadian Academy of Sport Medicine (CASM) has a detailed listing of the step-wise tests ([www.casm-acms.org](http://www.casm-acms.org)). CME

**Should a person who has suffered from a previous concussion declare it as part of their medical history?**

The history of concussion should become part of a patient's permanent medical history. Who knows what the long-term effects of concussions are? Do they predispose to forms of organic brain syndrome? Only further research in this area will help answer these questions.



## Net Readings

The PCSS can be obtained through the Canadian Academy of Sport Medicine [www.casm-acms.org](http://www.casm-acms.org)