

## Young hockey players misunderstand concussions

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TORONTO -- Too many young hockey players, coaches and parents have a dangerous lack of knowledge about whether it's safe to play with a concussion and what symptoms constitute the brain injury, suggests a new study calling for more education to prevent kids from suffering long-term head injuries.

The research by Dr. Michael Cusimano, a neurosurgeon at Toronto's St. Michael's Hospital, was based on interviews with 142 coaches, trainers and parents, and 267 players, including 10- and 14-year-olds and players who played in house leagues and for highly competitive teams.

Cusimano found about one in four minor-league players didn't know whether it was OK to return to the ice with a concussion, about half either could not identify any concussion symptoms or knew only one, and about two-thirds didn't know they could have suffered a concussion without losing consciousness.

While adults fared somewhat better in the quiz, the results still suggest the average person doesn't know enough about the dangers of concussions, Cusimano said in an interview.

"If people don't know about concussion - and how to recognize it and what to do after - they make themselves prone to more brain injuries and more permanent lasting effects," he said, noting those consequences include effects on memory, behaviour, mood, speech, social relations and school or work performance.

"Most people have heard about concussions but they're not quite sure of the effects and when it's OK to return."

About 40 per cent of the younger players and 30 per cent of the older players thought it would be safe for them to return to the ice if they felt 90 per cent better after suffering from a concussion, or "while experiencing a mild headache for the next game as long as it's at least two days later."

That thinking is dead wrong, Cusimano said, but the survey does help shed light on the fact that education is needed.

"Understanding what people know is important because if a coach doesn't really understand (concussions) and sends the kid back into play, or the parents think, 'Well, he's almost OK, he can go and play' ... that's bad news for the kid."

About half the players and one in five adults also believed incorrectly that concussions could be simply treated with medication or physical therapy.

There's no specific test for concussions, so it's critical that symptoms are understood and recognized in players, Cusimano said.

Symptoms can include loss of consciousness, headaches, confusion, nausea or vomiting, blurred vision, balance problems, slurred speech and loss of short-term memory.

"It's important the coaches, the parents, the trainers - and the kids playing themselves - understand about concussions so they don't put themselves at more risk than they need to," he said.

The study is published in the May edition of the Canadian Journal of Neurological Sciences and suggests young players aged five through 17 suffer about 2.8 concussions per 1,000 hours of ice time.

University and elite-level amateur players have rates of 4.2 and 6.6 concussions per 1,000 hours.

Former NHL player Keith Primeau, who retired in 2006 after a number of head injuries, recently announced he will donate his brain for concussion research when he dies.

"I hope to bring urgently needed awareness and recognition to the consequences of repetitive head trauma," Primeau said in a statement. "We owe it to the kids playing sports."

Cusimano applauded Primeau's decision but said it's even more important that work be done to prevent concussions rather than treat them.

"My point of view is - as a neurosurgeon who deals with it every day - that it's eminently better to prevent the concussion, to prevent the brain injury, than trying to develop some new method to treat it once it's happened."