

## CBC News

### The fear of being soft: playing through concussions

By Kristina Rutherford on November 14, 2008 11:39 AM



Hockey has the highest rate of concussion of any sport, and those are the ones that are reported.  
(Kevin Light/CBC Sports)

Brad Marsh remembers nothing about that Thanksgiving tournament. His only knowledge comes from stories he's been told.

He was 13 and it was the first game of the holiday weekend for the peewee AA Mississauga Terriers. The season was weeks old.

A physical player, Marsh came across the blueline, ready to lay a hit on the puck carrier. At the last second, Marsh's target panicked and put his stick up for protection.

Marsh got the worst of it.

The crashing noise resonated through the rink as the stick struck his helmet. He fell to the ice, unconscious.

"It left a dent in my helmet," says Marsh, now 22. "I had no idea where I was when I woke up. I kept repeating myself, and my mom was really worried. I was so confused -- I just didn't know what happened.

"That was the only time I ever had memory loss. To this day, I don't remember a thing."

It was Marsh's fifth hockey concussion, and it was his worst.

His parents took him to the hospital and a week later they visited a concussion specialist. Marsh remembers this conversation like it was yesterday. The doctor sat him down and told him five concussions was too many for a 13-year-old. His parents agreed.

Marsh's career in body-contact hockey was over.

"That was really, really tough," he says. "I wanted to play no matter what. I said, 'I don't care what happens, I want to play.'"

"It's so hard to accept and it's upsetting at that age, when you've been playing hockey every day of the week, and suddenly you're told you can't play anymore. I felt like it was cutting off three-quarters of my life."

Karen Johnston has been the doctor on the other end of those conversations. One of the leading hockey concussion specialists in North America, Johnston has treated NHL players like Eric Lindros and Mike Richter, who were plagued by concussions during their professional careers.

Richter retired from the New York Rangers in 2003 on Johnston's recommendation.

### **'Symptom pattern comes back to bite you'**

The doctor says the key to preventing those career-ending injuries is ensuring players seek medical advice every time they suspect they may have a concussion.

"A lot of times when you see people that get retired from professional sport early in their life, a lot of times it's people who, in their junior year, kept going back with symptoms, didn't tell anybody, didn't tell the coach, had headaches after lots of games, but kept it hidden," she says. "Somehow that symptom pattern comes back to bite you. If you treat it early, you treat it right every single time, you actually do better in the long run."

But it's getting the players to own up to their symptoms that remains the hardest part. Hockey has the highest rate of concussion of any sport, and that's only counting the ones that are reported. "Under-reporting," Johnston says, "is a major problem."

"If you just ask somebody, 'Did you have a concussion last season?' they'll most likely say no, because you know, even our professional athletes in the CFL, four out of five of them don't know if they've had a concussion," she says. "That study was done a while ago, but the bottom line is, there's way more than we know."

Dr. Michael Czarnota, the neuropsychology consultant for the Canadian Hockey League, says it's a common belief in the medical community that doctors are catching between one-tenth and one-third of the actual concussions on the ice.

"Underreporting is a big issue, especially when it's [in] minor hockey," Czarnota says. "I think it's an awareness and recognition issue. People might even see it, but not appreciate what it is. They'll say, 'Oh yeah, I had that when I played. Shake it off; you'll be fine tomorrow.' They don't report it as a concussion unless the child has splitting headaches through the night or passes out. They'll say, 'Play through that, that doesn't count because he wasn't knocked out.'"

The fact is, people who suffer concussions are knocked out in only 10 per cent of cases, Czarnota says.

Any contact that results in symptoms like a headache or dizziness, or causes broken teeth or a broken nose, "should always draw out questions about the brain," says Johnston, who treats everyone from minor to old-timer hockey players at the Toronto Rehabilitation Institute.

### **'Playing through' the injury**

"You don't get a concussion every time that happens, but you've got to ask yourself, 'OK, did I get a concussion as well?' Often that facial injury gets all the attention, and the brain injury tends to get put on the back-burner until later."

Because it's an invisible injury only the athlete feels, it's one they're too often "playing through," Czarnota says.

"There's a culture, certainly in hockey and in all sports, that you don't sit down. Players want to play through it so they don't get labelled as soft. Sometimes there's a fear that if a player sits out, they may lose their starting position. Players don't want to let the team down."

But returning to the ice too early can hurt players not only in the short run, but also down the road, the doctor says. That's what he tells parents, players and their coaches when he sits down with them to suggest the athlete take some time off to heal.

Recurring headaches, a lack of focus in school and problems with memory are some of the short-term affects. Medical studies on long-term affects have found retired football players who suffered severe concussions had higher rates of depression and cognitive difficulties earlier in life than the general population.

"What we're hoping is better treatment will not lead to those long-term problems," says Czarnota. "Unfortunately, better treatment just started 10 years ago. So ideally, it's the young athletes now that when they're older hopefully will not be having these problems."

Major progress in treating concussions has been made over the last decade. It used to be if you had a concussion, you'd sit out a prescribed number of days and it would be assumed everything was healed once those calendar days had passed.

"We're moving away from this kind of pigeonholing or cookie-cutter approach," Czarnota says. "We're going to a very individual approach to say every individual should be measured on a case-by-case basis. Some athletes are going to bounce back that much faster and some might bounce back a little bit slower, so we need to tailor our treatment."

Studies have shown girls often take longer to recover, and adults bounce back faster than children do from concussions. Children who suffer concussions may need to be removed from school for the proper healing process to take place.

### **Second force can 'break the bank'**

When it comes to kids, doctors are also studying second-impact syndrome: what happens when a young person who has suffered a brain injury endures a second before the brain has had a chance to heal.

"That second force, it can be minor, but it basically breaks the bank," Czarnota says. "It overwhelms the body's ability to handle the injury appropriately and the brain swells catastrophically. Obviously, when you bang your knee or your elbow, it can swell as big as it wants to. Your brain's got nowhere to go. If it starts swelling like that, there's a pretty high mortality rate.

"That's kind of the 6,000-pound gorilla when you're talking to young athletes. We don't want to have that second-impact syndrome."

Sometimes it takes the threat of lifelong repercussions to convince a young athlete to hang up the skates.

Doctors told Brad Marsh if he continued playing after that fifth concussion, he could have headaches every day. They told him it could affect his ability to get a higher education, concentrate in school, and affect his professional life down the road. Still, he didn't care. He was 13 and hockey was his life.

"I was bugging my parents pretty much every day. I was like, 'Come on, let me play, let me play!' They kept saying no," Marsh says. "I was trying everything to get them to change their minds. It caused a lot of problems between us. Now I can see they probably did the right thing, but I still wish that they didn't.

"When you're that age, it's pretty hard to get over."

His father, Dean Marsh, was the team trainer when Marsh suffered that final concussion. Telling his son his competitive hockey career was over was one of the most difficult things he's ever had to do.

"We had to enforce the doctor's recommendation, because you don't want him to end up with brain injuries," he says. "Brad was young, and there's more to life than hockey. He didn't see it that way, because he was a young kid.

"But I mean, you've got the rest of your life."

*This is the first of Our Game's three-part series on concussions.*