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Keep your head up, hockey study suggests

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Contrary to popular thinking, a five-year study into minor hockey injuries has concluded that unintentional collisions — rather than intentional bodychecking — not only causes more injuries but more severe injuries.

The accidental bumps accounted for 66 per cent of the 247 reported injuries compared with 34 per cent from intentional contact. And there wasn't a single injury caused by fighting.

In the study done by University of Buffalo researchers, bodychecking was primarily defined as two opposing players colliding and severe injuries included fractures, dislocations and concussions while unintentional collisions are defined as a player running into the boards, hitting the ice, goalposts or a teammate during games.

Dr. Scott Darling, lead author of the report that will be published this year in the *British Journal of Sports Medicine*, was surprised by the findings.

"We thought we would find that most of the injuries would be from intentional bodychecking, but we were surprised that such a high percentage of injuries was due to unintentional contact," he said. "There hasn't been a published paper that separated out intentional and unintentional contact and we wanted to see if intentionality factored in at all.

"Our results are contradictory to some of the published bodychecking studies and that may be because most of the published research included unintentional contact as bodychecking where as we separated the two."

Darling says the study suggests that keeping one's head down leaves the player vulnerable to contact, intentional or otherwise.

"The study didn't address the injury rate in heads-up hockey, but based on the high level of injuries from unintentional contact, it suggests players should look up rather than down at the puck."

The study followed about 3,000 players ages 4 -18 in the Burlington Lions Optimist Minor Hockey Association house league, select and representative teams from 2002 to 2007. Hockey Canada certified trainers recorded the injuries sustained in games and practices that sidelined players for at least 24 hours.

Fractures, contusions (bruising) and sprains were listed as the most common injuries, followed by concussions and dislocations.

Barry Willer, a professor at UB and another author on the paper, noted that fighting was not a factor in causing injury.

"When we looked through all the data, we didn't see a single injury that came from fighting," Willer said. "That's an image people have of hockey, but I don't know where it came from."

John Gardner, president of the Greater Toronto Hockey League, said the study shows bodychecking "is not the bad boy of hockey."

"There are critics out there and a lot of them have never played or enjoyed the game. A collision is not a bodycheck and at last someone has identified that."

"This will give (GTHL) a good reason to emphasize heads up hockey that we teach in our clinics."

The study showed injuries during practice were minimal, but during games increased as the age and level of competition increased. The study also found that there was a four-fold increase in injury rates when bodychecking is permitted.

Mark Filippone, the assistant coach of the GTHL team competing this weekend in the Under 16 Prospects tournament in Kitchener, was surprised that more injuries were accidental, but not surprised that the number of injuries increased with age and competitiveness because older players "are bigger and have more testosterone."

"I don't think this will change anyone's mind," the veteran GTA coach said.. "Previously bodychecking has been the focus of all reports.

"I've seen a lot of kids get hurt from intentional body contact, but I've never had a player who would deliberately want to injure another player," said Filippone, who also runs Score Hockey School. "I think people see one big hit in the game and think that would cause the most severe injury. It is hard for them to imagine a hit like that will not cause a more severe injury than getting your blade caught in a rut in the ice."

He noted that catching a skate in a rut could cause a broken ankle or tear a knee ligament that could keep players out for weeks.

Paul Carson, vice-president of development for Hockey Canada, says this study adds another dimension to the research pool.

"This is the first study we have seen that separates intentional contact reporting with unintentional contact reporting," he said from his Calgary office. "One thing it clearly confirms is when you introduce bodychecking, you increase the risk of injury.

"(It) demonstrates a real responsibility of coaches to teach the skills of bodychecking and to promote 'heads-up' hockey and player awareness."

The study states: "Aspiring hockey players will have to learn to give and receive a bodycheck at some age if they hope to play competitively as an adult." However, it does not address when or if bodychecking should be introduced.

"Our game is much more dynamic than five years ago," Carson said. "The players are faster and more skilled so it is important to gather credible research to act."

Research has paid off in the past. In the 1980s, Hockey Canada penalized checking from behind after research by Dr. Charles Tator indicated that it was one of the main causes of the 12-13 spinal cord injuries recorded each year.

Since 2002 there have been only three spinal cord injuries in its jurisdiction and none with any neurological deficit since 2006.