

## Most youth hockey injuries caused by accidents, not checking, UB study shows — Science Blog

BUFFALO, N.Y. — Hockey fans likely would assume that body-checking — intentionally slamming an opponent against the boards — causes the most injuries in youth ice hockey. But they would be wrong.

Findings from a new study, the largest and most comprehensive analysis to date of young hockey players, show that 66 percent of overall injuries were caused by accidentally hitting the boards or goal posts, colliding with teammates or being hit by a puck.

Only 34 percent of the injuries were caused by checking. Moreover, the accidental injuries were more severe than those from body checks.

These results, which appeared in June issue of the *British Journal of Sports Medicine*, were a surprise to many, including the researchers at the University at Buffalo who conducted the five-year study.

“There is an image of body checking as a form of violence that is condoned by the game of hockey,” says Barry Willer, PhD, UB professor of psychiatry and rehabilitation sciences and senior author on the study.

“However, this study found that body checking did not account for a large proportion of injuries. Perhaps as important, body checking did not lead to a rise in intentional injuries.”

Burlington, Ontario’s, youth ice hockey program was the base of the study. The researchers compared injury rates overall for the three levels of competition: “house leagues,” where there is no body checking; “select,” in which checking is allowed at age 11 and older; and “representative,” for the most skilled players, which allows checking in all divisions at age nine and above.

They also examined injury rates as level of competition and players’ age increased, and how injury rates varied in games versus practices. The data covered 3,000 boys ages four to 18 for a total of 13,292 player years. Only injuries that kept a player off the ice for at least 24 hours were included.

Their analysis of the data shows that there were three times more accidental injuries than body-checking injuries in the house leagues — 92 versus 30. Willer says accidents at this level of competition primarily are caused by players watching the puck instead of what’s in front of them, of not playing “heads-up,” which coaches try to instill at all levels.

The “select” level tallied the least injuries (28) with more than half intentional, as players first experience checking. In the most experienced league, however, 59 percent of the 96 injuries were unintentional, but the number of intentional injuries (39) was the highest of all the categories, as competition level increases.

As the researchers predicted, as the level of competition and players’ age increases, so did injuries. “Game injuries were much more frequent among the highly skilled players on rep teams,” says Willer. Rates during practice were low across all age groups and divisions.

Willer notes that this study doesn’t answer two important questions: at what age should body checking be allowed in youth hockey, or should it be allowed at all?

“The study does suggest,” says Willer, “that, regardless of whether young players are allowed to body check, unintentional contact with the board, the ice or other players are important sources of serious unintended injury. To avoid these accidents, hockey coaches must teach players to keep their heads up, rather than looking down at the puck.”

Scott Darling, MD, a primary care sports medicine specialist in the UB Department of Orthopaedics, is first author on the study.

Additional UB contributors to the study are: John G. Baker, MD, assistant professor of clinical rehabilitation; John J. Leddy, MD, associate professor of orthopaedics and co-director of UB’s Sports Medicine Institute; and Leslie J. Bisson, MD, associate professor of orthopaedics and head team physician for the Buffalo Sabres. Douglas E. Schaubel, PhD, from the University of Michigan, also contributed to the study.

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