#### Reference

 Marchie A, Cusimano MD. Bodychecking and concussions in ice hockey: Should our youth pay the price? [editorial]. CMAJ 2003;169(2):124-8.

Twenty-five years ago the Canadian Association of Surgeons (Western Division), of which I was a member, wrote to hockey administrators condemning the violence that was creeping into hockey. Unfortunately, as outlined by Anthony Marchie and Michael Cusimano,¹ the level of violence has only increased since then.

The commentators on CBC's *Hockey* Night in Canada have, in my view, been partly responsible for this increase. First came Howie Meeker and his admonition to "finish the check." When youngsters become old enough to play in leagues where bodychecking is allowed, they are urged by coaches and sometimes parents to finish the check — in other words, to violently hit their opponent, whether or not he or she has the puck. Then along came Don Cherry, who seems to emphasize hitting as the most important skill in hockey, with his "rock 'em, sock 'em" version of the sport.

Marchie and Cusimano¹ do not address the question of how the interpretation of the rules relates to bodychecking. Professional hockey is about entertainment and money. Thus, in professional hockey and, to a lesser degree, professional junior and minor hockey, referees are instructed in how to enforce the rules, so as not to slow the tempo of the game. What today is accepted as bodychecking would in my time have been called charging, boarding or even intent to injure.

A change in attitude is needed to curb hockey violence. Bodychecking should be curbed by enforcing established rules and dealing appropriately with the violence that permeates hockey and, some would say, society at large. Children do not need to be taught how to give or take bodychecks; rather, they should be learning how to skate, stick-handle, pass and shoot, as well as how to carry and pass the puck with their heads up, to avoid the occasional legal bodycheck.

Let's take the violence out of hockey

by enforcing the rules, not by trying to remake the game.

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There are several problems with the analysis of bodychecking and concussions by Anthony Marchie and Michael Cusimano. They quote statistics from the popular media alongside those from peer-reviewed journals, their essay contains some inaccurate numbers, and they are selective in their use of the available data.

For instance, citing Honey's review<sup>2</sup> of articles published between 1966 and 1997, they state that there were 2.8 concussions per 1000 player-hours for participants aged 5 to 17; however, the concussion rates reported in the 4 studies reviewed by Honey<sup>2</sup> were 0.0, 0.5, 1.5 and 2.8, and only the last of these had data for players 5 to 17 years (the age range was narrower for the other 3 studies). Furthermore, Marchie and Cusimano neglect to share 2 major conclusions of that review:2 that the incidence of concussion increases with the level of play and that it has been decreasing in children 5 to 14 years of age.

Elsewhere, Marchie and Cusimano use injury data from high school, university and elite-level players to support their conclusion that our children, and perhaps Canadian society as a whole, would be better off if there was no more checking at the youth level. However, the data from the cited studies<sup>3-5</sup> support the concept that injury rates climb along with the size and speed of the players.

The American Academy of Pediatrics also endorses the no-checking concept for children.<sup>6</sup> They weight heavily data from a small prospective study of hockey injuries in 150 boys, 9 to 15 years of age, over a season.<sup>7</sup> However, most of the 52 injuries (sus-

tained by 44 players) were contusions, sprains and strains. Disability was defined as time away from physical activity, not days missed from school or admission to hospital. Fracture, not concussion or catastrophic injury, is why the American Academy of Pediatrics suggests that checking should be proscribed.

Current data do not support the notion that serious injury is a major risk of ice hockey at the more junior levels. It is only when speed and strength outpace judgement, in mid and late adolescence, that the game becomes hazardous. Rather than banning checking in the younger age groups, a concerted international effort should be made to rid hockey of dangerous behaviours, such as checking from behind. Catastrophic injury in football dropped dramatically when spearing was eliminated in the 1970s.3 Surely similar rule changes could be instituted and enforced for hockey.

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Kudos to Anthony Marchie and Michael Cusimano¹ for their informative and valuable article regarding an issue that affects many Canadian families. However, the authors make an erroneous extrapolation. In examin-