# Sports Safety: Preventing Sports Related Eye Injuries

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*Trauma is a leading cause of preventable vision loss in adults and children in the United States. Although most adults have trauma through work-related injuries, eye trauma in children usually occurs while playing sports. Over the last few decades, improvements in equipment have decreased the incidence of sports-related trauma in children significantly. One great success story is the near eradication of eye injuries in Canadian hockey because of the work done by the Canadian Ophthalmological Society (COS).*

In the early 1970's, the COS, in an effort led by Dr. Tom Pashby, worked with the public to reduce preventable eye injuries. The COS sent a questionnaire to its member eye doctors asking about eye injuries they treated that were related to ice hockey over the 1972-3 season. The 1972-3 study revealed that 287 eye injuries occurred in players of all ages, with twenty eyes ending up blind. A second study was conducted for the 1974-5 season, revealing 258 eye injuries including 43 blind eyes.

The Canadian press showed interest in these results, and the story was presented in both the *Toronto Star* and *Toronto Sun* newspapers. A video report was shown on the popular weekly television program, *Hockey Night in Canada*, in both French and English. In the late 1970's, in response to this publicity, the Canadian Hockey Association (CHA) mandated that all minor league players wear helmets and face masks certified by the Canadian Standards Association (CSA). In 1981, the Canadian Hockey League (CHL) made the same rule for its junior hockey players.

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As a result of these changes, in the 1992-3 season only 31 players reported eye injuries, with 4 blind eyes, a drop of roughly 90%. More impressively, in the 2001-2 season, only four injuries were reported with two blind eyes, an incredible drop of almost 99%. Between 1972 and 2002, a period of time covering thirty hockey seasons, not a single eye injury was suffered by a player wearing protection certified by the CSA. These injuries came about in leagues where the standards were not so rigorous, in those playing unsupervised pond hockey, or in individuals wearing half-face visors without tightening the chin strap fully.

It is unfortunate that the National Hockey League (NHL), the showcase for hockey in the world with teams based in Canada and the United States, has never instituted a similar rule. The player's union has always refused this protective gear, feeling that face protection is restrictive and could interfere with performance. In the NHL, players not wearing face protection account for 95% of facial and eye injuries requiring treatment. What's more unfortunate is that these players are looked at as role models by children playing the game, thus encouraging the lack of protective equipment during informal, pick-up hockey games.

***How can you, as the primary physician, help manage this?***

According to the National Eye Institute, the sports with the highest injury rate are baseball/softball, ice hockey, racquet sports and basketball followed by fencing, lacrosse and boxing. The American Society of Testing and Materials (ASTM) recommend certain types of protective eyewear for all sports, with one critical component being polycarbonate lenses which are shatterproof.

Healthcare providers play a critical role in advising students and parents about the proper use of protective eyewear and how this critical addition should be considered as part of any uniform. Parents can set a good example by wearing protective eyewear when they play sports.

Reference:

1. http://www.safety-council.org/info/sport/hockeysafety.html
2. Pashby T. Eye injuries in Canadian sports and recreation, 1972-2002. *Can J Ophthalmol*, 37(4), 243-5, 2002.