

CDHA Position Paper on Sports Mouthguards

Putting More Bite into Injury Prevention

by the Canadian Dental Hygienists Association

CDHA POSITION STATEMENT ON SPORTS MOUTHGUARDS

Research shows that orofacial injury in sport is prevalent and carries significant medical, financial, cognitive, psychological and social costs. Research also confirms that mouthguards can prevent orofacial injuries. The CDHA therefore strongly recommends that dental hygienists play an integral role in the prevention of orofacial injury in sports and promote properly fitted mouthguards as an essential piece of protective equipment, in sports that present a risk of orofacial injury at the recreational and competitive level, in both practices and games.

EXECUTIVE SUMMARY

RESearch shows that orofacial injury in sport is prevalent and carries significant medical, financial, cognitive, psychological, and social costs. Research also confirms that mouthguards can prevent orofacial injuries. The CDHA therefore strongly recommends that dental hygienists play an integral role in the prevention of orofacial injury in sports and promote properly fitted mouthguards as an essential piece of protective equipment, in sports that present a risk of orofacial injury at the recreational and competitive level.

Relatively few Canadian organizations take a stand on the use of mouthguards compared with American organizations. The Canadian Dental Hygienists Association's strong stand on the use of mouthguards as primary prevention for orofacial injuries places CDHA as a Canadian leader in this area. There is significant opportunity for dental hygienists to protect the health and safety of children and adults in sport by supporting and promoting mouthguard use. It is not just the fastest and roughest sports such as football, rugby, and ice hockey that result in orofacial injury. Sports that are considered less dangerous such as soccer, baseball, field hockey, and basketball also have the potential to cause orofacial injury.

There is compelling evidence indicating that mouthguards can make sport safer by preventing orofacial injuries. The evidence for the role of mouthguards in preventing or reducing the severity of concussions is very weak and further research is needed in this area. Custom-fabricated mouthguards, particularly the pressure-laminated type, appear to provide a number of benefits over other mouthguards: the thickness can be adjusted for specific sports; it can be extended to the second molar; and the mouthguards can be articulated against the mandibular model.

Some progress has been made in preventing orofacial injuries since the 1960s and 1970s when mouthguards first became mandatory. However, there is still considerable work to be done in developing more positive attitudes and increasing use of mouthguards. First, greater use of mouthguards in all contact sports needs to be promoted. The cost

of a mouthguard fabricated by oral health professionals is extremely low compared with the medical, financial, cognitive, psychological, and social consequences associated with orofacial injury. Second, a multidisciplinary approach is needed to increase the number of players who wear mouthguards. The coach, officials, parents, dental hygienists, other oral health professionals, and general health professionals all have a role to play. They can help the public to develop positive attitudes to mouthguard use, influence behaviour, and address compliance issues in sports where mouthguards are mandated. Third, there is a need to develop an approach for expanding regulations regarding mouthguard use in sports.

Unfortunately, Canadian statistics on incidence of orofacial sports injuries are limited and may be underreported due to the lack of a national surveillance system. This gap in knowledge may be addressed by the creation of an Injury Prevention Centre of Canada. Such a centre could coordinate surveillance and maintain a database of orofacial injury reports. This information could be used to study the efficacy of mouthguards, assist in designing better mouthguards, and promote better public education.

RECOMMENDATIONS

Dental hygienists can

- work together with other health professionals to deliver health education, injury prevention, and mouthguard promotion campaigns on either a one-to-one basis or to groups of clients, parents, athletes, athletic teams, sports coaches and officials, and gym teachers;
- act as change agents to influence a culture in sports that accepts mouthguard use as a normal part of dressing for sport;
- fabricate mouthguards and advise on the use and care of properly fitted mouthguards;
- conduct research on the oral health promotion of mouthguards and the prevention of injury.

Sports governing bodies, local injury prevention centres, and school districts can

- mandate the use of properly fitted mouthguards during practices and competition in all sports where orofacial injury is a risk, including sports such as basketball, baseball, and soccer;
- develop a plan to address compliance in sports that mandate mouthguards;
- deliver increased health promotion and education of athletic trainers, coaches, sports officials, organizers, administrators, athletes, and parents.

Dental hygiene professional organizations and educational institutions can

- work with national sports and school organizations to develop an approach for expanding mouthguard regulations in sports and for addressing compliance issues in sports that have existing mouthguard rules;
- provide ongoing opportunities during college/university and in continuing education to gain knowledge and experience with mouthguard issues.

Governments can

- fund health promotion and injury prevention programs that include mouthguards;
- work with local or provincial injury prevention centres to establish an Injury Prevention Centre of Canada (IPCC), which would be responsible for an injury surveillance system, monitoring injury exposure and incidence, and assessing injury trends in activities when new equipment or regulations are introduced;
- establish an injury research and demonstration fund to test and evaluate injury prevention and control approaches.

Health insurance industry can consider covering the cost of properly fitted mouthguards in health plans and promote the use of custom fabricated mouthguards.

Researchers can conduct high-quality mouthguard research, including randomized controlled trials on topics such as:

- efficacy of various types of mouthguards in preventing orofacial injuries and concussion;
- cost-effectiveness of mouthguards and infection control;
- effectiveness of population-based interventions and sports regulations, including an increased penalty severity for mouthguard rule infractions, for increasing mouthguard use;
- survey dental hygienists and other oral health professionals to determine the general knowledge and experience levels with respect to mouthguards and to determine attitudes of dental hygienists with respect to advocating for mouthguard use;
- improved product design of an effective, comfortable mouthguard that would facilitate widespread compliance.