

## [Sports Mouthguards](#) [1]

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### Background

Participants of all ages, genders and skill levels are at risk of sustaining oral injuries in sports at both recreational and competitive levels.<sup>1-3</sup> Traumatic oral injuries also occur in noncontact activities and exercises.<sup>1-3</sup> Studies have consistently shown that custom-made mouthguards with adequate labial and occlusal thickness offer significant protection against intraoral injuries by providing a resilient, protective surface to distribute and dissipate impact forces. There is, however, insufficient evidence to confirm that mouthguards prevent concussion injuries.

In a meta-analysis,<sup>2</sup> the overall injury risk during athletic activity was found to be 1.6-1.9 times greater for mouthguard non-wearers compared to mouthguard wearers. A study<sup>4</sup> of collegiate basketball teams found that athletes who wore custom-made mouthguards sustained significantly fewer oral than those who did not.

Evidence suggests<sup>1</sup> that custom-made mouthguards provide the best level of protection and wearer comfort, that mouth-formed ('boil-and-bite') mouthguards are less adequate, and that stock mouthguards provide the lowest level of protection and wearer comfort.

### Statement

The FDI World Dental Federation recommends:

- that national dental associations promote to the public and to oral health care professionals the benefits of sports mouthguards, including the prevention of orofacial injuries;
- that appropriate oral health care professionals determine if their patients participate in any sports, or any activities which carry a risk of oral injury;
- that people of all ages use a mouthguard while participating in any such sports or activities; and
- that patients are educated about the benefits of mouthguards in preventing orofacial injuries, including appropriate guidance on mouthguard types, their protective properties, costs and maintenance requirements.

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### References

1. American Dental Association Council on Access, Prevention and Interprofessional Relations; American Dental Association Council on Scientific Affairs. Using mouthguards to reduce the incidence and severity of sports-related oral injuries. *J Amer Dent Assoc* 2006 137: 1712-1720
2. Knapik JJ, Marshall SW, Lee RB, Darakjy SS, Jones SB, Mitchener TA, de la Cruz GG, Jones BH. Mouthguards in sport activities: history, physical properties and injury prevention effectiveness. *Sports Med* 2007 37: 117-144
3. Kumamoto DP, Maeda Y. A literature review of sports-related orofacial trauma. *Gen Dent* 2004 52: 270-280
4. Labella CR, Smith BW, Sigurdsson A. Effect of mouthguards on dental injuries and concussions in college basketball. *Med Sci Sports Exerc* 2002 34: 41-44

[Dental Practice Committee](#) [2]    **Classification:** [Injuries](#) [3]

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