



POSITION STATEMENT AND RECOMMENDATIONS FOR MOUTHGUARD USE IN SPORTS

National Federation of State High School Associations (NFHS) Sports Medicine Advisory Committee (SMAC)

The NFHS mandates the use of mouthguards in football, field hockey, ice hockey, lacrosse and wrestling (for wrestlers wearing braces). Multiple studies by the American Dental Association, the American Academy of Pediatric Dentistry, and the American Academy for Sports Dentistry have shown a significant reduction of orofacial injuries with the use of a properly fitted mouthguard. The Sports Medicine Advisory Committee (SMAC) of the NFHS recommends that athletes consider the use of a properly fitted, unaltered mouthguard for participation in any sport that has the potential for orofacial injury from body or playing apparatus (stick, bat, ball, etc) contact. Research currently does not support the theory that the use of a mouthguard minimizes the risk or severity of a concussion.

A properly fitted mouthguard should separate the biting surfaces of the teeth, protect the lips, gums and teeth, and fully cover all of the upper teeth. Mouthguards which cover the lower, rather than the upper, teeth are preferred if the lower row of teeth protrudes farther out (are the leading edge) than the upper teeth. It is strongly recommended that mouthguards be properly fitted and not be altered in any manner which decreases the effective protection. Proper fit is insured by: (1) being constructed from a model made from an impression of the individual's teeth or (2) being constructed and fitted to the individual by impressing the teeth into the mouthguard itself.

A properly fitted and unaltered mouthguard has been shown to not impede communication, breathing, or create any hazards to the airway or oral cavity. Types of mouthguards which comply with NFHS rules and the relative advantages and disadvantages of each are listed below:

TYPE OF MOUTHGUARD

Mouth-formed

ADVANTAGES

Inexpensive
Form-fitted

DISADVANTAGES

Deteriorates over time
May not last entire season
Pressure on cheeks and gums
if not fitted well

Custom

Accurate fit
Comfortable

May offer superior
protection

Most expensive
Several trips to dentist may be
required

Stock

Easily fits over braces

Poor fit and easily dislodged
Can disrupt normal breathing and make
intelligible speech very difficult

References:

American Dental Association. Using mouthguards to reduce the incidence and severity of sports-related oral injuries. ADA Council on Access, Prevention and Interprofessional Relations. Journal of the American Dental Association 2006;137(12):1712-20.

Daneshvar, DH Baugh CM, Nowinski CJ, et al. Helmets and mouth guards: the role of personal equipment in preventing sports-related concussions. Clinics in Sports Medicine 2011;30:145-163.

Knapik JJ, Marshall SW, Lee RB, et al. Mouthguards in sport activities: History, physical properties and injury prevention effectiveness. Sports Medicine 2007;37:117-144.

Labella CR, Smith BW, Sigurdsson A. Effects of mouthguards on dental injuries and concussions in college basketball. Medicine & Science in Sports & Exercise 2002;34:41-44.

Lloyd JD, Nakamura WS, Maeda Y, et al. Mouthguards and their use in sports: Report of the 1st International Sports Dentistry Workshop, 2016. Dent Traumatol. 2017 Dec;33(6):421-426.

Maeda Y, Kumamoto D, Yagi K, Ikebe K. Effectiveness and fabrication of mouthguards. Dental Traumatology 2009;25:556-564.

Newsome PRH, Tran DC, Cooke MS. The role of the mouthguard in the prevention of sports-related dental injuries: a review. International Journal of Paediatric Dentistry 2001;11:396-404.

Rowson S, Bland ML, Campolettano ET, et. al. Biomechanical Perspectives on Concussion in Sport. Sports Med Arthrosc Rev. 2016 Sep;24(3):100-7.

Spinas E, Mameli A, Gianetti L. Traumatic Dental Injuries Resulting from Sports Activities; Immediate Treatment and Five Years Follow-Up: An Observational Study. Open Dent J. 2018 Jan 15;12:1-10.

Woodmansey KF. Athletic mouth guards prevent orofacial injuries. Journal of American College of Health 1997;45:179-82.

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