

CED Recommendation on Custom-Made Athletic Mouthguards

Council of European Dentists

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INTRODUCTION

The Council of European Dentists (CED) is a European not-for-profit association which represents over 340,000 dentists across Europe. The association was established in 1961 and is now composed of 32 national dental associations from 30 European countries. The CED's core mission is to promote the interests of the dental profession in the EU. This includes attention to priority issues for dentistry, such as patient safety.

In this recommendation paper, the CED will focus on preventive measures against orofacial injuries that athletes may encounter during sports activities. As is well known, whether recreational or competitive, sports and athletic activities provide substantial benefits for physical, mental, and psychological well-being. However, athletes are at an elevated risk of sustaining traumatic **dentofacial injuries (TDIs)**, particularly in high-contact sports. Besides this, studies show that **up to 15%** of all sports participants experience TDIs, with the risk significantly higher among individuals who do not use protective sports mouthguards.¹ As a result, athletes may face various post-traumatic complications, some of which may even be irreversible. In addition to that **functional, physical, or significant aesthetic problems, psychological and financial consequences** may also arise. For instance, athletes suffering from dentofacial injuries may experience long-term difficulties in chewing, speaking, and maintaining oral hygiene, which can significantly affect their quality of life and **potentially hinder their professional athletic performance and career progression**. Furthermore, considering the young age of child athletes, their limited ability to protect themselves from potential trauma during sports activities makes them one of the groups most affected by traumatic dental injuries.

The growing awareness of these risks has led to the development of preventive oral care programs and the recommendation of protective appliances, particularly **custom-made mouthguards (CMSs)**. These devices are proven to minimize the risk of traumatic dental injuries by **absorbing and redistributing the force of impacts, stabilizing the jaw, and separating oral structures to prevent soft tissue damage**. For this reason, their adoption should be considered a shared responsibility among athletes, coaches, parents, sports organizations, and dental professionals.

CMSs are **individually manufactured, removable devices designed to resist deformation, mitigate dental trauma, and protect the surrounding oral and facial structure**. Compared to over-the-counter (OTC) or boil-and-bite alternatives, CMSs offer superior protection against impact forces, better retention and fit, greater comfort and wearability during performance, as well as improved communication and breathing capability during sports. Among the responsibilities of dentists are educating patients, athletes, parents, coaches, and school officials about dental injury risks and preventive strategies, as well as encouraging the fabrication and use of CMSs.

CED Recommendations:

In light of the above findings, the CED recommends the following actions:

- Implement **early dental screening programs** for athletes of all ages and levels.
- Integrate **oral health education into athlete health assessments** and sports medicine curricula.
- **Engage health professionals, health and sports educators, sports federations, field dentists and policymakers** to emphasize the importance of using mouthguards in sports, and, accordingly, develop awareness campaigns.
- Promote the use of **CMSs as the gold standard** for contact and collision sports athletes due to their superior safety profile.
- Encourage national sporting association to push for an obligatory use of CMSs as part of their national strategies and advocacy activities.

¹ Avgerinos S, Stamos A, Nanussi A, Engels-Deutsch M, Cantamessa S, Darteville J-L, *et al.* Position Statement and Recommendations for Custom-Made Sport Mouthguards. *Dent Traumatol.* 2025;41(3):246-51. doi:10.1111/edt.13019.

- Encourage insurance companies to include CMSs as obligatory for their coverage for specific sports.
- Furthermore, the CED highlights the **need for promotion of use of Custom-Made Sports Mouthguards at both supranational and national levels**, aiming at:
 - Mandating the promotion of oral protection in organized sports across EU Member States.
 - Standardizing the recommendation of mouthguards by licensed dentists.
 - Standardizing the fabrication of mouthguards by licensed dentists and lab technicians.
 - Supporting research, education, and policy development focused on preventing sports-related orofacial injuries.

In conclusion, dental injuries sustained during sports are highly preventable. CED has the opportunity to take a leading role in safeguarding the oral health of athletes through the formal endorsement of custom-made sports mouthguards. The abovementioned recommendations will serve as a crucial step in aligning national policies, raising public awareness, and protecting athletes from lifelong oral complications.

References/ Literature

- Avgerinos S, Stamos A, Nanussi A, Engels-Deutsch M, Cantamessa S, Darteville J-L, *et al.* Position Statement and Recommendations for Custom-Made Sport Mouthguards. *Dent Traumatol.* 2025;41(3):246-51. doi:10.1111/edt.13019.
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