

## Sports Dentistry [1]

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### **Context**

Sports dentistry is the branch of sports medicine dealing with prevention and treatment of dental injuries and oral diseases associated with sports and exercise. Amateur and young athletes face greater risk of oral injuries, because they may not receive proper guidance and/or training. Although the indication of customized types of mouthguards has increased, and the effectiveness for preventing injuries has been demonstrated, there is a need to further specify the sport characteristic, age group, selected material, guard design, as well as time of use. Current evidence also shows that mouthguards may lose efficiency over time, due to use and regular maintenance.

Injuries, facial bone fractures and brain concussions should receive special attention, as sports-related blows may carry a considerable amount of energy. Aerial duels with projection of the body and consequent head and/or elbow contact completely change the impact received on the facial bone structure. Face shields, or customized masks made of scientifically determined cushioning materials, may be successfully applied and may be indicated for post-fracture use to reduce recovery time for the athlete. Customized sports mouthguards and face shields manufactured under the supervision of a dentist, should be favoured instead of commercially available pre-sized guards sold over-the-counter.

There is also a need to increase awareness of the potential indirect 'doping' effects of dental prescriptions, i.e. opioid drugs, as certain drugs widely indicated in dentistry may be transformed into banned doping substances. For example, codeine-containing drugs are not prohibited by the World Anti-Doping Agency (WADA). However, when they enter the body, these drugs are transformed into morphine, which is prohibited. There are also substances in the body that, when decompensated due to functional deterioration, can promote reactions and indirectly affect the athlete's oral health.

Some dental problems, such as non-carious cervical lesions or caries, may also come from over training, an unfavourable diet, a parafunctional load, or a lack of education of oral hygiene. Swimmers are particularly exposed to dental erosion risk due to potentially acidic aqueous environment.

For additional consideration, sports drinks and related products ingested in the form of liquids, or food supplements, can cause complications in the oral environment including dental hard tissues and dental materials, due to high content of free sugars and acidic ingredients. It should be noted that sugar-free varieties of sports and energy drinks are often still highly acidic and can therefore cause dental erosion. All aspects of an athlete's oral and general health may affect performance and should be addressed.

### **Scope**

This policy statement provides information about the global situation of sports dentistry and the role of dentists on the health of athletes.

### **Definitions**

Sports dentistry is the branch of sports medicine dealing with prevention and treatment of dental injuries and oral diseases associated with sports and exercise.

### **Principles**

This policy statement contributes to FDI's aims to improve the oral health of athletes, as well as systemic and psychological health, increasing performance and safety in sports practice. Moreover, having dentists present in high performance sport teams is an important measure to ensure athletes general health, through oral preventive and curative action.

## Policy

FDI recommends to:

- Reinforce the importance of customized mouthguards, shock-absorbing material, and time of use.
- Promote preventive measures for the maintenance of healthy oral tissues.
- Introduce the indication of customized face masks and shields, made by dentists or under dental professional supervision.
- Update the dental team on the metabolism of prescribed substances in potential conflict with WADA regulations.
- State the importance of an athlete's oral health status to their performance and the manifestation of oral lesions related to systemic reactions derived from sports conditions.
- Reinforce the importance of the relationship between an athlete's oral and general health.
- Promote the benefits of well-balanced diets for good oral health.

## Disclaimer

The information in this Policy Statement was based on the best scientific evidence available at the time. It may be interpreted to reflect prevailing cultural sensitivities and socio-economic constraints.

## References

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