



# Oral Health among Athletes at the Egas Moniz Sports Dentistry Practice<sup>†</sup>

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**Abstract:** The sports dentistry consultation at the Clínica Universitária Egas Moniz is guaranteed by a multidisciplinary team of health professionals that provide a customized service to high performance athletes. Over the last year, 99 athletes were evaluated in terms of their oral health through extraoral, intraoral and radiographic exams. In this population a high prevalence of dry mouth, erosive wear, gingivitis, periodontitis and DMF index was observed, which may have a profound and negative impact on sports performance. Of the athletes, 40.4% attended follow up consultations, where restoration and scaling were the majority of the clinical procedures performed. This data highlights the importance of a dedicated sports dentistry consultations.

**Keywords:** sport; athlete; athletic performance; sports dentistry; oral health; dental caries; dental erosion; periodontal disease; temporomandibular disorders



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## 1. Introduction

Sports dentistry (SD) is an area whose main focus is the promotion of oral health and the prevention of orofacial injuries that might disrupt the athletes' performance [1]. Over the last decade the European Association for Sports Dentistry (EA4SD) and the Academy for Sports Dentistry (ASD) have reinforced the need to create stronger links between dentistry and sports, in order to guarantee the best health care for athletes of all ages, levels and modalities [2]. The practice of sports, especially in high performance athletes, has been shown to be affected by the needs of each individual, by their oral and systemic health and by their physical and psychological state [3]. Research shows that athletes' oral health is usually poor and careless, causing oral lesions that can quickly manifest themselves at the joint, muscular or even systemic levels [3]. Therefore, the dentist should be able to adequately attend the physical and psychological consequences of an injury, and determine the best strategy for the prevention, diagnosis and treatment of oral diseases, depending on the sports' modality [2]. With the present work we describe the overall oral health status of high-performance athletes followed at the sports dentistry consultation over the last year and reiterate the importance of the existence of such a consultation.

## 2. Materials and Methods

In this longitudinal observational study were included athletes who followed the sports dentistry consultation during the year of 2020, after providing informed consent.

Evaluation of the athletes' oral health began with triage, where extraoral, intraoral and radiographic examinations were performed. Demographic data (age, sex), data related to sports (modality), eating habits (added sugars), and hygiene habits (number of daily teeth brushings) were recorded. The presence of dry mouth, tooth decay and erosion, periodontal disease, temporomandibular disorders and third molars were also recorded. The presence of caries was evaluated through the DMF index (decayed, missing and filled). The presence of dental erosion was evaluated by sextants. Periodontal disease was reflected by the manifestation of gingivitis or periodontitis. Occlusal problems were assessed according to the presence of changes in the temporomandibular joint (TMJ).

### 3. Results and Discussion

This study included 99 athletes, of which 89.9% were male. The age of these athletes ranged between 16 and 60 years, and the large majority were dedicated to football (62.6%), athletics (7.1%) or basketball (5.1%). A large number of these athletes reported good oral hygiene habits, brushing their teeth more than twice a day (89.9%). Furthermore, 19.2% of the athletes reported feeling a dry mouth. Subsequent evaluation of the DMF index, showed that on average these athletes had  $3.12 \pm 2.8$  decayed teeth,  $0.821 \pm 1.76$  missing teeth and  $3.75 \pm 3.80$  filled teeth, with an overall index of  $7.28 \pm 4.87$ . As for dental erosion, 27.9% showed erosive wear in at least one quadrant. Though the DMF index is lower than that previously reported for soccer players, the DMF index was higher for our sample [4]. Regarding periodontal disease, 37.4% presented gingivitis and 10.1% periodontitis. As for TMJ problems, 20.2% showed to have some type of joint disorder. This data shows that in general, athletes have more filled than decayed or missing teeth, have a high prevalence of dental erosion, gingivitis, periodontitis and TMJ problems, problems that need to be rapidly addressed, before further deterioration. Of these athletes, 40.4% attended follow up consultations, subsequent to triage, to address these problems, where restoration and scaling composed the majority of the clinical procedures performed (43.0% and 28.1%, respectively). With this study we show the importance of the establishment of dedicated sports dentistry consultations, that promote prevention, and allow the identification and subsequent treatment of oral pathologies in athletes, as these may have a profound and negative impact on their sports performance.

**Institutional Review Board Statement:** The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Institutional Review Board of Egas Moniz, Cooperativa de Ensino Superior. Ethical review and approval were waived for this study, due to all users of the Egas Moniz Dental Clinic signed a consent form (given the educational nature of this clinic) at the time of their first visit (triage). This document was approved by all the institutional bodies responsible for education and research in this institution.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** All available data are accessible in the central computer database of the Egas Moniz Dental Clinic.

**Conflicts of Interest:** The authors declare no conflict of interest.

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