



Clinical Role of the Sports Dentist in the Athlete Health Care Team

Sneha Divekar*

Department of Dentistry, Sports Dentist and Nutritionist, Cosmetic Dentist, Geriatric Dentist, India

***Corresponding Author:** Sneha Divekar, Department of Dentistry, Sports Dentist and Nutritionist, Cosmetic Dentist, Geriatric Dentist, India.

Received: July 12, 2023

Published: August 03, 2023

© All rights are reserved by **Sneha Divekar**.

Abstract

Sports industry in India has evolved at a fast pace in the last 2 decades. As a result, the demand of sports healthcare professionals involved in different disciplines has increased. With courses being developed on varied subjects like sports medicine, sports nutrition, sports physiotherapy, etc; availability of well-trained sports healthcare professionals is increasing. Sports medicine has now evolved into a multi-disciplinary field and has now started recognizing oral health as an important aspect of athlete's overall health. It is now time that the dental fraternity too awakens and understands as to what is their role, not just in managing the oral health of the athlete, but looking into many issues that connect the oral and overall health of the athlete. Improving athlete performance is the key element and a dentist in the athlete health care team is sure an important addition.

Keywords: Sports Dentistry; Athlete Health Care; Sports Medicine; Sports Nutrition; Athlete Oral Care

Introduction

Over the years, as sports industry has developed in India, sports medicine has evolved into a multi-disciplinary field and which has very recently started recognizing sports dentistry as a key element for athlete's health. Sports physicians and other sports healthcare professionals strive to keep the athlete's health and fitness to an optimum level to ensure good performance. In this, the role of dentist is now increasing as through scientific research, the connection between dentistry and medicine has deepened. It is imperative that the dentist now understands what are the different types of dental treatments that is needed for the athlete, what his/her role will be in the athlete health care team and how can the dentist too contribute to the better athlete performance. Many international organizations on sports dentistry have come into existence over the years that have helped define the role of the sports dentist. The sports dentist cannot function alone and has to collaborate with the members of the sports medicine team like the sports physician, the coaches, sports nutritionist, sports physiotherapist, sports psychologist, etc. So let us now understand the various clinical roles of the sports dentist in the athlete health care team.

Worldwide importance of sports dental care (Defining the role of sports dentist)

Various sports dentistry organizations have formed in last few decades which have helped define the role of sports dentist in the athlete healthcare team. The Academy for Sports Dentistry was founded as early as 1983 in San Antonio, Texas, as a forum for

dentists, physicians, athletic trainers, coaches, dental technicians, and educators interested in exchanging ideas related to Sports Dentistry and the dental needs of athletes at risk to sports' injuries. Activities include the collection and dissemination of information on dental athletic injuries and the encouragement of research on the prevention of dental injuries to athletes.

The European Association for Sports Dentistry was founded in Paris, France, by Sports Dentists. Their common ground was the findings that athletes have a neglected and underestimated Oral Health. EA4SD believes that the best way to maintain player's health and performance is to include oral health in sports medicine with physicians and dentists working closely together at the individual level as well as with the cooperation between local and international sports medicine and dentistry associations. That is why, in 2020, The EA4SD, along with the Academy for Sports Dentistry and the European College of Sports and Exercise Physicians have lead the way and have worked together to develop a Consensus Statement on Sports Dentistry integration into Sports Medicine - describing the main pillars of oral health integration into sports medicine based on the most common oral diseases found in athletes and linked to exercise, sports and performance.

FDI (Federation Dentaire Internationale) is one of the oldest organizations in the field of dentistry and its membership comprises some 200 national dental associations and specialist groups in over 130 countries. It follows the same definition of Sports Dentistry as

ASD. FDI recommendations for Sports Dentistry/sports dentists (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.

Summary - clinical role of a sports dentist

The dentist should know exactly what role he/she will play as a sports dentist, here is a summary of what is the Clinical Role of a Sports Dentist

- Evaluate each participant before his or her involvement in sports activity. Pre-season oral screenings of athletes of different age groups around the year.
- Perform required dental treatments and motivate for good oral hygiene. Show the athlete proper oral hygiene techniques and introduce them to suitable oral care products which they must carry during their competitions/tournaments.
- A team dentist, whether paid or volunteer, must be under an obligation to prevent injured participants from competing if there is unreasonable risk for further injury to the player.
- Advocate and fabricate customized mouthguards for the athletes. Give them proper instructions regarding use and maintenance of the mouthguards.
- If dental problems are severe leading to other health issues, the dentist must co-ordinate with the other dental and medical specialists and start early interventions of all the dental and health problems with a proper follow-up.
- Try to recognize any signs/symptoms of drug or substance abuse and doping and if suspicious it’s obligatory to inform the concerned authority/individual.
- Nutrition assessment of the athlete and recommend modifications in the diet keeping in mind the athletes requirements if it is seen that the diet is adversely affecting the athlete’s oral health.

- Be available for emergency dental care at the sporting event. In case if cannot be present, send a substitute doctor along with teaching all the necessary dental emergency care steps/tips to the rest of the people in the team like the team physician, nurses, coaches and other paramedics.
- Conduct sports injury prevention programs – awareness lectures to athletes, parents, coaches on prevention and emergency care and treatment of dento-facial injuries and use of mouthguards.
- Long-term management of dento-facial injuries which can include right from simple cosmetic fillings to front teeth that are chipped or fractured, root canal treatments of teeth where the pulp is involved, re-implantation of avulsed teeth to treatment of minor fractures, lip/skin cut or bruises. In case of severe mandibular/maxillo-facial fractures or other head injuries, co-ordinating with the team of oral and maxillofacial surgeon, physician, neurosurgeon, plastic surgeon, psychologist, etc for management and rehabilitation of the athlete.

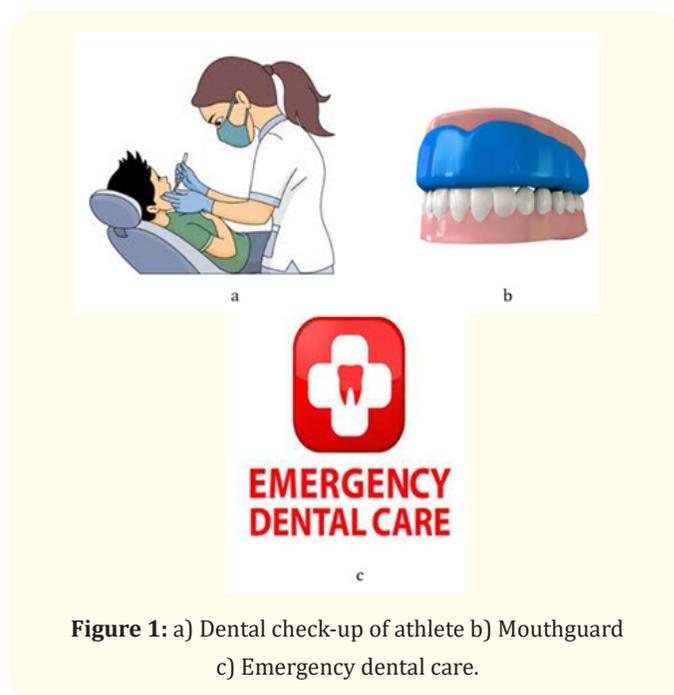


Figure 1: a) Dental check-up of athlete b) Mouthguard c) Emergency dental care.

Co-ordination of the Sports Dentist with other Sports health-care professionals for various clinical issues arising while taking care of the athlete’s oral health

- **Sports Physician:** Dentist has to co-ordinate for various health issues of athletes esp. related to sleep, CVS, diabetes, body deficiencies, performance, injuries, etc with the sports physician. The presence of the dentist at the medical screening camps (as also at the same time dental screening has to be done) will definitely help to understand if any general health problems are co-related to the oral health issues of athlete.

- Coaches:** It is important for the dentist to be in touch with coaches for resolving dental issues of athletes and stress on preventive treatment. In fact, in many places/ sports clubs, the physician will not be there on a daily basis. So it's best to contact the coaches to understand the type of sport played by the athlete to understand the type of mouthguard needed, the hours the athlete practices daily, some food or other habits of the athlete that might be significant from oral health point of view.
- Sports Nutritionist:** It has now become the need of the hour that the dentist and the sports nutritionist need to work together so as to achieve a balance between oral health and optimum nutrition for the athlete. While doing dental assessment, diet history has to be taken by the sports dentist. Dental treatments that need to be performed have to be discussed with the sports nutritionist, mainly to remove the source of causing decay and erosion by modifying the athlete's diet. The sports dentist can visit the sports nutritionist for doing oral health assessment of athletes. And if any athlete has specific issues like severe decay/erosion caused by eating disorders or erratic habits, the sports nutritionist can visit the dentist at the time of dental appointments to further help in the treatment.
- Sports Psychologist:** Dentist has to discuss with the sports psychologist in cases of bruxism, severe stress, eating disorders and dental erosion. Even in case of suspected drug abuse or tobacco withdrawal and PTSD (Post Trauma Stress Disorder) for dento-facial injuries. Severe dental and facial injuries can have a profound effect on athlete's mental health and needs to be handled well with a team approach. If athlete suffers from insomnia, jaw pain or frequent headaches, stress related teeth grinding can be the cause. In this case, a night guard might be recommended to the athlete, but again collaborative treatment with the psychologist is needed to treat the root cause of the problem.
- Sports Physiotherapist:** Dentist needs to discuss cases of buccal respiration, h/o frequent falls and recurrent Achilles tendinosis with the physiotherapist. If an athlete has history of recurrent dental infection, the dentist needs to ask the athlete if he has had infection of the Achilles tendon which has not healed. Long standing gum disease can truly cause many problems for the athlete in the form of infections and inflammations elsewhere in the body causing hindrance for any injured tissue to heal.



Figure 2: Nutrition and oral health.



Figure 3: Need of a custom night guard.

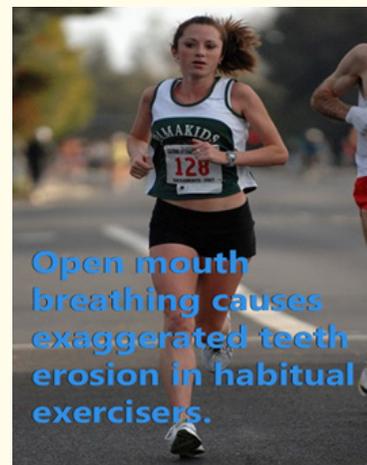


Figure 4: Mouth breathing by athlete.



Figure 5: Dentist and the athlete.

Conclusion

All these collaborations of the dentist with the rest of the health-care team are a very big topic in itself. This article aims to introduce the dentist what role he/she need to play and they need to consider so many other factors other like mental health, nutritional factors, injury history, muscle imbalances etc. We have given an overview as to consult which sports professional for which oral and general health issue of the athlete. The dentist has to understand that the sports dentistry practice happens in 2 ways: one is on the field and one is in the clinic. The clinic practice comprises of doing all the dental treatments of the athlete, customized mouthguard fabrications, conducting counselling sessions for quitting tobacco or any other habits or issues, long term dental injury management, etc. On field practice mainly involves education of the sports medicine team and athletes, pre-season dental screening, emergency dental trauma management, team mouthguard programs and any other dental treatments needed as part of emergency in that situation. A team dentist is needed at all levels of sports, whether it is grass root sports or international level games.

That is why, it is advisable for the sporting community to have sports dentistry centers all over the various cities across India identified for a quick approach when needed. Millions of rupees are spent every year in treating dental trauma injuries caused due to sporting accidents. However in India, only a few athletes wear mouthguards to prevent these injuries. In India, dental procedures regarding Sports Dentistry should be performed at reasonable costs with best of quality at various dental clinics situated in different cities. Few years back, the Department of Sports Medicine at Guru Nanak Dev University (GNDU) Amritsar, has launched India's first Sports Dentistry Clinic in May 2010. In this way, similar clinics can be opened in various cities across India.

Note

For all those who are interested in having their own sports dentistry centres and want to work as a Consultant Sports Dentist for various sports clubs, academies, schools or colleges, we have a course called "Diploma in Sports Dentistry". Dr Sneha Divekar is the course faculty and the course is organized by Institute of Sports Science and Technology, Pune co-certified by Dental Reach. It is a 6months distance learning course with a 2 day contact workshop. For more details, contact Dr Sneha on 9822910294.

Bibliography

1. Sports Dentistry-It's time to change your game; by Neha Sharma, Nikhil Srivastava, Vivek Rana.
2. <https://www.academyforsportsdentistry.org>
3. <https://www.ea4sd.com>
4. <https://wwwfdiworlddental.org>