

# Cognizance of Sports Coaches in managing Orofacial trauma in Children- A Systematic Review

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## ABSTRACT

**Dental or teeth related injuries are the foremost type of oro-facial injuries sustained throughout participation in sports and therefore considered as a link between sports and dentistry. Sports dentistry is the branch which deals in the evaluation, prevention and management of oro-facial sports injuries. In this review, we will discuss the relationship between sports and dentistry, and the importance of evaluating the knowledge of coaches in prevention of orofacial injuries related to the sports.**

**Keywords: Oro-facial injuries, Sports coaches, Trauma, Prevention**

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## INTRODUCTION

Injuries related to teeth are the most common type of oro-facial injury occurred during participation in sports. The current public popularity of contact sports and the willingness to take high risks in sports have led to an increase in sports injuries.<sup>1</sup> The biggest challenge in sports is to perform well and the athletes should perform maximum and should limit the injuries as far as they can by taking necessary precautions and through adequate preparation.<sup>2</sup>

Sports coaches and their awareness on first aid related to oro-facial trauma actually play the vital role in prognosis. Since there is strong correlation in between sports and the etiology of dental trauma, it would be quite essential for coaches and teachers of physical education to be capable of managing such injuries when they occur.<sup>3</sup>

In any orofacial injuries generally athletes are referred to dental surgeons or to hospitals because either the athletes or the coaches does not know the immediate first aid care which is to be given at that particular time of injury or on the spot where the injury occurred.

This delay in the first aid or emergency care may land the athlete in the position where they loose their precious teeth. This loss can be prevented if the coaches or athletes have certain basic first aid knowledge to treat such orofacial injuries and thereby improving the prognosis as well.<sup>2</sup>

Dental trauma especially in children and young adults has been reported from several countries with high rates between 11% and 60%. A large number of these injuries can cause irreversible dental loss and if not treated timely, ankylosis could occur. Several epidemiological studies have reported sports activities as the main etiological factors of dental trauma.<sup>4</sup>

In several countries like New Zealand, despite a high incidence of avulsive injuries, sports coaches generally had an inadequate knowledge for managing such conditions.<sup>5</sup>

Most of the oro-facial injuries occurring during sports activities can be minimized by wearing protective devices like mouth guard and by timely first aid care in cases of oro-facial trauma because managing the avulsed tooth/ tooth fragment is directly associated with a more favorable prognosis.

Sports coaches and their awareness on first aid related to oro-facial trauma play the vital role in prognosis. As sports have been implicated in the etiology of dental trauma, it is desirable for coaches and teachers of physical education to be capable of managing such injuries when they occur<sup>6</sup>.

Avulsed tooth needs to be replanted as early as possible and various recommended storage mediums should be used to preserve the vitality of periodontal ligament cells of the avulsed tooth.<sup>7</sup> Time plays an important role during reimplantation of avulsed tooth. Reimplantation within 30 minutes of exarticulation of tooth shows high success rate.<sup>2</sup>

A review study conducted by Emerich et al. proposed ‘Save – a – tooth’ boxes containing an isotopic transport medium, which can maintain the viability of avulsed tooth for upto 72 hours.<sup>8</sup> Apart from HBSS, various transport mediums which are considered to be appropriate includes milk, saline or saline soaked gauze. Also the avulsed tooth can be place under athlete’s tongue or buccal vestibule only if athlete is conscious and alert otherwise their saliva can be used as the transport medium.<sup>2</sup>

Emergency management and first aid during various sports are of utmost importance to deal with any kind of unwanted traumatic dental injuries. Knowledge of first aid is also beneficial among sports coaches to improve the prognosis of any injury. Various sports are listed in those activities where first aid and emergency could be required any time. Study conducted by Kalaskar AR et. al. showed that 91% of teachers were unaware of first aid provided after dental trauma.<sup>9</sup>

Coaches not only, bear the responsibility to educate the sports persons but also motivating them to use various protective measures like mouth guards and shields. Various studies have shown that only few coaches or sports teachers imply these precautions on regular basis.<sup>10</sup>

Collaborations between coaches and dental professionals are recommended to increase the knowledge and awareness. With the help of dental professionals the risk of dental trauma/ oro- facial injuries can be prevented to a large extent.

## **CONCLUSION**

Knowledge of sports coaches regarding prevention of orofacial trauma during contact as well as non contact sports is of prime importance. Not only prevention but also the knowledge of first aid in traumatic dental injuries plays important role in maintaining the good aspects of sports dentistry. This knowledge will surely help in protecting the winning smile of sports athletes.

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