



# Prevention and Management of Dental Injuries in Schools



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## Prevalence

- 1/5 - 1/3 of all children are affected by dental injuries by age 12.<sup>1</sup>
- Prevalence of dental injuries continues to increase throughout adolescence.<sup>1</sup>

## Some Types of Dental Injuries<sup>1</sup>

### Intrusion

- Tooth is displaced into bone
- May need a root canal or orthodontics

### Lateral Luxation

- Tooth is moved out of position to the side
- May need a root canal or orthodontics

### Extrusion

- Tooth is displaced out of the socket
- May need a root canal

### Avulsion

- Tooth is knocked out
- Will need a root canal
- Tooth may not survive

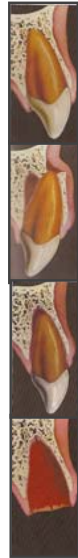


Photo courtesy of Dr. Ted Croll



## Prevention of Dental Injuries

- Mouth guards are a cost effective and easy mechanism to prevent or minimize dental injuries.<sup>2</sup>

## MCH Concern

- Many dental injuries occur at school. School staff may not be aware of prevention and emergency treatment recommendations, or if aware may not follow recommendations.

## Approach

- Interventions have been attempted to educate school staff using seminars, but long term data is lacking. Reported interventions have not stressed prevention.

## Findings

- School staff may lack knowledge on management of traumatic dental injuries.<sup>4</sup> Interventions aimed at education of teachers and school staff have had mixed results. Short term retention has been good,<sup>5</sup> with less long term retention of knowledge; diffusion of knowledge to control groups has been noted.<sup>6</sup>

1. Adnreasen et al. Traumatic Dental Injuries: A Manual. 2<sup>nd</sup> ed. 2003. BlackwellMunksgaard. Odder, Denmark

2. ADA. (2006). Using mouthguards to reduce the incidence and severity of sports-related oral injuries. Journal of the American Dental Association (1939), 137(12), 1712-20

3. Sane, J. Comparison of maxillofacial and dental injuries in four contact team sports: American football, bandy, basketball, and handball. The American journal of sports medicine, 16(6), 647-51.

4. McIntyre et al. 2008. Elementary school staff knowledge about dental injuries. Dental Traumatol. 24(3) 289-98.

5. McIntyre, J. D., Lee, J. Y., Trope, M., & Vann, W. F. (2008). Effectiveness of dental trauma education for elementary school staff. Dental traumatology 24(2), 146-50.

6. Holan, G., Cohenca, N., Brin, I., & Sgan-Cohen, H. (2006). An oral health promotion program for the prevention of complications following avulsion: the effect on knowledge of physical education teachers. Dental traumatology 22(6), 323-7.

## Emergency Treatment of Dental Injuries

### Any dental injury

- Prompt dental attention is necessary.<sup>1</sup>

### Avulsion

- The tooth should be rinsed in water if dirty and replaced back into the socket. Immediate dental care should be sought.
- If the tooth cannot be replaced in the socket, it should be placed in an appropriate storage medium (Save-A-Tooth®, milk, or stored in the mouth) until replanted.
- The tooth should not be scrubbed, stored dry, or stored in water for long periods of time.<sup>1</sup>

### Implications

- Prevention of dental injuries with mandatory mouth guard use is cost effective and easy. Mouth guards are recommended for all sports involving risk of dental injuries (basketball, soccer, hockey, and others).<sup>2</sup>
- School staff must be equipped to handle a dental injury such as an avulsion prior to dental attention as prompt management of the dental injury may determine the fate of the tooth.
- An educational intervention should be given to school staff stressing prevention and management of dental injuries. Interventions have been shown to be effective in the short term; long term results are limited and retention is questionable.
- Educational interventions for school districts should be conducted and evaluated over the long term.

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Pictures courtesy of Blackwell Munksgaard