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### High carb diet, acidic sports drinks, and eating disorders take their toll on athletes' teeth

*But poor understanding of importance of good dental health on performance and training also key*

**[Oral health and elite sport performance: Consensus Statement Online First doi 10.1136/bjsports-2014-093804]**

A high carb diet, acidic sports drinks, and a heightened risk of eating disorders are taking their toll on athletes' teeth, says a Consensus Statement on mouth health and elite sport performance, published online in the ***British Journal of Sports Medicine***.

But diet is not the only culprit, says the Statement. There is little in the way of education or encouragement to help athletes appreciate the importance of good dental health on their training and performance, it says.

The Consensus Statement, which draws on a comprehensive review of the published evidence and a recent symposium on the lessons of the London 2012 Olympic Games, is intended as a call to action.

The UK and North American authors, all experts in dental health and sport and exercise medicine, point out that dental consultations accounted for almost a third of all medical visits at London 2012, and that demand has continued to increase at subsequent major competitive events.

Their review of the published evidence, which includes 39 studies on elite or professional sports men and women, showed that poor dental health is widespread: tooth decay (dental caries); gum disease (periodontal disease); enamel erosion, and infected wisdom teeth (pericoronitis) /impacted molars were the most commonly reported problems.

Tooth decay affected 15-75% of athletes; moderate to severe gum disease up to 15%; enamel erosion 36-85%; and pericoronitis/impacted molars 5-39%. Damage caused by trauma was reported by between 14-57% of athletes in high risk sports.

Athletes from rich countries were no less likely to be affected than those from poor countries, the data showed. And, overall, the dental health of athletes was on a par with that of non-athletes living in deprived communities.

Unsurprisingly, up to two thirds of those who had sustained trauma to their teeth said that this had adversely affected them. But up to 40% said that their dental health "bothered" them or affected their quality of life, while between one in 20 and one in five said that it had affected their performance.

There is a wealth of published evidence to show the impact of poor dental health on wellbeing, say the authors. "With clear psychosocial impacts of oral health, it would be surprising if training and performance were not affected in those athletes with poor oral health," they write.

And this could be especially important in competition, where marginal gains...or losses can make all the difference, they say.

Athletes with poor dental health are likely to suffer pain, difficulties sleeping and eating, systemic inflammation, a dent to their confidence and may be generally out of sorts, all of which could be detrimental to their performance, they suggest.

In a bid to explain the prevalence of poor dental health among athletes, the authors point to the preference for a high carb diet and acidic sports drinks during training and performance, the impact of which is likely to be worsened by a dry mouth during competition.

Eating disorders are also likely to be a factor, particularly in sports, such as boxing, horse riding, gymnastics, and long distance running, where body weight, composition, and aesthetics are crucial.

There has been little research on elite athletes' attitudes to dental health, but what there is suggests that their understanding of its importance is relatively poor. And it does not appear to be a priority for trainers and sporting bodies either, say the authors.

The steps needed to prevent poor dental health and maintain good mouth hygiene are simple and cheap, say the authors, who list them for each of the commonly reported conditions. But they need to be integrated at all levels, they say.

"To achieve a sustained effect, oral health should be embedded within other aspects of health promotion, taking into account the structural issues and inter-relationship of athletes within their sport and peer networks," they write. "National sport funders and policy organisations should take a lead in integrating such an approach," they add.