

Carrying the torch for oral health

Andrew Eder investigates one of the most common dental conditions affecting athletes; dental erosion.

According to the International Olympic Committee (IOC) Medical Commission, which supports the protection of Olympians' wellbeing, the role that satisfactory dental health may play in the pursuit of an athlete's goals is sometimes neglected.

In its publication, *Sports Dentistry*, the IOC states: 'The mouth and body must work together as a unit and a healthy mouth will allow the body to function in the most efficient manner possible. From better chewing and digestion of food all the way to proper support of the upper body muscles, a healthy dental condition will bring out the best in an athlete.'

Drink to your health

One way in which dental health can be affected is when athletes drink beverages they believe are good for their body, but in fact may contribute to tooth surface loss.

Taking a closer look at sports drinks, the majority have a pH below the critical measure of 5.5, the point at which erosion of tooth enamel commences. To provide a guide, water quality regulations in the UK specify that the pH of tap water should be between 6.5 and 9.5, cow's milk is between 6.4 and 6.8, while Lucozade Sport Orange comes in at a pH of 3.8



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Healthy body healthy mouth. Swimmers who repeatedly come into contact with acidic chlorine-related by-products in the water can suffer from tooth erosion.

and orange juice at 3.5.

It is, therefore, important to ensure that athletes are able to make informed choices.

Athletes can reduce the risk to their oral health by:

- Choosing still water, low fat milk or sports drinks with a pH greater than 5.5.
- Using a wide-bore straw to drink any acidic drinks to limit the contact of acids with the teeth.
- Avoiding sports drinks as a mouthwash or sipping such drinks for extended periods of time.
- Swallowing any acidic drinks immediately to reduce the contact time with the teeth.
- Not brushing immediately after having any acidic foods or drinks.
- Diluting and keeping any acidic drinks chilled as the damaging acidic potential is reduced.
- Rinsing the mouth after acidic foods and drinks with water for 15-30 seconds to dilute any remaining acids.
- Rinsing any protective mouthguards with clean water during a break, or removing the mouthguard while drinking to minimise the effect of any retained acid.
- Using a fluoridated mouthwash daily at a different time to tooth brushing

and/or before consuming acidic foods and drinks to help limit the erosive potential.

- Visiting the dentist regularly to allow application of in-surgery fluoride and prescription of highly fluoridated products for home use.

Other front-runners

Acidic drinks are not the only culprits when it comes to sports-related tooth surface loss. Swimmers who repeatedly come into contact with acidic chlorine-related by-products in the water can suffer from tooth erosion. There is also the potential for significant erosion if regurgitation occurs, for example as a result of an athlete pushing themselves too hard on a regular basis or, perhaps, having suffered an eating disorder such as bulimia.

And the winner is?

With oral health playing its part in sporting success, and for the dental professional in particular, seeking to prevent problems is always top of the agenda. Once tooth surface loss has been diagnosed, the causative factors must be addressed before proceeding with any definitive restoration.

References available on request.