



## Endurance Athletes at Increased Risk for Dental Decay



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## **The Diet**

While endurance events are usually pursued by the generally health-conscious individual. The diet of the endurance athlete consists mostly of carbohydrates. Perhaps an even more detrimental effect of the endurance athlete's diet occurs during a race. It is then that the athlete must consume a greater amount of carbohydrates with greater frequency. The Ironman triathlon, for example, can last anywhere from 8 to 17 hours. During this period, the athlete needs not only to consume the amount of calories she/he would on a day with no exercise, but also to compensate for the calories burned during the event. Dental professionals know that a diet high in carbohydrates provides more nutrient content in the mouth for *Streptococcus mutans* (the bacteria responsible for dental cavities) to flourish. Research states that frequent drinking or sipping of sugary drinks provides an abundant food supply for the caries-causing bacteria on tooth surfaces. Sugary drinks include sports drinks commonly used during strenuous activity.

Taking a look at the nutritional supplements that are available on the market, we can see a source of potential problems. The assortments of bars, gels, drinks and chews all contain large amounts of sugar. With the amount and frequency of fermentable carbohydrate consumed on a daily basis and during an event, we can see that oral cariogenic bacteria will have adequate time to establish themselves. With consumption of frequent carbohydrates, the activity of bacteria in the mouth can be nearly constant.

Current literature explains how the sports nutrition diet can accelerate demineralization of the teeth and begin the cavity process, and deserves attention from the dental professional. After volunteering in the medical tent during Ironman races in 1994, Kathy Conlin, Registered Dental Hygienist and RN, of Spokane, Wash., recalled that she would see the European and Australian participants with obvious gumline and in between the teeth cavities when they would smile. Conlin added that the acidity of sports drinks may speed up the progression of decay. The front teeth are the ones most exposed to sports drinks and most likely to become dehydrated, which is the next risk factor.

### **Dry Mouth: A Catalyst for Decay**

As an athlete trains and races, the rate of breathing increases along with the level of intensity of the exercise. With increased respiration, the mouth tends to become drier due to the large amounts of air passing through it. Where there is less saliva flow, and thus a lower concentration of neutralizing enzymes, the tooth decay process is accelerated. With decreased saliva activity during sporting events, a cariogenic (decay producing) environment is more likely.

## Call for Education

Dental professionals recommend:

1. Use of xylitol-containing products such as chewing gum between workouts and meals.

\*generates remineralization

\*increases salivary output/relieves dryness

2. Carry a bottle of water while racing and working out to rinse the mouth after consumption of gels, drinks and bars.

3. Use of appropriate fluoride:

\*Fluoridated toothpastes

\*Fluoridated rinses

\*Professionally applied fluoride treatments by dentist or hygienist

4. Pit and fissure sealants where appropriate; sealing areas where bacteria can flourish.

5. Proper home care.

\*Brushing well and flossing regularly

\*Regular dental check ups and cleanings