

Oral Health Tips

smile discoveriesSM

Summertime and Sports Drinks Can Take a Toll on Teeth

People who are just trying to stay cool during the summer months or are active in summer sports are consuming lemonade and sports drinks at a considerable rate. High energy and sports drinks are often used to rehydrate after exercising or replacing body fluids. Recent studies have found that popular sport drinks and beverages containing high acidity may be cause for concern. These beverages can cause irreversible damage to the dental enamel resulting in long-term dental problems.

Does what I drink matter?

According to a recent study in the Academy of General Dentistry's clinical journal, tooth enamel damage caused by non-cola and sports beverages is three to 11 times greater than from cola-based drinks. The beverages that were cited as causing the most significant concern included lemonade, energy drinks, and sports drinks, followed by supplemented fitness water, iced tea and cola beverages.

What is tooth erosion?

Erosion is the loss of tooth enamel caused by continuous contact with acidic substances. Enamel is the hard outer coating of the tooth that protects the inner sensitive dentin (the layer of tooth under the enamel). When the enamel is worn away, the dentin underneath is exposed. This can lead to pain and sensitivity, and increases the chances of tooth decay.

What is the role of pH?

The pH (potential of hydrogen) value is used to measure the acidic nature of substances. It is measured on a scale of 0-14, 0 meaning lower pH and therefore more acidic. Foods and beverages with a low pH value are cited as a major contributor to irreversible dental erosion. Every time you eat or drink anything acidic, the enamel on your teeth becomes softer for a short while and

loses some of its mineral content.

Increasing the consumption of acidic, carbohydrate (sugar)-rich sports drinks increases the risk for the development of tooth decay. Most soft drinks contain one or more acids, such as citric and phosphoric acid. Sports drinks often contain additional acids and additives to give the drinks a longer shelf life and to give them their tangy taste.

Regardless of whether you consume sugar-laden soft drinks or naturally sweetened fruit drinks, the sugar content in each affects your teeth similarly. This can be confusing when trying to choose which type of beverage to drink. Some beverages, such as sports drinks, feature natural sugars and are marketed as being a healthier choice. This claim is misleading. Even beverages with natural sugars — or low pH — can be cause for concern to your teeth.

Some beverages with low pH include:

- Sports or fitness drinks
- Sugary soft drinks
- Fruit juices, including lemonade

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What is the role of saliva?

Saliva acts as your mouth's natural defense system, washing food and beverages away and slowly neutralizing acidity in your mouth restoring it to its natural balance. However, if acid exposure occurs too frequently, your teeth do not have a chance to be restored or repaired. Over time you can start to lose the enamel surface of your teeth. People who continuously bathe their teeth in acidic substances have a higher probability of tooth erosion.

How do I minimize the risk of tooth erosion?

- Keep the contact time of low pH beverages and foods to a minimum. Avoid sipping over an extended period of time.
- Rinse your mouth with water for 30 seconds to dilute sugar and acids

- Drink water or low-fat milk in place of acidic beverages
- Use a straw positioned toward the back of the mouth to limit the contact of acids and sugars with your teeth
- Chew sugar-free gum to stimulate saliva flow
- Drink fluoridated water and brush with fluoride toothpaste to help remineralize the teeth
- Limit the intake of sports and soft drinks as well as other low pH beverages

Even though the heat of summer appears to be a perfect time to increase one's consumption of sports and soft drinks, lemonade, ice tea and other summertime beverages, there are important indications that what we drink may have a dramatic effect on the health of our teeth. Read labels. The

sugar and acid found in most of these sweetened beverages can be a major contributing factor to tooth erosion. Dental erosion is irreversible. So make smart decisions about what you drink — the health of your teeth depends on it.

Sources: Academy of General Dentistry: www.agd.org; Irish Health: www.irishhealth.com; American Dental Assn: www.ada.org