

# Mouth Matters

Dorion on Dentistry



## The Devastating Effects of Acid Erosion

Significant damage to teeth from the effects of acid erosion has become a growing problem for dentists and their patients in recent years. We are not talking about the bacterial acids that cause tooth decay but rather acids from other sources that actually cause the teeth to dissolve. Because our teeth are comprised mainly of calcium, they are very vulnerable to the damaging effects of acid in the mouth.

Acid eroded teeth look like melting popsicles, with the normally well defined hills and valleys leveled out. When the erosion perforates the protective enamel layer, the next layer (dentin) is softer and even more easily dissolved. The teeth then usually become very sensitive. It is also common to

**Acid eroded teeth look like melting popsicles.**

see fillings (which are resistant to erosion) standing up higher than the surrounding tooth structure to the point that they sometimes fall out

completely.

In the most severe cases of erosion, the bite begins to collapse (the jaws close further down before the teeth contact) because the teeth are now shorter. This loss in the vertical height of the face can result in wrinkles at the corners of the mouth that frequently become infected with yeast. Temporal mandibular joint problems accompanied by headaches and jaw pain can also occur.

So where is all this destructive acid coming from? Well there are a few sources including the stomach. People who suffer from esophageal reflux (a condition which allows the stomach acid to seep up into the mouth) are particularly at risk. Bulimia (habitual vomiting) can also have similar effects. In addition to the increased risk of esophageal cancer that accompanies these conditions, erosion of the teeth can be both severe and rapid if effective treatment is not rendered.

The acid source we see most commonly comes in the form of pop and citrus juices. These and similar drinks contain high concentrations of phosphoric, citric and or ascorbic acid. Anything with a pH lower than 5 is potentially harmful to the teeth. Since colas have a pH as low as 2.7 and lemonade, which can be as low as 2.0, it's no surprise that these beverages are capable of doing a lot of damage. Oh, and just in case you thought you were safe with diet drinks – think again. It is not the sugar content but the acid content that matters when it comes to erosion and diet drinks are equally as destructive as their sugar containing counterparts.

Don't let us scare you completely away from your favorite soft drink because there are a couple of other important factors besides a low pH that determine the extent of damage to your teeth.

Frequency of exposure is the first. A Coke now and then is not going to do any harm – it's what you drink habitually that matters. One study showed that North American women consume more Diet Coke than water!

Exposure time is also an important part of the equation. Sipping acidic drinks slowly or worse yet swishing before swallowing increases the exposure so that the acids are able to do a lot more damage than if the beverage is swallowed quickly. Try this little experiment. Take a sip of your favorite cola and swish it for a few seconds before swallowing. Do your teeth feel fuzzy? That is because your enamel has just been etched by phosphoric acid. Do this enough times and there will be no enamel left!

If you think you might be a victim of acid erosion, see your dentist soon because ... your "Mouth Matters".

Yours for better dental health,

**Rae Dorion, DDS**

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