

did you know?

money down the drain

In 2004, Americans spent \$66 billion on carbonated drinks—and billions more on noncarbonated soft drinks. That works out to about \$850 per household—enough to buy a computer and a year's worth Internet access.

starting young

One-fifth of 1- and 2-year-old children consume soft drinks. Those toddlers drink an average of seven ounces—about 1 cup—each day. Almost half of all children between ages 6 and 11 drink soda, with the average child drinking 15 ounces a day.

what's being learned at school

The Alliance for a Healthier Generation has worked with leading beverage companies to create guidelines which allow only lower calorie and nutritious beverages to be sold at schools. Be a part of this important movement and a voice for our youth. Ask your school to offer healthier options like reduced-fat milk and water.

empty calories, excess weight

In 2004, the average American drank 37 gallons—60,000 calories—of non-diet soft drinks; adding in another 16 gallons of fruit and sport drinks brings the total to about 85,000 calories. All those calories can contribute to excessive weight gain and related health problems.

sizes are growing

In the 1950s, a bottle of soda was 6.5 ounces. Today, a 12-ounce can is standard and a 20-ounce bottle is common. Larger container sizes mean more calories, more sugar and more acid in a single serving.

caffeine in a can

The amounts of caffeine in one or two cans of caffeinated soft drinks can affect performance and mood, increase anxiety in children and reduce the ability to sleep.

better keep exercising

To burn off the calories in a 20-ounce bottle of non-diet soda, a 135-pound person would have to walk three miles in 45 minutes, play vigorous basketball for 40 minutes or bike vigorously for 22 minutes!

Statements in "Did You Know" were adapted from "Liquid Candy: How Soft Drinks are Harming American's Health" a report from the Center for Science in the Public Interest (CSPI). Learn more at cspinet.org.

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check the label

Always read the label! Regular soft drinks contain acid and sugar that can lead to tooth decay. Diet or "sugar free" drinks may not have sugar, but most always contain acid. Even many flavored milks have loads of extra sugar!

Nutrition Facts

Serv. Size 1 Can (regular)

Amount Per Serving

Calories 140
Total Fat 0
Sodium 50mg
Total Carb 39g
Sugars 39g
Protein 0g

CARBONATED WATER,
HIGH FRUCTOSE CORN SYRUP
AND/OR SUCROSE, CARAMEL
COLOR, PHOSPHORIC ACID,
NATURAL FLAVORS, CAFFEINE

Nutrition Facts

Serv. Size 1 Can (diet)

Amount Per Serving

Calories 0
Total Fat 0
Sodium 40mg
Total Carb 0g
Protein 0g

CARBONATED WATER,
CARAMEL COLOR, ASPARTAME,
PHOSPHORIC ACID, POTASSIUM
BENZOATE (TO PROTECT TASTE),
NATURAL FLAVORS, **CITRIC ACID**

What is pH anyway and what does it mean for my oral health?

A normal mouth has a pH of 6.2 to 7, which is close to neutral with no damage done to the teeth. Tooth enamel begins to de-mineralize (dissolve) at pH levels below 5.5. Soda has an average pH of 2.5, which is far below this point and very acidic. Enamel is the hardest substance in the body, but it becomes porous and soft when exposed to acid. Tooth enamel erosion is extremely harmful because it weakens the tooth and makes it prone to decay and breakage. Enamel (and thus teeth) wears out faster when it's been weakened. Just think: You only have one set of teeth (and enamel) that's meant to last you a lifetime. Take care of them!

	pH (acid) Level* Low number = bad for teeth	Sugar Amount** Per 12-ounce serving
Pure Water	7.00 (Neutral)	0.0
Coffee (Average, Black)	5.00	0.0
Barq's Root Beer	4.61	10.71 tsp.
Diet Dr. Pepper	3.41	0.0
Juicy-Juice (Berry)	3.40	9.75 tsp.
Fresca	3.20	0.0
Diet Sprite	3.17	0.0
Red Bull Energy Drink	3.10	9.29 tsp.
Nestea	3.04	6.07 tsp.
Propel (Berry)	3.02	0.71 tsp.
Diet Mountain Dew	2.95	0.0
Dr. Pepper	2.92	9.64 tsp.
Sprite	2.90	9.29 tsp.
Gatorade (Lemon-Lime)	2.83	5 tsp.
Mountain Dew	2.80	11.07 tsp.
Minute Maid Orange Soda	2.80	11.2 tsp.
Diet Pepsi	2.77	0.0
Diet Coke	2.70	0.0
Powerade	2.63	5.36 tsp.
Pepsi	2.43	9.64 tsp.
Coca-Cola	2.30	9.64 tsp.
Battery Acid (Yikes!)	1.00 (Acidic)	0.0

*Acid amounts from the study "Enamel and root surface erosion due to popular U.S. beverages." 2006. Authors: L. Ehlen, T.A. Marshall, F. Qian, J.J. Warren, J. Wefel, M.M. Hogan, and J.D. Harless. College of Dentistry, University of Iowa, Iowa City and from University of Minnesota School of Dentistry, 2000. *Northwest Dentistry* Vol 80, No. 2. **4.2 grams = 1 teaspoon.

stop the pop!

STOP

get healthy prevent decay

Brought to you by dentists of the

Missouri
Dental Association



Americans consume huge quantities of soft drinks each year.

Enough soft drinks are produced annually to provide 725 12-ounce servings (equivalent to more than 30 cases) to every man, woman and child.

CARE

**We care about your oral health. Don't you?
Learn more at www.modental.org**

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enough is enough

Soft drinks, juices and sports drinks provide huge amounts of sugars to many diets. Each day, soda consumption alone provides the average teenage boy about 15 teaspoons of refined sugars, the average girl about 10 teaspoons. These amounts roughly equal the recommended daily limits for teens' sugar consumption from *all* foods.

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why should you care

No matter what it's called—a soft drink, soda or pop—drinking too much can cause tooth decay and harm your health.

Sugar and acid in soft drinks, juices and sports drinks can set up the perfect environment for tooth decay. Drinking too much of these beverage likely contributes to other health problems, such as osteoporosis, kidney stones, and especially overweight and obesity, which are prime risk factors for type 2 diabetes in teens and adults.

Soft drinks are a problem not only for what they contain, but for what they push out of the diet, including vitamins, minerals and fiber. Less than 50% of adolescent girls consume enough calcium daily, which can lead to early development of osteoporosis. Girls who drink carbonated beverages are 5 times more likely to have bone fractures than those who don't drink soda.

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It's not just "soft drinks" that are the problem. Many other beverages, like sports drinks and fruit juices, have sugar and acid which can cause decay.

How tooth decay starts

- Soda and other soft drinks have lots of refined sugar, such as high fructose corn syrup. Bacteria in the mouth process the sugar and produce acid.
- This acid, plus the extra acid already present in the drink demineralizes your tooth enamel, the outer coating of the teeth that guards against decay.
- Tooth decay (cavities) begins when enamel is weakened.
- Each acid attack lasts about 20 minutes, and each sip you take resets the clock.
- Remember! Diet or "sugar free" drinks may not have sugar, but usually contain harmful acid.

How to reduce decay

- Choose water; it's best for your hydration and health.
- Don't sip soda all day; drink a serving all at once. Sipping exposes teeth to prolonged sugar and acid attacks.
- If you do drink soda, sports drinks or fruit juices, do so in moderation—not more than a 12-ounce serving per day. And, it's best to drink it with a meal.
- After having a soft drink, brush your teeth. If you can't brush, rinse your mouth with water to dilute the sugar and acid, or chew gum which contains xylitol, a sugar substitute shown to discourage tooth decay.

Can you imagine eating that much sugar?



Spoon out 10 level teaspoons of sugar (actually high fructose corn syrup) to see about how much is in a 12-ounce can of regular soda. Now spoon out 17 teaspoons for a 20-ounce bottle. Can you imagine eating that much sugar at one time?! If you think diet soda is better, think again. It may not have the sugar but still contains acid that can harm tooth enamel, which can lead to decay.



The look of decay

Have you ever wondered what tooth decay looks like? It's nasty, isn't it? The top picture is more shocking and shows a severe case of decay, but the bottom picture also shows tooth decay—in a more subtle way that may go unnoticed by most people. Do you see the white, chalky lines along the gums in the bottom picture? It may seem like no big deal, but in dental terms, it's called "decalcification" which translates into tooth decay. The person in this picture wore braces to straighten the teeth, but didn't practice good oral hygiene, causing the tooth enamel to erode. This is what tooth decay caused by soft drinks looks like when it starts. If you don't brush and floss daily, eat and drink healthy and see a dentist regularly, this could be your teeth...on the way to decay.



- Brush at least twice daily (especially before bed) with fluoride toothpaste; floss daily to remove plaque buildup between teeth and along gums.
- See your dentist for regular checkups and cleanings.