

Diet soda, aspartame and staying healthy: Q&A with nutritionist Jan Starkey

22 August 2013, by Eric Peters

Coca-Cola this month began rolling out an advertising campaign to defend artificial sweeteners and to tout diet soft drinks as a healthy way to help people lose or manage their weight.

Some of the ads specifically mention aspartame, the artificial sweetener used in many of Coke's [diet sodas](#), and cite hundreds of studies suggesting the sweetener is safe.

Aspartame and other [artificial sweeteners](#) have come under fire recently as the subject of charges of being unhealthy and perhaps even dangerous.

Jan Starkey, nutrition clinic director at VCU Medical Center, is a registered dietitian and certified diabetes educator. She sat down to answer some questions about soft drinks, aspartame and the keys to a [healthy diet](#).

What is the difference between a normal soft drink and a diet soft drink?

Calorically there is a huge difference since most soft drinks typically contain between 11 and 14 calories per ounce, while [diet drinks](#) have virtually no calories. A typical 12-ounce can of regular soda will have about 150 calories, which is a little more than nine teaspoons of sugar. A liter of regular soda contains about 400 calories or 25 teaspoons of sugar.

Some have referred to regular sodas and soft drinks as "liquid candy" due to the [sugar content](#), and depending upon the brand, all soft drinks can also contribute caffeine, sodium, potassium or artificial colorings and flavoring agents.

Aspartame is the artificial sweetener used in many diet soft drinks, what is it?

Aspartame was first synthesized in 1965, although the FDA didn't give final approval until 1981 because of the conflicting studies hinting at health

risks. It is a combination of two [amino acids](#): phenylalanine and aspartic acid. It's about 220 times sweeter than sugar.

Aspartame is marketed under a number of trademark names, such as NutraSweet and Equal, as well as Canderel. It is an ingredient in approximately 5,000 consumer foods and beverages sold worldwide.

People who have the [genetic disorder](#) phenylketonuria, or PKU, cannot metabolize the phenylalanine content in aspartame and must avoid it completely to avoid toxic levels from building up.

For others, Aspartame has been found to be safe by more than 90 countries worldwide with FDA officials describing aspartame as one of the most thoroughly tested food additives the agency has ever approved. Nonetheless, it has been the subject of several controversies, hoaxes and health scares which continue to this day.

Artificial sweeteners have been deemed safe by the Academy of Nutrition & Dietetics as far as overall health is concerned

What effects do artificial sweeteners have on appetite and weight?

Research is now showing that sometimes artificial sweeteners can impact the brain and the gut in ways that may cause people to eat more.

Consuming high amounts of artificial sweeteners and sugar alcohols may cause your gut bacteria to adapt in a way that interferes with satiety signals and metabolism, according to a new paper in *Obesity Reviews*.

How does that happen? As bacteria in the gut process food, they give off byproducts called short-chain fatty acids. These can be beneficial and serve as energy in the body. But as the sweetener-

adapted bacteria thrive and become more efficient at processing large amounts of artificial sweeteners, they also produce more and more short-chain fatty acids. In those high amounts, short-chain fatty acids decrease satiety signals.

This signaling may cause disruptions in our feeling full and hence prevent us from stopping to eat when we should, according to some researchers. Having said that, the jury remains out regarding a possible role of increased artificial sweetener use in the obesity and diabetes epidemics.

Our taste buds may also be impacted by regular consumption of artificial sweeteners as we get accustomed to the high intensity sweetness that could condition people to a greater preference for sweets, which can distort our food choices and preferences.

Can diet soft drinks help people manage their weight?

Artificial sweeteners are no "magic bullet" and cannot result in weight loss unless the overall calorie intake is below what is needed to maintain weight. Despite its concerns about the risk posed by artificial sweeteners, the Center for Science in the Public Interest says consumers who drink soda are still probably better off drinking diet soda than sugar-sweetened soda.

In what circumstances are diet soft drinks a better choice than regular soft drinks?

Diet soft drinks can be of benefit to people who need to limit sugar, such as diabetics, or special populations, such as those who have had gastric bypass or other stomach surgeries. But they are no "magic bullet" and cannot result in weight loss unless the overall calorie intake is below what is needed to maintain weight.

In what circumstances are regular soft drinks a better choice than diet soft drinks?

Regular soft drinks are fine in moderation for people who don't need to restrict calories or even need to increase calories because of low body weight, increased physical exertion, and of course,

people who have PKU who must avoid aspartame. We have also suggested using regular soft drinks for diabetic patients who have hypoglycemia, although other carbohydrate sources can be used just as well.

What is the best way (food, exercise, diet, etc.) to manage weight?

There is no one answer to this as so much depends upon individual factors, preferences and goals. The bottom line is that lifestyle management of nutrition and diet by choosing portion-controlled nutritious foods as well as activity, sleep patterns and stress management are all keys to managing weight.

What we drink is important, and not only with regards to [soft drinks](#). Specialty coffees, fruit juices and alcohol-based beverages can add up as well. Think about replacing diet soda with healthier drinks such as water, tea, seltzer water or even coffee. If you can't kick the habit entirely, limit diet soda consumption to one or two cans per day.

For gut flora to thrive, eat a wide variety of fruits, vegetables and whole grains. Start somewhere and build from there. Even changing what you eat at night or what you drink during the day can make a big difference.

For example, a person could lose 15 pounds in a year by reducing 150 calories each day. That equals a 12-ounce soft drink, a 1-ounce bag of chips, or a half cup of regular ice cream. Paying attention to portion sizes is key, since most of us underestimate the amount we eat.

It also helps to track what you are eating and drinking by keeping a diary or using one of the apps available such as myfitnesspal. Weighing once or twice a week can provide feedback and help keep up motivation.

Many people would benefit to meet with a registered dietitian who is uniquely qualified to address health concerns and provide individualized guidance.

Provided by Virginia Commonwealth University

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