

Sugar: How Much is Too Much?



Thank you for your interest in **Sugar—How Much is Too Much?** This nutritional educational packet contains a 14 page study guide, as well as a self test/training certificate, which fulfills two hours of training. This certificate is only valid if the self-test on the backside is completed. You are expected to review the enclosed materials thoroughly prior to completing the self-test. Answers to all questions are contained in the accompanying study guide. ***Remember, the training certificate is only valid after review of the enclosed materials and completion of the self test.***

If you have any questions as to the proper use of this packet, please contact the ICCB office and we will be glad to assist you.

Sugar is taken for granted to be a natural and very necessary part of our diet. By weight, it accounts for approximately 9% of all food eaten in the United States. It is added to so many common foods that one could easily eat 1 – 2 cups per day while thinking that he or she has not had any. It was not until the last century that sugar became an important part of the American and European diet.

The average American consumes an astounding 2-3 pounds of sugar **each week**. This is not surprising considering that highly refined sugars in the forms of sucrose (table sugar), dextrose (corn sugar), and high-fructose corn syrup are being processed into so many foods such as bread, breakfast cereal, mayonnaise, peanut butter, ketchup, spaghetti sauce, and the majority of processed, commercially prepared foods.

In the last 20 years, we have increased sugar consumption in the U.S. from 26 pounds to 135 lbs. of sugar per person **per year!** Prior to the turn of this century (1887-1890), the average consumption was only 5 lbs. per person per year! Cardiovascular disease and cancer was virtually unknown in the early 1900's. However, nowadays these diseases account for the majority of deaths (62%) in adults 45 – 64 years. Sugar is not solely to blame for this increase as there are a number of lifestyle changes that have occurred over the past century that have also been proven to have had a negative effect on our overall health. However, the increase is significant and deserves a closer look.

Sugar Consumption by our Children

The diets of children also contain too much added sugar according to a study conducted by Sibylle Kranz, PhD, RD, who is a registered dietitian and assistant professor of nutrition sciences at Pennsylvania State University.

Kranz and colleagues tracked added sugar intake in 2 and 5 year-olds. The data came from children's food surveys conducted by the U.S. Department of Agriculture in the 1990s and detailed what more than 5,400 children ate over two days.

The researchers focused on **added sugar** categories. This is sugar added to many foods during processing or preparing. The study also included sugars eaten separately, such as candy or those added at the table, including syrup, and brown and white table sugar. The main sources were examined including cookies, soft drinks, candy, and juices. The natural types of sugars, such as fructose found in foods like fruit, or galactose, a type of sugar found in milk products were not included in the sugar consumption amounts.

The statistics showed that added sugar saturated the kids' diets. On average, added sugar intake was 14 teaspoons per day for kids aged 2-3 and about 17 teaspoons per day for those aged 4-5. The highest level of added sugar for the younger kids was 23 teaspoons per day and more than 26 teaspoons per day for the older kids. On average, sugar added up to more than one quarter of the total daily calories for 11% of the children aged 2-3 and 12% for the 4- and 5-year-olds. Fruit drinks, high-fat desserts, and regular soft



drinks were the most common sources of added sugar and account for half of added sugar noted in the surveys.

"Children with the highest level of added sugar intake have the lowest consumption of most nutrients and servings of grains, vegetables, fruits, and dairy," say the researchers in the Jan. 2005 issue of *The Journal of Pediatrics*.

Since a child's food consumption habits are formed at a very young age, an overload of sugar in those pre-school years can lead to a life long habit of too much sugar. It does *not* take a lot of food for a child to be on sugar overload. Let's suppose that a child eats in one day, pancakes with syrup, a granola bar, strawberry yogurt, pasta with spaghetti sauce, a sugary cereal and an ice cream cone.



		<u>Added Sugar</u>
Syrup	(3TBSP)	25 g
CC Granola Bar	(1 each)	8 g
Strawberry yogurt	(6 oz)	19 g
Spaghetti sauce	(1/2 c)	13 g
Lucky Charms	(1 1/4 c)	15 g
Ice cream	(1/2 c)	15 g
		95 g

These few items amount to 95 g of sugar or 1/2 cup. If a child eats 1/2 cup of sugar each day it will amount to 182.5 cups per year or 77 pounds. Imagine a five pound package of sugar and a child consuming 15 of these each year. This example explains how easy it is for a child or anyone to become over-sugared!

Many American kids consume too much added sugar almost as soon as they start eating solid food. They're also not getting enough calcium and other nutrients, since sugary foods often edge out healthier fare, researchers say. The long-term consequences could include a greater risk of obesity, heart disease, and dental cavities. Food habits adopted in childhood can be hard to change.

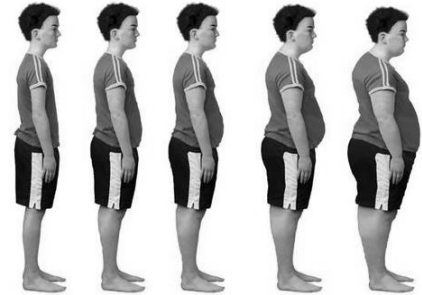
Research also suggests that children are more sugar sensitive than adults, and the affects are more pronounced in younger children, according to Dr. Keith Connors, author of *Feeding the Brain*. This could be related to the fact that the brain grows rapidly in the preschool years, exaggerating the effects of sugar on behavior and learning. In an interesting study, researchers fed normal preschoolers a high-sugar drink, containing the amount of sugar in the average can of soda, and compared them with children who received a non-sugar drink. The sugar group experienced decreased learning performance and more hyperactivity than the non-sugar group.

Children tagged with the ADHD label are often sugar-sensitive. Some studies of hyperactive children show a higher blood sugar rise following a high sugar meal than one finds in normally active children. Hyperactive children seem to metabolize sugar differently. In response to a high sugar meal, hyperactive kids increase their output of the stress hormone, cortisol, the hormone that plays an important role in regulating blood sugar levels. While studies show that activity levels go up in both hyperactive and normal children on high sugar diets, the hyperactive children also become more aggressive. Adding protein to a high sugar meal mellows out the behavioral and learning deterioration. Chalk up another point for eating a balanced breakfast.

Sugar's Link to Disease?

It is fairly obvious that excess added sugar increases our calorie intake and definitely contributes to the high incidence of obesity in our nation. However, is there any definitive link between too much sugar and disease?

Refined dietary sugars lack vitamins and minerals and are considered “empty” calories because of this characteristic. In order to metabolize simple sugars, a host of B vitamins and other minerals are required. Eating excess sugar reduces the levels of these vitamins and minerals in the body without replenishing them. All that added sugar replaces more nutritious foods in our diets. The more added sugar in a kid's diet, the less likely it is that grains, vegetables, fruits, and dairy products are being consumed. In light of the obesity crisis with the concerning statistic that 1 in 3 adults are overweight and the most recent data that 1 in 5 four year old children in the U.S. are obese, it is evident that we are eating too many calories! Sugar for added energy is not a necessary dietary component for the majority of us.



There are no long term research studies that **definitely** link increased sugar consumption to the onset of disease however there are studies that have identified certain health risks associated with a diet high in added sugar.

Sugar and Diabetes

Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches and other food into energy needed for daily life. The cause of diabetes continues to be a mystery, although both genetics and environmental factors such as obesity and lack of exercise appear to play roles.

There are 23.6 million children and adults in the United States, or 7.8% of the population, who have diabetes. While an estimated 17.9 million have been diagnosed with diabetes, unfortunately, 5.7 million people (or nearly one quarter) are unaware that they have the disease.

Type 2 diabetes is the most common form of diabetes. In type 2 diabetes, either the body does not produce enough insulin or the cells ignore the insulin. Insulin is necessary for the body to be able to use glucose for energy. When glucose builds up in the blood instead of going into cells, it can cause two problems: 1) Right away, your cells may be starved for energy and 2) There is increased risk for many serious complications such as: heart disease (cardiovascular disease), blindness (retinopathy), nerve damage (neuropathy), and kidney damage (nephropathy).

Eating foods high in sugar does not cause diabetes however after being diagnosed, a high sugar diet can make it extremely difficult to normalize blood glucose levels. The good news is that the recently completed Diabetes Prevention Program (DPP) study concluded that people with pre-diabetes can prevent the development of type 2 diabetes by making changes in their diet and increasing their level of physical activity. Some medications may delay the development of diabetes however diet and exercise worked better. Just 30 minutes a day of moderate physical activity, coupled with a 5-10% reduction in body weight, produced a 58% reduction in diabetes.

Since foods that are high in sugar are often high in calories, overeating those foods can lead to weight gain and contribute to a person being at risk for this disease.

Sugar and Heart Disease

High sugar intake has been linked to an increased risk of heart disease. During the digestive process, sugars must draw upon the body's micro-nutrient stores in order to be metabolized into the system. When these storehouses are depleted, cholesterol and fatty acid metabolism is hindered, contributing to higher blood levels of triglycerides and bad (HDL) cholesterol. It is estimated that a high sugar intake may account for as many as 150,000 premature deaths from heart disease in the US each year. Major researchers and major health organizations (American Dietetic Association and American Diabetic Association) agree that sugar consumption in America is one of the 3 major causes of degenerative disease.



Sugar and Cancer

Health Sciences Institute panelist Allan Spreen, M.D., had this to say: *“Nutritionally oriented doctors have known about the refined sugar/cancer association for decades. Cells that are dividing (multiplying) the fastest have the highest requirement for energy (to sustain such accelerated growth). Cutting out the source is similar to cutting off the blood supply.”*

Of the over 4 million cancer patients being treated in the U.S. today, almost none are offered any scientifically guided nutrition therapy other than being told to "just eat good foods." Many cancer patients would have a major improvement in their conditions if they controlled the supply of cancer's preferred fuel: GLUCOSE. By slowing the cancer's growth, patients make it possible for their immune systems to catch up to the disease. Excellent nutrition is essential in this battle as well as controlling one's blood-glucose levels through diet, exercise, supplements.

Sugar and Immunity



The basic function of the white blood cells and the immune system is to gobble up foreign invaders, bacteria, viruses and parasites. There are many ways you can stimulate the immune system to do this in a better way and there are many ways you can suppress it.

It was only in the 1970's that researchers found out that vitamin C was needed by white blood cells so that they could phagocytize (gobble up) viruses and bacteria. White blood cells require a 50 times higher concentration inside the cell as outside so they have to accumulate vitamin C. It was in the 1970's that Linus Pauling realized that white blood cells need a high dose of vitamin C and that is when he came up with his theory that you need high doses of vitamin C to combat the common cold.

Sugar slows or inhibits the entry of vitamin C into the cells. If there is more glucose around, there is going to be less vitamin C allowed into the cell. And it doesn't take much! A blood sugar value of 120 reduces the white blood cell's ability to devour viruses and bacteria by 75%. This starts approximately 30 minutes after ingestion and lasts over five hours. In contrast, 100 grams of starch or complex carbohydrates has no adverse effects. In other words, if you eat a lot of sugar, you end up with a suppressed immune system.

Sugar and Obesity

Obesity in the United States is a chronic health problem. Although it is not technically categorized as a disease it certainly increases the risk for many of the diseases previously mentioned as well as hypertension, dyslipidemia (high triglycerides or cholesterol) and stroke. According to the Centers For Disease Control (CDC) approximately 33% of the US population are obese and another 33% are overweight meaning that nearly 2/3 of our adult population are either overweight or obese.



Robert Lustig, MD, a University of California—San Francisco, pediatric neuroendocrinologist, believes that the increase in sugar consumption in our nation is the root of the problem.

“Food was just as abundant before obesity’s ascendance. The problem is the increase in sugar consumption. Sugar both drives fat storage and makes the brain think it is hungry, setting up a “vicious cycle,” according to Lustig.

More specifically, he believes that fructose is the culprit. Fructose is a component of the two most popular sugars. One is table sugar — sucrose. The other is high-fructose corn syrup. High-fructose corn syrup has become commonplace in soft drinks and many other processed foods. He believes that fructose generates greater insulin resistance than other foodstuffs, and that fructose calories, therefore, fail to curb appetite in the same way as other foods. This leads to a greater intake of food and excess weight, ultimately.

So far, the research is conflicting in this matter.

"Contrary to its name, high fructose corn syrup is essentially a corn sugar," stated sweetener expert John S. White, Ph.D., president of White Technical Research. "Recent marketing claims that sugar is healthier than high fructose corn syrup are misleading to consumers."

"By every parameter yet measured in human beings, high fructose corn syrup and sugar are identical. This is not surprising since high fructose corn syrup and sugar are metabolized the same by the body, have the same level of sweetness and the same number of calories per gram," noted James M. Rippe, M.D., cardiologist and biomedical sciences professor at the University of Central Florida.



One may continue to wonder, “Is a calorie a calorie, no matter what the source?”

“Is it true, in all cases, that too many calories overall plus a sedentary lifestyle will lend itself to overweight and obesity whether the excess calories comes from sugar or protein or fat?”

Research will be ongoing in the HFCS link in this debate. However, for now, it appears that excess calories and too little activity is where the focus lie.

Hidden Sugars in Our Foods

Ready for a little experiment? Grab that jar of sugar, a measuring spoon, a plate and a can of regular soda. Then, dump one teaspoon of sugar onto the plate. Repeat this nine more times. Do you know what you have, besides a mess? The amount of sugar in one 12-ounce can of soda! Just look at that mound!



Now locate the sugar listing on the soda's nutrition label—40 grams. Four grams of sugar equals one teaspoon. Do the math. That innocent can of pop contains 10 teaspoons of sugar and 160 empty calories.

Even if you don't drink regular soda, the typical American now eats the equivalent of about 31 teaspoons (124 grams) of added sugar every day. That sugar alone adds up to almost 500 extra calories—about 25% of the average person's caloric intake. **WOW!**

So where does most of the added sugar hide in our foods?

Some foods contain natural sugars such as the sugars in fruits, fruit juices and milk. Many other foods contain added sugar to enhance taste. Following is a list of some of the possible code words for "sugar" which may appear on a label. Hint: the words "syrup", "sweetener", and anything ending in "ose" can usually be assumed to be "sugar". If the label says "no added sugars", it should not contain any of these "code" names for sugar, although the food could contain naturally occurring sugars (such as lactose in milk).

<ul style="list-style-type: none"> Beet sugar Brown sugar Cane sugar Caramel Confectioner's sugar Corn sweetener Corn syrup, or corn syrup solids Crystallized cane juice Dehydrated Cane Juice Dextrin Dextrose Evaporated cane juice Fructose Fruit juice concentrate Glucose Grape sugar High-fructose corn syrup Honey Invert sugar Lactose Maltodextrin 		<ul style="list-style-type: none"> Malt syrup Maltose Maple syrup Molasses Raw sugar Rice Syrup Saccharose Sorghum or sorghum syrup Sucrose Sugar (granulated) Syrup Treacle Turbinado sugar Florida crystals Hydrolysed starch Polydextrose Monosaccharides Disaccharides Polysaccharides Raw sugar
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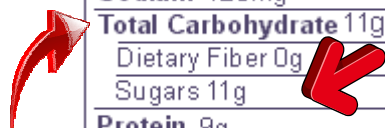


Hidden Sugars in Our Foods

There are many foods that we would suspect have a good amount of added sugar. Cakes, cookies, ice cream, candy, soft drinks and puddings can all be very high. However, there are many processed foods that you would not necessarily suspect to have a lot of added sugar that have a considerable amount. *Please note the table to the right.* As you can see, these items have much more sugar than one would ever guess.

Food	Serving Size	Added Sugar (grams)	Added Sugar (tsp)
Maple Syrup	1/4 c	22 g	5.5 tsp
Spaghetti Sauce	1/2 c	13 g	3.25 tsp
Baked Beans	1/2 c	12 g	3 tsp
Pancakes (from mix)	2 - 4" pancakes	12 g	3 tsp
Ketchup	3 TBSP	12 g	3 tsp
BBQ Sauce	2 TBSP	11 g	2.75 tsp
French Dressing	2 TBSP	9 g	2.25 tsp
Quaker Granola Bar	1	8 g	2 tsp
Sweet Pickle Relish	1 TBSP	4 g	1 tsp

Nutrition Facts	
Serving Size 1 cup (236ml)	
Servings Per Container 1	
Amount Per Serving	
Calories 80	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol Less than 5mg	0%
Sodium 120mg	5%
Total Carbohydrate 11g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 9g	17%
Vitamin A 10%	Vitamin C 4%
Calcium 30%	Iron 0% • Vitamin D 25%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	



RICE, SUGAR, COCOA (TREATED WITH ALKALI), SEMISWEET CHOCOLATE (SUGAR, CHOCOLATE, DEXTROSE), PARTIALLY HYDROGENATED VEGETABLE OIL (ONE OR MORE OF: COCONUT, COTTONSEED AND SOYBEAN)†, SALT, MALT FLAVORING, CALCIUM CARBONATE, HIGH FRUCTOSE CORN SYRUP, ASCORBIC ACID AND SODIUM ASCORBATE (VITAMIN C), IRON, NIACINAMIDE, ARTIFICIAL FLAVOR, ZINC OXIDE, PYRIDOXINE HYDROCHLORIDE (VITAMIN B6), RIBOFLAVIN (VITAMIN B2), THIAMIN HYDROCHLORIDE (VITAMIN B1), VITAMIN A PALMITATE, FOLIC ACID, BHT (PRESERVATIVE), VITAMIN D AND VITAMIN B12.

- 1) The amount of added sugar in any food item will be listed under Total Carbohydrates on the Sugars line. The sample Nutrition Facts label to the right contains 11g of added sugar.
- 2) Next read the ingredient list. If additional sugars are listed as in the list noted, these are added sugars and not naturally contained in the food product.

Cereal Confusion



We've all heard the adage that breakfast is the most important meal of the day — but who knew it also could be the most sugary?

A new analysis by Consumer Reports found that 11 popular breakfast cereals contain at least 40 percent sugar by weight. That's at least as much sugar as you'd get in a glazed doughnut from Dunkin' Donuts. Two cereals — Post Golden Crisp and Kellogg's Honey Smacks — contain more than 50 percent sugar by weight.

The authors of the report note that many sugary cereals are marketed heavily to children — and that many children tend to pour more cereal for themselves than the suggested serving sizes on most cereal boxes. That means thousands of children and teens are loading up on even more grams of sugar before they head off to school each day.

How Much Sugar is in My Favorite Cereal?

Nutrition Facts		
Serving Size	3/4 Cup (27g/1.0 oz.)	
	Cereal	Cereal with 1/2 Cup Vitamins A&D Fat Free Milk
Amount Per Serving		
Calories	100	140
Calories from Fat	5	5
	% Daily Value**	
Total Fat 0.5g*	1%	1%
Saturated Fat 0g	0%	0%
Trans Fat 0g		
Cholesterol 0mg	0%	0%
Sodium 50mg	2%	5%
Potassium 40mg	1%	7%
Total Carbohydrate 24g	8%	10%
Dietary Fiber 1g	4%	4%
Sugars 15g		
Other Carbohydrate		
Protein 2g		

1. Look under Total Carb. (Carbohydrates) and find Sugars.
2. Note how many grams are listed next to Sugars.
3. Near the top of the label is Serving Size.
4. Note the amount of grams listed next to Serving Size (adult).
5. To know if a cereal is highly recommended; divide the grams in the serving size by five. If the grams listed next to sugars is less than this, this cereal is an excellent choice.

FYI: This cereal contains 55% sugar by weight! If the value on the Sugars line was less than 6, this would have been an excellent cereal choice.

If the cost of this box of cereal is \$3.00, you just paid \$1.65 for the added sugar.

If the total weight of this box of cereal is 17.6 ounces, then nearly 10 oz is added sugar. At the cost of \$1.65 for 10 oz, you would have paid \$13.20 for a 5lb bag of sugar or 5 times its average cost.

Because a serving of cereal can be such a convenient and quick way to gulp down whole grains, it can be an excellent choice for breakfast or snack. Breakfast truly can be the most important meal of the day — for both children and adults. People who eat breakfast tend to have superior overall nutrition, enhanced cognitive performance and fewer weight issues. Experts stress the importance of reading product labels and watching sugar and sodium levels, and they suggest sweetening cereals with fresh fruits whenever possible.

Choose cereals that have the least amount of added sugar. This will ensure the best value for your nutrition dollar.

Artificial Sweeteners

Artificial sweeteners are chemicals or natural compounds that offer the sweetness of sugar without as many calories. Because the substitutes are much sweeter than sugar, it takes a much smaller quantity to create the same sweetness. Products made with artificial sweeteners have a much lower calorie count than do those made with sugar. Artificial sweeteners are often used as part of a weight-loss plan or as a means to control weight gain.



People with diabetes may use artificial sweeteners because they make food taste sweet without raising blood sugar levels. Some foods labeled "sugar-free" — such as sugar-free cookies and chocolates — may contain sweeteners, such as sorbitol or mannitol, which contain calories and can affect your blood sugar level. Some sugar-free products may also contain flour, which will raise blood sugar levels. Also, remember that foods containing sugar substitutes may also contain calories that may undermine your ability to lose weight and control blood sugar.

Children should not be given artificially sweetened foods on a regular basis. This may be more difficult that it appears given the fact that aspartame or "NutraSweet" is found in over 6000 processed food items. Diet soda, lower sugared cereals, salad dressing, puddings, jelly and syrup are just a sampling of the types of foods that contain aspartame.

Given the childhood obesity crisis in our nation, why it is not such a grand idea to cut the calories in our kid's diets with these types of low calorie sweeteners?

A person's food preferences are formed between the ages of 1 and 6. Since artificial sweeteners are 200 - 700 times sweeter than regular sugar, it is more than likely that children consuming artificial sweeteners will become accustomed to highly sweetened foods and develop an intense sweet tooth. Research shows that children with a sweet tooth regularly take in excess calories even if consuming "diet" or "low sugar" items. Except in the case of a diabetic child, scientists and nutritionists agree that serving table sugar to children is advisable over it's artificial counterparts.

Sweet Choices

The Food and Drug Administration (FDA) has approved the following low-calorie sweeteners for use in a variety of foods. The FDA has established an "acceptable daily intake" (ADI) for each sweetener. This is the maximum amount considered safe to eat each day during your lifetime. ADIs are intended to be about 100 times less than the smallest amount that



cause health concerns.

Aspartame (NutraSweet, Equal)

Aspartame is 200x sweeter than sugar and has been FDA approved since 1981 for use on tabletop and since 1996 as a general purpose sweetener in foods and drinks. It cannot be used for cooking. Once digested it converts to methanol, aspartic acid and phenylalanine. High levels of phenylalanine in the blood can cause brain damage. The FDA admits that aspartame use can lead to the accumulation of formaldehyde in the brain but states that the amount that might accumulate is so low it should not cause concern.

The FDA acceptable daily intake is 50 mg/kg of body weight per day which for a 150 lb person is around 18 cans of diet soda.

1 packet = 40 mg
12 oz diet soda = 200 mg

than
might

Saccharin

((Sweet'N Low, SugarTwin)

Saccharin is 200—700 times sweeter than sugar. In 1977, the FDA proposed a ban on saccharin because of concerns about rats developing bladder cancer from it. According to the National Cancer Institute (NCI), more than 30 human studies have shown that saccharin does not cause cancer, and the tumors in the rats were species-specific. In the late 70's, the FDA and NCI determined that "in general" saccharin users had no greater risk than the general population of developing bladder cancer.

The FDA acceptable daily intake is 5 mg/kg of body weight per day which for a 150 lb person would equal 9—12 packets of sweetener.



Acesulfame-K (Sunett, Sweet One)

This sweetener is 200x sweeter than sugar and was approved in 1988 for specific uses, including as a table-top sweetener. FDA approved it for use in beverages in 1998 and in 2003 for general use in foods except meats and poultry.

The FDA acceptable daily intake is 15 mg/kg of body weight per day which for a 150 lb person would equal 30 cans of diet soda.

Sucralose

(Splenda)



Splenda is 600x sweeter than sugar. It was approved in 1999 as a general purpose sweetener in all foods. It is manufactured by the selective chlorination of sucrose, (table sugar). Unlike aspartame, it is stable under heat and over a broad range of pH conditions, and can be used in baking, or in products that require a long shelf life.

The FDA acceptable daily intake is 5 mg/kg of body weight per day which for a 150 lb person is less than 6 cans of diet soda.

Neotame

Neotame was discovered in 1990 and was approved for use in the United States in 2002. Eight thousand times sweeter than sugar, this analog of aspartame can be used in both cooking and baking applications. Neotame has been shown to be safe in more than 130 studies by the FDA. Although it is made with the same amino acids as aspartame, it is metabolized differently and is therefore not a source of phenylalanine. This means that people with phenylketonuria can use neotame safely. Neotame may become a popular artificial sweetener for beverages, chewing gum, and confections as part of the Nutrasweet brand. No toxicological effects even for extremely high levels of neotame, with amounts up to 40,000 times the expected daily intake for high-level consumers i.e. equivalent to the every day consumption by a adult



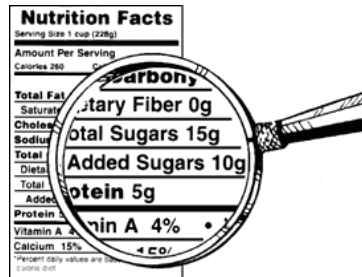
The use of nonnutritive sweeteners began with the need for cost reduction and continued on with the need for calorie reduction. Since the 1950s, nonnutritive sweeteners have become a weight-loss wonder that allowed us to have our sweets without the calories and cavities. The celebration and consumption of nonnutritive sweeteners came to a halt in the '70s when cancer connections were discovered. To this day, there is a great deal of controversy surrounding the safety of nonnutritive sweeteners. For every compelling positive argument in favor of using these sweeteners, there is an equally compelling negative argument opposing their use. As with all things, use in moderation is the wisest path to follow.

Tips to Reducing Sugar Intake

Although the USDA recommends we get no more than 10 teaspoons of sugar a day, the average American downs about 31 teaspoons -- more than three times as much. Listed below are some tips to help you reduce your sugar consumption down to healthy levels. But beware: Uncovering all the sugar in your diet isn't easy. As you are now aware, sugar hides behind several names and turns up in too many unexpected places (like bread, crackers, salad dressing, ketchup, and mustard). Being knowledgeable as to it's whereabouts is key in your progress to healthier eating.

1 Understand food labels

The problem with cutting down sugar is that often we don't know how much sugar there is in a given food item. Check the food labels to see just how much sugar has been added. Look for the line labeled "sugar" or "added sugar". Compare the amount of sugar (usually measured in grams) in a few different brands of the food item you want, and select the one with the lowest amount of sugar.



Nutrition Facts	
Serving Size 1 cup (20g)	
Amount Per Serving	
Calories 260	
Total Fat	5g
Saturated Fat	1g
Cholesterol	0g
Sodium	10g
Total Sugars	15g
Added Sugars	10g
Protein	5g
Vitamin A	4%
Calcium	15%

5 Don't add sugar to foods.

Many everyday recipes -- including those for vegetables, soups, casseroles, and sauces -- call for sugar to add sweetness. In most cases, it's just not needed. So if you're making biscuits, for instance, you probably can skip the sugar. Likewise, make your own barbecue sauce with fresh ingredients, which will cut out the extra sugar in the ketchup.

2 Look for hidden sources of sugar

Cough syrups, chewing gum, mints, tomato sauce, baked beans, and lunch meats often contain sugar. Even some prescription medications contain sugar. For a week, be particularly vigilant and scan every possible food label. You likely won't forget what you'll find.

3 Avoid processed food

Sugar is added freely to most processed foods in one form or another. While it is almost impossible to avoid processed food entirely, you can avoid it as much as possible. With a little bit of planning it is not difficult to prepare food items from scratch and freeze for later use.

4 Buy unsweetened alternatives

Many cereals, juices, yogurts and other types of foods and beverages come with low sugar or no sugar alternatives these days. While the lack of taste may take getting used to at first, once you're accustomed to the purer taste of the unsweetened versions you will feel quite sick when you taste artificially sweetened foods again.

6 Try all-fruit spread.

Sweet as sugar, but without the added sugar, all-fruit spreads are wonderful not just on toast, but melted into hot tea, mixed into cottage cheese and plain yogurt, and drizzled onto pancakes and waffles instead of syrup (heat for 10 seconds in the microwave to make it syrupy).

7 Go half and half.

Mix half a carton of sweetened yogurt with half a carton of plain yogurt. Half a cup of Honey Nut Cheerios with half a cup of Cheerios. Do this for two weeks, then cut back to one-quarter sweetened to three-quarters unsweetened. Continue until you are accustomed to the unsweetened version.

8 Avoid sodas and syrups

One of the main causes of obesity is drinking sodas and other sweetened drinks instead of water. Large amounts of sugar are needed to overcome the bitter taste of carbonated drinks. Drink plain water instead or water lightly flavored with a lemon wedge.



Tips to Reducing Sugar Intake

9 Choose the right breakfast cereal. Many of them are loaded with sugar. You want one with less than 8 grams sugar per serving or, preferably, unsweetened altogether. If you must, sprinkle a little table sugar in the bowl. You will, more than likely, not even come close to the amount that is added during food processing.

10 Buy unsweetened alternatives. Many cereals, juices, yogurts and other types of foods and beverages come with low sugar or no sugar alternatives these days. While the lack of taste may take getting used to at first, once you're accustomed to the purer taste of the unsweetened versions you will feel quite sick when you taste artificially sweetened foods again. Be on the lookout however, for foods that are labeled "low-sugar" but are actually heavily laden with artificial sweeteners. The extra sweetness will only fuel your craving for sugar.

11 Ditch the syrup. Don't add syrup to pancakes or waffles. If you like, add fresh fruit or applesauce or yogurt instead.

12 Use applesauce. Substitute applesauce or pureed prunes for half the sugar in recipes. You can also use these items in place of the recipe's fat.

13 Don't skip meals. Too busy to eat? When you go without breakfast, lunch, or dinner, your blood sugar levels drop, propelling you toward high-sugar (often convenience) foods to quell your cravings.

14 Are they getting an eyeful? If you monitor what your child watches on TV, then he or she doesn't have to watch the commercials. If they don't watch the commercials, they won't see some of the ads for the cereals or other sweetened items, and they are less of a nagging, sugary presence.

15 Talk the talk. Most importantly, monitor what you eat and drink, and be a strong, healthy model to your kids. While your kids might not eat everything that you eat, they do follow your lead. It's never too late for you to change your eating habits.

So How Much Sugar is Too Much?



According to the U.S. Department of Agriculture, the average American should consume no more than about 40 grams of **added** sugars a day. If food manufacturers did not add the sugar for us in so many items we consume, this amount would be the equivalent of a person adding 10 teaspoons of sugar each day to his or her foods. However, because the sugar added for us is camouflaged under a variety of "hard to pronounce" names, we must become proficient at reading the Nutrition Facts labels in order to have an idea of how much **added** sugar we do consume on a regular basis. Then we can take measures to reduce this amount if it is out of control.

Use the worksheet on the next page to assess your daily sugar intake. Then become a sugar detective and make an effort to find and reduce the added sugars in your diet and in the diets of your daycare children and family members.

The Sugar Detection Worksheet

Have you consumed more than 10 teaspoons today?

<u>Breakfast</u>	Food Item	# servings	x	Added Sugars per serving	=	_____	Total Sugar (g)
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	_____
<u>Lunch</u>							
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	_____
<u>Dinner</u>							
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	_____
<u>Snacks</u>							
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	
	_____	_____	x	_____	=	_____	_____
Grand Total						_____	(g)

How Many Teaspoons of Sugar Consumed?

$$\frac{\text{Grand Total sugar (g)}}{4 \text{ (g sugar in 1 tsp)}} = \text{_____ teaspoons}$$