Simple vs. Complex Carbohydrates

Many health experts recommend cutting down or eliminating sugar and other simple carbohydrates, and increasing the servings of complex carbohydrates in the diet.

Carbohydrates are necessary to your health, because every cell in your body uses them for energy. In fact, your brain can only use carbohydrates for energy. Unfortunately, over-consumption of sugar and other highly refined carbohydrates has been associated with a higher incidence of diabetes, cardiovascular disease, and even breast cancer. According to the World Health Organization, sugars and other simple carbohydrates are a leading factor in the worldwide obesity epidemic.

With the popularity of low-carb diets, many people are afraid to eat any carbohydrates at all. However, distinguishing between the health-robbing effects of simple carbohydrates and the health-giving properties of complex carbohydrates will greatly improve peoples’ choices and overall health.

Complex carbohydrates are foods containing fiber, which improve your digestion and include whole fruits, whole vegetables (except potatoes), and whole grains. They help stabilize the blood sugar, keep your energy more level and help you feel satisfied longer than a simple carbohydrate. In contrast, sugar and other simple carbohydrates such as refined or white breads, rice, pasta, hot and cold cereals and most packaged foods AND fruit and vegetable juices, sugar-based drinks including coffee drinks, sports drinks, sodas and white potatoes can alter your mood, lead to cravings and compulsive eating, cause wide swings in your blood sugar levels and cause weight gain in most people. In addition, a high consumption of sugar can lead to uncomfortable withdrawal symptoms including shakes, headaches, muscle aches and very low energy when you finally decide to forego the sweets.

If you are trying to eliminate simple sugars and carbohydrates from your diet, but you don’t want to refer to a list all the time, here are some suggestions:

**READ LABELS:** If the label lists sugar, sucrose, fructose, corn syrup (or any syrup), white or wheat flour, they contain simple carbohydrates. If these ingredients are in the first five listed, this food probably contains mostly simple carbohydrates and probably little nutritional value. They should be avoided. However, if there is also protein and fiber in the first five ingredients along with fructose, you are likely OK.

**LOOK FOR UNREFINED AND WHOLE FOODS:** Choose whole fruits instead of juice. Choose whole grain breads instead of white or “wheat” bread. Choose whole grain oatmeal instead of instant, quick cooks or cold cereals. Choose roasted brown rice instead of white rice. Choose whole wheat or whole brown rice pasta instead of white pasta.

**THE CLOSER YOU ARE TO NATURE, THE CLOSER YOU ARE TO HEALTH!**
EAT YOUR FRUITS AND VEGGIES

By Luigi Gratton, M.D., M.P.H.

When our mothers told us, “Eat your fruits and veggies,” they were right. They are an essential part of our diet, providing a wide range of vitamins and minerals that serve an array of important functions in the body. Many people, however, are still deficient in their fruit and vegetable intake.

NOT GETTING THE MESSAGE

Over the last several years, the U.S. Department of Health has recommended eating at least five portions of fruits and vegetables a day. Yet, only 1-in-7 achieve this quota. In fact, one-third of American adults eat only two servings of fruits and vegetables a day and are four times more likely to choose a processed snack instead. On any given day, about half the population eats no fruit at all.

A BUSHEL OF REASONS

There is a rainbow of reasons to eat a variety of colors from the produce aisle. Fruits and vegetables are virtually fat free, low in salt and an excellent source of fiber. Some fruits and vegetables, such as carrots and cantaloupe, provide Vitamin A, which maintains eye health and immunity. Other fruits and vegetables, such as bananas and spinach, contain potassium, which is necessary for proper nerve and muscle functioning. Green vegetables, such as broccoli and asparagus, provide B vitamins, which are necessary for converting food into energy. But all fruits and vegetables contain phytonutrients, the health-promoting components of plants. Scientific studies show that phytonutrients can help protect seven key organs, including the eyes, heart, liver and skin, and they may also serve as antioxidants.

ANTIOXIDANT PROTECTION

Current research has measured the total antioxidant power of various foods, citing fruits and vegetables at the top of the list. Antioxidants protect our bodies from free radicals that can cause damage to cellular membranes. Antioxidants also boost our immunity, help make our muscles stronger and support bone and skin health. Since eating the recommended daily servings of antioxidant-rich fruits and vegetables is not always realistic, try supplementing your diet with appropriate products. Herbalife’s Garden 7® dietary supplement protects your health with the powerful phytonutrients and antioxidant benefits found in seven servings of colorful fruits and vegetables. It also supports your body’s vital organs by providing them with key nutrients.*

So, try to get in the habit of eating plenty of produce each day. It’s one of the biggest favors you can do for your body.
FRUITS AND VEGETABLES  Add Color to Your Life

By Susan Bowerman, M.S., R.D., C.S.S.D.

Color-coding can be a useful device to introduce diversity into the diet. The different colors are important because the different plant chemicals they represent have different effects on the body. There are two purposes for this classification. First, it is meant to increase the diversity of the plant foods you eat. Second, it groups these according to mechanisms that the phytochemicals in each group provide. By eating regularly from each group, you will obtain a rich group of phytochemicals to help promote good health.

And remember not to overdo a good thing: Fruits and vegetables have a lot of nutrients per serving, so always be sure to keep portion size reasonable.

<table>
<thead>
<tr>
<th>COLOR GROUP</th>
<th>PREVENTIVE BENEFITS*</th>
<th>FOODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red (lycopene)</td>
<td>Prostate and lung cancer</td>
<td>Tomatoes, pasta sauce, tomato soup, tomato-based juices (spicy or regular) and ketchup; pink grapefruit, guava and watermelon</td>
</tr>
<tr>
<td></td>
<td>Heart disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Antioxidant</td>
<td></td>
</tr>
<tr>
<td>Red/Purple (anthocyanidins, resveratrol)</td>
<td>Protects DNA</td>
<td>Grapes, cranberries, blueberries, blackberries, strawberries, pomegranate, plums and cherries</td>
</tr>
<tr>
<td></td>
<td>Antioxidant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anticancer</td>
<td></td>
</tr>
<tr>
<td>Orange (alpha- and beta-carotene)</td>
<td>Antioxidant</td>
<td>Carrots, mangos, apricots, winter squash, cantaloupe, pumpkin, acorn squash and sweet potatoes</td>
</tr>
<tr>
<td></td>
<td>Anticancer</td>
<td></td>
</tr>
<tr>
<td>Orange/Yellow (terpenoids, Vitamin C)</td>
<td>Antioxidant</td>
<td>Oranges, tangerines, yellow grapefruit, lemon, lime, peaches, papaya and pineapple; lemon, lime and orange zest</td>
</tr>
<tr>
<td></td>
<td>Anticancer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heart disease</td>
<td></td>
</tr>
<tr>
<td>Yellow/Green (lutein)</td>
<td>Vision</td>
<td>Spinach, avocado, collard, mustard or turnip greens, green peas, green beans, green peppers, yellow peppers, cucumber and kiwi</td>
</tr>
<tr>
<td></td>
<td>Anticancer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heart disease</td>
<td></td>
</tr>
<tr>
<td>Green (glucosinolates)</td>
<td>Anticancer</td>
<td>Broccoli, Brussels sprouts, cabbage, kale, cauliflower, Chinese cabbage or bok choi</td>
</tr>
<tr>
<td></td>
<td>Heart disease</td>
<td></td>
</tr>
<tr>
<td>White/Green (allyl sulfides)</td>
<td>Circulation</td>
<td>Garlic, onions, leeks, celery, asparagus, artichoke, endive and chives</td>
</tr>
<tr>
<td></td>
<td>Blood pressure</td>
<td></td>
</tr>
</tbody>
</table>

* These benefits are potential and based on the current understanding of science in these areas. Also the various fruits and vegetables in each group have multiple compounds that work together to provide some of these benefits. Only the major ones are used to form the groupings.

Okay, kids, sit down and listen closely. All sugars are carbohydrates, known as "simple" carbs, since they're composed of just one sugar molecule. The label on a can of Pepsi reads 41 grams of carbs and 41 grams of sugar. This means that every single carbohydrate comes from sugar. The label on a package of plain oatmeal will read 18 grams of carbs and only one gram of sugar. Almost all of the carbs in oatmeal are made up of long chains of sugar molecules called "complex" carbs. Oatmeal, along with sweet potatoes, wheat breads, rice and corn, is a complex carb, also known as a starch.

In this age of convenience foods, the terms complex and simple are a bit outdated. For the purpose of losing fat, it's smarter to look at carbs as either "unrefined" or "processed." The former refers to whole foods that contain sugar, such as fruits, vegetables, juices, grains and legumes, and that still hold their natural water, fiber, phytochemicals, vitamins and minerals. Processed foods include white bread, soda, candy, crackers, cookies and just about any commercial product labeled "fat-free." These have been stripped of their wholesome attributes and are dense with nothing but empty calories. For instance, one gram of a cracker will contain four calories, but one gram of an orange contains about 0.2 calories, because the bulk of its weight is water and fiber.

The Glycemic Index
The glycemic index (GI) rates how quickly certain foods turn into glucose (a form of sugar) in the bloodstream, and is a valuable tool when trying to control sugar intake and limit its effect on you. While high-glycemic-index foods can cause a rapid jump in blood sugar, followed by a massive crash, low-glycemic-index foods increase blood sugar slowly, providing constant and stable energy levels over a considerable period of time. Several factors contribute to a low rating, such as the presence of protein, fiber and fat. Pure processed sugars garner the highest scores, with the most highly processed foods topping the list. For instance, out of a possible 100, instant rice earns a 90 while fibrous, vitamin-rich brown rice gets a 55.

Recent studies by the Harvard School of Public Health show that diets loaded with high-GI foods lead to an increased risk of type 2 diabetes, coronary heart disease and obesity. In fact, the World Health Organization is spearheading a movement to include GI ratings on food labels, and several products in Australia already bear the grade.

Nature's Sugar
The following is a list of some common natural sugars that can be a little friendlier to your physique than refined ones. Although unrefined, many of these sugars still pack a caloric wallop and can be detrimental if consumed in excessive amounts. Some are worse than others.

Blackstrap Molasses: The liquid left behind after sucrose is removed from beet juice or sugar cane. Provides calcium and iron.

Date Sugar: Made of ground-up dates. Rich with minerals and fiber.

Fruit Juice (fructose): Absorbed into the bloodstream relatively slowly, creating only a moderate rise in insulin levels.
**Honey:** Will boost your energy, but contains more calories and rots teeth faster than sucrose (table sugar). Use in moderation.

**Maple Syrup:** A sweetener that comes from maple-tree sap. Abundant in minerals, potassium and calcium.

**Sucanat:** A product of squeezing juice from sugar cane. Similar to white sugar, but contains vitamins and minerals that table sugar doesn't.

**Man-Made Sweeteners**

Many of the following refined sugars can be found in some of your favorite foods. Keep your distance.

**Corn Syrup:** Found in dozens of foods-salad dressings, lunch meats, ice cream and canned fruits. Enhances viscosity, texture and color.

**Dextrose:** Comes from the hydrolysis of cornstarch and serves as a yeast food in breads, buns and rolls.

**Brown Sugar:** A refined sweetener derived from sugar cane. Contains molasses syrup and is found in many baked goods.

**Granulated Sugar:** Comes in many different forms. Can be found in anything from your sugar bowl at home to baked goods like doughnuts and cookies.

**High-Fructose Corn Syrup:** Produced from adding enzymes to cornstarch. Found in soft drinks, ice cream and frozen desserts. Invert Sugar: An equal mixture of glucose and sucrose commonly found in carbonated beverages.
Say the word “sugar” and most people picture the familiar white granular stuff many of us have in a sugar bowl at home. But what is sugar exactly?

Table sugar is just one form of sugar that we get in the diet. Sugars are carbohydrates, and they exist naturally in different forms and in all kinds of foods. The granulated sugar that you might sprinkle on your cereal is called sucrose, which is produced primarily by extracting the sugar from sugar beets or sugar cane, although it is present in lots of other plant foods, too. The primary sugar in fruits is called fructose, and there is a naturally occurring sugar in milk called lactose. When you consume a fruit, a vegetable or a dairy product, you can’t avoid consuming the natural sugar that these foods contain.

All sugars ultimately end up in the bloodstream in the form of glucose, which is the form of sugar that our body prefers to use for energy. While sugars in foods end up as glucose in the bloodstream, so do the end-products of the digestion of all carbohydrate-rich foods like fruits, vegetables and starchy foods.

The concern about sugar intake from added sugars (not the naturally occurring ones) has mostly to do with the fact that they are considered to be “empty calories”—that is, sugar provides calories (which the body uses for energy) but no vitamins or minerals. So, if you consume a lot of sugary foods instead of healthier items, you are shortchanging yourself by not getting enough of the vitamins, minerals, fiber and healthy phytonutrients that carbohydrate-rich natural foods contain.

We eat a lot of sugar—even in foods that don’t taste sweet. Aside from the obvious items like fizzy drinks, fruit drinks, sweetened cereals and desserts, sugar—in one form or another—finds its way into condiments, soups, breads and even savory snacks like chips. The primary health hazard of eating too much sugar is tooth decay. The bacteria that live in your mouth can convert sugars into an acid that can destroy tooth enamel. Foods that are sweet and sticky, like fruit snacks or gummy sweets, are particularly a problem since the sugar stays in contact with the teeth.

Does sugar make you fat? Certainly sugar adds extra calories to the diet, and extra calories mean extra weight. Most studies have focused on soda consumption, and several have concluded that as soda consumption increases, so does the risk of obesity. Part of the problem with beverages is that they don’t fill us up—so we can consume a lot of calories in these sweet liquids and still consume regular solid foods, too, before we feel full.

The other issue is that many foods that are high in added sugars are also high in fats and calories—cakes, pastries, ice cream and candy bars are just some of the sweet foods we eat that are loaded down with fat and calories. Food manufacturers are more than happy to accommodate America’s sweet tooth—sugar is inexpensive and adds a lot of taste to foods. To know how much sugar you are eating, it’s important to understand that many forms of sugar are added to foods. By reading the label, you may not realize how much sugar a food really contains.

Here are some other forms of sugar that you might see on a label: sucrose, fructose, glucose, dextrose,
lactose, maltose, invert sugar, raw sugar, turbinado sugar, brown sugar, cane sugar, brown rice syrup, fruit juice concentrate, confectioner’s sugar, maltodextrin, corn syrup, high-fructose corn syrup, honey, maple syrup and molasses.

One popular breakfast cereal marketed to children has the following ingredients: corn, sugar, corn syrup, modified cornstarch, canola oil and high-fructose corn syrup, followed by some vitamins, minerals, and artificial colors and flavors. This cereal isn’t much more than a bowl of sugar, oil and starch.

When you look at a food label, the sugar content is listed—in grams per serving—just under the total carbohydrate listing. But this includes all sugars in the food including natural sugars, so it can be deceptive.

For instance, a bran cereal with no added sugar but with raisins in it might look as high in sugar as a sugary kid’s cereal. But there is a big difference in the nutritional value of the two foods, since one might contain only the natural sugar from the fruit, while the kid’s cereal will contain all added sugar.

How can you reduce your sugar intake? Try to obtain your sugars naturally—which should be primarily from fresh, whole fruit.

• Fruit juices, even if they are 100 percent fruit juice, are all-natural sugar but they are very high in calories—it’s best to avoid beverages with high calories, including fruit juices, sodas, lemonade and other sweetened beverages. Learn to enjoy your iced tea for its natural flavor, rather than for the flavour of the sugar that you pour into the glass.

• Rather than adding syrup or honey to foods like waffles or pancakes, try topping them with sliced fresh fruit and a dollop of vanilla yogurt.

• Look for whole-grain cereals without added sugars, and top with sliced bananas, berries or other fruit that appeal to you. This applies to both cold cereals and hot. Oatmeal is delicious with some mashed banana stirred in for sweetness.

• Keep healthy snacks around, like whole fruits, cut vegetables, whole-grain crackers, low-fat yogurt and low-fat cheese, so you won’t be tempted to eat sweets instead.

• Help your kids develop healthier habits—if they are old enough to read labels, give them a list of all the names for sugar and ask them to become “sugar detectives.” They will enjoy finding the hidden sources of sugar in foods, and it will help to educate them as to how much sugar is added—sometimes where you least expect it.

• Instead of baked goods for desserts, try fresh fruit with a bit of chocolate syrup. One great trick is to take ripe bananas, peel and place them on a foil-lined tray in the freezer. Frozen bananas taste just like ice cream and will satisfy your sweet tooth for significantly fewer calories.

• If you add sugar to cereals, beverages and fruits routinely, try to gradually reduce the amount you use. You may not really know the true flavor of these foods because you have “masked” the flavor with sugar. Fresh fruits in season should be deliciously sweet—no added sugar necessary.
SIZING UP SUGAR FOR KIDS

By Luigi Gratton, M.D., M.P.H.

Sugar is a short-term source of both energy and pleasure. But the fact is, kids today are on sugar overload!

According to a study published in the Journal of the American Dietetic Association, kids are getting a staggering 29 teaspoons of refined sugar per day. This overconsumption of sugar is causing a variety of problems and health issues.

Currently, about a third of the nation’s children and teens are either overweight or obese, and a high-sugar diet is often the cause. Sugar can make it difficult to lose weight because of constantly high insulin levels, which cause the body to store excess carbohydrates as fat. It can also suppress the immune system, cause tooth decay, and even lead to diabetes. What’s more, too much sugar can also result in energy peaks and valleys.

HIGHS AND LOWS

After sugar consumption, children experience a rapid rise of the stimulant hormone adrenaline, which causes hyperactivity. In fact, a recent study at Yale University School of Medicine revealed that, when ingested by children, sugar releases twice the amount of adrenaline into the bloodstream as it does in adults. Kids then experience a crashing low, as refined sugars break down very quickly in the body, leaving them tired, irritable and unable to concentrate.

THE CULPRITS

So, which foods contain the most calories from sugar? It all starts with breakfast. Sugar accounts for more than a third of the weight of children’s cereals. They contain about 52 percent more sugar than adult cereals and have less protein and fiber.

Another big concern is sugar-sweetened sodas. They are the largest source of added sugar in the daily diets of U.S. children. Each 12 oz. carbonated soft drink contains the equivalent of 10 teaspoons of sugar and 150 calories. And juice-flavored drinks aren’t any better. They often contain as much added sugar as soft drinks and also tend to be high in calories and low in valuable nutrients.

So, instead of giving your child sugar-loaded cereals and beverages, offer them healthier alternatives, such as fruit. It’s a naturally sweet snack that also contains fiber and vitamins they need.
## Hidden Sugar in Common Products

<table>
<thead>
<tr>
<th>Too Sugary?</th>
<th>Sunny Delight</th>
<th>Coca Cola Classic</th>
<th>Snapple Lemon iced tea</th>
<th>Dannon low-fat yogurt</th>
<th>Mott’s Original apple sauce</th>
<th>Heinz Ketchup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving size</td>
<td>20 oz bottle</td>
<td>20 oz bottle</td>
<td>16 oz bottle</td>
<td>6 oz serving</td>
<td>6 oz serving</td>
<td>1 tbsp.</td>
</tr>
<tr>
<td>Teaspoons of sugar:</td>
<td>18</td>
<td>17</td>
<td>12</td>
<td>6</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Calories from sugar</td>
<td>294</td>
<td>250</td>
<td>184</td>
<td>96</td>
<td>61</td>
<td>16</td>
</tr>
<tr>
<td>Same amount of sugar as:</td>
<td>7 peanut butter cups</td>
<td>2 snickers bars</td>
<td>11 oreos</td>
<td>2 blow pops</td>
<td>1 twinkie</td>
<td>1 hershey’s kiss</td>
</tr>
</tbody>
</table>

To calculate the teaspoons of sugar in a food item, take the total grams of sugar listed, and divide that number by 4 to equal the number of teaspoons of sugar in that item.
Simple Carbohydrate/ Complex Carbohydrate Quiz

1. Which is a better choice?
   a) Apple Juice
   b) Apple Sauce
   c) Apple Pie
   d) An Apple

2. Which is a better Choice?
   a) White Potato
   b) Sweet Potato
   c) Red Potato
   d) Potato Chips

3. Which choice is not a complex carbohydrate?
   a) Spinach
   b) White Rice
   c) Whole Oatmeal
   d) Banana

4. Which combination of food will give you 3-4 hours of energy and hunger control?
   a) Bagel with cream cheese
   b) Peanut Butter sandwich
   c) Garden Salad with ranch dressing
   d) Grilled Chicken Breast, Garden Salad and Brown Rice

5. Which is the best snack?
   a) Snickers bar
   b) Granola bar
   c) Cup of Low fat cottage cheese with fruit
   d) Pretzels and peanut butter
### FEATURED PRODUCTS

#### GARDEN 7

**Overview**
Eating enough fruits and vegetables? Get your daily 7 with Garden 7®.

**Key Benefits**
- Supports the optimal health and function of vital organs.*
- Provides antioxidants equal to 1 cup red grapes, 3 oz. of cranberries, one orange, one tomato, ½ cup broccoli, ½ cup spinach, one carrot, and a clove of garlic

**Details**
Consuming the recommended 7-9 servings of fruits and vegetables each day is difficult. Just one Garden 7® tablet three times a day helps fill the nutritional gaps in your diet by providing your body with the vital nutrition needed for optimal health

$46.56 for month, $1.55 per day, $0.51 per serving

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#### SNACK DEFENSE™

**Overview**
A powerful herbal blend that helps deliver all-day snack control, while helping reduce carbohydrate absorption and maintain blood sugar levels, already within a normal range.*

**Key Benefits**
- Curb your appetite to reduce your urge to snack between meals*
- Help for managing your sweet tooth
- Lower carbohydrate absorption*

91 cents per day or $27.42 for bottle of 60 tablets