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Sugar Consumption: Taking Down the White Elephant

By Dan Harvey

Health experts estimate that the average American eats 20 teaspoons of sugar a day or about 170 pounds of the sweet stuff a year. Kathleen W. Wilson, M.D., an internal medicine specialist and author of *Health For Midlife Women: When You Think You Are Falling Apart* (Whiskey Hollow Press, 2004) reports that, annually, most people eat as much sugar as it takes to sculpt a full-sized elephant.

That's an alarming image. However, that elephant isn't created just by active consumption, such as spooning tablespoons of sugar into coffee, cereals, and recipes. Pounds are packed on this pachyderm by a more passive consumption, too. This includes sugars in processed foods. "Sugar is ubiquitous," indicates Joseph Brasco, MD, author of *Restoring Your Digestive Health* (Kensington Publishing Corporation, 2003). "It's even in places we wouldn't expect to find it, such as chicken broth."

In fact, by carefully studying food labels, you'll find that most commercial foods contain corn syrup or some other form of sugar. "The problem with sugar consumption is that Americans are doing it in three to four meals a day," says Brasco.

Uncovering the Sugars

Of course some sugars are natural, such as single sugars (made up of one molecule) including fructose (found in fruits) and glucose (found in carbohydrate foods). These aren't necessarily bad. In fact, you need some glucose to survive, according to Shari Lieberman, Ph.D, nutrition specialist and author (*The Real Vitamin & Mineral Book* [Avery, 1997]). Problems only arise when you overindulge, which is easy to do with carbohydrates.

Conversely, it's hard to overindulge on fructose in its natural state. "Nature has packaged it in such a way that you can't overeat it," says Earl Mindell, Ph.D., nutritionist and author of *The Diet Bible* (F&W Publications, 2002). "No one complains about being overweight because they eat 25 apples a day. You can't eat that many, but you sure can drink five soft drinks with 17 teaspoons of sugar in each."

Soda contains high fructose corn syrup, one of the "extrinsic" sugars that are not a natural part of foods. These derivatives can be problematic, as they're often called "hidden sources" of sugar.

Processed sugars have no nutritional value. They do supply energy, but they're also stored as fat when we ingest too much. In addition, sugar begets a craving for even more sugar. Mindell explains that when we eat sugar, glucose breaks down and is absorbed into

the blood stream. Elevated glucose levels tell the pancreas to secrete insulin, which stores glucose in cells. Too much glucose—from eating too much sugar—gets stored in muscle cells as fat. When glucose levels eventually drop, you feel a need for more sugar.

High fructose corn syrup is particularly pernicious. Food manufacturers like it because it is a cheap way to sweeten products, including sodas, jams, baked goods, and condiments such as ketchup. Fructose enters the blood rapidly, especially when we drink a soda, which contains no fiber to slow down its entry.

Plethora of Health Problems

High sugar consumption, and its resulting metabolic effects, contributes to a multitude of health problems ranging from obesity to gastrointestinal disorders to cancer. The human body is a homeostatic mechanism of beautiful design and efficiency. When you ingest unnatural substances, you upset the homeostatic harmony, causing disruption in the finely tuned endocrine (hormonal) system that regulates metabolism. For instance, Brasco warns that insulin level spikes, caused by high sugar consumption, are extremely detrimental to overall health and cause our organs to work overtime to regulate blood sugar levels.

The major health risks, says Shawn Talbott, Ph.D, author of *The Cortisol Diet* (Hunter House Inc. Publishers, 2004), are diabetes and obesity. Both lead to associated conditions such as heart disease, arthritis, and forms of cancer. “That’s quite a laundry list, and it’s really at the root of all bad health conditions in this country,” he remarks.

Wilson indicates that sugar consumption can lead to a pre-diabetic state called the metabolic syndrome, which involves a steady rise in blood sugar that leads to weight gain, especially around the abdomen. It’s not only unsightly, but it’s related to other problems. Blood pressure rises, bad cholesterol levels go up, protective cholesterol levels drop, and that predisposes people to arterial sclerotic plaques. “More to the point, it causes premature coronary artery disease, or heart attacks among people below the age of 65,” says Wilson.

Over-secretion of insulin, in response to chronically high glucose levels, leads to insulin resistance, which causes the pancreas to secrete even more insulin to compensate. “Insulin resistance has very serious health implications,” says Lieberman. “High insulin levels are implicated in cardiovascular disease, coronary artery disease, hypertension, diabetes, dementia, and certain cancers.”

Indeed, Mindell believes many lethal health conditions can be directly related to high sugar consumption.

In addition, high consumption plays havoc with your immune system. “Sugar causes white blood cells to become less active and less able to fight off infection,” says Brasco.

Lowered immunity, indicates Wilson, leads to other conditions such as a propensity to vaginal yeast infections and slow healing of wounds.

Is it Addictive?

With all of the health problems associated with sugar, you'd think people would willingly put the lid on the sugar jar. But that's not happening, and that begs the reasonable question: Is sugar an addictive substance?

From a scientific standpoint, the jury is still out concerning any addictive qualities sugar might possess. However, most people have experiential evidence. Take away their sugar, and they do seem to endure withdraw symptoms. "Our taste buds have been altered to a point where, if you put someone on a no-sugar or low-sugar diet, they'll be quite upset for the first weeks," says Brasco. "They even suffer physical symptoms such as headaches, nausea, and irritability. Their taste buds need time to reacclimatize to foods without the sweet taste."

Still, craving may be a more accurate term, but there's a fine line between craving and addiction. "Sugar is a self-fulfilling prophecy," says Talbott. "The more we eat, the more we crave. If you eat a high-sugar diet, you're encouraged, from a biochemical perspective, to continue eating that diet."

Wilson indicates the insulin response is responsible. "Eating sugar gives you a high insulin response, and you become hypoglycemic," she explains. "So, shortly after eating sugar, you become hungry again. Even more, you become hungry for something sweet."

So, indulgence doesn't satisfy the craving; it only feeds the need.

If you really want to get down to it, kicking sugar requires the diligence of a recovering alcoholic, as the same mechanisms seem to come into play. But stopping is easier said than done. We live in a society that constantly reinforces sugar consumption. Reinforcement begins quite early. Infants are fed formulas that contain sugar, and young children are rewarded with a sugary treat for good behavior. As adults, we're fed sugar even when we don't realize it. "If you buy canned and packaged food, there's no way around it," says Brasco.

Kicking the Sugar Habit

What's the best way to kick the habit? Going "cold turkey," with the accompanying withdraw symptoms, is pretty hard for some people to endure. In addition, the hunger for sweets becomes overwhelming, which can compel people to sabotage their own efforts with a full-blown binge.

So, if you can't cut out then cut down, especially on the refined sugars. In 2003, the World Health Organization (WHO) released a global health strategy that advocated educating people how to change their diets to avoid disease. Among the several

recommendations, the one that garnered the most attention involved consumption of refined sugars. WHO strongly suggested that people should only get 10 percent of daily calories from sugar. (It's interesting to note the response from the United States. The U.S. sugar industry—one of the nation's most powerful lobbies—opposed the recommendations, restating a claim that there is “no evidence whatsoever” that sugar consumption is related to diseases like obesity or diabetes.)

The best place to start is by giving up candy, sodas and doughnuts—three of the worst items you can ingest. If you're serious about this, then kiss the soda goodbye. “It's liquefied sugar,” says Talbott.

Next to soda, the worst thing you can eat is a doughnut, according to Mindell. It is a solid mass of sugar and saturated fat. It contains the worst ingredients imaginable: white sugar, white flour, salt, and hydrogenated oils—a quadruple whammy of gastronomic poisons. “If we can eliminate those from the diet, the average person would live 25 years longer,” he states.

Other vital strategies follow:

Ration the sugar

Reduce or eliminate use of table sugar. If it's only the sweet taste you're after, try an artificial sweetener (*see sidebar*). Some of the new substitutes can be used in recipes.

Read food labels

At the same time, stay away from so-called sugar substitutes such as honey, dextrin, maltose, fructose, molasses, and syrups (corn, sugar cane, rice). These are sugar derivatives and are often called “hidden sugars.” That's why you must carefully read food labels, to spot their presence. You'll find that even food products touted as “sugar-free” contain these derivatives. All that “sugar-free” really means is that no sucrose is included in the ingredients. Sugar is even included in items you don't think of as sweet treats, such as crackers, pretzels, and other salty snack foods.

The natural sugar alternative

Choose natural sugars over refined sugars. Natural sugars are found in fruit. Fruit's fiber helps prevent sweet cravings, because you won't experience broad swings in blood sugar that follow a high-sugar meal. Best fruits to eat are those lowest in carbs and highest in nutrients, the so-called “superfoods” such as berries and kiwi fruit. In addition, choose fruit over fruit juice, which is really just a glassful of sugar. “I don't see fruit juices providing any benefits above what a soda could provide,” says Talbott.

Stop the blood sugar rollercoaster

One of the most important things you must do is watch what you eat throughout the day. Typically, the fare that most people choose for their lunches and mid-morning and afternoon breaks are filled with sugar. These elevate blood sugar, which creates a temporary sugar high that is soon replaced by a craving for more sugar. Stay away from baked items, granola bars, crackers, and vending machine snacks. Choose things like

roasted soybeans or nuts instead. “Nuts are healthy,” says Wilson, “and the fats aren’t bad. Fat isn’t what makes your blood sugar rise. People who eat nuts don’t have a reactive craving.” Other snacks she recommends are celery stuffed with peanut butter and the natural cheeses, like Swiss and cheddar.

Avoid processed foods

Avoid anything that contains high fructose corn syrup or anything that says it contains highly refined sugar, especially white bread. “If you make a sandwich out of white bread, you may as well be making it with cotton candy,” says Talbott.

Rather, use bread made from whole-grain or sprouted grain. One rule of thumb about processed foods is don’t eat anything packaged in a box or bag. Mindell offers an interesting variation of that rule: “Don’t eat or drink anything that is advertised on commercial television,” he states. “If you can do that, you’ve got it beat. It’s a very simple rule. If you watch TV, you’re being brainwashed by the processed food companies to eat their highly processed food.”

Tame cravings with supplements

You can control your blood sugar with supplements readily available in health food stores and on the vitamin shelves at supermarkets and pharmacies. By controlling your blood sugar, you control, your appetite for sweets. These include:

- Banaba – an extract of the medicinal banaba leaf, this herb was used extensively for diabetics, because it regulates blood sugar and insulin levels so people don’t crave the sugar in the first place. It also helps control the appetite.
- Glutamic acid – contains the craving-curbing amino acid L-glutamine.
- Chromium – stabilizes the blood sugar.
- Magnesium – increases insulin secretion to control blood sugar levels.
- Alpha-lipoic acid – improves blood sugar control and enhances insulin effectiveness.

(Sidebar)

Sugar Substitutes—Popular and Natural Alternatives to Sugar

People seeking to cut down on sugar often resort to sugar substitutes. Both synthetic and natural options are available, though artificial sweeteners still generate some controversy. Proponents say that no studies exist that definitively demonstrate the dangers of synthetic substitutes. But critics like to cite a lab study showed that sucralose shrank the thymus glands in rats. Some even suggest that popular substitutes such as aspartame and saccharin cause cancer. Gastroenterologist Joseph Brasco, M.D., says that aspartame at least causes digestive problems. However, diet book author Shawn Talbott, Ph.D, feels they’re safe: “There aren’t any good reasons to be afraid of artificial sweeteners. They are all very well studied and perfectly safe.”

The most popular sweeteners include:

Sucralose – Known on the market as “Splenda,” sucralose was originally used as a no-calorie, low carb substance for diabetics. It is 600 times sweeter than sugar and doesn’t have that dreaded “artificial” aftertaste. People like it because it’s cooking-friendly.

Aspartame – Like sucralose, aspartame has no calories and it’s low in carbs. Brand names include NutraSweet and Equal. However, unlike sucralose, it can’t be used in recipes.

Saccharin – Most consumers know it via the Sweet ‘N Low and Sugar Twin brands. It’s about 300 times sweeter than sugar and can be used in recipes, but many people are turned off by its unpleasant aftertaste.

Acesulfame Potassium – Best known on the market as Sunett, this “tabletop” sweetener has been around since 1988.

Stevia – This natural alternative comes from the leaves of a South American plant, and is highly potent. It’s available in powdered and liquid forms, but available only in health food stores.