The Not So Sweet Side-effects of Artificial Sweeteners

Disclaimer: Use caution when beginning a new nutrition program. Not all exercise programs are suitable for everyone. Check with your doctor before you begin. Dr. West will not be responsible or liable for any injury sustained because of using this program.

The Risks of Artificial Sweeteners

New information about the risks of artificial sweeteners is emerging all the time.

The depressive effects
High-intensity sweeteners, HIS, can be addictive, leaving you prone to more sugar cravings. There is also some evidence that they affect blood sugar, producing the same glucose highs and lows that can lead to food cravings, a sugar rush, and then post-carbohydrate depression.

In addition, HIS are chemicals, so it is not surprising that they can alter body chemistry. One area of most concern is the alteration of human brain chemistry. Around 70% of depression cases are caused by a chemical imbalance in the brain. With an increasing number of cases in the world-it is now the #2 cause of disability after hearing and vision problems-depression is now a global epidemic.

Other effects on the brain
Some studies have shown that using chemical sweeteners can lead to a brain fog, or poor short-term and long-term recall. Some researchers are also studying them in connection with the increase in Alzheimer's disease, particularly amongst women.

Women have a higher incidence rate of Alzheimer's than men. Is it hormonal? Or could it be dietary, the result of weight-conscious women consuming artificially sweetened products on a regular basis over the course of their adult lives?

Artificial sweeteners have also been linked with certain forms of cancer. Stomach, pancreatic, and kidney cancer are on the rise, with kidney cancer increasing at an unprecedented rate in the last few years. Prior to that it was one of the rarest forms of cancer. Now the race is on to find any drugs that can extend life for even a few months.

Kidney issues
Kidney disorders are also on the rise, leading to acute kidney injury (AKI) , chronic kidney disease (CKD) , end stage renal disease (ESRD) and eventually kidney failure. When failure occurs, only dialysis or a kidney transplant can save a person's life.

The kidneys filter waste products out of the blood in order for them to be eliminated via urination. What if these chemicals aren't being cleared, but stored in the kidney, creating a toxic environment?

One study in 2009 showed that women who consumed 2 diet sodas a day had 30% less kidney function than those who did not. Another study from 2013 showed that both sugar and artificial sweeteners were associated with chronic kidney disease.

Poor kidney function can have a depressive effect because your body is not operating at optimal wellness. Accumulating toxins can also cause depression.

Inflammation and autoimmune disorders
In addition, they can cause inflammation, a leading cause of pain and of autoimmune disorders, that is, diseases in which the body starts to attack itself. Researchers are not sure of the exact mechanism for autoimmune disorders like rheumatoid arthritis and lupus, but they are much more prevalent in women than in men.

Fibromyalgia, a musculoskeletal condition, is also much more common in women. The chronic pain that these conditions produce can most certain cause depression and adversely affect a person's quality of life.

Heart disease
Excessive weight gain and calorie consumption is linked to heart diseases, as is inflammation. Up to 75% of heart disease patients have depression.

Age-related disorders

Certain health conditions relate to the process of aging, including osteoporosis and osteoarthritis. HIS can cause premature aging and wear and tear on the body. So too can carrying excess weight. Around 50% of the elderly suffer from depression. They also often don't eat healthful meals and 'reward' themselves with sweet things, leading to a vicious cycle of carb consumption and further depression.

Now that you have a general idea of the serious health issues that have been linked to artificial sweeteners in general, let's look at a few potentially harmful ones in particular, namely, high intensity sweeteners.

High Intensity Sweeteners Revealed

High Intensity Sweeteners, as the name suggests, offer intense sweetness great than that of natural sugar such as table sugar. The effect is presumably that a little goes a long way, but studies also suggest that the intensity leads to ever more intense sugar cravings.

There are 6 High Intensity Sweetener currently approved by the FDA

1. Acesulfame Potassium (Ace-K)
2. Advantame
3. Aspartame
4. Neotame
5. Saccharin
6. Sucralose

Let's look at each of these in turn.

Acesulfame Potassium (Ace-K) (Sunette® or Sweet One®)

This artificial sweetener came on the scene in the 1980s. It was discovered in a lab in the 1960s by a German chemist and looks like an ideal sugar substitute because it is white and crystalline in nature. It is commonly seen under its name Sunette®.

It is a flavor enhancer that is used in a variety of foods. If you read food labels, you will be surprised to find how often it is used.

Acesulfame is used to add and prolong sweetness in processed foods, that is, give a sweet aftertaste. The FDA issued safety guidelines for the allowable daily intake per pound of body weight. For Acesulfame K it is 15mg/day per kg of body weight. However, since it is used in many foods as 'flavoring', it is easy to 'overdose'.

There has not been a lot of testing done on this artificial sweetener despite FDA approval. The lack of testing has many concerned about possible long-term effects. It is known that Sunette® contains methyl chloride. Prolonged exposure to

it can lead to nausea, vomiting, headaches, liver dysfunction and cancer, to name a few.

In addition, acetoacetamide, a breakdown product, has been shown to affect the thyroid in rats, rabbits, and dogs. Administration of 1 to 5% acetoacetamide in the diet for three months caused benign thyroid tumors in rats. The rapid appearance of the tumors raises serious questions about the chemical's potential carcinogenic effects.

Damage to the thyroid can lead to weight gain and other metabolic issues. A slow thyroid can lead to hair loss, feeling cold all the time, and depressive effects.

Bottom line: There are much safer products to use if you wish to have sweetness without extra calories. Learn more here:

Advantame

Advantame was approved by the FDA in 2014 despite the fact that it has all of the dangers of aspartame (see below) PLUS even more risks. Advantame is an aspartame derivative that is said to be 20,000 times sweeter than sugar. It has been approved in the US to add sweetness to a range of non-diet foods such as cookies, cake, Jell-O, pudding and more.

The Center for Science in the Public Interest (CSPI) points to research which linked advantame to early death in mice, with the test subjects dying at a “significantly higher rate than common” in lab research.

The Journal of the European Food Safety Authority (EFSA) surveyed a number of studies regarding advantame and found evidence of these compromised immune system function in test subjects, and gastrointestinal birth defects in rabbits.

One of the dangerous substances found in advantame is processed phenylalanine. Phenylalanine is an amino acid which appears in its natural form in meat, milk and bananas. However, it can act as a neurotoxin when in a processed form. High levels of phenylalanine have been associated with behavioral changes such as

ADD, ADHD, and depression. It has also been linked to worsening diabetes symptoms,

For individuals with phenylketonuria (PKU), a genetic disorder, phenylalanine is especially dangerous, and can lead to seizures, brain damage and even death. While PKU only affects 1 in every 10,000 people, some people may not know that they carry this gene, and may experience severe, life threatening reactions to advantame and aspartame, which also contains phenylalanine.

Bottom line: steer clear of this HIS, and any processed foods which may contain it.

Aspartame - NutraSweet, Equal

This is one of the more popular HIS, found not only in little packs to add to your coffee but in a range of pre-packaged foods, meaning you might be consuming more than you realize. Studies have shown that it can:

- Stimulate your appetite
- Increase carbohydrate cravings
- Stimulate fat storage and weight gain
- Cause you to gain more weight that sugar would
- Worsen insulin sensitivity in diabetics

Experiments have found that sweet taste, regardless of its caloric content, enhances your appetite. Aspartame has been found to have the most pronounced effect on your appetite, but the same applies for other artificial sweeteners, such as acesulfame potassium and saccharin. Overeating and weight gain, and emotional eating or binge eating, can all lead to a food hangover, especially a carb one, and in turn lead to depressive effects.

Another reason for aspartame's potential to cause weight gain is because of its two main ingredients, phenylalanine and aspartic acid, rapidly stimulate the release of two key hormones insulin and leptin. They are both linked to the feeling of satiety and fat storage in the body, and are key in regulating metabolism. This means that even though you are not eating sugary calories, your insulin and leptin levels are still being raised.

High levels of insulin are linked with metabolic syndrome, insulin resistance, and diabetes. Insulin resistance means less ability to stop eating and burning fact, and increased desire for sweets.

Leptin is linked with metabolic syndrome, obesity, and stubborn belly fat. The point of satiety, or feeling full, takes about 20 minutes to reach, but those with insulin and leptin imbalances can happily keep on eating without feeling full. Excess calorie and carb consumption is a complete downer for the body. You get further out of condition and continue to eat more, gaining even more weight. An inefficient body metabolism burns few calories and stores them. Greater fat storage, especially around the middle, can lead to diabetes and heart disease.

Aspartame has also been shown to break down to form formaldehyde in the body, (embalming fluid) and been linked to methanol (a type of alcohol) poisoning. Sugar may be bad for you, but aspartame is clearly far worse.

As noted above, it contains phenylalanine, which can be fatal to those with the condition PKU.

Neotame

Neotame is new aspartame, with an ingredient change intended to make it safer that aspartame by removing the chemical that can trigger PKU. Unfortunately, neotame is even more toxic than aspartame, and being used in a range of pre-packaged foods as flavoring. It is 13,000 sweeter than sugar, and far more deadly.

Statistics show that up to 80% of all complaints to the FDA refer to aspartame's adverse reactions. These reports include: grand mal seizures (epilepsy) , brain tumors, blindness and other health issues, and even death. So the NutraSweet manufacturers came up with an even more deadly product that rarely appears on food labels.

Neotame, like aspartame, turns into formaldehyde in the body, and also the poisonous substance formic acid, commonly found in venomous insects. It is linked to methanol toxicity and holes in the brain from the poisoning. It is being

fed to beef cattle in order to fatten them, since it makes the (low-quality) feed tastier for them in the way that molasses has been traditionally used.

Because of loose labeling regulations, neotame can be found in some foods labeled organic as well, so stick to non-packaged foods whenever possible.

Saccharin – Sweet n'Low

Saccharin was the first artificial sweetener on the market, and is said to be as much as 700 times sweeter than sugar. It was discovered accidentally in a laboratory in 1879. It is made using different chemicals such as toluene, sulfur dioxide and chlorine and was approved by the FDA despite the volatile nature of these chemicals.

Saccharin was seen as a wonderful discovery for diabetics. As Sweet 'N Low® is not digested by the body, it doesn't affect the blood sugar. It is stable when tested in heat, but because of the bitter aftertaste and the fact that it has a lighter consistency than sugar, it is not often used in baking. It has found its way into chewing gum, candy and processed sweets, as well as many drinks.

Laboratory testing in the 1970s showed that rats given different doses of the artificial sweetener were developing bladder cancer. The FDA had the manufacturers add a warning to the boxes of Sweet 'N Low® but allowed it to continue to be sold because at the time it was the only HIS available. It has been linked to weight gain and food cravings, which can in turn lead to mental fog, depression, and generally feeling down and listless. It has been given the dubious distinction of being one of the 4 most dangerous artificial sweeteners on the market

Sucralose – Splenda®

The claim in the commercials is that because it is made from sugar, Splenda® is as close to natural as you can get. It is much lighter than sugar and also many times

sweeter. It was developed by a British company and marketed in the US and is now found in a range of beverages and processed foods. Since it comes from sugar, it is assumed by many people that it can be used in place of it.

To create Splenda®, sucralose is chemically created by using chlorine, methanol and acetic acid, all poisonous to humans. It is closely related to the pesticide DDT. Consuming too much can lead to diarrhea, nausea and vomiting. Many other side effects have been connected to it, including damage to DNA, alteration of brain chemistry, depression, and cancer. It has also been linked with:

- Seizures, dizziness, and migraines
- Blurred vision
- Allergic reactions
- Blood sugar increases and weight gain

And the dangerous and depressive effects are heightened if it is cooked.

Conclusion

We are what we eat, including chemicals, which can lead to all sorts of damaging health effects, including depression and 'carbohydrate hangovers'. Eliminating HIS from your diet could be just what you need to start feeling like your old self again.

All of the HIS have been approved by the FDA in the mistaken belief that they have to be better for people than table sugar. If you value your health, avoid these 'sweet poisons' and use only natural sweeteners in small quantities, such as raw honey and raw Stevia. Cook and bake for yourself rather than use pre-packaged convenience foods, and steer clear of soda.

To your best health!

Dr. Jami West