

How Splendid Is 'Splenda'?

By Dr. Ted Showalter

8-8-3

What is Splenda?

It's the artificial sweetener sucralose, which is sold under the name splenda. It's one of the up-and-coming high-intensity sugar substitutes. It is about 600 times sweeter than white table sugar and is non-caloric. The sweetness can vary depending on the food application from 320 to 1000 times sweeter than sucrose (white table sugar). The intensity of sucralose is much more intense in sweetness than sugar, even though it looks about the same as sugar.

How it is manufactured

Sucralose is produced by chlorinating sugar (sucrose). This involves chemically changing the structure of the sugar molecules by substituting three chlorine atoms for three hydroxyl groups.

Safety Concerns

Very few studies exist on sucralose. According to Endurance News there are only 19 studies that have been performed, yet sucralose was approved for use by the FDA in 1998. Just to give you an example of how few studies sucralose has, saccharin, which has been around for a while has 2374 studies according to Endurance News. Many of the studies on sucralose so far have been reported by the FDA to have "inconclusive" results.

Research in animals has shown that sucralose can cause many problems in rats, mice, and rabbits, such as:

- Shrunken thymus gland (up to 40% shrinkage)
- Enlarged liver and kidneys
- Atrophy of lymph follicles in the spleen and thymus
- Increased cecal weight
- Reduced growth rate
- Decreased red blood cell count
- Hyperplasia of the pelvis
- Extension of the pregnancy period
- Aborted pregnancy
- Decreased fetal body weights and placental weights
- Diarrhea

Now you can't directly convert this to humans, but if it does that much to an animal, I think it's safe to assume that it could affect the human body in some manner.

How Splendid is Splenda?

One claim of sucralose is that it won't affect your sugar levels. Few human studies exist on safety have been published on sucralose. One small study using diabetic patients showed a statistically significant increase in glycosylated hemoglobin (HgbA1C), which is a marker of your average blood sugars over a 3-4 month period and is used to assess sugar regulation in diabetic patients according to the FDA.

Is Sucralose Absorbed or Metabolized?

One of the other main things sucralose has been claimed by the manufacturer's to do is go straight through the body without being absorbed. To the contrary, sucralose is significantly absorbed and metabolized by the body. According to the FDA's "Final Rule" report, 11% to 27% of sucralose is absorbed in humans, and the rest is excreted unchanged in feces. According to the Japanese Food Sanitation Council, as much as 40% of ingested sucralose is absorbed. About 20% to 30% of absorbed sucralose is metabolized. The absorbed sucralose has been found to concentrate in the liver, kidney, and gastrointestinal tract. According to Dr. Mercola's website, "The manufacturer claims that the chlorine added to sucralose is similar to the chlorine atom in the salt (NaCl) molecule. That is not the case. Sucralose may be more like ingesting tiny amounts of chlorinated pesticides, but we will never know without long-term, independent human research," of which there is none. Some chlorinated molecules serve as the basis for pesticides such as D.D.T., and accumulate in the body fat.

Does sucralose and any of the sweeteners on the market help with weight loss?

According to Consumers' Research Magazine "There is no clear-cut evidence that sugar substitutes are useful in weight reduction. On the contrary, there is some evidence that these substances may stimulate appetite."

One of the major selling points of aspartame is a diet aid and currently is in most diet drinks. Although some companies are changing to splenda (i.e. Diet rite). When aspartame is ingested with carbohydrates, such as having a sandwich with a diet drink, aspartame causes the brain to cease production of serotonin, which is the hormone that makes you feel full after eating. Therefore you never feel full, thus increasing your appetite. You then eat more foods, many containing aspartame, and the cycle continues. Recent research on aspartame in Europe is showing that ingesting aspartame leads to the accumulation of formaldehyde in the brain, other organs and tissues (Formaldehyde has been shown to damage the nervous system, immune system, cause irreversible genetic damage in humans and is also used to preserve cadavers)!

So what should I use as a sweetener?

Stevia, which is a sweet herb, 300-400 times sweeter than sugar and does not affect sugar levels. I would advise just to stay away from any artificial sweeteners and to use something natural.

http://www.chattanooga.com/articles/article_39516.asp