

XYLITOL

Xylitol is both a “fluoride alternative” and a “sugar substitute”. Xylitol, a sugar alcohol of the pentol type, is an all-natural xylan that is produced by the body during normal glucose metabolism, and specifically is a long polysaccharide molecule consisting of D-xylose units. It is found in nature in berries (especially raspberries), plums, cauliflower, mushrooms, birch bark, lettuce, and corn cobs, and is FDA-approved as a food additive. Finland, the former Soviet Union, Japan, Germany, and Italy have all used xylitol for 20-30 years. It is now readily available in the U.S.A.

DENTAL - ORAL BENEFITS:

Xylitol prevents or inactivates tooth decay because it does not support the growth of streptococcus mutans bacteria, promotes remineralization of tooth enamel, and increases saliva flow. Xylitol also helps prevent gum disease (essentially osteoporosis of the mouth) by not having sugar’s systemic side effect of mineral (calcium-phosphorus-magnesium) imbalance that inhibits calcium absorption. Also, studies indicate that the incidence of middle ear infections (otitis media) and sinus and lung infections are reduced when there are less streptococcus mutans bacteria in the mouth.

Xylitol is available in a toothpaste, mouthrinse, “mints”, and chewing gum, and can be purchased at our office, online, mail order, and at many health food stores. Some common brands are Epic, Spry, and Omni. Generally, 4-6 exposures to xylitol throughout a day are adequate to stop decay.

GENERAL HEALTH BENEFITS:

The commonness of degenerative disease and obesity in America is alarming! A significant reason is most Americans ingest too much **simple and refined sugars** (sucrose, glucose, dextrose, levulose, maltose, raw sugar, turbinado sugar, maple sugar, galactose, dextrine, barley malt, rice syrup, table sugar, brown sugar, fructose, high-fructose corn syrup, molasses, honey). Did you know that one sugared 12 oz. soft drink contains 9-11 teaspoons of sugar? Sugar is also “hidden” in processed foods such as hamburgers, breading, luncheon meats, bouillon cubes, alcoholic beverages, canned fruits, peanut butter, many dry cereals, ketchup, ice cream, fruit juices, and cranberry sauce. In many cases, sugar is *addictive* and *toxic*! Another contributor is ingestion of certain carbohydrates that, *like sugar*, stimulate intense insulin secretion. Eating sugar and intense insulin-stimulating carbohydrates too often or too much causes the pancreas to overproduce insulin. **The harmful result is excess insulin and excess glucose in the blood, as well as unbalancing the body’s mineral relationships!** As a result, the following health problems can occur:

- insulin-resistant disorders such as Type II diabetes (the fat, liver, and muscle cells are no longer responsive to normal levels of insulin, and more insulin is required to keep the blood sugar from rising too high)
- mineral imbalance which can lead to osteopenia and osteoporosis
- Syndrome X – a combination of elevated insulin, elevated triglycerides, obesity, hypertension, elevated cholesterol (especially LDL), and coronary artery disease

(over)

- learning dysfunctions
- autoimmune or immune-deficiency disorders such as arthritis, allergies, and asthma
- obesity
- hypertension (high blood pressure)
- bowel and digestive disorders
- systemic Candida Albicans (yeast)
- degenerative diseases from free-radical damage
- hormone-related cancers
- polycystic ovary syndrome that can lead to infertility

Xylitol is available as crystals for sweetening beverages and cooking, and can be substituted for sugar in recipes teaspoon-for-teaspoon. Some common brands are Perfect Sweet, Miracle Sweet, and Healthy Sweet. Sweet Life makes xylitol cake mixes. Eating 50-70 grams spread throughout the day is healthy, but may cause slight cramping and mild diarrhea during the first few days you eat it until the body compensates with enzymes. Another drawback is the higher cost of xylitol. Be aware that xylitol is not just a substitute for sugar, but also has *active beneficial health properties*. Other sugar substitutes include stevia, aspartame (Nutrasweet), sucralose (Splenda), sorbitol, maltitol, mannitol, lactitol, acesulfame potassium, and saccharin. Be advised that some of these may cause more long-term health problems than they solve, cause unpleasant side effects, or just taste bad.

Sugars and some carbohydrates have a high-glycemic index, which is a ranking of foods based on the amount they raise blood sugar during digestion. A list of carbohydrates that have a high-glycemic index can be found in nutrition books or on the internet. Xylitol has a glycemic index of 7, compared to glucose at 100. Xylitol is easily metabolized and does not raise blood sugar, and therefore does not raise insulin levels either. To improve health, consider adding xylitol to your food choices to biochemically modulate a healthier insulin-glucagon relationship. Glucagon is another hormone secreted from the pancreas that keeps the blood sugar from being too low. Be aware that a diet for optimal health and performance and a weight-loss diet do not necessarily address the same health issues, and that one nutritional approach does not fit all. And although the relationship between blood glucose and insulin levels and high-glycemic foods are important pieces of the puzzle, they are not the only pieces involved in health. Read my nutrition handout which discusses food choices based on blood type and other metabolic factors, although other approaches exist that consider acid-alkaline, oxygen, and calories.

Resources:

- Xylitol – www.epicdental.com; www.xylitolproducts.com; www.locarbdiner.com; www.thesweetlifesweets.com; www.xylitolworks.com; www.tundratrading.com
Xylitol: Sweeten Your Smile by John Peldyak, D.D.S.
The Sweet Miracle of Xylitol by Fran Gare, N.D., M.S.
- Sucralose (Splenda) – www.holisticmed.com/splenda
- Aspartame (Nutrasweet) – www.aspartamesafety.com
Aspartame Disease: An Ignored Epidemic by H. J. Roberta, M.D.
- Sugar - www.nancyappleton.com
Lick the Sugar Habit by Nancy Appleton, PhD
Sugar Busters! by H. L. Steward, M. C. Bethea, S. S. Andrews, L. A. Balart
- Stevia – www.stevia.net