



Making Your Sweets Nutritious to Power Up Your Brain

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The general principals are:

- **take in no sugar without some redeeming healthy ingredients** such as whole grains, nuts, seeds, fruits, vegetables and spices, herbs.
- **make choices that would be safe for a person who is diabetic.** We all need to eat as if we are diabetic or trying to avoid getting diabetes and that will help us achieve a brain healthy nutrition program. Limit added sugars to 7 tsp/day for women and 10 tsp for men. Less is better.
- **limit daily intake of sweets.** It is preferable to limit desserts & sweet foods with added sugar to **once or twice a week.** Group residences should offer maximum one dessert/sugary food per day that isn't 100% fruit, nuts, or seeds, and/or pure yogurt.
- **Limit daily intake of refined flours and starches** - body converts these to sugar quickly.

Why is limiting sugar related to brain health?

1. **Sugar, in all forms, is inflammatory.** (That's like having a sunburn inside us; we usually don't feel inflammation unless it is in our joints and muscles, or causes a headache)
2. **Inflammation increases risk of brain problems** including slower thinking, memory problems and Alzheimer's disease.
3. **Inflammation also increases risk of:**
 - heart problems, including heart attacks,
 - diabetes,
 - joint pain,
 - infections, and
 - some cancers.



How excess sugar hurts the brain:

1. Directly inflames the brain
2. Increases the amount of the A-beta problem protein in the brain implicated in Alzheimer's disease and other cognitive problems,
3. Creates pre-diabetes (insulin resistance) which then **shrinks the brain's hippocampus.**
 - The hippocampus is the part of our brain where our short term memories and spatial memories are made,
4. Causes our bodies to make a lot of "bad" sLDL cholesterol and fat, which indirectly can harm brain; excess sugar also decreases the "good" HDL cholesterol. DiNicolantonio JJ. Editorial. Open Heart 2014;1: doi:10.1136/openhrt-2013-000032

We are NOT suggesting we eliminate all sugar. Some sugars are a natural part of fruit, beans, nuts, seeds, or sweet vegetables (e.g. sweet potato, carrots, beets), that come along with very important nutrients, which are themselves brain healthy. **However too much total sugar is still to be avoided, in any form.** The easiest way is to avoid processed foods and added refined sugars. **Limit the daily amount of fruits, especially fruit juices.** Limit fruits to about 5-6 fruit servings a day including no more than 4-6 oz. of fruit juice, to assure we don't take in too much sugar. Avoid fruit juice that isn't 100% fruit juice! (Check the label and avoid "fruit cocktail" and added sugars).

To help your body process the sugar you do eat (and prevent insulin resistance & inflammation): Eat more vegetables, spices and herbs, beans, nuts and seeds, whole grains, fish, seafood and fish oil.



EAT DARK CHOCOLATE TO HELP SAVE YOUR BRAIN © 2013 HeathCare Insights, LLC

A message from brain health expert, Dr. Nancy Emerson Lombardo, from her Memory Preservation Program®

Dr. Nancy says dark chocolate is good for you, particularly your brain and heart. Dark chocolate appears to counter many of the ways sugar hurts our brains and bodies. Make sure the chocolate has at least 60-70% cocoa solids. Even though the other 30% is cocoa butter and sugar, the cocoa solids will reduce your blood sugar.

Eat dark chocolate in moderation, which means about 1 to 1.6 oz (1/2 of a typical large chocolate bar), per day = 170-230 calories. Eating too much of even dark chocolate may decrease the benefits as it may add too much sugar and calories to your diet, or reduce other healthy food intake. People with migraines or sensitivity to caffeine need to be wary since chocolate can trigger headaches or wakefulness. It is also poisonous to dogs.

Some of the benefits of dark chocolate and pure cocoa powder:

1) Dark Chocolate/cocoa powder contain some of the most potent beneficial antioxidants



- promotes blood flow in the heart and arteries,
- lower blood pressure,
- lowers LDL ("bad") cholesterol, (& helps prevent its oxidation)
- controls blood sugar,
- improves health of endothelial cells,
- lowers risk of stroke,
- lowers inflammation.



which:

2) Heart and stroke benefits: Helps prevent cardiovascular disease. Zomer E, Owen A, Mgliano DJ, Liew D, Reid CM. "The effectiveness and cost effectiveness of dark chocolate consumption as prevention therapy in people at high risk of cardiovascular disease: best case scenario analysis using a Markov model." *BMJ* 2012; 344 doi: <http://dx.doi.org/10.1136/bmj.e3657> (Published 31 May 2012)

3) Dark chocolate increases cognitive performance when studied in an elderly population, improves mood. (<http://jn.nutrition.org/content/139/1/120.long> & Scholey A, Owen L. Effects of chocolate on cognitive function and mood: a systematic review. *Nutr Rev.* 2013 Oct;71(10):665-81. doi: 10.1111/nure.12065.)

4) Contains important minerals for the brain and body health such as magnesium, calcium, and potassium. Magnesium for example, is essential for emotional health. Magnesium is also important in energy production, muscle contractions, and strong bones. Magnesium also helps relax muscles.

5) Dark chocolate can protect nerves from injury and inflammation. (Katz DL, Douglas K, Ali Cocoa and chocolate in human health and disease. *Antioxid Redox Signal.* 2011 Nov 15;15(10):2779-811. doi: 10.1089/ars.2010.3697. Epub 2011 Jun 13. A.)

6) Heart health: Clinical research trials suggest that dark chocolate and pure cocoa are as powerful as spices, tea, red wine, and berries in enhancing some aspects of heart health. Most of the health benefits from dark chocolate come from the potent antioxidant phyto-nutrients it contains. The antioxidant potency of pure natural cocoa powder (using ORAC values) is about the same per weight as several dried herbs such as basil and parsley, and about 1/3 that of several ground spices such as cinnamon, cloves and nutmeg.

7) **Dark Chocolate's benefit for the brain** is both direct through reduced inflammation, and indirect, through improved heart and blood sugar-related health.

8) Combine dark chocolate with nuts, fruits, spices and other brain healthy foods to maximize benefits!