

# On My Mind: Sugar and mental health



Few people leave my office without the advice to rigorously reduce their sugar and starch intake and to eat more fruits, vegetables, nuts, and fish. I give this advice mostly because time after time, I see people who, when they come close to eliminating sweets, sugar, and things like white bread, potatoes, corn, pasta, and alcohol, all of which turn quickly into sugar during digestion, feel markedly more fit, both physically and psychologically. The fact that this approach is the best way to lose weight is a nice side benefit, but that is not my main concern. Sugar promotes inflammation in the body and brain, and there is good evidence that inflammation adversely affects mood, anxiety, and memory. Many people who change their diets feel more energetic, have less muscular skeletal pain, and notice that they are thinking more clearly. For some it also dramatically improves mood.

We have long known that lower carbohydrate diets are beneficial to the heart, immune system, and overall bodily health, but there is increasing evidence that they also benefit the brain. In the best-designed and largest study of dietary

changes as treatment of depression to date, 67 people with moderate to severe depression were randomly assigned to treatment as usual or a diet low in simple carbohydrates and starch and high in vegetables, nuts, fruit, lean meat, and seafood. The 12-week study, called the SMILES trial, found that people who ate this modified Mediterranean diet had a decline in depression that matched or exceeded the response to many medications. And the people who had the poorest diets — that is, diets filled with “white foods” like bread, pasta, pizza, and baked goods, had the most robust antidepressant response when they changed to more colorful, whole food diets. Animal and human studies suggest that high levels of sugar cause inflammation in the brain and are actually toxic to brain cells. As a physician, I find it gratifying to encourage patients to make easy lifestyle changes that, while entirely safe and without the negative side effects so often associated with medications, can be so powerful.

Large studies have found a correlation between depression and the consumption of diets high in carbs, sugar, and processed foods. (See two here: [bit.ly/CarbsSugar](https://bit.ly/CarbsSugar) and [bit.ly/DietMood](https://bit.ly/DietMood).) Many people report that when they eat sugar and carbs, they feel an immediate boost in their moods. This is probably why such foods are often referred to as “comfort foods.” But my experience and the results of numerous studies suggest that, as is true with the consumption of alcohol and other drugs, the long-term effect is the opposite. It appears that the brain spends the feel-good chemicals up front, and then they are depleted. Also, like alcohol and drugs, sugar and foods that turn quickly to sugar can stimulate the reward centers in the brain, and for some people they become addicting. Following the same pattern as other habit-forming substances, the more of these foods that people consume, the more they want. The opposite is also true: The less they consume, the more their cravings for such foods subside.

In his [book](#), “Grain Brain: The Surprising Truth About Wheat, Carbs, and Sugar — Your Brain’s Silent Killers,” neurologist Dr. David Perlmutter states that a high-fat, nearly carbohydrate-free diet can prevent or greatly lower dementia risk and progression. He presents considerable evidence that supports the idea that people with higher levels of sugar in their blood have a higher risk of brain atrophy and dementia, and their brains are less capable of repairing themselves. While he points out that the studies are not conclusive for cause and effect, he makes the good point that “we know that a lower-carbohydrate diet is the right choice for the heart and the immune system. There’s no downside to it.” Among others, he cites two important studies:

A study published in August 2013 in the New England Journal of Medicine (NEJM) followed more than 2,000 individuals, and found “that even subtle elevations of fasting blood sugar translate to dramatically increased risk for dementia ... the conclusion results suggest that higher glucose levels may be a risk factor for dementia, even among persons without diabetes.”

Second, “The Mayo Clinic published a study in the Journal of Alzheimer’s Disease in 2012 demonstrating that in individuals favoring a high-carb diet, risk for mild cognitive impairment was increased by 89 percent, contrasted to those who ate a high-fat diet, whose risk was decreased by 44 percent.”

One of the frustrating things about being a doctor is that sometimes we give advice based on what we know at the time, which later turns out to be wrong. For years doctors prescribed hormone replacement therapy for menopausal and postmenopausal women. Then it turned out that this treatment caused increased rates of cancer. Most doctors stopped prescribing it, but now it turns out that for some women, hormone replacement therapy is actually safe and beneficial. Similarly, doctors played a major role in creating the largest opioid epidemic in history by promoting Oxycontin as a safe and non addicting source of long-term pain control. Now we know that drugs like Oxycontin have very limited value in controlling pain, and that they are highly addictive to some people. And for years, doctors promoted a high carbohydrate, low-fat diet for weight control. That advice spawned an epidemic of obesity. So the question arises: Is the low sugar/carb diet just another fad that in the long run may be proven wrong? Are we embarking on another large-scale experiment for which there is insufficient evidence?

I don’t think so. The whole food diet — a diet of unprocessed, natural, complex, high-nutritional food that is naturally available — is a return to the way we ate for millenium, up until about a century ago, when our consumption of sugar and carbohydrates skyrocketed. Modern grains are high in starch and low in nutrition. They didn’t exist or were eaten in far smaller quantities for most of human history. And as for refined sugar, it was a rare and luxurious commodity, consumed very sparingly.

If you want to lower your risk of depression and dementia by decreasing sugar, here are some things to keep in mind. Remember, the starches, bread, pasta, and other products made from potatoes, corn, rice, and wheat are quickly turned into sugar. Whole grains are better than refined grains. Ancient grains are probably better than modern grains. But even brown rice and blue corn products, which are

more nutritious than their white cousins, raise blood sugar levels quickly. Perhaps counterintuitively, fruit is better, because it is digested more slowly than processed sweets, and sugar levels in the body do not spike as quickly. But a glass of orange juice is probably not much better than a can of soda. And as for beer and other alcoholic beverages? They're just carbs. Also remember that processed food such as ketchup, tomato sauce, and baby food are usually loaded with added sugar. What's more, all of the supposedly "healthy" sources of sugar (honey, agave syrup, maple syrup, molasses) are, when it comes down to it, fundamentally just sugar all the same.

Telling people what they shouldn't be doing rarely works very well in changing behavior. Instead, some positive suggestions: Enjoy fruits and vegetables and healthy fats found in olive oil, nuts, and avocados; if you eat meat and dairy, try to eat grass-fed meat, eggs, and milk, which, along with fish, is filled with healthy fats that have an anti-inflammatory effect. In addition, keep in mind that ancient grains such as buckwheat, quinoa, and amaranth are much lower than wheat in simple carbs. Also, the closer a grain is to its actual form on the stem — whole or steel-cut oats as opposed to rolled, for example — the more nutritious it is, and the more slowly it will convert to sugar in your body.

There have been many times in the history of medicine when doctors and researchers have tried medications and other treatments in order to test them and better understand what their patients are experiencing. There are obvious pros and cons. But this is one experiment for which there seem to be no cons. So truth in advertising: I have followed this protocol for a few years now. I find that I have more energy, get sick less often, feel more comfortable in my body, and believe that I think more clearly as a result. More studies of this approach are being done. But in the meantime, the risk is low, and the potential benefits are huge. It's worth a try.

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