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How to Raise or Lower Your Dementia Risk Through Diet

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STORY AT-A-GLANCE

- A high-fat, moderate-protein, low net-carb ketogenic diet is crucial for preventing degeneration that can lead to Alzheimer's. High-carb diets have been shown to increase your risk of dementia by 89% while high-fat diets lower it by 44%
- Other research highlights the importance of eating a diet rich in flavonols — antioxidants found in fruits, vegetables and tea. Those who got the highest amounts of flavonols had a 48% lower risk of developing Alzheimer's than those getting the lowest amounts
- Drinking tea three times or more per week also lowers your risk of cardiovascular disease and all-cause mortality. A 50-year-old habitual tea drinker would develop heart disease and/or have a stroke 1.41 years later than someone who drinks it less frequently, and live 1.26 years longer
- Diets high in trans fats, refined sugar, grains and processed vegetable oils, as well as insufficient cholesterol, raise your risk of dementia
- Diets high in trans fats can raise your risk of dementia by 52% to 74%. The biggest dietary culprits include pastries, margarine, candy, caramels, croissants, nondairy creamers, ice cream and rice cakes

According to statistics released in 2022, Alzheimer's disease — the most common form of dementia for which there is no effective conventional treatment or cure — affects an estimated 6 million Americans,[1] up from 5.4 million in 2016.

Progression of Alzheimer's disease varies, but often begins with short-term memory lapses that later progress to speech problems and trouble with executive functions.

Your Diet Plays a Significant Role in Dementia

While it's never too early to start, if your memory slips frequently enough to raise even an inkling of concern, it's time to take action. A high-fat, moderate-protein, low net-carb ketogenic diet is crucial for protecting your brain health and preventing degeneration that can lead to Alzheimer's.

One of the most striking studies[2] showing the effects of a high-fat/low-carb versus high-carb diets on brain health revealed that high-carb diets increase your risk of dementia by 89%, while high-fat diets lower it by 44%.

According to the authors, "A dietary pattern with relatively high caloric intake from carbohydrates and low caloric intake from fat and proteins may increase the risk of mild cognitive impairment or dementia in elderly persons." Other research[3,4] highlights the importance of eating a diet rich in flavonols — antioxidants found in fruits, vegetables and tea. As reported by Reuters:[5]

> *"Researchers followed 921 people without dementia for about six years, starting when they 81 years old, on average. During the study, 220 people were diagnosed with probable Alzheimer's disease.*
>
> *People who had the most flavonols in their diet were about half as likely to develop Alzheimer's than those who consumed the least ... While 15% of people who ate the most flavonol developed Alzheimer's disease, this rose to 54% among those who consumed the least.*
>
> *This difference remained even after researchers accounted for other risk factors for Alzheimer's like diabetes, a prior heart attack or stroke, or high blood pressure ..."*

Overall, people in the lowest quintile got about 5.3 milligrams of flavonols per day on average, while the highest intake group got about 15.3 mg per day. Those who got the highest amounts of flavonols had a 48% lower risk of developing Alzheimer's than those getting the lowest amounts.

Some Flavonols Are More Potent Than Others

The researchers were particularly interested in whether specific flavonols might offer better protection than others. To determine this, they tallied participants' intake of:

- Kaempferol
- Quercetin
- Myricetin
- Isorhamnetin

Kaempferol came out a clear winner in this regard. Those with the highest consumption of kaempferol had a 51% lower risk of dementia, while the highest intakes of isorhamnetin and myricetin were linked to a 38% lower risk. Quercetin, a powerful antiviral and immune booster, did not appear to have any impact on Alzheimer's risk.

Tea Drinkers Live Longer

In related news, a January 2020 study[6] in the European Journal of Preventive Cardiology found habitual tea consumption (three times or more per week) helps lower your risk of cardiovascular disease and all-cause mortality.

Overall, the findings suggest a 50-year-old who drinks tea at least three times a week would develop heart disease and/or have a stroke 1.41 years later than someone who drinks it less frequently. Overall, they'd also live 1.26 years longer than someone who didn't regularly drink tea. As reported by Science Daily:[7]

> *"Compared with never or non-habitual tea drinkers, habitual tea consumers had a 20% lower risk of incident heart disease and stroke, 22% lower risk of fatal heart disease and stroke, and 15% decreased risk of all-cause death."*

How a Ketogenic Diet Protects Your Brain Function

Getting back to the ketogenic diet, it has the ability to lower your dementia risk in a number of ways. For starters, a cyclical ketogenic diet will improve your insulin sensitivity, which is an important factor in Alzheimer's.[8] The link between insulin sensitivity and Alzheimer's is so strong, the disease is sometimes referred to as Type 3 diabetes.

Even mild elevation of blood sugar is associated with an elevated risk for dementia.[9] Diabetes and heart disease[10] are also known to elevate your risk, and both are rooted in insulin resistance. For optimal health, you'll want to keep your insulin level below 3 mcU/ml (fasting).

The connection between high-sugar diets and Alzheimer's was highlighted in a decadelong study published in the journal Diabetologia in January 2018,[11] which showed that the higher your blood sugar, the faster your rate of cognitive decline.

Studies have also confirmed that the greater an individual's insulin resistance, the less sugar they have in key parts of their brain, and these areas typically correspond to the areas affected by Alzheimer's.[12,13]

A cyclical ketogenic diet will also trigger your body to produce ketones, an important source of energy (fuel) for your brain[14] that have been shown to help prevent brain atrophy and alleviate symptoms of Alzheimer's.[15] Ketones may even restore and renew neuron and nerve function in your brain after damage has set in.

Last but not least, a cyclical ketogenic diet helps reduce free radical damage and lower inflammation in your brain. This too is largely the result of ketones, as they generate fewer reactive oxygen species and less free radical damage than carbohydrates.

A ketone called beta hydroxybutyrate is also a major epigenetic player, stimulating radical decreases in oxidative stress by decreasing NF-kB, thus reducing inflammation and NADPH levels along with beneficial changes in DNA expression that improve your detoxification and antioxidant production.

I explain the ins and outs of implementing this kind of diet, and its many health benefits, in my "KetoFast" book. In it, I also explain why cycling through stages of feast and famine, opposed to continuously remaining in nutritional ketosis, is so important.

(For clarity, a ketogenic diet tends to be very high in both healthy fats and vegetables. There is in fact no limit to the vegetable carbs you can eat. There's also no restriction on tea.

The only area where prudence might be needed is when it comes to fruits, as some are very high in fructose. Fructose, even from fruit, needs to be restricted in the earlier stages until you've successfully transitioned into burning fat as your primary fuel. For guidance on what fats to eat more of, see the Fats section of my free nutrition plan.)

Trans Fats Raise Your Risk of Alzheimer's

While diets high in healthy fats and antioxidants can go a long way toward warding off dementia, diets high in trans fats, refined sugar and grains do the opposite. Research[16] published in the October 2019 issue of Neurology found a strong link between trans fat consumption and incidence of dementia and its various subtypes, including Alzheimer's.

The study included 1,628 Japanese seniors aged 60 and older. None had dementia at the outset of the study, which went on for 10 years. Levels of elaidic acid — a biomarker for industrial trans fat — in the participants' blood were measured using gas chromatography/mass spectrometry.

Based on those levels, the hazard ratios for all-cause dementia, Alzheimer's and vascular dementia were calculated using Cox proportional hazards model. As reported by the authors:[17]

> *"Higher serum elaidic acid levels were significantly associated with greater risk of developing all-cause dementia and AD [Alzheimer's disease] after adjustment for traditional risk factors.*
>
> *These associations remained significant after adjustment for dietary factors, including total energy intake and intakes of saturated and polyunsaturated fatty acids."*

This increase in risk was not slight. As reported by CNN,[18] people in the highest quartile of elaidic acid levels were 74% more likely to develop dementia. Those in the second-highest quartile had a 52% higher risk.

Of the various processed foods found to contribute to elevated elaidic acid levels, pastries were the biggest contributors, followed by margarine, candy, caramels, croissants, nondairy creamers, ice cream and rice crackers.[19]

Oxidized Omega-6 — Another Harmful Fat to Stay Clear Of

While it's clearly important to avoid trans fat, processed oils are the primary culprit in most Western diseases.

This is largely related to the oxidized omega-6 fat found in them, which may actually be even worse than trans fat. Now, omega-6 fat (linolenic acid) in and of itself is not the problem. Linoleic acid is also found in foods such as nuts, seeds and eggs, and is important for health. The problem is oxidized omega-6 fat, and the fact that most people eat far too much of it.

For years, I've stressed the importance of balancing your omega-3 to omega-6 intake to protect your health. Ideally, get an omega-3 index test done once a year to make sure you're in a healthy range. Your omega-3 index should be above 8% and your omega 6-to-3 ratio between 0.5 and 3.0. To correct a lopsided omega-3 to omega-6 ratio, you typically need to:

1. Significantly decrease intake of damaged omega-6 by avoiding processed foods and foods cooked in vegetable oil at high temperatures. Common sources of harmful omega-6 include corn oil, canola oil, soy oil, hydrogenated or partially hydrogenated fats, margarine and shortening.

2. Increase your intake of animal-based omega-3 fats from sardines, anchovies, herring and wild-caught Alaskan salmon, or take a supplement such as krill oil, all of which provide you with DHA bound to phospholipids.

   Research[20,21] suggests DHA bound to phospholipids (not triglycerides, which is what you find in most fish oil supplements) may be particularly important for those with the APOE4 gene, which predisposes them to Alzheimer's.

Low Cholesterol Can Impact Your Dementia Risk

Another dietary factor that has been shown to influence your risk for Alzheimer's is **low cholesterol**. While there are many warnings about high total cholesterol, low levels can have equally serious repercussions. In fact, a number of studies have demonstrated the importance of higher cholesterol for the prevention of Alzheimer's specifically.

According to senior research scientist Stephanie Seneff, Ph.D., insufficient fat and cholesterol in your brain play a crucial role in the Alzheimer's disease process, detailed in her 2009 paper[22] "APOE-4: The Clue to Why Low Fat Diet and Statins May Cause Alzheimer's." A 2014 study[23] in JAMA Neurology came to a similar conclusion, stating that:

> *"Cholesterol, vital to neuronal structure and function, has important roles in the synthesis, deposition, and clearance of β-amyloid (Aβ) and may have a pathogenic role in Alzheimer disease (AD) ... There are also important connections among apolipoprotein E (APOE), Aβ, and cholesterol.*
>
> *A strong genetic risk factor for AD, the APOE ε4 allele is associated with earlier and higher deposition of Aβ. APOE is the primary transporter of cholesterol in the brain, and its isoforms differentially modulate brain cholesterol levels."*

Here, the researchers found that higher levels of HDL and lower levels of LDL were associated with a reduced risk for amyloid plaque deposits in the brain, and these findings were independent of age and presence of the APOE4 gene. Study co-author Dr. Charles DeCarli, a professor of neurology at UC Davis and director of the UC Davis Alzheimer's Disease Center, offered the following advice, based on the results:[24]

> *"If you have an LDL above 100 or an HDL that is less than 40 ... you want to make sure that you're getting those numbers into alignment. You have to get the HDL up and the LDL down."*

That said, research[25] published in 2008 found that elderly individuals who were not genetically predisposed to Alzheimer's disease who had the highest levels of cholesterol — including the highest levels of LDL — had the best memory, so the verdict is still out on whether high LDL is a significant risk factor.

Healthy Eating Habits Protect Your Brain Function

To summarize the key dietary factors reviewed here, diets high in healthy fats, omega-3 DHA bound to phospholipids, and flavonols from fruits, vegetables and tea, will help protect against Alzheimer's.

Dietary factors that deteriorate brain health and raise your dementia risk include diets high in refined sugar, grains, trans fats, industrially processed vegetable oils (high in damaged omega-6) and insufficient cholesterol.

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