

COMMENTARY

Diet and Cognitive Decline: Untangling the Evidence

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My name is Richard Isaacson, and I direct the Alzheimer's Prevention Clinic at Weill Cornell Medicine, New York-Presbyterian Hospital. When it comes to diet, brain health, and Alzheimer disease, what's the deal? Is there evidence that you are what you eat when it comes to brain health?

Over the past several years, the development of evidence and scientific progress has been astounding. There are two different types of nutritional categories [that have been gaining attention]. One is the type of dietary pattern that someone follows—for example, the Mediterranean-style diet or ketogenic diet. Second, I'm sure you've heard about caloric restriction and even, most recently, the Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) diet.

When it comes to single or multiple nutrients, the evidence has also exploded. For example, omega-3 fatty acids or E vitamins, curcumin, vitamin D, and caffeinated foods: These are all different dietary components that may or may not play a role in development of Alzheimer disease. You've heard about the Mediterranean-style diet, and by far there's a lot of evidence that this diet may reduce a person's risk of developing Alzheimer's and cognitive impairment over time.

Recently, Dr Martha Clare Morris and her colleagues from Rush University presented a great paper that studied very specific brain-healthy eating patterns, which she calls the MIND diet, with the results suggesting a reduction in the likelihood of developing cognitive impairment significantly over several years.^[1,2]

When it comes to single- and multi-nutrients, that's a little more confusing. For example, omega-3 fatty acids: First of all, not all omega-3's are created equal. DHA and EPA have the most evidence for reducing a person's risk of developing cognitive decline. The key here is that certain people with different genes may respond preferentially; people with an *ApoE4* gene may respond favorably while people without that gene may respond less.

When it comes to Alzheimer's treatment, those omega-3's didn't pan out in terms of randomized studies, but omega-3's used for Alzheimer's prevention or risk reduction are something we want to think about.

Also, when it comes to personalized medicine based on genes, we can focus on Alzheimer disease in a new area called clinical precision medicine, where we look not only at genetics, but also at people's individual biologies, nutritional patterns, and lifestyle patterns, and then give a clinically precise approach for treatment or prevention. For example, if a person has high homocysteine levels, then B complex vitamins—folic acid, B₁₂, and B₆—in randomized studies have been shown to slow overall brain atrophy as well as increase memory function. The key take-home point here is that B complex therapy only works in patients who have high homocysteine levels and those who have an adequate level of omega-3's in the blood. So you can see how things are complicated.

When it comes to blueberries, you've heard about flavonols. Dark cocoa powder may be effective for boosting memory. You can't just eat one blueberry and think you're going to prevent or cure Alzheimer disease—it doesn't work that way. But in the Nurses' Health Study,^[3] a half a cup of blueberries two to three times a week was shown to delay the onset of cognitive decline.

The key here is that nutrition is complicated and there isn't a perfect brain-healthy diet for one person, but people can take a variety of steps to change what they eat, which can result in incremental benefits over time. Thanks.

References

1. Morris MC, Tangney CC, Wang Y, et al. MIND diet slows cognitive decline with aging. *Alzheimers Dement*. 2015;11:1015-1022.
2. Morris MC, Tangney CC, Wang Y, et al. MIND diet associated with reduced incidence of Alzheimer's disease.

Alzheimers Dement. 2015;11:1007-1014.

3. Devore EE, Kang JH, Breteler MM, Grodstein F. Dietary intakes of berries and flavonoids in relation to cognitive decline. *Ann Neurol*. 2012;72:135-143. [Abstract](#)

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