

New MIND diet may significantly protect against Alzheimer's disease

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Diagram of the brain of a person with Alzheimer's Disease. Credit: Wikipedia/public domain.

A new diet, appropriately known by the acronym MIND, could significantly lower a person's risk of developing Alzheimer's disease, even if the diet is not meticulously followed, according to a paper published online for subscribers in March in the journal *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*.

Rush nutritional epidemiologist Martha Clare Morris, PhD, and colleagues developed the "Mediterranean-DASH Intervention for Neurodegenerative Delay" (MIND) diet. The study shows that the MIND diet lowered the risk of AD by as much as 53 percent in participants who

adhered to the diet rigorously, and by about 35 percent in those who followed it moderately well.

"One of the more exciting things about this is that people who adhered even moderately to the MIND diet had a reduction in their risk for AD," said Morris, a Rush professor, assistant provost for Community Research, and director of Nutrition and Nutritional Epidemiology. "I think that will motivate people."

Morris and her colleagues developed the MIND diet based on information that has accrued from years' worth of past research about what foods and nutrients have good, and bad, effects on the functioning of the brain over time. This is the first study to relate the MIND diet to Alzheimer's disease.

"I was so very pleased to see the outcome we got from the new diet," she said.

The MIND diet is a hybrid of the Mediterranean and DASH (Dietary Approaches to Stop Hypertension) diets, both of which have been found to reduce the risk of cardiovascular conditions, like hypertension, heart attack and stroke. Some researchers have found that the two older diets provide protection against dementia as well.

In the latest study, the MIND diet was compared with the two other diets. People with high adherence to the DASH and Mediterranean diets also had reductions in AD—39 percent with the DASH diet and 54 percent with the Mediterranean diet—but got negligible benefits from moderate adherence to either of the two other diets.

The MIND diet is also easier to follow than, say, the Mediterranean diet, which calls for daily consumption of fish and 3-4 daily servings of each of fruits and vegetables, Morris said.

The MIND diet has 15 dietary components, including 10 "brain-healthy food groups"—green leafy vegetables, other vegetables, nuts, berries, beans, whole grains, fish, poultry, olive oil and wine—and five unhealthy groups that comprise red meats, butter and stick margarine, cheese, pastries and sweets, and fried or fast food.

With the MIND diet, a person who eats at least three servings of whole grains, a salad and one other vegetable every day—along with a glass of wine—snacks most days on nuts, has beans every other day or so, eats poultry and berries at least twice a week and fish at least once a week and benefit. However, he or she must limit intake of the designated unhealthy foods, especially butter (less than 1 tablespoon a day), cheese, and fried or fast food (less than a serving a week for any of the three), to have a real shot at avoiding the devastating effects of AD, according to the study.

Berries are the only fruit specifically to make the MIND diet.

"Blueberries are one of the more potent foods in terms of protecting the brain," Morris said, and strawberries have also performed well in past studies of the effect of food on cognitive function.

The MIND diet was not an intervention in this study, however; researchers looked at what people were already eating. Participants earned points if they ate brain-healthy foods frequently and avoided unhealthy foods. The one exception was that participants got one point if they said olive oil was the primary oil used in their homes.

The study enlisted volunteers already participating in the ongoing Rush Memory and Aging Project (MAP), which began in 1997 among residents of Chicago-area retirement communities and senior public housing complexes. An optional "food frequency questionnaire" was added from 2004 to February 2013, and the MIND diet study looked at results for 923 volunteers. A total of 144 cases of AD developed in this

cohort.

AD, which takes a devastating toll on cognitive function, is not unlike heart disease in that there appear to be "many factors that play into who gets the disease," including behavioral, environmental and genetic components, Dr. Morris said.

"With late-onset AD, with that older group of people, genetic risk factors are a small piece of the picture," she said. Past studies have yielded evidence that suggests that what we eat may play a significant role in determining who gets AD and who doesn't, Morris said.

When the researchers in the new study left out of the analyses those participants who changed their diets somewhere along the line—say, on a doctor's orders after a stroke—they found that "the association became stronger between the MIND diet and [favorable] outcomes" in terms of AD, Morris said. "That probably means that people who eat this diet consistently over the years get the best protection."

In other words, it looks like the longer a person eats the MIND diet, the less risk that person will have of developing AD, Morris said. As is the case with many health-related habits, including physical exercise, she said, "You'll be healthier if you've been doing the right thing for a long time."

Morris said, "We devised a diet and it worked in this Chicago study. The results need to be confirmed by other investigators in different populations and also through randomized trials." That is the best way to establish a cause-and-effect relationship between the MIND diet and reductions in the incidence of Alzheimer's disease, she said.

Provided by Rush University Medical Center

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