

Food for Thought

Considering the benefits of the Mediterranean diet on brain health.

BY AMY PATUREL, M.S., M.P.H.

It seems like every week, a new study links a Mediterranean-style diet—fruits, vegetables, fish, nuts, olive oil, a daily glass of red wine—to better health. Many experts suggest the diet can prevent diseases ranging from heart attack to stroke. Eating this way has been shown to reduce inflammation in the body, protect against various kinds of cell damage, lower blood pressure, and improve cholesterol levels.

“And many heart-related conditions are linked to cognitive impairment,” says Nikolaos Scarmeas, M.D., M.Sc., associate professor of neurology, Columbia University–National and Kapodistrian University of Athens, Greece. In 2006, Dr. Scarmeas and his team of researchers showed that following a Mediterranean diet not only protected against Alzheimer’s disease (AD), but also enabled patients who have AD to live an average of four years longer. The more closely the subjects adhered to the diet, the greater the benefit.

Now, a new crop of studies lends weight to previous findings suggesting that eating the Mediterranean way may help stave off heart attack, stroke, and cognitive decline.

NEW EVIDENCE

A 2013 study published in *Neurology*,[®] the medical journal of the American Academy of Neurology, offers evidence that following a Mediterranean diet may help protect the brain. Researchers followed more than 17,000 people enrolled in the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study from 2003 to 2007 and found that those who had a higher adherence to a Mediterranean diet reduced their risk of thinking and memory problems by 19 percent.

That’s especially important because



HEALTHY PLATE Fish and greens are common Mediterranean ingredients.

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few effective treatments exist for cognitive impairment, dementia, and AD, according to study author Georgios Tsivgoulis, M.D., assistant professor of neurology at the University of Athens, Greece, and adjunct assistant professor of neurology at the University of Alabama at Birmingham. Right now, our best tool may be to delay the onset of these conditions as long as possible, Dr. Tsivgoulis suggests.

Interestingly, following a Mediterranean diet did not benefit people in the study with diabetes (the study didn't specify whether these people had type 1 or type 2 diabetes). Researchers think this finding may be due to the fact that people with diabetes have a reduced ability to clear amyloid proteins in the brain. The accumulation of amyloid has been linked in some studies to AD.

A second study published in *The New England Journal of Medicine* (NEJM) earlier this year had the media buzzing that Mediterranean-style eating can prevent heart attack and stroke. Researchers randomly assigned participants who were at high cardiovascular risk, but with no cardiovascular disease, to one of three diets: a Mediterranean diet supplemented with extra-virgin olive oil, a Mediterranean diet supplemented with mixed nuts, or a control group, which followed a low-fat diet. The two Mediterranean diets consisted of abundant amounts of fruits and vegetables each day, at least three weekly servings of fish, and a restricted amount of red meat, high-fat dairy, and sweets. Both Mediterranean diets also included some extra-virgin olive oil and nuts. (Weight loss was not a focus of the study, nor was physical activity.)

The results: people who followed either of the two Mediterranean diets had a striking 30 percent lower risk of heart disease and stroke than those who followed the low-fat diet.

Mediterranean Shopping List

There is no one Mediterranean diet. In fact, different places around the Mediterranean have different dietary patterns. But experts recommend filling your plate with the following staples, which have a place in many Mediterranean kitchens:

FISH This nutritional powerhouse boasts heart- and brain-healthy omega-3 fatty acids, high-quality protein, and important minerals, including iron and zinc. Shoot for three to four ounces of fatty fish, two to three times a week.

On your list: salmon, herring, mackerel, and other cold-water fish.

FRUITS AND VEGETABLES Countless studies link consumption of fruits and vegetables to a lower risk of disease and premature death. These nutrient-rich gems are loaded with antioxidant and anti-inflammatory compounds. Polyphenols, for example, are plant chemicals that eliminate damaging free radicals in the body. In addition to their antioxidant and anti-inflammatory properties, polyphenols help reduce cholesterol, prevent blood clots, lower blood pressure—and have been linked to lower risk of cancer. Aim for at least nine servings of vegetables or fruits daily.

On your list: leafy greens like kale, spinach, Brussels sprouts, and collard greens, as well as deeply hued produce like eggplant, bell peppers, tomatoes, blueberries, strawberries, and blackberries.

OLIVE OIL In addition to being a healthful monounsaturated fat, olive oil is another vehicle for polyphenols. Shoot for two to three tablespoons daily.

On your list: extra virgin olive oil. It goes through less refining and processing and thus retains more nutrients than standard varieties.

NUTS They are jam-packed with inflammation-fighting monounsaturated fat, which may be why the U.S. Food and Drug Administration recommends people eat 1.5 ounces of nuts daily (one ounce is about one handful).

On your list: walnuts, pine nuts, pistachios, and almonds. Mediterranean fare features these nuts in everything from salads and pilafs to main dishes and desserts.

BEANS Bursting with fiber and protein, beans provide sustained energy and keep blood-sugar levels on even keel. And they're loaded with polyphenols.

On your list: red kidney beans and pinto beans. Both of these varieties rank in the top four of the U.S. Department of Agriculture's list of top antioxidant-containing foods.

WINE It contains anti-inflammatory properties, and the red varieties boast high concentrations of polyphenols.

On your list: red wine. People who don't consume alcohol probably shouldn't start. But if you do like an occasional glass of wine, go for red—it packs a greater health punch than white thanks to a higher concentration of polyphenols. Experts recommend no more than one glass of wine per day for women and two for men. And keep in mind that people become much more susceptible to the toxic effects of alcohol as they age. Falling down after a glass of wine could very quickly wipe out any benefits.

Following a Mediterranean diet may lower risk of heart disease and stroke in several ways, explains Dr. Scarmeas, especially through anti-inflammatory and antioxidant effects. Inflammation and oxidation are involved in many disease states. Inflammation often occurs in the body after injury and infection, but it can also occur as the result of diet. Oxidation—which is triggered by exposure

to pollutants, chemicals, stress, and certain foods—is like a rusting of cells and tissues.

Some experts who looked at the study results say the nuts and olive oil were responsible for the heart-healthy effects, based on the fact that all three diets contained roughly the same amount of fat.

“The authors of the study acknowledged that maybe it's not the diet but



rather those two components, the nuts and extra virgin olive oil, that were responsible for the benefits,” explains David Knopman, M.D., professor of neurology at the Mayo Clinic in Rochester, Minnesota, deputy editor of the journal *Neurology*, and AAN member.

THE LIFE OF A DIET

While these new studies seem to back the benefits of Mediterranean fare, plenty of questions remain. Researchers still aren't clear whether the beneficial effects are due to the presence of certain Mediterranean staples (such as nuts, olive oil, fish, fruits, and vegetables), by the absence of foods not typically included in a Mediterranean-style diet (excessive amounts of meat, high-fat dairy, and sugar), or by following a broader set of healthy behaviors typical for people who follow this type of diet (such as regular physical activity, avoidance of smoking, and reduced stress levels). Maybe the benefits are due to a combination of these factors.

It's also not clear how long a person must adopt a Mediterranean diet to reap the rewards. According to Dr. Knopman, a few years' worth of olive oil, nuts, and fish may not be enough to undo a lifetime of bacon and donuts. “With conditions such as diabetes and hypertension, for example, the duration of exposure is what's important. It's hard to believe you can turn your diet on a dime and suddenly be healthy,” Dr. Knopman says. “It's a long-term effort.”

Plus, diet is only one piece of the puzzle. Other lifestyle factors, such as avoiding smoking and getting regular physical activity, are also important.

THE MAGIC OF THE MEDITERRANEAN

While there's no solid proof yet regarding the protective effect of a Mediterranean diet on cognition, we have very

strong hints, according to Dr. Scarmeas. “Scientists are only beginning to uncover how important nutrition is not only for the heart and general health, but also for brain function,” he says.

The true magic of the Mediterranean diet may be that it limits red meat, high-fat dairy, and sweets; swaps out butter and lard for healthy fats such as olive oil,

and dismisses processed snacks. What's left? A bevy of fruits, vegetables, and lean protein sources such as fish, nuts, grains, and beans.

Although researchers continue to investigate whether eating Mediterranean can prevent cognitive decline, the consensus is that this heart-healthy diet is balanced, safe—and tastes great.” NN

Life's Simple Seven

Diet is part of a bigger package of health behaviors, embodied in the American Heart Association's (AHA) checklist called “Life's Simple Seven.” In a nationwide study of nearly 18,000 adults, those who adhered to at least five of the following criteria had a 55 percent lower risk of death over five years than those who met none: happiness.

- 1. STOP SMOKING** The AHA calls smoking the most important preventable cause of premature death in the United States. It contributes to plaque buildup in the arteries and reduces blood levels of high-density lipoprotein (HDL, a.k.a., good cholesterol), which makes the blood more likely to clot and cause problems.
- 2. GET ACTIVE** Not only does exercise help you lose (or maintain) weight, it also lowers blood pressure, increases HDL, and helps keep blood sugar levels in check. Exercise relieves stress and has a positive effect on mood. The AHA recommends people exercise moderately for at least 150 minutes per week or vigorously for at least 75 minutes per week.
- 3. EAT BETTER** Fill half of your plate with fruits and vegetables at meals and snacks, swap out butter and lard for healthy fats such as olive oil, and amp up your fish intake. Do all of these three and you'll naturally cut back on calorically dense foods like meat, high-fat dairy, and sugary, processed snacks. (But don't overlook fat-free milk and yogurt as healthy sources of calcium and protein. Try fat-free Greek yogurt with fresh fruit for a healthy Mediterranean snack.)
- 4. MAINTAIN A HEALTHY WEIGHT** Too much fat—especially around the waist—increases the risks of high blood pressure, high cholesterol, and diabetes. Experts recommend that both men and women should keep their waist-to-hip ratio below one.
- 5. REDUCE BLOOD SUGAR** Fasting blood glucose should be below 100 mg/dL of blood.
- 6. MANAGE BLOOD PRESSURE** Blood pressure should be below 120/80 millimeters of mercury.
- 7. CONTROL CHOLESTEROL** Total cholesterol should be below 200 milligrams per deciliter of blood.