Can diet slow the aging process and prolong life?

According to a recent study, the answer may be yes. We all know that the Mediterranean diet is good for health, but there are few studies focusing on the elderly and the aging process.

It’s been touted as the recipe for a healthy life, preventing all manner of ills, including cardiovascular disease (CVD), diabetes and cancer. Now, researchers say a Mediterranean diet still offers benefits in older age, and could reduce the risk of death.

While somewhat nebulous in specific makeup, the diet is typically said to be rich in fish, nuts, fresh vegetables, fruit, olive oil and legumes like peas, beans and lentils.

The study looked at the health and diet of 5,200 individuals aged 65 and over from the Molise region in Italy, who were recruited as part of a larger study between 2005 and 2010, and followed up until 2015, during which time 900 deaths occurred. Participants completed a food questionnaire reflecting their diet in the year before signing up, and each was given a score for how close their diet was to the Mediterranean diet on a 0-9 scale. The results revealed that those who stuck most closely to the Mediterranean diet were also more likely to undertake more physical activity in their free time.

When factors including age, sex, activity levels, socioeconomic status, smoking and BMI were taken into account, those with a high adherence to the diet (scoring 7-9 on the scale) had a 25 percent lower risk of any cause of death than those who only scored 0-3. A one-point increase in adherence to the diet was linked to about a 6 percent drop in the risk of death.

No clear links were seen for specific causes of death, such as cancer or CVD, although there were some signs of a reduction in risk of coronary artery disease or cerebrovascular mortality, and mortality from other causes.

The team also investigated whether particular components of the Mediterranean diet were more strongly linked to a reduction in mortality than others by looking at changes to the reduction in risk of death associated with a two-point increase in adherence to the diet. The results show that even when individual items are removed, the diet almost always remains beneficial. But a rise in saturated fats, or the loss of fish, loss of a moderate amount of alcohol or fewer cereals, appear to have some of the biggest effects in reducing the size of the benefit.

A Mediterranean diet may slow the aging process by five years.
The team notes that the study cannot prove the Mediterranean diet is behind the effect; it only reveals a link. Also, self-reports of food intake can be prone to errors, and participants were only asked once about their diet and other areas of their life. Nonetheless, the findings suggest Mediterranean fare could help older individuals live a longer life.

The findings, they add, were backed up by an analysis that included another six studies focusing on older people which, taken together, suggested a 5 percent drop in risk of death from all causes with every one-point-better adherence to the Mediterranean diet.

**Can the Mediterranean diet protect against stroke in women?**

Yes. A current study confirmed previous findings suggesting that this diet reduces stroke risk. Greater adherence to the Mediterranean diet was associated with lower risk of stroke in a white UK population, according to a new study.

Interestingly, the results were much more pronounced in women than men. Results suggest the Mediterranean diet may be especially protective in women over 40 regardless of menopausal status or hormone replacement therapy.

**Take home for the clinician:** Eat a Mediterranean diet.

**Will aspirin help us avoid a first heart attack?**

The answer is that while it may offer some benefit in select individuals, it will certainly increase your risk of bleeding.

One of the core problems with clinical science is that “positive” studies earn more praise than neutral studies. This is silly, because knowing what does not work is as vital as knowing what does work.

Numerous studies have confirmed that taking a low-dose aspirin (81 mg) every day cuts the chances of another heart attack, stroke or other heart problem in people who’ve already had one. It’s also proven beneficial in those with any other types of vascular disease (peripheral, carotid, etc.)—i.e., for secondary prevention. Fewer studies have addressed primary prevention, and those that did so have included patients at super-low risk.

Although it’s been used for more than a century, aspirin’s value in many situations—especially primary prevention—is still unclear. The latest studies are some of the largest and longest to test this pennies-a-day blood thinner for primary prevention.

**BIG NEWS:** Three trials, two presented at the European Society of Cardiology Congress 2018, and a third just published online in the *New England Journal of Medicine,* inform this decision about aspirin (ASA) to prevent cardiac events in people without known CVD. Since millions of people take ASA in hopes of improving health, this is big news.

**TRIALS:** In *ARRIVE,* more than 12,500 adults with (presumed) moderate risk, but no evident heart disease, were randomized to 100 mg of ASA or placebo, with a mean follow-up of five years. In *ASCEND,* more than 15,000 middle-aged patients with diabetes, but no evident heart disease, were randomized to 100 mg of ASA or placebo, with a mean follow-up of 7.4 years. In the third study, *ASPREE,* about 19,000 people (median age, 74) were randomized to receive aspirin (100 mg) or placebo daily during a median follow-up of 4.7 years. All three studies used composite primary endpoints of major cardiac events and safety endpoints of bleeding.

**RESULTS:** In *ARRIVE,* the intention-to-treat analysis showed no reduction of events with ASA. The total number of events was lower than anticipated. The observed rate of cardiac events was only one-third of what was expected (550 versus 1,488 events). Although the authors tried to enroll higher-risk patients, including only those with multiple risk factors, the cohort ended up being a low-risk group. In *ASCEND,* the authors came to a “no net benefit” conclusion for ASA because its reduction in cardiac events (about 1.1 percent) was countered by bleeding events (0.9 percent). In *ASPREE,* daily ASA not only failed to help generally healthy older individuals reduce their risk of disability-free survival and CVD, it also appeared to raise overall mortality, and particularly death from cancer. The reason for the
excess cancer risk is unclear and the authors urge caution in interpreting these results or coming to any conclusion. Other studies with ASA have shown decreased cancer risk. One could postulate that ASA may have different effects in different age groups.

No cancer prevention signal was seen in ARRIVE. The ASCEND trial found no difference in the rate of GI cancer. But authors from these two trials warned that if ASA prevents cancer, the effects would appear after 10 years of use, which is longer than the average follow-up of either study.

The trials confirmed the biological effect of ASA on bleeding. In ARRIVE, ASA doubled the rate of gastrointestinal (GI) bleeding in relative terms, but by only 0.5 percent in absolute terms. In ASCEND, ASA increased the rate of major bleeding by 29 percent in relative terms and 0.9 percent in absolute terms. Most bleeding was from the GI tract. While in ASPREE, major hemorrhage occurred in 3.8 percent of the participants in the aspirin group, as compared with 2.8 percent of those in the placebo group.

Conclusions

When researchers ask an important question, randomize people into a placebo-controlled trial and collect and report results, society wins—regardless of the findings.

In our view, all these new studies should push the pendulum away from aspirin prophylaxis for primary prevention—at least in moderate-risk patients. Differences between benefits and harms are likely to be razor thin, and balancing one adverse CV event against one bleeding event is not straightforward. For example, a fatal MI is more lethal than a minimally symptomatic gastrointestinal bleed, whereas some bleeding events (e.g., severe intracranial hemorrhage) are more lethal than some ischemic CV events (e.g., transient ischemic attack). Prospectively, we can’t predict which of those outcomes would apply to any given patient.

In moderate-risk patients (ARRIVE) and elderly patients (ASPREE), rather than take ASA, we strongly recommend working hard on risk factor modification—maintaining an ideal weight, eating a Mediterranean diet, exercise/physical fitness—as well as taking blood pressure medications when indicated, calculating 10-year coronary artery disease risk using statins when indicated, and not smoking.

In diabetics (ASCEND), one could argue that ASA use remains a decision that should involve a thoughtful discussion between the clinician and patient. Some feel that avoiding a cardiac event is worth the risk of having a GI bleed. We’re in the “no ASA” camp and think it’s wiser to push risk factor modification.

Take home for the clinician: Inappropriate use of ASA by patients for primary prevention should be discouraged. Push Mediterranean diet and exercise and aggressively treat risk factors.

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