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Anti-Hypertension Diet Also Fights Kidney Stones

A diet designed to fight high blood pressure may also help prevent painful kidney stones, according to an analysis of three large studies totaling more than 240,000 men and women. People whose diets most closely matched the Dietary Approaches to Stop Hypertension (DASH) eating plan were 40% to 45% less likely to develop kidney stones than those whose diets were most at odds with DASH. The benefit was seen even after excluding hypertension patients and regardless of intake of calcium (involved in the formation of calcium oxalate kidney stones, the most common type).

Eric Taylor, MD, of Brigham and Women's Hospital and colleagues analyzed data on 45,821 men in the Health Professionals Follow-up Study, 94,108 older women in the Nurses' Health Study I and 101,837 younger women in the Nurses' Health Study II. The studies followed participants for 14-18 years. Overall, researchers documented 5,645 cases of symptomatic kidney stones.

Participants were assigned a DASH score calculated from eight dietary components:

- **High intake** of fruits, vegetables, nuts and legumes, low-fat dairy products and whole grains
- **Low intake** of sodium, sweetened beverages, and red and processed meats.

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Eat Like a Mediterranean to Protect Your Aging Brain

Two newly published studies have largely confirmed a 2006 finding that the so-called "Mediterranean diet" may protect against mental decline with aging. In an accompanying editorial in the *Journal of the American Medical Association*, David S. Knopman, MD, of the Mayo Clinic said the results "provide moderately compelling evidence that adherence to the Mediterranean-type diet is linked to less late-life cognitive impairment."

In an updated analysis of that earlier study of 1,880 older New Yorkers, those who most closely followed a Mediterranean-style diet were at 40% lower risk of Alzheimer's over 5.4 years than those with lowest adherence. Overall, 282 cases of Alzheimer's disease were diagnosed during the study.

Participants' diets were scored on a scale of 0-9, with higher scores assigned for greater consumption of fruits, vegetables, legumes, cereals and fish; lower consumption of meat and dairy products; a higher ratio of monounsaturated fats to saturated fats; and mild to moderate alcohol consumption.

Nikolaos Scarmeas, MD, of Columbia University, the lead investigator on this and the 2006 study, commented, "We know that some part of Alzheimer's disease is related to genetic changes and as time goes on, we discover more and more of these changes. But it is also possible that nongenetic changes, including lifestyle and behavior, may also be affecting our brain function and our brain health and risk for getting diseases such as Alzheimer's."

The new analysis also looked at physical activity, finding that participants with the highest level of activity were at 33% lower risk of Alzheimer's than the least-active subjects. That most-active group averaged 1.3 hours of vigorous exercise, 2.4 hours of moderate activity or 4 hours of light activity per week. Most important, said Dr. Scarmeas, was that the association of physical activity with Alzheimer's disease risk was independent to that of the diet.

A second study published in the same journal attempted in part to replicate the 2006 findings. Following 1,410 seniors over five years, Catherine Féart, PhD, of the Université Victor Ségalen Bordeaux 2 and colleagues compared adherence to a "Mediterranean diet" (scored as 0 to 9) with cognitive performance on four standard neuropsychological tests.

After adjusting for other risk factors, researchers found that a higher "Mediterranean diet" score was associated with fewer errors on the Mini-

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Mediterranean Diet

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Mental State Examination (MMSE) and with better Free and Cued Selective Reminding Test (FCSRT, episodic memory) performances, but only among subjects who remained free from dementia over five years. Performance on the other cognitive tests (Isaac Set Test and Benton Visual Retention Test) over time was not significantly associated with "Mediterranean diet" adherence. And following the diet was not associated with the risk for developing dementia, although researchers said the statistical strength of the data to detect such a difference was limited.

Higher adherence to a Mediterranean-type diet is linked to lower risk for mortality and chronic diseases, Féart and colleagues noted, and "might also have protective effects against cognitive decline in older individuals, because it combines several foods and

nutrients potentially protective against cognitive dysfunction or dementia, such as fish, monounsaturated fatty acids,

Diet, Mediterranean Style

Despite the popularity of the term, there's no such thing as an official "Mediterranean diet." When researching the possible benefits of a dietary pattern similar to that traditionally found in areas around the Mediterranean, scientists generally look for:

MORE: fruits, vegetables, legumes, cereals, fish and monounsaturated fats (such as olive oil)

LESS: red meat, dairy products and saturated fats

... compared to the typical American diet, along with moderate alcohol consumption, especially of red wine with meals.

To see how the "Mediterranean diet" compares with science-based dietary guidelines, see the Special Report in the October 2009 *Healthletter*.

vitamins B12 and folate, antioxidants (vitamin E, carotenoids, flavonoids), and moderate amounts of alcohol."

"The Mediterranean diet pattern probably does not fully explain the better health of persons who adhere to it, but it may contribute directly," the researchers concluded. "A 'Mediterranean diet' also may indirectly constitute an indicator of a complex set of favorable social and lifestyle factors that contribute to better health. Further research is needed to allow the generalization of these results to other populations and to establish whether a 'Mediterranean diet' slows cognitive decline or reduces incident dementia in addition to its cardiovascular benefits."

TO LEARN MORE: *JAMA*, August 12, 2009; abstracts at <jama.ama-assn.org/cgi/content/abstract/302/6/627> and <jama.ama-assn.org/cgi/content/short/302/6/638>. Alzheimer's Association, 225 N. Michigan Ave., Fl. 17, Chicago, IL 60601, (800) 272-3900, <www.alz.org>. ♦

Kidney Stones

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(For an in-depth look at the DASH plan and how it compares to other dietary guidelines, see our October 2009 Special Report.)

Comparing the highest one-fifth in matching the DASH plan to the lowest one-fifth, Dr. Taylor and colleagues found that men with the highest DASH score had a 45% lower risk of developing kidney stones. Older women in the top DASH group were at 42% lower risk, and young women, 40%.

The findings may also overturn some common dietary advice for preventing

kidney stones. Dr. Taylor noted, "Although we think it reasonable for calcium oxalate stone formers with high levels of urinary oxalate to avoid intake of some individual foods very high in oxalate (such as spinach and almonds), our data do not support the common practice of dietary oxalate restriction in calcium stone formers, particularly if such advice results in lower intake of fruits, vegetables and whole grains." The DASH plan, after all, emphasizes consumption of those very dietary components.

The researchers pointed out that eating fruits and vegetables—despite their oxalate content—also increases urinary citrate pro-

duction, which inhibits the formation of calcium-containing kidney stones. Previous research has also associated reduced risk of stone formation with diets low in animal protein and sodium, and higher risk with high fat intake and low dietary calcium.

The findings, Dr. Taylor and colleagues concluded, make a case for further research in the form of a randomized clinical trial or dietary intervention.

TO LEARN MORE: *Journal of the American Society of Nephrology*, online ahead of print; abstract at <dx.doi.org/10.1681/ASN.2009030276>. Healthy Eating with DASH <www.nhlbi.nih.gov/hbp/prevent/h_eating/h_eating.htm>. ♦

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