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## An apple a day keeps kidney stones away

## More fruits and veggies, less salt prevents stones from forming

Researchers have found another reason to eat well: a healthy diet helps prevent kidney stones. Loading up on fruits, vegetables, nuts, low-fat dairy products, and whole grains, while limiting salt, red and processed meats, and sweetened beverages is an effective way to ward off kidney stones, according to a study appearing in an upcoming issue of the *Journal of the American Society Nephrology* (*JASN*). Because kidney stones are linked to higher rates of hypertension, diabetes, increased body weight, and other risk factors for heart disease, the findings have considerable health implications.

Eric Taylor, MD (Maine Medical Center) and his colleagues at Brigham and Women's Hospital conducted a large study to determine the effects of healthy eating habits on the formation of kidney stones. The investigators collected information from individuals enrolled in three clinical studies: the Health Professionals Follow-up Study (45,821 men followed for 18 years), the Nurses' Health Study I (94,108 older women followed for 18 years), and the Nurses' Health Study II (101,837 younger women followed for 14 years).

Dr. Taylor's team assigned a score to each participant based on eight components of a DASH (Dietary Approaches to Stop Hypertension) style diet: high intake of fruits, vegetables, nuts and legumes, low-fat dairy products, and whole grains and low intake of salt, sweetened beverages, and red and processed meats. Individuals with higher DASH scores consumed diets that were higher in calcium, potassium, magnesium, oxalate, and vitamin C and lower in sodium.

A total of 5,645 incident kidney stones developed in the participants in the three studies. In each study, participants with the highest DASH scores were between 40% and 45% less likely to develop kidney stones than participants with the lowest DASH scores. The reductions in kidney stone risk were independent of age, body size, fluid intake, and other factors.



Because a DASH-style diet may affect the development of hypertension, diabetes, and other chronic diseases associated with kidney stones, the researchers also performed an analysis limited to study participants without hypertension or diabetes. Even among those individuals the DASH diet reduced the risk of kidney stones.

Many of the medications used to treat kidney stones have unpleasant side effects. This study indicates that adopting a DASH-style diet may be an effective alternative.

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The authors report no financial disclosures. Study co-authors include Teresa Fung (Simmons College) and Gary Curhan, MD (Brigham and Women's Hospital).

The article, entitled "DASH-Style Diet Associates with Reduced Risk for Kidney Stones," will appear online at http://jasn.asnjournals.org/ on August 13, 2009, doi 10.1681/ASN.2009030276.

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