



YALE-GRIFFIN PREVENTION RESEARCH CENTER

A Walnut a Day? Walnuts Improve Blood Flow in Adults with Diabetes

According to a study conducted by the Yale-Griffin Prevention Research Center, and just published in the February issue of *Diabetes Care*, eating 2 ounces of walnuts per day as part of a normal diet may improve cardiovascular health in people with Type 2 diabetes.

Prior studies have demonstrated potential benefit of walnuts in promoting heart health in healthy adults, but few have focused on diabetes. Since Type 2 diabetes raises the risk for cardiovascular disease, researchers at the Yale-Griffin Prevention Research Center wanted to explore the effect of walnut intake on adults with diabetes.

A total of 24 adults with type 2 diabetes participated in the study and were instructed to eat 2 ounces of walnuts each day along with their normal diets during one 8-week period, and to simply follow their normal diets during another 8-week period. The order in which they followed the diets was randomly assigned, with an 8-week “washout” period in between.

The researchers compared the effects of the adults’ usual diets and walnut-enriched diets on their endothelial function- a measure of how well blood vessels are able to dilate and increase flow, and a powerful predictor of overall cardiovascular risk. Endothelial function is measured with ultrasound images of the brachial artery in the arm – a simple and painless procedure which provides a picture of the blood vessels. The team also assessed blood lipid levels, and blood glucose control.

The research team found that endothelial function improved significantly when people consumed the walnut-enriched diet for 8 weeks, compared to when they followed their normal diets. “We were very gratified by these findings,” said Dr. David Katz, the principal investigator. “We all know the adage about ‘an apple a day,’ but in fact there are other foods that people should consider adding to their daily diets for specific health benefit. Walnuts rank high on that list.”

Katz commented on the importance of testing foods for functional benefits in diabetes in particular. “There are tens of millions of diabetics in the U.S. right now, and unfortunately, that number will rise rather steeply for the foreseeable future. Identifying simple, accessible, and even enjoyable lifestyle practices that can mitigate the potential harms of diabetes is of clear public health importance.”

Walnuts are a rich source of protein, polyunsaturated fats, vitamins, minerals, fiber, antioxidants, and omega-3 fatty acids. Two ounces of walnuts, the amount used in this study, contains approximately 350 calories. Participants in the study were counseled on ways to adjust their diets to make room for the extra calories in the walnuts. Participants did not gain weight, indicating that even people at risk of weight gain can make room for walnuts, and their benefits, in their daily diets.

This study was funded primarily by the California Walnut Commission with supportive funding from the Centers for Disease Control and Prevention.



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About Dr. David Katz

David L. Katz MD, MPH, FACPM, FACP is an Associate Professor, adjunct, of Public Health at the Yale University School of Public Health and directs the [Yale Griffin Prevention Research Center](#), which he co-founded in 1998. As director of this research center dedicated to chronic disease prevention, Katz has served as Principal Investigator for numerous community and clinical trials, and has acquired and managed over \$20 million in research funds. He is internationally recognized as an authority on chronic disease prevention, weight control, and nutrition. For more information, visit www.davidkatzmd.com.

About the California Walnut Commission

The California Walnut Commission, established in 1987, is an agency of the State of California that works in concurrence with the Secretary of the California Department of Food and Agriculture (CDFA). The Commission is primarily involved in health research and export market development activities, and is funded by mandatory assessments of the growers.

About Yale-Griffin Prevention Research Center

The Yale-Griffin Prevention Research Center (PRC) was established in 1998 through funding from the Centers for Disease Control (CDC). One of 35 such centers nationwide representing academic/community partnerships, the Yale-Griffin PRC is engaged in interdisciplinary applied prevention research in collaboration with community partners, federal, state, and local health and education agencies, and other universities. The goal the PRC is to develop innovative approaches to health promotion and disease prevention that will directly benefit the public's health, first locally, and then nationally. For more information, visit www.yalegriffinprc.org