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DASH DIET WITH WEIGHT MANAGEMENT CAN IMPROVE BLOOD PRESSURE, MARKERS OF CV RISK

New Research Shows Health Benefits of Lifestyle Changes

Orlando, FL – Overweight or obese patients who closely follow the Dietary Approaches to Stop Hypertension (DASH) diet in combination with exercise and weight loss can significantly lower their blood pressure (BP) and improve other markers of cardiovascular (CV) risk, according to new data presented today at the American College of Cardiology's 58th Annual Scientific Session. ACC.09 is the premier cardiovascular medical meeting, connecting cardiologists and cardiovascular specialists to the latest and most innovative findings in cardiovascular science.

The DASH diet is an eating plan that is low in saturated fat, cholesterol and total fat and emphasizes fruits, vegetables, and fat-free or low-fat milk products. While the DASH diet alone results in significant BP lowering, the addition of exercise and weight loss leads to an even greater BP reduction. Although the DASH diet is widely recommended for the treatment of high BP, the extent to which weight loss and exercise further enhance the diet's cardiovascular benefits are unknown. The ENCORE trial, a randomized, controlled study, is the first to systematically examine the effects of the DASH diet alone or in combination with a weight reduction program on lowering BP and other key CV risks (e.g., left ventricular mass, arterial stiffness, autonomic function, and glucose and cholesterol levels).

“Our data shows that the DASH diet with or without a behavioral weight loss program results in clinically significant reductions in blood pressure. Adding exercise and weight management to the DASH diet also appears to confer even greater reductions in blood pressure, as well as additional improvements in left ventricular wall thickness, arterial stiffness, and other markers of cardiovascular risk,” said James Blumenthal, Ph.D., professor of medical psychology and lead investigator. “This is an important finding because a concerning complication of hypertension is the accompanying structural changes in the blood vessels and heart.”

This study randomized 144 patients with pre-hypertension or stage I hypertension (BP 130-160/80-99 mmHg) to one of three groups: 1) DASH diet alone in which patients were given nutritional counseling without exercise or caloric restriction, 2) DASH diet plus weight management training including supervised exercise and a behavioral modification program, or 3) usual care. All study participants were overweight or obese (body mass index of 25 to 40 kg/m²), not currently engaged in any exercise and not using anti-hypertensive medicines.

Patients who followed the DASH diet in addition to an exercise and weight loss routine had a 14 mmHg drop in systolic BP compared to a five mmHg drop among those on the DASH diet alone and one mmHg fall with usual care. Diastolic BP was reduced by an average of 11 mmHg, nine mmHg and six mmHg, respectively. Patients randomized to the DASH diet plus weight management lost an average of 19 pounds, compared to a loss of 0.6 pound in those on the DASH diet alone and a gain of roughly two pounds in those only receiving usual care.

“We are excited about the magnitude of reductions in blood pressure, which are comparable to what we might find with pharmacological intervention,” said co-investigator Alan Hinderliter, M.D. “Improvements in other CV risk factors and the fact that patients were able to adhere to the program in their everyday routine were also important.”

During the first two weeks, patients in the treatment group were provided with food so they could be carefully monitored. During the remaining 14 weeks, patients ate on their own based on the calculated number of calories needed to maintain their current weight. To date, most of the evidence supporting the DASH diet is based on feeding studies in which there was some uncertainty as to whether patients could adopt the diet in everyday life.

In addition to measuring clinic and at-home blood pressures, researchers assessed cardiovascular structure and function by echocardiography, arterial stiffness by measuring pulse wave velocity, autonomic function by measuring baroreflex sensitivity, heart rate variability and blood sugar and cholesterol. Measurements were taken at the start of the study and again at the conclusion of the 16-week treatment course. Only five participants failed to complete the program. The study was funded by the National Heart Lung and Blood Institute.

Dr. Hinderliter will present the study, “The ENCORE Study: Examination of Cardiovascular, Metabolic, and Autonomic Changes Associated With the DASH Diet Alone and in Combination With Exercise and Weight Reduction in Hypertensive Men and Women,” on Monday, March 30 at 2:00 p.m. in Hall WF1.

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The American College of Cardiology (www.acc.org) works to influence health care policy and represents the majority of board certified cardiovascular care specialists through education, research, promotion, and the development and application of standards and guidelines. ACC.09 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.