



From Heartwire

Mediterranean Diet Might Delay Need for Drugs in Diabetes

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September 3, 2009 (Naples, Italy)— By following a low-carbohydrate, Mediterranean diet rather than a low-fat diet, newly diagnosed diabetic patients may postpone the need for drugs to control this disease, a study suggests [1]. After four years, with continued nutritional advice, only 44% of newly diagnosed diabetic patients on a Mediterranean diet vs 70% of those on a low-fat diet required drug therapy as well as diet to control their diabetes. Patients on the Mediterranean also showed greater improvement in some cardiovascular risk factors. "Perhaps most important, the findings reinforce the message that benefits of lifestyle interventions should not be overlooked, despite the drug-intensive style of medicine fueled by the current medical literature," the authors write.

The study, by Dr Katherine Esposito (Second University of Naples, Naples, Italy) and colleagues, is published in the September 1, 2009 issue of the *Annals of Internal Medicine*. "The study confirms that lifestyle changes are a basic part of managing diabetes," Dr Christine Laine, editor of the *Annals of Internal Medicine*, told heartwire, adding that it also "suggests that people might be better off if the dietary advice they receive is in line with the Mediterranean diet."

Intense Nutritionist Support While a Mediterranean diet improves risk factors for cardiac disease and diabetes and the American Diabetes Association (ADA) recommends a low-carbohydrate or a low-fat diet for overweight people with type 2 diabetes, few studies have directly compared these diets in diabetes. To investigate the effectiveness of the two diets in delaying antihyperglycemic therapy, the researchers randomized 215 overweight patients (53% men) seen in a Naples hospital who were newly diagnosed with type 2 diabetes. The patients were sedentary, had a mean age of 52 years (range 30 to 75 years), a body-mass index greater than 25 kg/m² (mean 29.6 kg/m²), and a hemoglobin A1c level of less than 11%. Most (77%) had an HbA1c level greater than 7%.

The primary study outcome was time to introduction of antihyperglycemic therapy--predetermined to start when HbA1c levels were more than 7% at two measurements three months apart.

Secondary outcomes included weight change, glycemic control, and attaining ADA coronary-risk-factor goals (HbA1c <7%; blood pressure <130/80 mm Hg; and low-density lipoprotein (LDL) cholesterol <2.59 mmol/L). Participants first received advice about the importance of diet and exercise and--of note--were taught how to prepare meals at home.

They were then randomly assigned to one of two diets for four years:

A Mediterranean diet, which included lots of vegetables and whole grains, with little red meat but with poultry and fish instead, where <50% of calories were from complex carbohydrates and >30% of calories were from fat, largely olive oil. A low-fat diet based on American Heart Association guidelines, which included lots of whole grains and restricted sweets, fats, and high-fat snacks, where <30% of calories were from fat. Participants received frequent counseling sessions from dietitians--monthly for one year, then every two months for three years--and kept food-intake diaries. HbA1c levels were determined at baseline and every three months.

Of the 155 patients who had an elevated HbA1c level of >7% at baseline, only 22 patients still had an elevated HbA1c level after three months, and all patients had lower levels after six months on either diet. This is "quite a dramatic improvement without pharmacotherapy," American College of Cardiology spokesperson Dr Elizabeth Klodas, editor-in-chief of *Cardiosmart.org*, commented to heartwire. Patients in both diet groups lost weight and had declines in plasma glucose and HbA1c levels, but the reductions were greater in the Mediterranean-diet group.

The Mediterranean diet delayed the need for antihypertensive drug therapy independent of weight change. More participants in the Mediterranean diet met all three ADA goals and had consistently greater increases in high-density lipoprotein (HDL) cholesterol levels and decreases in triglycerides. The four-year study period is long for diet trials, Laine commented. "People had much more intense nutritionist support than is typically available to patients in most US settings," she added, noting that it remains to be determined whether dietary advice from a physician without nutritionist support would deliver such good results. "Diet Cannot Be Overlooked" The study shows that "diet and other lifestyle practices of our patients cannot be overlooked," Klodas said. "I don't think we spend enough time teaching patients about diet and lifestyle and really reinforcing what a big difference that can make to their outcomes." Learning about portion sizes and the nutritional value of whole foods as opposed to low-fat, highly processed foods and then seeing HbA1c numbers improve as a result of lifestyle changes can be very motivating for patients, she added. "[Patient management is] a synergistic combination between lifestyle change and medical therapy, and if we just concentrate on medical therapy alone we'll never obtain the best possible outcomes," according to Klodas. The authors declare no conflicts of interest. The work was supported in part by the Second University of Naples.

References

Esposito K, Maiorino MI, Ciotola M, et al. Effects of a Mediterranean-style diet on the need for antihyperglycemic drug therapy in patients with newly diagnosed type 2 diabetes. *Ann Intern Med* 2009; 151:306-314. Abstract

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