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Mediterranean Diet Produces Moderate Weight Loss

Clinical Question

What is the effect of a Mediterranean-type diet on body weight?

Bottom Line

In addition to improving cardiovascular outlook, a Mediterranean diet produced greater sustained weight loss than a low-fat diet and similar weight loss to other diets in patients who were overweight or obese, most of whom had type 2 diabetes mellitus. The range of average weight loss was 3.8 to 10.1 kg (8.4 to 22.3 lb) after one year with a Mediterranean diet vs. a loss of 5.0 kg (11.0 lb) to a gain of 2.9 kg (6.4 lb) with a low-fat diet. (Level of Evidence = 1a–)

Synopsis

The so-called Mediterranean diet consists of high consumption of fruits and vegetables; monounsaturated fats, usually from olive oil; moderate consumption of poultry, fish, and dairy; and little or no red meat. To identify studies for this meta-analysis, the authors searched three databases, including the Cochrane Library, and identified five studies (N = 998) of at least 12 months' duration that investigated the diet's effect on weight loss. The authors also searched reference lists of identified studies, reviews, and other meta-analyses. The included studies

were published in English or French. Several of the studies had high dropout rates but were otherwise at low risk of bias. Study results were heterogeneous, and therefore the authors were unable to combine the results. The patients in the studies were between 44 and 67 years of age and were obese or borderline obese, with an average body mass index (BMI) of 29.7 to 33.5 kg per m². Most of the patients in the studies had type 2 diabetes. After 12 months, the Mediterranean diet produced moderate weight loss, an average range of 3.8 to 10.1 kg across the studies, with an average BMI change of –1.0 to –3.33 kg per m². These averages were greater than those found with a low-fat diet but similar to a low-carbohydrate diet and an American Diabetes Association diet with similar proportions of protein, fat, and carbohydrates.

Study design: Systematic review

Funding source: Self-funded or unfunded

Setting: Various (meta-analysis)

Reference: Mancini JG, Filion KB, Atallah R, Eisenberg MJ. Systematic review of the Mediterranean diet for long-term weight loss. *Am J Med.* 2016;129(4):407-415.

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Blood Pressure Goal of 140 to 150 mm Hg Is Best for Patients with Diabetes

Clinical Question

What is the appropriate antihypertensive treatment goal for patients with diabetes mellitus?

Bottom Line

Although most recent practice guidelines have relaxed the blood pressure goals for patients with diabetes, there are still a few holdouts that suggest aggressive treatment. This analysis shows that the ideal range for hypertension control in patients with diabetes is between 140 and 150 mm Hg; higher

or lower sustained blood pressures increase mortality, the so-called J-curve. (Level of Evidence = 1a)

Synopsis

These researchers searched four databases, including the Cochrane Central library, identifying 49 studies enrolling 73,738 participants with (mostly type 2) diabetes who were treated for hypertension. Two authors independently selected articles for inclusion and extracted data. Heterogeneity and publication bias were assessed but not reported. Most studies were at low risk of bias. The studies evaluated the effect of hypertension treatment on mortality and cardiovascular events but were not specifically designed to compare benefit across different target systolic blood pressures. So, the authors got creative and looked at mortality rates based on baseline (before treatment) and attained (after treatment) systolic blood pressure. In patients with a baseline blood pressure greater than 140 mm Hg or greater than 150 mm Hg, treatment decreased all-cause mortality on average, though not by much (relative risk [RR] = 0.87; 95% confidence

interval [CI], 0.78 to 0.98 and RR = 0.89; 95% CI, 0.80 to 0.99). However, cardiovascular mortality, myocardial infarction risk, and development of end-stage renal disease were decreased by 15% to 25%. If baseline blood pressure was less than 140 mm Hg, however, further treatment did not decrease all-cause mortality and significantly increased the risk of cardiovascular mortality (RR = 1.15; 95% CI, 1.00 to 1.32). These results are somewhat at variance with a meta-analysis published last year that found a reduced risk of stroke and albuminuria with treatment (*JAMA*. 2015;313(6):603-615).

Study design: Meta-analysis (randomized controlled trials)

Funding source: Government

Setting: Various (meta-analysis)

Reference: Brunström M, Carlberg B. Effect of antihypertensive treatment at different blood pressure levels in patients with diabetes mellitus: systematic review and meta-analyses. *BMJ*. 2016;352:i717.

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