



ACC.15

TCT@ACC-12 | innovation in intervention

A1448
JACC March 17, 2015
Volume 65, Issue 10S

Prevention

EFFECTS OF THE MEDITERRANEAN DIET ON CARDIOVASCULAR OUTCOMES: A SYSTEMATIC REVIEW AND META-ANALYSIS

Poster Contributions

Poster Hall B1

Sunday, March 15, 2015, 9:45 a.m.-10:30 a.m.

Session Title: Statins, Cholesterol Guidelines and Lifestyle

Abstract Category: 21. Prevention: Clinical

Presentation Number: 1178-116

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Background: A Mediterranean dietary pattern is widely recommended for the prevention of chronic disease although the evidence base is more limited than is widely understood. We sought to define the most likely effects of the Mediterranean diet on vascular disease and mortality.

Methods: We systematically searched MEDLINE, EMBASE and the Cochrane Central Register without language restriction for randomized controlled trials comparing Mediterranean to control diets. Data on study design, patient characteristics, interventions, follow-up duration, outcomes and adverse events were sought. Individual study relative risks (RR) were pooled to create summary estimates.

Results: Six studies with a total of 10950 participants were included. Effects on major vascular events (n=477), death (n=693) and vascular deaths (n=315) were reported for 3, 5 and 4 studies respectively. For one large study (n=1000) there were serious concerns about the integrity of the data. When data for all studies were combined there was evidence of protection against major vascular events (RR 0.50, 95% confidence interval 0.29-0.87), coronary events (0.60, 0.37-0.98), stroke (0.65, 0.48-0.89) and heart failure (0.30, 0.17-0.56) but not for all-cause mortality (0.85, 0.61-1.19) or cardiovascular mortality (0.72, 0.42-1.24). If the study of concern was excluded the benefit for vascular events was no longer observed (0.44, 0.13-1.56). Apparently positive findings for coronary events (0.56, 0.20-1.60), heart failure (0.25, 0.05-1.17) and stroke (0.64, 0.34-1.20) also disappeared when the study of concern was excluded. No publication bias was detected on Begg's test (P=0.33) or Egger's test (P=0.09).

Conclusion: The Mediterranean diet may protect against vascular disease. However, both the quantity and quality of the available evidence is limited and there is much greater uncertainty than is widely understood.