

## **Abstract 137: Reversal of Endothelial Dysfunction Using Polyphenol Rich Foods and Supplements Coupled with Avoidance of Major Dietary Lectins**

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### **Abstract**

Endothelial dysfunction (ED) is highly correlated with the development of coronary artery and vascular disease in general. While dietary factors have been previously implicated in the causation of endothelial dysfunction, a purposeful change in dietary habits, coupled with the addition of several polyphenol-containing supplements, has not been studied for their effects on endothelial function, as measured by Peripheral Arterial Tonometry (PAT).

200 consecutive pts, aged 51-86, M:F ratio 3/2, with known vascular risk factors of HTN, DM, Hypercholesterolemia, hx of MI, Stent, CABG, were enrolled in a dietary program, which emphasizes large amts of leafy green vegetables, olive oil, radical reduction of grain, legumes, nightshades, and fruits; and generous amts of grassfed animal proteins, emphasizing Shellfish and avoiding commercial poultry (Diet Evolution). All pts were instructed to take 2-4,000 mg of high DHA fish oil, 200mg of Grape Seed Extract, and 50 mg of Pycnogenol per day. All pts had Endothelial Reactivity (ER) using PAT before and after a 5-minute arm occlusion using the EndoPAT 2000 (Itamar, Israel) at baseline and at 6 months.

Baseline Endothelial Reactivity was  $1.88 \pm 0.7$  (range 1.0-3.3), with 145/200 pts (72%) having endothelial dysfunction (less than 1.60). At 6 months, ER increased to  $2.25 \pm 0.5$  (range 1.2-3.6) ( $p < 0.01$ ). Only 40/200 (20%) remained with ED, but all had increased ER numbers. Ten pts stopped the polyphenols after a normal PAT; all developed ED on repeat PAT.

We conclude that a limited grain, legume, nightshade, and fruit diet with emphasis on greens, olive oil and grassfed animal proteins, particularly Shellfish, with avoidance of commercial poultry, with supplemental fish oil and polyphenols dramatically improves endothelial function in a group of high risk patients.