

The effect of Omega 3 fatty acid supplementation in the secondary prevention of the progression of coronary artery stenosis documented using a quantitative coronary angiography: A meta-analysis

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Despite numerous experimental studies 8-24 on the use of O3FA supplementation, there have been conflicting results to its use for the secondary prevention of coronary artery disease. Recommendations had been issued by many health organizations on the basis that there is growing evidence about how O3FA affect endothelial function and the reduction of coronary heart disease. The study aimed to assess the efficacy of O3FA supplementation versus placebo in the secondary prevention of coronary artery stenosis (CAS) with respect to the dose and to the duration of treatment as documented by quantitative coronary angiography. Only randomized clinical trials on the effect of omega-3 fatty acids in the prevention of CAS documented by coronary angiography were included. Interventions include administration of at least 1 gm per day of O3FA based on AHA with at least a total of 100 patients per trial attaining power of 80% with greater/equal to 4 months duration. The results of the 13 studies on the effect of O3FA supplementation on secondary prevention of CAS versus placebo showed OR 0.85 (0.7-1.04), however there is substantial heterogeneity ($\chi^2 p=0.04$, $Tau^2=0.06$, and $I^2= 56\%$). The sensitivity analysis of fixed effects model showed OR 0.83 (0.75-0.93) but their presence of significant heterogeneity. Post-hoc analysis, O3FA supplementation were statistically significant using the studies of higher population ($N>300$) by sensitivity analysis with OR 0.84, CI (95%) 0.73 to 0.97(fixed effects).