Health effects of olive oil and the Mediterranean diet

**INFLAMMATION**

Evidence from randomised controlled trials shows olive oil exerts beneficial effects on markers of inflammation and endothelial function.

**WHAT IS THE QUALITY OF THE EVIDENCE?**

No significant effect for TNF-α or Adiponectin

No significant effect for ICAM-1 or VCAM-1

28 Random controlled trials

Diets containing olive oil

Systematic literature and meta-analysis

**KEY RESULTS**

- **REDUCTION IN CRP**
  - Mean difference = -0.64; 95% CI -0.96 to -0.31; P<0.0001 (15 studies)

- **REDUCTION IN IL-6**
  - Mean difference = -0.29; 95% CI -0.47 to -0.02; P<0.04 (7 studies)

- **INCREASE IN FMD**
  - Mean difference = 0.76; 95% CI 0.27 to 1.24; P=0.002 (8 studies)

- **REDUCTION IN SE-SELECTIN**
  - Mean difference = -3.16; 95% CI -4.07 to -2.25; P<0.00001 (2 studies)

**WHAT TO KEEP IN MIND?**

- There was considerable amount of heterogeneity between studies e.g., the length of intervention, amount and type of olive oil used, classification of control and the number of participants.
- Some studies prescribed the intake of olive oil in addition to a baseline Mediterranean diet that already consisted of olive oil, which means the absolute quantity of olive oil consumed could not be determined.

**WHAT’S THE BOTTOM LINE?**

Markers of inflammation (CRP, IL-6) and endothelial function (FMD, sE-Selectin) were improved following interventions with olive oil. These markers are generally regarded to influence CVD risk and may help to explain the cardio-protective associations of olive oil in observational studies.

**OTHER REVIEWS**


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