Olive Oil Improves Cholesterol, After-Meal Glucose

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Extra virgin olive oil is not only a key component in salad dressings, it's also a major ingredient in the Mediterranean diet. It may also account for the diet's protective effect against cardiovascular disease (CVD), but the underlying mechanism is still elusive.

Italian researchers investigated "the olive oil effect" in 25 healthy subjects who were randomly allocated in a crossover design to a Mediterranean-type meal added with or without 10 g of extra virgin olive oil (first study), or a Mediterranean-type meal with 10 g of extra virgin olive oil or 10 g of corn oil (second study) (*Nutr Diabetes. July 20, 2015).*

In the first study, two hours after their meal, subjects who assumed a meal with olive oil had significantly lower blood glucose, DPP-4 protein and activity, low-density lipoprotein (LDL) cholesterol and oxidized LDL, and higher insulin, glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP), compared with those without olive oil. The second study showed that compared with corn oil, olive oil improved both glycemic and lipid profile. Thus, a significantly smaller increase of glucose, DPP4 protein and activity, and higher increase of insulin and GLP-1 were observed. Furthermore, compared with corn oil, olive oil showed a significantly less increase of LDL and oxidized LDL.

The results of this study, for the first time, show that extra virgin olive oil improves post-prandial glucose and LDL cholesterol, an effect that may account for the anti-atherosclerotic effect of the Mediterranean diet.