

Effect of Filtered Coffee Intake on Lipid Metabolism

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ABSTRACT

In the pathogenesis of atherosclerosis, high density lipoprotein (HDL) plays an important protective role, while oxidised low density lipoprotein (LDL) promotes atherogenesis. To clarify the relationship of coffee intake to atherogenesis, we investigated the effect of filtered coffee intake on serum lipid levels (especially HDL-C) and the oxidative susceptibility of LDL in normolipidemic healthy young subjects. The subjects abstained from caffeine-containing beverage for four weeks, and were divided into three groups (a water group, a coffee group, and a tea group). The coffee group consumed five cups of coffee per day for 4 weeks, while the water group similarly consumed five glasses of water and the tea group consumed 5 cups of tea daily. There were no significant changes of serum lipid levels (total cholesterol, triglycerides, free cholesterol, and phospholipids) in the water and tea groups. In the coffee group, HDL-C levels did not change significantly in male subjects, but increased significantly in female subjects. In addition, the oxidative susceptibility of LDL was significantly reduced in the coffee and tea groups compared with the water group.

In conclusion, moderate filtered coffee intake may have a potential protective effect against atherosclerosis by increasing HDL-C and reducing the oxidative susceptibility of LDL.

Key words: filtered coffee/ HDL/ oxidative susceptibility of LDL/ LpAI/ CETP.