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Beneficial effects of virgin coconut oil on lipid parameters and in vitro LDL oxidation.

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OBJECTIVES: The present study was conducted to investigate the effect of consumption of virgin coconut oil (VCO) on various lipid parameters in comparison with copra oil (CO). In addition, the preventive effect of polyphenol fraction (PF) from test oils on copper induced oxidation of LDL and carbonyl formation was also studied. DESIGN AND METHODS: After 45 days of oil feeding to Sprague-Dawley rats, several lipid parameters and lipoprotein levels were determined. PF was isolated from the oils and its effect on in vitro LDL oxidation was assessed. RESULTS: VCO obtained by wet process has a beneficial effect in lowering lipid components compared to CO. It reduced total cholesterol, triglycerides, phospholipids, LDL, and VLDL cholesterol levels and increased HDL cholesterol in serum and tissues. The PF of virgin coconut oil was also found to be capable of preventing in vitro LDL oxidation with reduced carbonyl formation. CONCLUSION: The results demonstrated the potential beneficiary effect of virgin coconut oil in lowering lipid levels in serum and tissues and LDL oxidation by physiological oxidants. This property of VCO may be attributed to the biologically active polyphenol components present in the oil.

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