Stanol esters attenuate the aggravating effect of dietary cholesterol on atherosclerosis in homozygous Watanabe rabbits

Plant stanols are marketed as natural means to lower blood cholesterol in humans; hence the effect on combined familial hyperlipidemia is not known. The objective was to investigate the effect of stanol esters on blood lipids and aortic atherosclerosis in homozygous WHHL rabbits challenged with dietary cholesterol. A total of 36 rabbits, 6 weeks of age, with initial plasma cholesterol of 22.5 mmol/L were assigned to two treatment groups fed a standard rabbit chow with 1 g/kg cholesterol or this diet added 34 g/kg stanol ester, respectively, for 16 weeks. Plasma cholesterol was measured initially and at termination, also in lipoproteins. Aortic atherosclerosis was evaluated as cholesterol content and area covered by plaque. Plasma cholesterol was not significantly different between the groups at termination (35.7 mmol/L vs. 35.5 mmol/L). A significant increase in LDL was seen (13.1 mmol/L vs. 16.5 mmol/L) in the stanol ester group (p

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