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Note

Effects of Collagen Peptide Ingestion on Blood Lipids in Rats Fed a High-Lipid and High-Sucrose Diet

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Increased protein intake frequently improves lipid profiles in humans and animals. To investigate the effects of collagen peptide ingestion on blood lipid profiles, 0.2 g/kg body weight collagen peptide was administered for 29 days to male Crlj:CD (SD) rats fed a high-lipid and high-sucrose diet, and their blood lipid levels were determined on days 1 and 28, and also on day 30 after overnight fasting. Food intake and body weight did not change with collagen peptide ingestion. Although triglycerides increased markedly with the high-lipid and high-sucrose diet, collagen peptide ingestion had no significant effect on triglyceride levels. Collagen peptide also had no effect on non-esterified fatty acid levels. In contrast, total cholesterol, particularly LDL, was significantly lower in rats given collagen peptide than in control rats on day 30 after overnight fasting. These results suggest that collagen peptide ingestion improves cholesterol metabolism in rats fed a high-lipid and high-sucrose diet.

Keywords: collagen peptide, cholesterol, LDL, HDL, high-lipid and high-sucrose diet, triglyceride

Abbreviations: collagen peptide (CP); low-density lipoprotein (LDL); high-density lipoprotein (HDL); triglyceride (TG); total cholesterol (TC); prolylhydroxyproline (Pro-Hyp)