

Effect of Dietary Octadecylpectinamide at 20, 40 and 60 g/kg on the Blood and Liver Cholesterol in Female Rats

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It has been shown in previous studies that in rats dietary octadecylpectinamide at 50 g/kg significantly decreased serum and liver cholesterol concentrations [1, 2]. In this study female rats (5 per group) were fed diets supplemented with cholesterol at 0 or 10 g/kg and with octadecylpectinamide at 0, 20, 40 or 60 g/kg. In rats fed the basal diet without cholesterol serum and hepatic cholesterol concentrations were 1.70 ± 0.30 $\mu\text{mol/ml}$ and 2.11 ± 0.16 mg/g, respectively. Supplemental cholesterol increased serum and hepatic cholesterol to 3.32 ± 0.80 $\mu\text{mol/ml}$ and 6.47 mg/g, respectively. In cholesterol-fed rats amidated pectin at 20, 40 or 60 g/kg significantly decreased serum cholesterol to 1.73 ± 0.16 , 1.57 ± 0.27 and 1.23 ± 0.29 $\mu\text{mol/ml}$, respectively. Corresponding hepatic cholesterol concentrations in these groups were 3.31 ± 0.26 , 2.59 ± 0.34 and 2.77 ± 0.23 mg/g. It can be concluded that cholesterol-lowering effect of octadecylpectinamide were not dramatically altered when its dietary dose was reduced to one third. No treatment effects on the growth, feed intake and weight of liver of rats were observed.

[1] Marounek, M., Volek, Z., Skřivanová, E., Tůma, J., Dušková, D. (2010), Comparative effect of amidated pectin and psyllium on cholesterol homeostasis in rats, *Cent. Eur. J. Biol.*, **5**, 299-303.

[2] Marounek, M., Volek, Z., Skřivanová, E., Tůma, J. (2010), Effect of amidated pectin alone and combined with cholestyramine on cholesterol homeostasis in rats fed a cholesterol-containing diet, *Carb. Polym.*, **80**, 989-992.