

P1-29

The Effect of Pectin on Serum Lipid and Catecholamine Profiles Depending on Dietary Fat Level in Growing Rats

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This study was conducted to evaluate the effect of pectin supplement on serum lipid and catecholamine profiles depending on dietary fat level. by using male Sprague-Dawley rats, weighing 73.0 g on average. Total experimental period was 4 weeks. The rats were divided into four groups; **C** (10% fat, 5% cellulose/Kg diet), **P** ((10% fat, 25% cellulose+25% pectin /Kg diet), **CHF** (20% fat, 5% cellulose/Kg diet) and **PHF** ((20% fat, 25% cellulose+ 25% pectin /Kg diet). The results are as follows;

(1) Food intake, food efficiency ratio, body weight, organ weight, fecal fat content, and total cholesterol, triglyceride, and glucose in serum did not show a significant difference between C and P groups. The HDL cholesterol of P group tended to be lower than that of C group Serum dopamine concentration of P group was higher than that of C group, but not norepinephrine and epinephrine.

(2) Food intake, body weight, body weight gain and food efficiency ratio of PHF group showed significantly much lower than those of CHF group. Also the weight of organs except adrenal in PHF group tended to be lower. The total cholesterol, triglyceride, HDL and glucose in serum of PHF group showed lower than CHF groups. But fecal fat contents of PHF group tended to be higher than that of CHF group. Interestingly serum dopamine concentration of PHF group showed much lower than those of CHF group and norepinephrine concentration of PHF group showed much higher than those of CHF group

From these results, dietary pectin may affect catecholamine metabolism diversely depending on dietary fat level.

P1-30

The Effect of Dietary Fat Level on Vit A Storage and Serum Retinol Binding Protein Level in Growing Rats

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This study was conducted to evaluate the retinyl ester in liver and serum retinol binding protein depending on dietary fat level, by using male Sprague-Dawley rats, weighing 73.0 g on average. The experimental groups were 10% fat diet group (LF) and 20% fat diet group (HF) The diets of both groups contained same amounts, 0.1mg retinyl acetate/ kg diet. The results are as follows: Retinyl ester concentration in liver and adrenal gland were much higher than those of LF group, but not significantly. The weight of liver showed no significant difference between two groups, but interestingly the weight of adrenal gland of HF group was a half of LF group's Total cholesterol, triglyceride, and total lipid contents in liver of HF group tended to be higher than those of LF group. The serum retinol binding protein of HF group was detected by western blotting to be much higher level than that of LF group. These results suggest that high fat diet may induce to increase serum retinol binding protein, and also to increase Vit A storage in the adrenal gland as well as liver in growing rats.