

脂肪酸組成の異なる3種のリン脂質及びその関連油脂の ラット血清コレステロール上昇抑制効果の比較

Comparison of Hypocholesterolemic Effect among Three Phospholipids
Containing Different Fatty Acid and the Related Oils in Rats

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Effects of dietary soybean-, egg yolk- and krill-phospholipids, and soybean and sardine oil on serum and liver cholesterol concentrations were investigated using weanling rats fed a hypercholesterolemic diet for 2 weeks. Serum total cholesterol concentrations were significantly lower and the ratio of HDL-cholesterol to total cholesterol was higher in all the experimental groups than those of the control group (olive oil). Liver cholesterol and triglyceride concentrations decreased in all the experimental groups, especially in the phospholipid groups. The apparent excretory ratio of fecal to dietary cholesterol gradually elevated in every phospholipid group with the lapse of experimental period, where the values of the soybean- and egg yolk-phospholipid groups were higher than that of the krill-phospholipid group, and those of the soybean and sardine oil groups were kept at a low level throughout the experimental period. The contents of chloroform-methanol-soluble phosphorus in feces tended to elevate as the cholesterol excretion increased. These results indicate that the different mechanism in hypocholesterolemic effect exist between phospholipids and polyunsaturated fatty acids, and that the phospholipids containing a large amount of higher polyunsaturated fatty acids such as eicosapentaenoic acid probably prevent the hypocholesterolemic effect.

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