

ラットの血清および肝臓脂質に及ぼす脂肪酸組成の
異なるリン脂質投与の影響

Influences of Phospholipid Concentrates with Different Fatty Acid Patterns
on Serum and Liver Lipids of Rats

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Present experiments aimed to clarify the effects of dietary phospholipids of different origins with different fatty acid compositions on the lipid concentrations in serum and liver of rats. Animals were fed the hypercholesterolemic diet before and throughout the experimental period. Each experimental diet contained 3% krill, egg or soybean phospholipid 0.9% choline the amount of which corresponded to that contained in these phospholipids or 0.63% EPA+ 0.53% DHA the amounts of which also corresponded to those contained in these phospholipids, while the control diet contained 5% olive oil. After 2 weeks on the tested diets, total serum cholesterol concentration, which had been elevated by the hypercholesterolemic diet, were depressed significantly in all of the phospholipid groups compared to the control group. Hypocholesterolemic effect krill phospholipid was not so marked as expected from the high contents of ω -3 polyunsaturated fatty acids in the phospholipid. A similar effect on serum total cholesterol concentration was observed in the EPA+DHA groups but not in the choline group. On the other hand, serum high density lipoprotein (HDL-) cholesterol concentrations in all groups were higher than that in the control group, where egg phospholipid showed the markedly elevated value. Liver total cholesterol concentration in the egg phospholipid group was significantly lower. In the krill and soybean phospholipid groups the liver total cholesterol concentrations were lower than in the control group but the differences were not statistically significant. The fatty acid pattern of total lipids in the serum and liver of rats was closely related to the fatty acid pattern of each dietary phospholipid.

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