攝取豆漿對於輕度高膽固醇血症受試者血脂質之影響

Effect of Soymilk Intake on Plasma Lipids in Mild Hypercholesterolemic Subjects

中文摘要

膳食中的黃豆具有改善血脂質的作用，其中的黃豆蛋白被認爲是主要的有效成分。本研究的目的是在探討攝取豆漿對於體內血脂質濃度的影響。受試者是 14 位健康成年人，血脂質濃度位於邊緣危險值(膽固醇值 200~240 mg/dL 或三酸甘油酯值 160~200 mg/dL)。實驗期爲 6 週，之後爲 3 週恢復期，共進行 9 週。受試者在 6 週實驗期內每天攝取 500 mL 豆漿，分成兩次，每次 250 mL，實驗期之後的 3 週恢復期則停止豆漿的攝取。於第 0、6、9 週收集血液樣本進行分析，分析項目爲：血漿總膽固醇、三酸甘油酯、LDL-C 和 HDL-C 濃度。並於第 0、6 週測量體脂肪與體重。結果顯示：攝取豆漿後血漿總膽固醇濃度有顯著降低($p < 0.05$)，但血漿三酸甘油酯、LDL-C 和 HDL-C 濃度則無顯著改變；體脂肪與體重也無顯著差異。另一方面，再經過 3 週恢復期後，血漿總膽固醇濃度則回復之至實驗初之濃度($p > 0.05$)。綜合以上結果顯示，豆漿具有改善血漿總膽固醇濃度的效果，但停止攝取後，則血漿總膽固醇濃度又會恢復至原來之濃度。

英文摘要

The purpose of this study was to investigate the effect of soymilk supplement on blood lipids in mild hypercholesterolemic subjects. The subjects were fourteen healthy adults, whose baseline plasma total cholesterol concentration was 200~240 mg/dL or triglyceride concentration was 160~200 mg/dL. This experiment lasted for nine weeks and divided into two periods, the first six weeks were study period and the next three weeks were recovery period. During study period, subjects were provided 500mL of soymilk daily, split into two times and each for 250 mL; during recovery period, subjects stopped the intake of soymilk. Plasma samples were collected on week 0, 6, 9, and analyzed for total cholesterol, triglyceride, LDL-C and HDL-C. Body weight and body fat were measured on week 0, 6. After six-week study period, the results showed that intake of soymilk could significantly lower plasma total cholesterol concentration ($p<0.05$), but there were no significant difference in plasma triglyceride, LDL-C, and HDL-C concentration ($p>0.05$); and there were also no significant difference in body weight and body fat. However, plasma total cholesterol concentration was back to baseline level after three-week recovery period, there was no significant difference compared with baseline value. In conclusion, consumption of soymilk decreased the plasma total cholesterol concentration in mild hypercholesterolemic subjects, but it was back to baseline level if stopping intake of

soymilk.