



The Weekly: February 9, 2011

Calcium in dairy may reduce fat absorption

A study published in the *British Journal of Nutrition* shows that the nutrient combination of calcium and milkfat present in dairy may play a key role in reducing fat absorption and may have the ability to maintain good cholesterol (HDL) while minimizing any increase in bad cholesterol (LDL). The study, designed to explore why dairy products containing saturated fat and high contents of calcium do not seem to significantly affect blood cholesterol levels as much as saturated fat from other sources, lends credence to the notion that milk and other dairy products with a high content of calcium such as cheese, might actually reduce the risk for cardiovascular disease.

The authors noted that, historically, intervention studies have pointed to a relationship between a diet high in saturated fat and increases in total cholesterol and LDL cholesterol. As a result, some nutrition experts have recommended that consumers limit the intake of high-fat dairy products. However, observational studies have found an inverse relation between intake of milk and other dairy products with a high content of calcium and incidence of cardiovascular disease. The researchers aimed to study whether the high calcium content of dairy products influences the effect of dairy fat on the lipid profile.

The study was a small, clinical trial that included nine participants completing four separate diets over a period of 10 days, with each diet differing in the amount of calcium and fat content. Blood variables were measured before and after each diet period, and feces and urine were collected at the end of each diet period. A two-way analysis of variance (ANOVA) was used to examine the effect of calcium and fat intake. Independent of calcium intake, the high-fat diet increased the concentrations of total, LDL, and HDL cholesterol compared with the low-fat diet. However, independent of fat intake, the high calcium diet decreased the concentrations of total and LDL cholesterol, but not HDL cholesterol compared with the low calcium diet. In addition, total:HDL cholesterol was decreased (5%), and HDL:LDL was increased (12%) by the high-calcium diet compared with the low calcium diet.

The researchers concluded that “dairy calcium seems to partly counteract the raising effect of dairy fat on total and LDL cholesterol, without reducing HDL cholesterol.”