Curcumin Lowers Cholesterol, Improves Lipids

Curcumin helps lower elevated cholesterol levels induced by a high-fat diet in rats, according to investigators at Al-Azhar University in Cairo, Egypt.* By promoting a healthy blood lipid profile, curcumin may thus help reduce the risk of cardiovascular disease.

The researchers studied three groups of 10 rats per group. The control group was fed standard rat chow. One experimental group received a high-cholesterol diet enriched with 0.5% curcumin by weight, while the other experimental group received a high-cholesterol diet without curcumin. Cholesterol profiles, liver enzyme levels, and markers of antioxidant activity in the three groups of rats were examined after one week on the high-cholesterol diet.

The high-cholesterol diet increased total cholesterol levels dramatically, but adding curcumin reduced total cholesterol by 21% compared to the high-cholesterol group that did not receive curcumin. In the curcumin-supplemented rats, triglyceride levels dropped by 25-31%, while low-density lipoprotein (LDL) levels fell by 58% compared to the unsupplemented group. The curcumin-fed animals also demonstrated a 51% increase in high-density lipoprotein (HDL) levels. Moreover, curcumin significantly reduced the ill effects of a high-cholesterol diet on markers of liver health in the rats, though it had no discernible effect on blood markers of oxidation.

Curcumin thus appears to improve several blood lipid parameters by lowering total cholesterol, LDL, and triglycerides, while raising HDL levels. The researchers believe that curcumin exerts its cholesterol-lowering actions by modulating cholesterol absorption, degradation, or elimination, rather than through an antioxidant mechanism. Long used as an anti-inflammatory agent, curcumin may also help protect cardiovascular health through its beneficial effects on blood lipids.

—Linda M. Smith, RN


Folate Cuts Colon Cancer Risk, Especially in Smokers

A high dietary intake of folate offers protection against colon cancer, particularly in cigarette smokers, report researchers affiliated with the Karolinska Institute in Sweden and the Harvard School of Public Health.* Epidemiological evidence indicates that high folate intake is associated with a reduced risk of colon cancer, but whether this effect is modified by smoking had not been previously studied.

To clarify the possible influence of cigarette smoking on folate's protective effect against colon cancer, the study followed more than 61,000 women. Using food-frequency questionnaires, the researchers determined mean daily folate intake among the study subjects to be 183 micrograms (mcg).

During nearly 15 years of follow-up, 805 cases of colorectal cancer were documented in the study group. Women who ingested less than 150 mcg of folate daily had a 39% greater risk of colon cancer compared to women who consumed at least 212 mcg of folate daily. Statistical modeling disclosed a dose-response relationship between daily folate intake and colon cancer risk, predicting that each 100-mcg increase in folate intake could decrease colon cancer risk by 34%.

Among women who had smoked cigarettes for 10 or more years, those consuming at least 193 mcg of folate daily had a 66% lower risk of colon cancer than those whose folate intake was less than 163 mcg. Although nonsmokers with the lowest folate intake had a 41% lower risk of colon cancer than did smokers, smokers with the highest folate intake had the same risk of colon cancer as non-smokers with the highest folate intake.

Increasing dietary folate intake may thus decrease the risk of colon cancer. This effect is particularly notable in smokers, who experience an elevated risk for the disease.

—Linda M. Smith, RN

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