

DIETITIANS' NEWS

Flax Lowers Cholesterol in Native American Postmenopausal Women

Milled flax has been shown to lower blood total cholesterol (TC) and low-density cholesterol (LDL-C) in diverse populations: healthy young adults, men and women with hypercholesterolemia, postmenopausal women, adults with systemic lupus and men with prostate cancer.¹ Recently, Anagha Patade and fellow researchers at Oklahoma State University, the University of Arkansas and Florida State University reported that flax consumption significantly lowered TC and LDL-C concentrations among Native American postmenopausal women.² This study is likely the first to study the health effects of flax in an American Indian population.

The researchers recruited 55 Native American postmenopausal women with moderate hypercholesterolemia who had not been taking hormone replacement therapy for at least 6 months. The women were randomly assigned to one of three groups: (1) control, (2) flax and (3) flax + oat bran fibre. Women assigned to the flax groups consumed 30 g of flax daily in the form of commercially-baked bread, muffins and powder (milled flax); those assigned to the flax + oat bran group received an additional 8 g of oat bran fibre added to the bread and muffins.

Among the 42 women who completed the 3-month study, mean TC concentration decreased 7% and LDL-C concentration decreased 10% for women assigned to consume flax or flax + oat bran. Mean high-density lipoprotein cholesterol (HDL-C) and triglyceride concentrations did not change over the course of the study in the flax groups, whereas they decreased 17% and 18%, respectively, in the control group. Serum concentrations of steroid hormones and C-reactive protein, a biomarker of systemic inflammation, were not altered by the study treatments. Mean serum lipoprotein(a) [Lp(a)] concentration decreased 22% in the flax group compared with a 3-5% decrease in the control and flax + oat bran groups, but the decrease from baseline was not statistically significant. The findings of this study regarding Lp(a) and CRP do not agree with those of other studies, which reported significant decreases in these two risk factors for cardiovascular disease (CVD) among adults who consumed whole flax or flax oil.^{3,4} The discrepancies may be due to different dietary ALA intakes and health characteristics of the study populations.

The findings of Patade and coworkers among Native American postmenopausal women confirm the blood cholesterol lowering effect of flax, whether consumed alone or paired with oat bran as part of the usual diet. The researchers concluded that flax is a safe and inexpensive food that helps lower blood cholesterol and may reduce CVD risk.

References

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- ⁴Paschos GK, Yiannakouris N, Rallidis LS, et al. 2005. Apolipoprotein E genotype in dyslipidemic patients and response of blood lipids and inflammatory markers to alpha-linolenic acid. *Angiology*. 56: 49-60.