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Cholesterol Management Health Center

Cholesterol Lessons for Kids Pay Off

Early Counseling About Low-Cholesterol Diet May Set Kids up for Healthier Future

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WebMD Medical News

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Aug. 13, 2007 -- It's never too early to teach your children about cholesterol, according to a new study.

Finnish researchers found counseling children from infancy about diets low in saturated fats, such as animal fats, reduced average blood cholesterol levels through age 14 without any negative effects on physical development.

Previous studies have shown that elevated levels of total cholesterol and LDL "bad" cholesterol in children predisposes them to early atherosclerosis (hardening of the arteries), which increases the risk of heart attack and stroke later in adulthood.

"We feel that lifetime habits form early in life and healthier lifestyles should be started earlier in life," says researcher Harri Niinikoski, MD, PhD, a pediatric endocrinologist at the University of Turku in Finland, in a news release. "We were trying to find out whether it is safe to start a lower-saturated-fat and lower-cholesterol diet early in life."

Low-Cholesterol Message Safe for Children

The study followed 540 children who received individualized dietary counseling and 522 who did not get diet advice from the age of 7 months through age 14.

The goal of the dietary counseling was not to reduce the total number of fat calories in the children's diet, but to shift the child's fat intake from saturated fats to unsaturated fats, such as those found in fish and vegetable oils. Overall, the children were advised to have fewer than 200 milligrams of cholesterol per day. During the first year of life, the children were breastfed or were fed formula.

The American Academy of Pediatrics does not recommend restriction of fat in products such as milk until after 2 years of age.

"We want to emphasize that this diet is not vegetarian or even close to it," says Niinikoski. "Our aim was not to reduce intake of cholesterol and total fat in infancy. The children were advised to use meat and fish, etc., but to choose meat and milk products lower in saturated fat."

The results, published in *Circulation: Journal of the American Heart Association*, showed children who were counseled about low-cholesterol diets consistently had diets that were lower in total fat and saturated fat and higher in protein and carbohydrates than the children who did not receive the counseling.

By age 14, children who were taught about a low-cholesterol diet had slightly lower blood cholesterol levels than the other group.

"Overall, the difference between the mean serum cholesterol values of the intervention and control children is quite small -- about 5 percent in boys and 2-4 percent in girls depending on age -- [statistically] significant for boys but not for girls," says Niinikoski in the news release. "In the long run, even a minor decrease in serum

cholesterol concentrations in a large population can have a major influence on coronary heart disease."

In addition, in the study there were no significant differences in physical development, including height, weight, body mass index (BMI), puberty changes, and age of first menstrual period for girls, among those who received counseling about a low-cholesterol diet.

SOURCES: Niinikoski, H. *Circulation: Journal of the American Heart Association*, Aug. 13, 2007; online edition. News release, American Heart Association.

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