



Study: Dairy Calcium Plays Critical Role in Reducing Milkfat Absorption

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The unique nutrient combination of calcium and milkfat present in dairy may play a key role in reducing fat absorption and may have the unique ability to maintain good cholesterol (HDL) while minimizing any increase in bad cholesterol (LDL), according to an article published in the February 2011 issue of the *British Journal of Nutrition*.

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 of cardiovascular disease.

The authors, Janne Lorenzen and Arne Astrup, professor and director of the Department of Human Nutrition at the Faculty of Life Sciences, University of Copenhagen, 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 recommend that consumers limit the intake of high-fat dairy products. However, observational studies found an inverse relation between intake of milk and other dairy products with a high content of calcium and incidence of cardiovascular disease. Astrup and Lorenzen studied whether the high calcium content of dairy products influences the effect of dairy fat on the lipid profile.

"In theory, without calcium, dairy would have a bigger impact on LDL levels. The protective function of dairy calcium seems to set it apart from other sources of fat," Astrup says. "This study supports previous research we have conducted that indicates dairy intake may actually play a role in minimizing the risk for cardiovascular disease versus increasing the risk."

"We know there are many adults today concerned about their fat intake, cholesterol levels and heart disease risk," says Gregory Miller, president of the Dairy Research Institute and executive vice president of the National Dairy Council, Rosemont, Ill. "We believe this study underscores the importance of dairy as a good daily source of calcium, protein and other nutrients while mitigating the impact on cholesterol. The study reinforces findings published in the Dietary Guidelines Advisory Committee report in 2010 that suggests

'bioactive components that alter serum lipid levels may be contained in milk fat,' or the effect of milkfat on blood lipids is different than what might be predicted. This is valuable information for the industry and for the consumer. It is an area of research the Dairy Research Institute continues to focus on."

The study, "Dairy calcium intake modified responsiveness of fat metabolism and blood lipids to a high-fat diet," was a small, clinical trial that included participants completing four separate diets over a period of 10 days, with each diet differing in the amount of calcium and fat content.

For more information on this and other dairy-related topics, visit www.USDAiry.com.

Dairy Research Institute is a non-profit organization affiliated with the Innovation Center for U.S. Dairy and was created to strengthen the dairy industry's access to and investment in the technical research required to drive innovation and demand for dairy products and ingredients, globally. The Institute works with and through industry, academic, government and commercial partners to drive pre-competitive research in nutrition, products and sustainability on behalf of the Innovation Center and the National Dairy Council.

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