



## **Research: Dairy Consumption Associated With Lower Incidence Of Metabolic Syndrome**

by Innovation Center for U.S. Dairy

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Rosemont, Ill. — Research findings recently published in *Diabetes Care* found that the consumption of dairy products, including cheese alone, was associated with decreased incidence of metabolic syndrome and associated risk factors for cardiovascular disease. These results also found that consumption of dairy products other than cheese, and calcium intake were associated with a decrease in the incidence of type 2 diabetes or impaired fasting glucose.[1] The study supports previous epidemiological research that associated dairy intake with a lower prevalence of obesity-related chronic diseases.[2]

Metabolic syndrome is a condition characterized by the presence of at least three metabolic abnormalities, including central obesity, high blood pressure, and impaired glucose and lipid metabolism, that are risk factors for cardiovascular disease.

“With approximately one-third of American adults meeting the criteria for metabolic syndrome, which includes risk factors for cardiovascular disease, there is a growing need to address this health issue,” said Gregory Miller, Ph.D., president of the U.S.-based Dairy Research Institute™ and executive vice president of the National Dairy Council®. “The findings in this study indicate that a diet including dairy could be part of the solution to help maintain metabolic health and reduce incidence of type 2 diabetes or impaired fasting glucose.”

The study examined Data from the Epidemiological Study on the Insulin Resistance Syndrome (DESIR), a nine-year prospective study that surveyed 3,435 individuals in France using a food frequency questionnaire at baseline and after three years. The authors examined dietary intake of three categories: dairy products excluding cheese, cheese specifically and overall calcium density of the diet. The results were adjusted to exclude confounding variables, including body mass index (BMI).

The authors found:

Consumption of dairy products, including cheese alone, and the calcium density of the diet were associated with lower incidence of metabolic syndrome, a lower nine-year diastolic blood pressure and lower BMI gain over time.

The consumption of dairy products other than cheese and the calcium density of the diet were associated with reduced incidence of type 2 diabetes or impaired fasting glucose.

Higher cheese intake and the calcium density of the diet were associated with lower triglyceride levels and a lower nine-year increase in waist circumference.

Understanding the benefits of dairy products on metabolic syndrome, type 2 diabetes, and other risk factors for cardiovascular disease may provide an opportunity to help reduce the health-related and economic burdens associated with these conditions.

#### Research Continues to Back Dairy's Impact on Metabolic Health

Dairy products supply key nutrients to the diet that may favorably affect blood pressure, including calcium, potassium, magnesium and vitamin D.[3] Another recent research study also demonstrated that the nutrient combination of calcium and milkfat present in dairy may play a role in reducing fat absorption and may help maintain good cholesterol while minimizing any increase in bad cholesterol.

The study, published online in the February issue of the British Journal of Nutrition[4] reinforced findings published in the 2010 Dietary Guidelines Advisory Committee report indicating that 'bioactive components that alter serum lipid levels may be contained in milkfat.' [5]

"We know there are many adults today concerned about their fat intake, cholesterol levels and heart disease risk," Miller said. "We believe today's research underscores the importance of dairy as a good daily source of calcium, protein and other nutrients while mitigating the possible impact on blood cholesterol."

The potential beneficial effect of dairy products and dairy ingredients on metabolic syndrome and obesity-related chronic diseases is a priority research area for the dairy industry and the Dairy Research Institute. Ongoing research has focused on identifying and purifying dairy-derived proteins with health promoting properties to help meet the needs of many consumer groups, said Bill Graves, senior vice president, Product Research, Dairy Research Institute.

"We believe these proteins will be part of the next generation of dairy-based products that will excite health-conscious consumers," Graves said. "More research on the role of other dairy components, such as calcium and milk fat, on metabolic health is needed. We believe that the unique components of dairy could ignite new dairy-based product innovations to meet the needs of today's consumers."

Dairy Research Institute™ is a 501(c)(3)\* 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®.

Source: Innovation Center for U.S. Dairy