



## **Dairy Consumption May Help Improve Metabolic Health & Reduce Diabetes Risk**

by Dairy Research Institute

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Rosemont, Ill. — The results of two new studies contribute to the growing body of research demonstrating that adequate dairy consumption as a part of a nutrient-rich, balanced diet may help maintain metabolic health and reduce the risk of type 2 diabetes.

With approximately one-third of American adults meeting the criteria for metabolic syndrome, there is a growing need to address this health issue.<sup>1</sup> Metabolic syndrome is a condition characterized by the presence of at least three metabolic conditions, including central obesity, high blood pressure and impaired glucose or lipid metabolism. These metabolic abnormalities, as well as enhanced inflammatory and oxidative stress, significantly increase the risk of cardiovascular disease and type 2 diabetes.

In one study, published online ahead of print in the *American Journal of Clinical Nutrition*<sup>2</sup> and administered by the Dairy Research Institute<sup>TM</sup>, researchers conducted a clinical trial in which 40 overweight and obese adults with metabolic syndrome were randomly assigned to consume either a low dairy or adequate dairy (at least three servings per day) weight maintenance diet for 12 weeks.

The study results show that compared with low intake, adequate dairy intake significantly improved multiple health indicators. Specifically:

Markers of both oxidative and inflammatory stress in subjects with metabolic syndrome were reduced.

Other key components of metabolic syndrome (i.e., high blood pressure and insulin resistance) showed improvement.

Fat mass (mostly trunk fat) and waist circumference decreased, with no significant change in body weight for either group.

In addition, in another study recently published in the *European Journal of Clinical Nutrition*, Chinese researchers conducted a systematic review and meta-analysis of seven prospective studies examining the association between dairy product consumption and type 2 diabetes.<sup>3</sup>

Diabetes affects approximately 347 million people worldwide.<sup>4</sup>

The study results show that higher dairy intake was associated with lower risk of type 2 diabetes. Specifically:

There was a significant (14 percent) reduction in type 2 diabetes risk in the population with the highest consumption of dairy products compared with those with the lowest intakes.

Low-fat dairy consumption was associated with a significant (18 percent) reduction in type 2

diabetes risk. Yogurt consumption was associated with a significant (17 percent) reduction in type 2 diabetes risk.

Type 2 diabetes risk was decreased 10 percent with an additional daily serving of low-fat dairy.

“Although additional research is needed, evidence is growing that indicates dairy’s positive role not only in improving health and nutrition but also in reducing risk of chronic disease,” says Gregory Miller, Ph.D., president of the Dairy Research Institute and executive vice president of the National Dairy Council®.

Overall, the results from both studies contribute to the growing body of research showing that adequate dairy consumption as a part of a nutrient-rich, balanced diet can help improve key risk factors associated with metabolic syndrome and the development of type 2 diabetes.

The Dairy Research Institute, which manages pre-competitive dairy research in nutrition, product and sustainability on behalf of the Innovation Center for U.S. Dairy®, the National Dairy Council and other sponsors, is funded by America’s dairy farmers through the dairy checkoff program.

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1Ervin RB, “Prevalence of metabolic syndrome among adults 20 years of age and over, by sex, age, race and ethnicity, and body mass index: United States, 2003–2006,” National Health Statistics Reports, no. 13 (May 5, 2009).

2Stancliffe RA, Thorpe T, Zemel MB. Dairy attenuation of oxidative and inflammatory stress in metabolic syndrome. *Amer J Clin Nutr* [Epub ahead of print]. 2011 June 30.

3Tong X, Dong J-Y, Wu Z-W, Li W, Qin L-Q. Dairy consumption and risk of type 2 diabetes mellitus: a meta-analysis of cohort studies. *Eur J Clin Nutr* [Epub ahead of print]. 2011 May 11.

4Danaei G, Finucane MM, Lu Y, et al, on behalf of the Global Burden of Metabolic Risk Factors of Chronic Diseases Collaborating Group (Blood Glucose). National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: systematic analysis of health examination surveys and epidemiological studies with 370 country-years and 2•7 million participants [Epub ahead of print June 24, 2011]. *Lancet*. [Epub ahead of print]. 2011 June 24.

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