

# Food Product Design

*Dairy Update - January 14, 2011*

## Diabetes, Heart Health, Diet Lead Dairy Research

ROSEMONT, Ill.—Continued evidence is mounting that consuming three servings of dairy per day can provide extraordinary benefits in the fight to reduce type 2 diabetes, cardiovascular disease, bone disease and obesity, according to the **Dairy Research Institute™**.

Established in 2010 under the leadership of America's dairy farmers through Dairy Management Inc., (DMI), the Dairy Research Institute 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 domestically and abroad.

The Dairy Research Institute outlined the following top insights learned from 2010 dairy nutrition and product research:

- Emerging research indicates dairy may play a positive role in reducing the risk of type 2 diabetes. The Centers for Disease Control and Prevention (CDC) predict that by the year 2050, up to one-third of the U.S. population could have diabetes. A newly published study indicates a specific type of fat found primarily in dairy products was associated with greater whole-fat dairy consumption, a more favorable metabolic profile, and a significantly lower incidence of type 2 diabetes. A study administered by the Dairy Research Institute showed that adequate dairy intake (3.5 daily servings compared with less than 0.5) can improve key metabolic risk factors associated with obesity. The findings suggest dairy also lowered blood insulin levels and increased insulin sensitivity in this study, demonstrating a potential decreased risk for developing metabolic syndrome and type 2 diabetes.
- Emerging research indicates that dairy consumption is associated with a reduced risk for heart disease.
- In an observational study administered by the Dairy Research Institute, higher blood levels of fatty acids found specifically in dairy products were associated with a decrease in the likelihood of a first heart attack in women.
- New research reveals girls who drink more soda and less milk than other kids at age 5 are likely to have similar habits at age 15, a critical time for building bones. In the study, girls with lower dairy intake also had lower intakes of important nutrients like calcium, magnesium, potassium and phosphorous, which are vital for their growing bodies.
- A research team developed a new Nutrient Density to Climate Impact Index to examine nutrient profiles related to greenhouse gas emissions in the production life cycle of various beverages. Milk had the highest nutrient

density scores in relation to greenhouse gas emissions, performing better than the other beverages tested.

- Dairy protein continues to excel for nutrition and product value for food and beverage manufacturers. In 2010, the Dairy Research Institute administered sensory, application and nutrition research to further develop dairy protein options for food and beverage manufacturers to make tasty, nutritious protein-enhanced products. For example, more heat stable whey proteins are now available, increasing the amount of protein that can be used in meal replacement beverages from 5 percent to 10 percent. This is important as the role of dairy protein in good health and body composition becomes better understood. In recent research with older women, study participants on a reduced-calorie diet supplemented with whey protein showed significantly greater fat loss than those consuming the same amount of calories from carbohydrates.
- The 2010 Dietary Guidelines Advisory Committee also recognized these new emerging areas of dairy research. In its June 2010 report the committee wrote, "Under-consumption of milk and milk products is associated with an increase in cardiovascular disease and type 2 diabetes, as well as an increased risk for poor bone health and related diseases."
- In 2011, the Dairy Research Institute expects to see more research on the role of three servings of dairy each day to improve metabolic health and dairy's effect on decreasing risks for type 2 diabetes and heart disease; more news on chocolate milk's role in muscle recovery and a shift in nutrition community advice away from a focus on individual nutrients toward providing more practical, total diet advice."