



## **Dairy may reduce risk of metabolic syndrome**

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**By Krissa Welshans**

There's more good news about the benefits of dairy after a recent review from the Dairy Research Institute associated dairy consumption with a reduced risk of metabolic syndrome and its related diseases.

Affecting more than one-third of American adults, metabolic syndrome poses a significant public health threat in the U.S. The syndrome is a cluster of symptoms that increases the risk of cardiovascular disease and type 2 diabetes and accounts for billions of dollars of health care costs annually.

The new report, published in *Advances in Nutrition*, was authored by scientists at the Dairy Research Institute and discusses how components of dairy products' unique nutrient package may account for their positive effects.

Dairy foods are an important source of key nutrients, contributing 50% of calcium and more than 10% of magnesium and potassium, and milk is the number-one food source of calcium, vitamin D and potassium in the American diet.

The research review reported that these and other components in dairy products, specifically milk fat and whey proteins, together may help regulate one or more elements of metabolic syndrome, including blood pressure, fasting glucose levels, the makeup of fats in the blood and body composition.

"Dairy is a great example of the whole being greater than the sum of its parts. This review provides further evidence that it's the components in dairy working together that provide nutrition and health benefits, in this case related to improved metabolic health," said Dr. Beth H. Rice, lead author of the review article and manager of scientific affairs for the Dairy Research Institute and the National Dairy Council.

"Although more research is needed to confirm the potential benefits related to cardiovascular disease and type 2 diabetes, this research does reinforce for the dairy industry the need to communicate the value of dairy's nutrient package and its distinguishable contributions to consumer health and wellness," she noted.

The review highlights recent studies that show that dairy protein provides wellness benefits. Some of these findings have indicated that dairy protein, specifically whey protein, may be associated with beneficial changes in body composition when accompanied by routine resistance exercise.

Whey protein is regarded as a "fast" protein because it is rapidly digested, allowing for quick delivery of amino acids to muscles. It is also a major source of essential amino acids, particularly leucine, which is an activator of muscle protein synthesis and is believed to have an overall beneficial effect on muscle

metabolism.

"Whey protein, in particular, is an asset to dairy's nutrient package. Its ability to impact body composition and potentially impact risk factors associated with metabolic syndrome are an important benefit to dairy consumption," said Dr. Gregory Miller, president of the Dairy Research Institute. "Further research on the mechanisms of whey protein involved with body composition benefits, specifically when compared to other dietary proteins, could strengthen our understanding of dairy's role in reducing the risk of metabolic syndrome."

The Dairy Research Institute provides pre-competitive dairy research and product innovation. The organization is funded through the national checkoff program by dairy farmers who are committed to research on dairy products, nutrition and sustainability.

Even more good news on dairy's health benefits comes from Harvard University, where researchers have found that developing healthy habits like drinking milk as a teen could have a long-term effect on a woman's risk of developing type 2 diabetes.

The research, published in a recent issue of the American Journal of Clinical Nutrition, found that teens who drink milk are likely to become adults who drink milk -- a lifelong habit that's associated with a 43% lower risk for type 2 diabetes compared to non-milk drinkers. Diabetes affects more than 25.8 million people, or nearly one out of 10 Americans.

The Harvard research studied teenage and adult food intake patterns (including intake of milk and milk products) and health risks in more than 37,000 women.

Researchers found that the women who drank the most milk as adults and consumed the most milk products (about four servings per day) in their teen years had a lower risk of type 2 diabetes than those who consistently had a low dairy intake (about one serving per day during the teen years).

The milk-drinking teens were also more likely to maintain their dairy habit through adulthood and gained less weight over time -- nearly 4 lb. less than non-milk drinkers. (Weight gain is another important risk factor for type 2 diabetes.)

A second large Harvard study reinforced the lifelong benefits of milk, particularly as a protein source. Studying more than 440,000 adults, researchers found that swapping low-fat dairy products for meat as a protein source could reduce the risk for type 2 diabetes by 17%.

Each glass of fat-free milk provides 8 g of protein, along with eight other essential nutrients -- including calcium and vitamin D -- for just 80 calories. The Dietary Guidelines for Americans recommend three servings of fat-free or low-fat milk each day.

Krissa Welshans holds a bachelor's degree in animal science from Michigan State University and a master's degree in public policy from New England College. Welshans has long been involved in agriculture and has worked with numerous agricultural groups, including the Animal Agriculture Alliance and United Horsemen.

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