

CHEESE MARKET NEWS[®]

The Weekly Newspaper Of The Nation's Cheese And Dairy/Deli Business

More research connecting weight loss, dairy products

By Johanna Nelson

MADISON, Wis. — As concerns about health and diet continue to influence the food products consumers seek out, research connecting dairy consumption to weight loss/weight management has gained an increasing amount of attention in recent years — although some remain skeptical of such claims.

“The research suggests that three servings of lowfat dairy foods plays a key role in healthy diets that results in healthy weight,” says Stephanie Cundith, registered dietitian, National Dairy Council (NDC). “Consumption of dairy foods that are high in calcium and dairy protein — including milk, cheese and yogurt — in calorie-restricted diets may help obese and overweight individuals lose more body weight and fat than when

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just cutting calories alone.”

Cundith notes that reduced-fat, lowfat and fat-free milk, cheese and yogurt not only have the potential to aid in weight loss, but also provide a unique package of nine essential nutrients that cannot be found in other food groups.

“Every calorie really counts; you want to look at foods that offer the most nutritional bang for your buck,” she adds.

NDC relays this message to consumers through a variety of educational programs that share scientific findings and highlight the 2005 Dietary Guidelines’ recommendation of three servings of dairy per day. Efforts include handouts for consumers as well as websites explaining the health benefits of dairy.

“People want to hear the best ways to efficiently construct the healthiest diet that works for their life. It’s not useful to hear scattered reports on a new nutrient that should be avoided or one that should be actively sought out,” says Greg Miller, executive vice president of research, regulatory and scientific affairs, NDC. “People eat food, not nutrients, and providing guidance centered on foods that are naturally nutrient-rich is so valuable, especially when many are looking to reduce food costs.”

Miller also says that Americans of all ages, including children, are missing out on important nutrients on a daily basis.

“Right now, children are overweight and undernourished — missing out on vital nutrients because they are not choosing nutrient-rich foods first,” he adds.

To address this issue, NDC has partnered with the National Football League to launch the Fuel Up to Play 60 campaign. Miller notes the program is giving students in more than 60,000 schools the tools they need to “fuel up” with nutrient-rich foods and “play 60” by getting at least an hour of physical activity every day.

In addition to spreading the dairy-weight loss message, NDC also focuses its nutrition research on this topic.

“This research program was developed to not only provide dairy industry-supported research on the relationship between dairy and/or calcium on body weight and body composition in children, adolescents and adults, but also to stimulate interest among non-dairy groups as well,” says Chris Cifelli, director of nutrition research at Dairy Management Inc. (DMI). “The net result has been that more than 40 studies funded by DMI have been published on this topic while at least 150 publications have been published overall.”

In fact, many studies have found a connection between dairy and weight loss. A recent study by Australia’s Curtin University of Technology indicates that a higher intake of dairy products while on a reduced-calorie diet can help fight obesity.

As part of her Ph.D. research, Wendy

Chan She Ping-Delfos, post-doctoral research fellow, Curtin Health Innovation Research Institute of Western Australia, compared three servings of dairy with five servings of dairy within a reduced-calorie diet prescribed to overweight participants over a 12-week weight loss trial.

The study found that participants who consumed five servings of dairy as opposed to three had higher mean levels of weight loss, higher mean levels of fat loss, greater drop of systolic blood pressure and greater total percentage of abdominal fat loss.

“While they all lost weight, the five servings had a more favorable fat distribution,” Ping-Delfos says, noting the research compared the recommended daily dairy intake with a higher intake.

According to Ping-Delfos, previous studies also have used dairy calcium to show its benefits on weight, indicating an intake equivalent to three servings is more beneficial than a low intake of dairy calcium.

She notes this study will help clarify the effects of dairy in a weight loss situation and will be used to design other studies.

Michael Zemel, professor of nutrition and surgery and director of The Nutrition Institute at the University of Tennessee, also has conducted numerous studies that have found a connection between dairy and weight loss.

“I made an accidental discovery in 1988 that dairy foods seem to facilitate loss of body fat,” Zemel says. “Over the next dozen years or so, in between other research, I worked on identifying the mechanism.”

His research found there are several mechanisms involved, including some linked to calcium.

“If there is not enough calcium in

the diet, the body reacts by releasing hormones to help reserve the calcium it does have,” Zemel says. “The hormones also act on fat cells, sending messages

to increase the process of making more fat out of sugar and to slow down the process of fat break down.”

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The hormone, calcitriol, also interferes with the normal life cycle of fat cells, preventing apoptosis (cell death) and resulting in bigger, fatter fat cells that live longer.

In addition, there are other components of dairy that work in conjunction with calcium, such as leucine — an essential amino acid that serves as a building block of protein. When it is at a high enough level in muscle, it also signals to make more protein, which uses energy/calories.

“There are other mechanisms of dairy that work with this system as well — it’s not just calcium, or calcium plus leucine,” Zemel says. “You can’t recreate

these effects as a pill.”

Through his research, Zemel found that when people are trying to lose weight by modestly cutting calories, having adequate levels of dairy (about three servings per day) leverages that effort and makes it easier to lose weight and fat.

“People with the same caloric intake lose twice as much fat on a dairy-rich diet compared to a dairy-poor diet,” Zemel says. “In addition, on a dairy-rich diet you lose more fat and retain more muscle.”

Zemel says that those who increase dairy intake without cutting calories will not see a change on the scale; however, body composition will be improved as there will be less fat and more lean tissue.

“Calories still count. We can’t pretend they don’t, but within a framework with some management of calories, a dairy-rich diet makes the body more forgiving to a few extra calories,” says Zemel, adding that if people already are consuming three to four servings of dairy per day, they are not going to benefit by doubling the amount. “We are talking about sufficiency and insufficiency. The benefit comes to those who do not have enough.”

In particular, dairy products that contain whey have been found to be especially beneficial; however, other products such as cheese also can produce positive results — as long as dietary adjustments are made elsewhere.

“Cheese is okay; however, because of the calories associated with the higher

fat found in cheese vs. skim milk or low or fat-free yogurt, you simply have to accommodate that fat elsewhere in the diet,” Zemel says. “My framework is we are going to have some fat, why not let it come from cheese and make adjustments elsewhere. In some clinical trials, cheese was utilized, and while it wasn’t the sole dairy source, the full effect was just as good as when the sole source was just yogurt.”

In addition to helping with weight loss, research also indicates dairy has other health benefits. In particular, the Italy-based Universities of Sassari and Cagliari, in conjunction with a team of doctors from the United States, collaborated on a six-year research study confirming that Pecorino Romano cheese contains high amounts of conjugated linoleic acid (CLA), an omega-6 polyunsaturated fatty acid.

CLA is found primarily in milk and dairy products and in the meat of ruminants (sheep, goats, lamb and cattle). CLA is highest when ruminants are fed fresh grass, which gives the end product its nutritional and therapeutic properties.

The study confirmed numerous health benefits of CLA, including reducing fat, suppressing diabetes, preserving muscle tissue and inhibiting tumor growths on the skin, mammary glands and stomach.

Researchers also note that the ongoing consumption of Pecorino Romano cheese — as part of a balanced and calorically correct diet — contributes a set of bioactive elements capable of significantly reducing the risk factors, such as cardiovascular diseases, associated with eating habits in Western countries.

“Pecorino is one of the highest, most abundant natural sources of CLA that you can find,” says Mark McGuire, professor, Department of Animal and Veterinary Science, University of Idaho. “All dairy products contain CLA, but the levels in Pecorino are greater than any other cheese.”

About 1.3 grams per day of CLA has been targeted to reduce cancer risk. To obtain this level, about 3 ounces of Pecorino Romano daily would be needed.

“Pecorino is an ancient cheese — it’s been a part of the Mediterranean diet for centuries,” McGuire says. “My hope would be that American consumers would not hesitate to consume a little cheese. It has beneficial fatty acids and can definitely be part of a good diet.”

In fact, Joan Salge Blake, clinical associate professor at Boston University and registered dietitian, encourages people to include three servings of dairy in their diets and recommends snack pairings such as reduced-fat string cheese or reduced-fat Cheddar cheese with an apple or a pear.

“One problem with weight management is that people are not eating enough of the right foods and are not planning their snacks,” Blake says. “This is where dairy products really

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can shine in that they are wonderful snack options.”

She says that in addition to calcium, milk is a great source of vitamin D. And with many Americans falling short on recommended intake of both calcium and vitamin D, some companies are enhancing dairy products such as yogurt with additional vitamin D.

“Yogurt is a phenomenal source of calcium, and now, having vitamin D added to it, you get two for the price of one,” Blake says.

But while she highly recommends dairy for its many health benefits, Blake says the jury is still out as to whether or not there is a definite dairy-weight loss connection.

“We don’t have enough information yet, and the results have been mixed,” Blake says.

In fact, some studies indicate there is no connection between the two. The University of Vermont conducted a 2005 study, *The Impact of Calcium and Dairy Product Consumption on Weight Loss*, comparing weight and body fat loss on a calorie-restricted, low-dairy diet vs. a high-dairy diet.

Fifty-four subjects were randomly assigned to both diets for a period of 12 months. Main outcome measures included change in weight and body fat. Results indicated there were no significant differences between the groups at baseline.

“These findings suggest that a high-dairy calcium diet does not substantially improve weight loss beyond what can be achieved in a behavioral intervention,” researchers say.

On the other hand, Zemel says there is a near consensus among the scientific community that there is a dairy-weight loss connection.

“Some people say ‘wait, we don’t see it,’ because they either don’t control calories or start out at too high a dairy intake to begin with,” he says. “The majority do see the connection.”

Cundith also notes that the 2005 Dietary Guidelines, in conjunction with research, affirm the health benefits of dairy.

“Research shows dairy contributes to greater success with weight loss and weight management,” she says. “People should feel safe and comfortable including three servings of dairy per day.”

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