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Nutrition Reports

A Newsletter of the United Dairy Industry of Michigan

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The United Dairy Industry of Michigan is the umbrella organization for the Dairy Council of Michigan and the American Dairy Association of Michigan. On behalf of funding members, these non-profit organizations provide science-based nutrition information to, and in collaboration with, a variety of stakeholders committed to fostering a healthier society, including health professionals, educators, school nutrition directors, academia, industry, consumers and media.

Scientific Review Dispels Dairy Food Myths

Despite the nutritional and health benefits of milk and other dairy foods, some people restrict or eliminate consumption of these foods because of myths. Such myths could potentially lead to nutrient shortfalls and risk of adverse health outcomes. A review of the scientific evidence dispels many of these myths. The following are some of these myths and the science-based facts.

Myth: People with lactose intolerance (gastrointestinal symptoms following intake of lactose or milk's sugar) should not consume milk or dairy products.

Fact: Health and nutrition authorities encourage many lactose intolerant persons to keep dairy foods in their diet to get the nutritional and health benefits of these foods.

Combating dairy food myths can help reduce the risk of unnecessary dairy restrictions or elimination, thereby decreasing potential nutrient shortcomings and adverse health effects.

Myth: Lactase deficient or lactose intolerant persons are also allergic to cow's milk.

Fact: Cow's milk allergy, a rare immune response to milk's proteins usually detected in early infancy and outgrown during childhood, differs from lactase deficiency or lactose intolerance. Patients with confirmed cow's milk allergy need to avoid dairy foods without compromising their overall nutrition.

Myth: Once an individual experiences gastrointestinal symptoms after consuming dairy foods, that individual will always have these problems.

Fact: A person's tolerance to lactose may improve over time with continued exposure to lactose.

Myth: Lactase deficiency (insufficient lactase, the enzyme needed to digest lactose) can be self-diagnosed based on symptoms following dairy intake.

Fact: This diagnosis is often incorrect and can lead to the unnecessary elimination of dairy products. Physicians can perform objective clinical tests to accurately diagnose lactase deficiency.

Myth: Lactose-intolerant people cannot tolerate even small amounts of lactose-containing foods.

Fact: Most people with lactose intolerance can tolerate moderate amounts of lactose-containing foods such as milk, especially when consumed with meals. Other strategies to include dairy foods in the diet without discomfort include yogurts with live, active cultures, most hard cheeses, and lactose-free dairy products.

Myth: Pasteurization of milk reduces its nutritive value.

Fact: Pasteurization, the process of heating and rapidly cooling milk to make it safe to drink, does not significantly alter milk's nutrient content.

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Click here to learn more about lactose intolerance, including its symptoms, diagnosis, and strategies to comfortably consume milk and milk products.

Scientific Review Dispels Dairy Food Myths (continued)

Myth: Drinking milk causes asthma.

Fact: Good evidence suggests that milk and dairy foods do not cause or worsen asthma.

Myth: Drinking milk causes increased mucus production and should be avoided during illnesses, such as the common cold.

Fact: Milk does not cause mucus production and need not be avoided when sick with colds.

The authors of this review encourage health professionals to help consumers make informed food choices by dispelling dairy food myths through nutrition education and counseling. ■

If you're unsure of what's fact and what's fiction when it comes to the dairy industry, visit www.dairygood.org/UdderTruth for a behind-the-scenes look at what really happens on America's dairy farms.

Food Insecurity Increases Children's Health Risks

According to the latest data, more than 15 million U.S. children (21%) live in food insecure households, defined as those with limited access to adequate food by a lack of money or other resources. For the first time, the American Academy of Pediatrics (AAP) has issued a policy statement, "Promoting Food Security for all Children," addressing the nation's hunger problem.

Food insecurity is associated with short- and long-term adverse health consequences for children and adolescents. The AAP report identifies the following:

- Increased illness, slower recovery from illness, poorer overall health, and increased frequency of hospitalization.
- Increased risk of iron deficiency in children and teens, low bone density in preadolescent boys, and increased risk of diabetes and cardiovascular disease later in life in those who experience early childhood malnutrition.
- Impaired ability to concentrate and perform well in school and increased behavioral and emotional problems from preschool through adolescence.

Research also indicates that household food insecurity is linked to increased risk of overweight and central obesity among adolescents. Central obesity is a risk factor for heart disease and metabolic disorders such as diabetes. This research study used National Health and Nutrition Examination Survey 1999 to 2006 data from more than 7,400 adolescents ages 12 to 18.

Food insecurity is a preventable health threat. The new AAP report calls for pediatricians to screen children for risk of food insecurity and to familiarize themselves with federal government programs (e.g., school nutrition programs, WIC) and community resources such as food banks and soup kitchens so that these can be recommended to food insecure families.

More than 1.7 million Michigan children and adults struggle with hunger every day. Michigan's dairy industry is helping to solve the state's hunger issue by implementing programs to increase hungry residents' access to nutrient-rich milk. Milk is America's number one food source of calcium, potassium, and vitamin D, and a good source of high-quality protein. More information about these programs can be found on our website, www.MilkMeansMore.org. ■

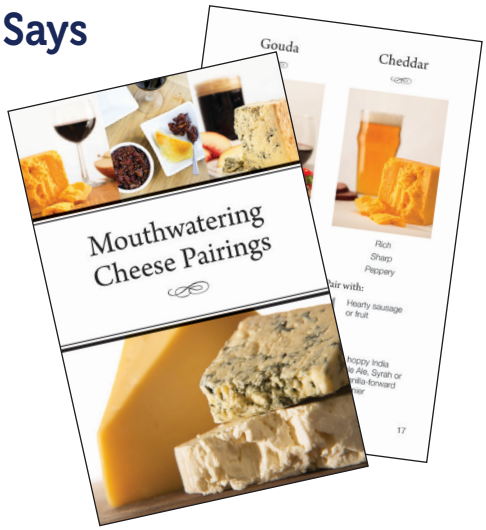
Cheese and Cardiovascular Disease: What the Science Says

Cheese is a delicious, versatile, convenient, and nutritious dairy food. Yet, because of its saturated fat content, consumption of full-fat cheese is often associated with increased risk of cardiovascular disease. However, accumulating scientific evidence is questioning this belief.

According to a review of 28 published human studies examining the effect of cheese intake on cardiovascular disease risk or cardiovascular disease risk factors, most observational studies report either no or a beneficial effect of cheese intake on cardiovascular disease risk or high density lipoprotein (HDL) cholesterol (the "good" cholesterol). Further, human intervention studies show that cheese lowers both total and low density lipoprotein (LDL) cholesterol (the "bad" cholesterol) compared to butter, despite the similar fat composition of these dairy foods.

Further evidence of a potential beneficial effect of cheese on cardiovascular disease risk or its risk factors is provided by an updated meta-analysis of prospective studies and a systematic review and meta-analysis of randomized controlled trials.

Possible mechanisms to explain cheese's neutral or beneficial effect on cardiovascular disease risk may involve its calcium, protein, specific types of saturated fatty acids, or food matrix. While more research is needed to clarify cheese's effect on cardiovascular disease risk, as well as underlying mechanisms involved, cheese can be part of a healthy diet when eaten in moderation. To learn more about how cheese can fit into the diet, check out these cheese brochures. ■



This guide will help you combine your favorite cheeses with wine, craft beer, and other tasty bites to help make your holiday gathering or casual weeknight cheese plate special.

No Evidence of Raw Milk's Benefits, Concludes Review

Consuming raw (unpasteurized) milk not only poses a significant health risk, but there is no scientific evidence that it has more nutritional or health benefits than pasteurized milk, concluded a recent review. Recognizing the ongoing popular debate about the risks and alleged benefits of consuming raw milk, a University of Wisconsin-Madison Food Science professor critically reviewed more than 50 publications related to raw milk.

The health risks of raw milk consumption are significant and well-documented. The popularity of raw milk has resulted in an increase in the number of milkborne illnesses due to raw milk contaminated with harmful bacteria. The average number of raw milk outbreaks was four-fold higher during 2007-2012 compared to 1993-2006.

In contrast to raw milk, pasteurized milk, which was introduced more than 100 years ago, has an excellent food safety record and is widely supported by government, medical, and scientific organizations to protect public health.

Despite claims of benefits by raw milk proponents, there is no reliable scientific evidence that raw milk is more nutritious than pasteurized milk, or that it protects against cow's milk allergy, alleviates lactose intolerance, or provides "good bacteria" or probiotics (i.e., "live microorganisms that, when administered in adequate amounts, confer a health benefit on the host"). The finding that there is no convincing evidence of raw milk's health benefits supports conclusions from earlier scientific reviews by various national and international health professional groups. ■

Benefits of High-Protein Breakfasts for Overweight/Obese Youth

Overweight and obesity among children and teens continues to be a growing public health concern in the United States. Currently, one-third of children aged 2 to 19 years are overweight or obese. Although multiple factors influence body weight, some studies associate skipping breakfast with increased risk of overweight/obesity. Findings from recent investigations suggest that overweight/obese children and teens who consume high-protein breakfasts experience health benefits.

Compared with a single low-protein, high-carbohydrate breakfast, a breakfast higher in protein and lower in carbohydrate increased satiety and reduced hunger in both normal weight and overweight children, according to a study of 29 children aged 8 to 12 years. The higher protein breakfast also increased post-meal energy expenditure and fat oxidation, especially in overweight children. Based on these findings, the researchers suggest that consuming breakfasts higher in protein and lower in carbohydrate may be an effective weight management strategy.

Findings from a 12-week trial including 57 teens who consumed a high calorie breakfast with either normal protein (13 g) or high protein (35 g), or continued to skip breakfast, led the researchers to conclude "the daily addition of a high-protein breakfast prevented the gain in body fat over 12 weeks compared to skipping breakfast, whereas normal-protein did not." The high-protein breakfast also reduced daily hunger and food intake.

In a recent pilot study in overweight/obese "breakfast skipping" teens, daily intake of a high-protein breakfast (35 g) improved blood glucose control compared to a normal protein (13 g) breakfast.

Emerging scientific evidence associates health benefits with consuming 30 g of high-quality protein at each meal. Dairy foods such as milk, cheese, and yogurt can help meet protein needs, not only at breakfast, but also at other meals throughout the day. ■

Teens' Early Dietary Patterns Predict Later Adolescent Cardiometabolic Risk Factors, Study Reports

Healthy dietary patterns consumed during the early teenage years reduce cardiometabolic risk factors in late adolescence, found a prospective study of 1,369 girls ages 9-10 followed for 10 years. Cardiometabolic risk refers to chances of having diabetes, heart disease, or stroke. While the effect of dietary patterns on cardiometabolic risk factors has been extensively studied in adults, few such studies have been carried out in adolescents.

The researchers determined teens' food intakes using multiple three-day diet records. Annual data on cardiometabolic risk factors (i.e., waist circumference, insulin resistance, blood lipid levels, blood pressure) were obtained from the National Heart, Lung and Blood Institute's Growth and Health Study.

Higher usual intakes of total dairy, fruits and non-starchy vegetables, and grains were independently associated with fewer cardiometabolic risk factors by the time the girls reached late adolescence. Likewise, eating patterns characterized by higher combined intakes of these food groups were associated with fewer cardiometabolic risk factors in late adolescence.

These findings have important implications for preventing cardiovascular disease and diabetes. ■

Increasing Dairy Food Intake Helps Close Nutrient Gaps

"Increasing dairy food consumption to recommended amounts is one practical dietary change that could significantly improve the population's adequacy for certain vitamins and minerals that are currently under-consumed, as well as have a positive impact on health," concludes a study published in *Nutrition Journal*.

Americans fail to consume recommended daily servings of dairy foods (milk, cheese, yogurt), which can contribute to under-consumption of key nutrients such as calcium, vitamin D, and potassium. The 2010 Dietary Guidelines for Americans recommends 3 servings of dairy foods a day for individuals 9 years and older, 2 1/2 servings for children 4 to 8 years, and 2 servings for children 2 to 3 years.

On average, Americans ages 2 and older consume only 1.9 servings of dairy foods a day.

Increasing consumption of dairy foods (milk, cheese, yogurt) to recommended amounts could help Americans better meet nutrient needs, especially for certain vitamins and minerals that are under-consumed.

To learn more about how recommended intakes of dairy foods could help close Americans' nutrient gaps, researchers conducted a diet modeling study using data from nearly 9,000 participants 2 years of age and older who participated in the National Health and Nutrition Examination Surveys (NHANES) 2007-2010. The analysis showed that increasing consumption of dairy foods to recommended intakes would result in significantly fewer adults with shortfall intakes of calcium, magnesium, and vitamin A. Because intakes of some nutrients such as vitamin D and potassium are far below recommended amounts for a large portion of the U.S. population, additional strategies may be needed to ensure adequacy of these nutrients. These strategies could include consuming 4 daily servings of dairy foods in dietary patterns and increasing intake of other foods containing these nutrients.

Click here for a handout and poster about how milk stacks up as a nutrient power house. ■

Low-fat Milk and Yogurt Reduce Frailty in Older Adults, Finds Study

A new study suggests higher consumption of specific dairy foods is associated with reduced risk of frailty in older adults. In this prospective study in Spain involving nearly 1,900 older adults living in the community and followed for 3.5 years, consumption of 7 or more servings a week of low-fat dairy foods, in particular low-fat milk and low-fat yogurt, was associated with reduced risk of frailty, slow walking speed, and weight loss compared to those consuming less than 1 serving a week. Frailty in older adults increases risk of falls, disability, and death.

While recommendations to reduce frailty have focused on increased protein, the researchers suggest that additional components in dairy foods such as minerals (e.g., calcium, potassium, magnesium) may also contribute to the findings. Milk's protein and calcium could reduce the risk of sarcopenia (age-related loss of muscle) and bone loss, respectively, which are associated with frailty. The researchers call for more studies, especially clinical trials, to determine dairy's role in reducing frailty and identify specific components in dairy that may explain this beneficial effect. ■

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