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2015 Dietary Guidelines Advisory Committee

The National Dairy Council® (NDC) appreciates the opportunity to submit comments for consideration by the 2015 Dietary Guidelines Advisory Committee (DGAC) in response to the Federal Register notice (78 FR 51727) issued August 21, 2013.

The NDC, the non-profit organization founded by U.S. dairy farmers, is committed to nutrition research and education about dairy's role in the diet and health and wellness. NDC provides science-based dairy nutrition information to, and in collaboration with, a variety of stakeholders committed to fostering a healthier nation, including health professionals, educators, school nutrition directors, academia and industry. Established in 1915, NDC comprises a staff of registered dietitians and nutrition research and communications experts across the country. NDC is committed to helping improve child health and wellness through programs such as Fuel Up to Play 60, which encourages youth to consume nutrient-rich foods and achieve at least 60 minutes of physical activity every day.

The following comments are offered regarding dairy food intakes and nutrient contributions to U.S. diets as the DGAC undertakes the work of evaluating current science on health and nutrition in support of developing national food-based dietary recommendations. During the first 2015 DGAC meeting June 13-14, 2013, Work Group 3 identified "dairy products" as a priority topic for review. The following evidence is provided to inform that evaluation.

Dairy foods make important nutrient contributions to the U.S. diet

The 2010 Dietary Guidelines for Americans (DGA) recommends 3 cup equivalents of low-fat or fat-free milk and milk products daily for Americans ≥ 9 years, 2½ cups for children 4 to 8 years and 2 cups for children 2 and 3 years (1). To build nutrient-dense eating patterns that meet nutrient needs, especially nutrients of concern, within calorie allowances, the DGA recommended increasing intakes of low-fat or fat-free dairy foods, whole grains, fruits and vegetables. Dairy foods help Americans meet shortfall nutrient recommendations including calcium, vitamin D and potassium that are difficult to meet without dairy foods (1, 2, 3, 4). The 2010 DGA concluded that there is moderate evidence linking milk and milk product intake with improved bone health, especially in children and adolescents, and with a reduced risk of cardiovascular disease and type 2 diabetes, and lower blood pressure in adults. Research published since the 2010 evidence review was conducted is consistent with and builds on the 2010 conclusions about dairy's health benefits (see separate NDC submissions). Dairy foods are also widely accessible, commonly consumed and affordable food choices, with a variety of dairy food choices available to meet individual needs, including lower sodium and lower fat options.

The DGA recommend low-fat or fat-free milk and milk products as a core part of nutrient dense diets

Dairy foods are a core component of several nutrient-dense eating patterns highlighted in the 2010 DGA, including the USDA food patterns (e.g., regular and vegetarian), and the Dietary Approaches to Stop Hypertension (DASH) eating plan (1). The DGA also supports establishing “the habit of drinking milk in young children, as those who consume milk at an early age are more likely to do so as adults” in recognition of the importance of adopting healthy nutrition and physical activity behaviors at a young age (1). From a population standpoint, adding just one dairy serving/day to current intakes can help meet calcium recommendations and contribute to closing gaps for vitamin D, potassium and other nutrients that are under consumed (5).

Many Americans do not meet current dairy and dairy nutrient recommendations

On average, Americans are consuming about 1.7 servings of dairy foods daily (0.9 servings of milk, 0.7 servings of cheese and < 0.1 servings of yogurt) (6). The only age group, on average, meeting dairy group recommendations is children ages 2-3 years. As children get older, their dairy intake decreases, driven mostly by a decline in milk, and the gap between actual and recommended dairy food intake widens through adulthood with less than 1.5 dairy servings consumed by adults >50 years. Milk and dairy food intake is lower in females compared to males (3) and is particularly low among some racial/ethnic groups including non-Hispanic blacks and Hispanics (7). Non-Hispanic whites consume 1.9 average dairy servings daily, Hispanics consume significantly less at 1.5 average daily servings and non-Hispanic blacks consume the least among these groups at only 1.2 average daily servings. Because the dairy food group is under-consumed by Americans and is an important contributor of nutrients of concern including calcium, vitamin D and potassium (2, 3), the 2010 DGA includes low-fat and fat-free dairy products as “foods to increase” (1). If Americans consumed one more serving of dairy/day, it would nearly close the dairy group gap (2.8 servings) while helping meet nutrient recommendations (5).

An analysis conducted after the 2010 Dietary Reference Intakes (DRI) for calcium and vitamin D were released found the percentage of individuals aged ≥ 2 years with total usual nutrient intakes, including that from foods and dietary supplements, falling below the estimated average requirement (EAR) was considerable for vitamin D (70% of individuals), vitamin E (60%), calcium (38%), vitamin A (34%), vitamin C (25%), and magnesium (45%) (8). A publication by the same authors examined adult mineral intakes by age and gender population groups who take or do not take dietary supplements (9). They found that among men and women who do not take calcium supplements, 51% of those ≥ 19 years have calcium intakes below the EAR; for women non-supplement users specifically, 71% > 19 years and nearly 90% > 50 years have calcium intakes below the EAR. This is consistent with the 2010 DRI report, which also found females 9-18 years fall below the calcium EAR (10).

At current intakes, milk, cheese and yogurt make important nutrient contributions to the U.S. diet

When considering all of the foods and beverages that Americans consume, dairy foods are important contributors of multiple essential nutrients in the diet of children and adults (2, 3). The dairy group (milk, cheese and yogurt) contributes 51% of the calcium, 58% of the vitamin D, 28% of the phosphorus, 28% of the vitamin A, 26% of the vitamin B12, 25% of the riboflavin, 18% of the protein, 16% of the zinc, 16% of the potassium and 13% of the magnesium in exchange for 10% of daily calorie intake for people ≥ 2 years (6). In fact, milk is the #1 food source of calcium, vitamin D and potassium in the diet of both adults and children, and cheese is the #2 food source of calcium, after milk (2, 3). For children, milk is the leading source of nine essential nutrients (protein, calcium, phosphorus, magnesium, potassium, vitamins A, B12, D and riboflavin) (2), and is therefore an invaluable source of key nutrients during growth and development.

The 2010 DGA also identified some dairy foods as top contributors of nutrients to reduce. In a recent publication, milk and cheese were identified among the top ten sources of saturated fat in the U.S. diet (11). While together milk and cheese contribute 25% of the saturated fat as well as 10% of the monounsaturated fats, they contribute more than 50% of the calcium and vitamin D, and more than 10% of the vitamin B12, riboflavin, vitamin A, phosphorus and zinc intakes in the U.S. diet. Thus these contributors of saturated fat are also major contributors of key shortfall nutrients.

DGA recommendations to increase intake of low-fat and fat-free dairy foods to help Americans meet their nutrient needs within calorie and fat recommendations would require a change from typical dairy choices (12). Behavioral responses to advice to reduce calorie intake by choosing lower fat versions of familiar foods such as dairy have not been well-studied. One study found that, when counseled to choose more reduced-fat versions of dairy foods, adults reduced total dairy intake or made lower-fat choices that did not result in fewer calories consumed (13). Taken together, dairy foods' nutrient contributions are an important consideration when balancing recommendations to increase dairy food intake while reducing calories from solid fats.

Nutrients in dairy foods are difficult to replace with other foods

It is difficult for Americans ≥ 9 years to meet nutrient recommendations without consuming at least 3 servings of milk and milk products daily. The 2010 Dietary Guidelines Advisory Committee found that when foods from the Milk Group were removed, calcium, magnesium, phosphorus, vitamin A and vitamin D drop below 100% of goals in either some or all USDA food patterns (4). Levels of potassium and choline, which were already below 100% of goal with Milk Group foods, declined even more without dairy. Higher intakes of dairy foods (> 4.5 servings/day) compared to current dairy recommendations can help some adolescents and adults get closer to meeting potassium recommendations (14). A study using a diet pattern modeling approach found that to replace the calcium from one cup of milk in diet patterns, it would take 1.1 servings of fortified soy beverage, 0.6 servings of fortified orange juice, 1.2 servings of bony fish, or 2.2 servings of leafy greens (5). Replacing dairy foods with other food sources of calcium would require a significant change in current dietary behaviors, and also alters the overall nutrient profile of the diet, because the replacement foods may not be meaningful sources of other nutrients. Using other food sources of calcium met calcium needs but changed levels of protein, potassium, magnesium, phosphorus, riboflavin, vitamins A, B12 and D. Replacing dairy foods with other foods can have implications for diet quality and cost too (15).

Conclusion

Adequate consumption of milk, cheese or yogurt is a core part of balanced, nutrient dense eating patterns. The 2010 DGA recommends 3 cup equivalents of low-fat or fat-free milk and milk products daily for Americans ≥ 9 years, $2\frac{1}{2}$ cups for children 4 to 8 years and 2 cups for children 2 and 3 years. Diet pattern modeling indicates that meeting dairy recommendations is necessary to ensure adequate intakes of calcium, magnesium, and other nutrients (4). Not only are dairy foods critical for meeting nutrient needs, the DGA findings that dairy intake is associated with bone health, reduced risk for cardiovascular disease and type 2 diabetes, and lower blood pressure provides further support for adequate dairy foods in the diet and the importance of helping people to consume recommended amounts.

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