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Co-Executive Secretaries  
2015 Dietary Guidelines for Americans  
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Dear Co-Executive Secretaries:

The International Dairy Foods Association (IDFA) appreciates the opportunity to comment on the scientific report of the 2015 Dietary Guidelines Advisory Committee (DGAC) and the 2015 Dietary Guidelines for Americans. The Dietary Guidelines is of the utmost importance to American health, since it serves as the basis for U.S. nutrition policy, including government nutrition education and the federal nutrition programs. We particularly appreciate the extension of the comment period, in order to review the significant DGAC report and to construct comments on this very important topic.

The International Dairy Foods Association (IDFA), Washington, D.C., represents the nation's dairy manufacturing and marketing industries and their suppliers, with a membership of 550 companies within a \$125-billion a year industry. IDFA is composed of three constituent organizations: the Milk Industry Foundation (MIF), the National Cheese Institute (NCI) and the International Ice Cream Association (IICA). IDFA's nearly 200 dairy processing members run nearly 600 plant operations, and range from large multinational organizations to single-plant companies. Together these organizations represent more than 85 percent of the milk, yogurt, cultured products, cheese, ice cream and frozen desserts produced and marketed in the United States.

We were pleased to see the 2015 DGAC report identify the nutritional and health benefits of dairy products. Indeed, according to the DGAC report, "Dairy foods are excellent sources of nutrients of public health concern, including vitamin D, calcium, and potassium. Consumption of dairy foods provides numerous health benefits including lower risk of diabetes, metabolic syndrome, cardiovascular disease and obesity."

We agree with the report's conclusion that "A dietary pattern emphasizing a variety of nutrient-dense foods will help shift individual and population consumption toward recommended intake levels for nutrients of public health concern."<sup>1</sup> Nutrient-dense low-fat and fat free dairy products, along with fruits, vegetables, whole grains and other nutrient-dense foods should serve as the basis for healthy eating patterns.

We encourage the Department of Health and Human Services (DHHS) and the U.S. Department of Agriculture (USDA) to continue to recommend three servings of dairy each day for Americans nine years of age and older.

Dairy foods are nutrient-dense foods that can play a significant role in helping to address the health disparities identified as an overarching theme in the DGAC report. As pointed out by the report, the U.S. population is faced with significant nutrition-related health issues such as "overweight, obesity, and other diet-related chronic diseases (particularly cardiovascular diseases, type 2 diabetes, and certain cancers), as well as less common but important health outcomes, such as bone health, for which nutrition plays an important role. These conditions are prevalent across the entire U.S. population, but are more pronounced in low-income populations, creating critical health disparities that must be addressed."<sup>2</sup> Encouraging nutrient-dense dairy foods is important for all Americans, but especially for low-income populations in order to reduce existing health disparities.

### **Executive Summary**

- The 2015 Dietary Guidelines for Americans should encourage flexible eating patterns based on nutrient-dense foods. The flexibility of eating patterns should allow individuals to select nutrient-dense foods and beverages with some saturated fat, added sugar or sodium, if desired and within calorie limits.
- Dairy foods are nutrient-dense, providing three of the four nutrients of concern. The consumption of dairy is associated with health benefits, including lower risks for diabetes, metabolic syndrome, cardiovascular disease and obesity.
- Americans don't consume adequate amounts of dairy. The Dietary Guidelines should urge Americans to eat or drink one more serving of dairy each day.
- The messages of the Dietary Guidelines should be positive, easy to understand and actionable.

### **Dairy Foods Deserve a Major Role in the American Diet and the 2015 DGAs**

The 2015 DGAC report identified three model healthy dietary patterns that are associated with positive health outcomes: healthy US-style, healthy Mediterranean, and healthy vegetarian. Dairy is included as a core part of all dietary patterns, including the vegetarian pattern. The USDA food patterns include fluid milk, cheese, yogurt, ice cream, milk-based replacement meals and milk products as part of the dairy foods group. The dairy group also includes fortified soy beverage, but not other plant-based milk-replacement beverages.

The 2015 DGAC report identified four under-consumed nutrients of public health concern: calcium, potassium, vitamin D and fiber. Milk provides three of these nutrients, while other dairy products

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<sup>1</sup> 2015 Dietary Guidelines Advisory Committee, Scientific Report of the 2015 Dietary Guidelines Advisory Committee (2015).

<sup>2</sup> 2015 Dietary Guidelines Advisory Committee, Scientific Report of the 2015 Dietary Guidelines Advisory Committee (2015).

provide calcium and in many cases vitamin D and potassium. Many health benefits are associated with dairy consumption, including lower risks for diabetes, metabolic syndrome, cardiovascular disease and obesity.

Since dairy provides so many essential nutrients and in such a unique combination, the nutrient package of dairy foods is not easily replaced, either by other foods or by supplements. They fill a particular need in most people's diets, both nutritionally and otherwise, as a nutritious beverage, a convenient snack or a special treat. Just as it is important to look at an entire dietary pattern, not just one food or one type of food, it is important not to simply look at the nutritional profile of a food or food group, but to consider the full contribution of the food to a person's diet. In addition to the nutritional content and the synergistic effect of the nutrients contained in dairy, some of the uses and benefits of dairy products are fairly unique, such as cheese serving as both a convenient snack and also an ingredient in many entrees.

The DGAC modeled a variety of foods in eating patterns, including examining the effect of various intakes of dairy products. The model demonstrated that diets containing no dairy foods have lower intakes of calcium, magnesium, iron, vitamin A, riboflavin, potassium, vitamin D, and choline. When dairy was eliminated, many of these nutrients drop below the recommended levels, with calcium intake dropping 68 percent to 88 percent and vitamin D intake dropping by 20 percent to 30 percent, depending on the age and gender group.

Cross-sectional studies have shown that yogurt intake is associated with better diet quality. One such study recently showed that yogurt intake also is associated with greater intakes of several shortfall nutrients and healthier metabolic profiles in adult populations.<sup>3</sup> Therefore, increasing yogurt intake among Americans may be promising in helping to achieve greater adequacy for acquiring some of the shortfall nutrients and maintain metabolic well-being as part of a healthy dietary pattern. Another recent study supports the consumption of yogurt and higher amounts of dairy as eating patterns associated with greater intake of specific shortfall nutrients and lower body fat in U.S. children.<sup>4</sup>

### **Americans Don't Get Enough Dairy Foods and Should Be Encouraged to Consume More Dairy**

Despite the important nutritional contributions of dairy foods, the 2015 DGAC report found that "more than 80 percent of the entire U.S. population does not meet the daily dairy intake recommendations." The only age group with more than half of the group meeting recommended levels of intake is boys and girls who are one to three years of age. More than half of all other age and gender groups do not meet the amount of dairy recommended for a healthy diet.<sup>5</sup>

Not only do most people fall short of the recommended levels of dairy, most are deficient by at least one serving per day. That means dairy intake for males ages 14 and older and females ages nine and older all fall at or below two servings per day.<sup>6</sup>

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<sup>3</sup> H. Wang et al., *Yogurt consumption is associated with better diet quality and metabolic profile in American men and women*. 33 *Nutr. Res.* 18–26 (2013).

<sup>4</sup> D.R. Keast et al., *Associations between Yogurt, Dairy, Calcium, and Vitamin D Intake and Obesity among U.S. Children Aged 8–18 Years: NHANES 2005–2008*. 7 *Nutrients* 1577–93 (2015).

<sup>5</sup> 2015 Dietary Guidelines Advisory Committee, *Scientific Report of the 2015 Dietary Guidelines Advisory Committee* (2015).

<sup>6</sup> 2015 Dietary Guidelines Advisory Committee, *Scientific Report of the 2015 Dietary Guidelines Advisory Committee* (2015).

With Americans consuming insufficient amounts of dairy, they miss out on the nutrients provided by and the health benefits associated with dairy consumption. The messages of the 2015 Dietary Guidelines should encourage increased consumption of dairy products. Some easy messages that would encourage Americans to move toward adequate consumption of dairy would be: “Eat or drink three servings of dairy each day” or “Consume one more serving of dairy each day.”

It is important that the 2015 Dietary Guidelines continue the 2010 recommendation to consume three servings of dairy per day because the nutritional modeling identified dairy as a shortfall food group. The Dietary Guidelines need to clearly state that most Americans need to consume three servings of dairy each day and that they need to consume more dairy than they currently are.

### **Cheese is a Nutrient Dense Food that Also Has a Place in the Dietary Guidelines**

Cheese, like fluid milk and yogurt, is a nutrient-dense food, providing a good source of high-quality protein, calcium and phosphorus. Some processed cheeses are good to excellent sources of vitamin D. In addition to being a nutritious snack or part of an entree, cheese is also naturally low in lactose. Cheese offers an excellent way to provide the nutrition of dairy foods to individuals who may not regularly consume fluid milk products because of their lactose content.

The DGAC recommended that Americans shift the types of dairy foods they consume, away from cheese and toward fat free fluid milk. While fat free milk is a nutrient dense option for Americans, the modeling conducted to support this recommended shift did not demonstrate a significant change in most nutrients. The modeling showed that when the American dietary pattern is changed to one with less cheese there is an increased intake of calories, calcium, magnesium, potassium, carbohydrates, vitamin A and vitamin D, with a decrease in protein, cholesterol, sodium, total fat and saturated fat. However, all of the changes were of 5% or less, except for an increased intake of vitamin A (9%) and vitamin D (11%).<sup>7</sup> With the exception of vitamins A and D these changes are trivial and insignificant and do not warrant the recommendation to consume less cheese.

As indicated in our previous comments to the DGAC, there are a variety of types of cheese available, including those with lower sodium and lower fat. While there are challenges to making these types of cheeses, some are available, particularly reduced-fat cheeses.

One important benefit of cheese that cannot be overlooked is its role in helping to increase consumption of other nutrient-dense foods. A study of children’s consumption of foods in a school cafeteria setting demonstrated that visible cheese served with a food, such as a vegetable, increased consumption of that food. While foods to encourage were increased during the study, the overall caloric intake in the meal was not increased.

These examples emphasize some of the unique roles of cheese in the diet. Although the DGAC report recommended that people swap cheese with low-fat or fat-free milk or yogurt, this is not always feasible or appropriate. Cheese has a unique portability as a snack, as well as the ability to serve as part of an entrée or side dish with other nutrient-dense foods.

The Dietary Guidelines’ emphasis on overall healthy eating patterns and flexibility should help people understand that cheese is an appropriate part of the dairy group and the overall diet. Additionally, the

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<sup>7</sup> 2015 Dietary Guidelines Advisory Committee, Appendix E-3.6: Dairy Group Alternatives in Scientific Report of the 2015 Dietary Guidelines Advisory Committee Table 5 (2015).

Dietary Guidelines can also help people understand how to use cheese appropriately in the diet in order to meet nutrient needs while balancing caloric, fat and sodium intake.

### **Dairy Provides Health and Nutritional Benefits in a Well-Liked Package**

The 2015 DGAC report continued the recommendation from past Dietary Guidelines that people should use nutrient-dense foods, such as dairy products, to form the basis of a healthy diet. Using nutrient-dense foods as the core of a diet helps ensure that people will consume a variety of the nutrients essential to health while staying within calorie limits. The Dietary Guidelines should continue this recommendation and help consumers identify nutrient-dense foods.

While nutrient-dense foods are defined as those that provide significant levels of nutrients in a relatively lower level of calories, we would also include nutrient-dense foods with some added sugars or some saturated fat in the overall definition of nutrient-dense foods and beverages to encourage. In fact, we would argue that the best use of the limited amount of added sugar or saturated fat in a person's diet is to enhance nutrient-dense foods to encourage their consumption, along with the nutrients they provide. Both the 2005 DGAC report and the 2010 Dietary Guidelines included messages about nutrient-dense foods that contain some added sugars or saturated fat (solid fats, in the 2010 DGAs). The 2010 Dietary Guidelines stated that "[m]ost people's eating patterns can accommodate only a limited number of calories from solid fats and added sugars. These calories are best used to increase the palatability of nutrient-dense foods..."<sup>8</sup>

This is the case with some dairy products, which may include added sweeteners, sodium or fat along with the calcium, potassium, vitamin D and other nutrients provided by dairy. In fact the 2005 DGAC specifically called out dairy in its statement that "[m]oderate amounts of sugars added to nutrient-dense foods such as . . . reduced-fat milk products may increase a person's intake of such foods and thus improve nutrient intake without contributing excessive calories."<sup>9</sup>

In a position paper from the American Academy of Pediatrics about foods and beverages in schools, the AAP's Council on School Health and Committee on Nutrition declared that "[c]onsideration of a beverage such as flavored milk provides a good example of the balance needed to limit added sugars and yet promote nutrient-rich foods."<sup>10</sup>

Some dairy foods also contain naturally-occurring milkfat. In many cases, the milkfat may have been reduced, but not to the level required for a "low-fat" or "fat-free" claim. Examples of these would be "reduced-fat milk" and "part-skim mozzarella cheese." This is particularly true for cheese, where regulations make it extremely difficult to meet the fat levels for low-fat and fat-free cheese. Since the Reference Amount Customarily Consumed (RACC) for most cheeses, as defined by 21 CFR § 101.12, is 30 grams, cheese must meet the requirements of "low-fat" claims not only on the RACC, but also on a 50 gram basis.<sup>11</sup> Low-fat cheese must contain no more than 3 grams of fat per 50 grams of cheese. Thus,

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<sup>8</sup> U.S. Department of Agriculture and U.S. Department of Health and Human Services, Dietary Guidelines for Americans 2010 (2010).

<sup>9</sup> 2005 Dietary Guidelines Advisory Committee, The Report of the Dietary Guidelines Advisory Committee on Dietary Guidelines for Americans, 2005 (2005) *available at* <http://www.health.gov/dietaryguidelines/dga2005/report/default.htm>.

<sup>10</sup> Council on School Health and Committee on Nutrition, Snacks, Sweetened Beverages, Added Sugars, and Schools 135 Pediatrics 575 (2015).

<sup>11</sup> 21 CFR § 101.61(b)(2)(i)(B); 21 CFR § 101.61(b)(4)(i)(B).

one 30-gram serving of cheese must have no more than 1.8 grams of fat in order to qualify for “low-fat” claims, respectively. These are much more difficult levels to achieve.

Even though they do not meet the “low-fat” or “fat-free” claims, these products still have an important role in healthy eating patterns. They still provide the same levels of beneficial nutrients that the low-fat versions contain. Reduced-fat versions may also serve as a stepping-stone toward a low-fat dairy product. These products are nutrient-rich products providing a number of essential nutrients and can be part of a healthy eating pattern that is in line with the Dietary Guidelines. Since it is more difficult for cheeses to meet the low-fat claim, but more reduced-fat or part-skim versions of cheese are available, people looking to make changes to their diets in line with the Dietary Guidelines will find it easier to select reduced-fat cheeses. Including these products would help to move Americans toward meeting the recommendations outlined in the Dietary Guidelines.

In addition to being nutrient-dense, some dairy products compound the positive impact by actually helping to increase the consumption of other nutrient-dense foods. Cheese increases the consumption of vegetables in schools.<sup>12</sup> A 2013 survey showed that most often, consumers choose to eat yogurt “as is,” but when consumers add other foods to yogurt, 70 percent choose fresh fruit. Yogurt can encourage consumption of fresh fruit, and meal patterns that combine yogurt with fresh fruit will encourage a preferred consumer behavior of eating yogurt with fresh fruit or other healthy additions.<sup>13</sup>

Over the past number of years, dairy processors have invested significant time and resources in developing dairy products that align with regulations, have a flavor that consumers like and function in a way consumers expect. While lower-fat versions of milk have existed for many years, milk processors can now furnish flavored milk with lower levels of sugar. Yogurt manufacturers have lowered fat and sugar in flavored yogurts, while increasing protein levels. Cheesemakers have expanded their offerings of reduced-fat cheeses and have also begun to offer a wider variety of lower sodium options. IDFA provided in-depth comments on reformulation efforts by the dairy industry to the Dietary Guidelines Advisory Committee. Those comments are attached to this document.

### **Dairy Can Still Be an Appropriate Option for People with Lactose Intolerance**

These points all emphasize the important nutritional role of dairy foods, such as milk, yogurt and cheese. However, some Americans that have lactose intolerance may incorrectly believe that they cannot consume any dairy products. The predominance of lactose maldigestion is a real concern for some Americans, especially among certain sub-groups of the population.

The 2010 DGAC, along with a National Institute of Health expert committee, urged Americans who think they may be lactose intolerant to get tested before they unnecessarily eliminate dairy foods from their diet.<sup>14</sup> The 2010 DGAC report also recommended low-lactose or lactose-reduced dairy products such as lactose-reduced milk, yogurt and cheese, as a way for individuals to avoid lactose, yet still obtain the nutritional benefits of dairy.<sup>15</sup> This advice is doubly important when considering the 2015 DGAC’s

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<sup>12</sup> Joseph E. Donnelly, EdD et al., *The Effects of Visible Cheese on the Selection and Consumption of Food Groups to Encourage Middle School Students*. 34 J. Child Nutrition & Management (2010).

<sup>13</sup> ECI on behalf of Dannon, 2013 Quantitative Market Study (2013).

<sup>14</sup> F.J. Suchy et al., *NIH Consensus Development Conference Statement: Lactose Intolerance and Health*. 27 NIH Consensus State Sci. Statements 1, 22–24 (2010).

<sup>15</sup> Dietary Guidelines Advisory Committee 2010, Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010, to the Secretary of Agriculture and the Secretary of Health and Human Services (2010).

findings that a diet without dairy is lower in a variety of essential nutrients, that many other products marketed as dairy substitutes do not have the same nutrient package as milk and that, many have higher levels of added sugars and calories than cow's milk.

Helping consumers who are suffering from lactose intolerance (either real or perceived) select the right dairy foods is specifically important as the DGAC report acknowledged that most milk alternatives are fortified with calcium at similar levels to milk, but also pointed out that absorption of calcium is less efficient from plant beverages. Most plant-based milk alternates also contain higher calorie levels per unit of calcium, meaning that in order to get recommended levels of calcium, a higher caloric intake would also be required.<sup>16</sup>

Therefore, we believe that the 2015 Dietary Guidelines for Americans should educate consumers about strategies and appropriate dairy products that may be helpful for individuals with lactose intolerance.

### **Dietary Guidelines Should Focus on Healthy Eating Patterns and Allow for Flexibility**

IDFA supports the goal of the DGAC to identify overall eating patterns that are associated with healthier outcomes. "These dietary patterns can be achieved in many ways and should be tailored to the individual's biological and medical needs as well as socio-cultural preferences."<sup>17</sup> While the individual foods within these eating patterns may be slightly different from person to person or meal to meal, each of the three model dietary patterns highlighted by the DGAC included dairy as a core component.

Within these eating patterns, there should be flexibility to include foods and beverages that people want to select due to flavor, cost, convenience, and also nutritive value. While the DGAC report emphasized low-fat and fat-free dairy products, the flexibility within the recommended eating pattern should allow for people to make their own choice to include some full-fat dairy products while staying within their recommended calorie and saturated fat levels.

When setting the Dietary Guidelines, it is important to remember that people eat foods and combinations of foods for a variety of reasons, including flavor, cost, convenience and nutrition. The emphasis should be on consuming the foods and beverages contained in a healthy eating pattern, with additional guidance about selecting a variety of nutrient dense foods and beverages balancing the nutrition provided by each food and the amount of fat or added sugar or sodium that it contains.

The DGAC report identified three model dietary patterns that are associated with positive health outcomes and optimal intake of nutrients: vegetarian, Mediterranean, and traditional U.S.-style diets. All three of these eating patterns included dairy as a core component, including in the Healthy Vegetarian Diet.

### **Dietary Guidelines Should Focus on Total Diet, Encouraging Balance**

IDFA believes that the Dietary Guidelines should not focus on specific nutrients, but rather should emphasize dietary patterns and the nutrient-dense foods and beverages that contribute benefits through those eating patterns. The total diet approach should encourage nutrient-dense food groups while promoting calorie balance.

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<sup>16</sup> 2015 Dietary Guidelines Advisory Committee, Scientific Report of the 2015 Dietary Guidelines Advisory Committee (2015).

<sup>17</sup> 2015 Dietary Guidelines Advisory Committee, Scientific Report of the 2015 Dietary Guidelines Advisory Committee (2015).

However since the DGAC report specially highlighted three particular nutrients of concern, we want to provide input on saturated fat, sodium and added sugar. We would urge that the Dietary Guidelines educate Americans how to best use the limited amounts of saturated fat, sodium and added sugar that they can incorporate in their diets. These uses would enhance the palatability of nutrient-dense foods, provide people with foods and beverages they enjoy, and help to increase consumption of a wide range of nutrients from the foods for which the DGAC encouraged increased consumption.

### Saturated Fat

Saturated fat is one of the nutrients that the 2015 DGAC report specifically called out for Americans to limit due to concerns about its effect on the risk of heart disease. The report also identified dairy foods, specifically milk and cheese, as the source of 25 percent of saturated fat in the American diet. However, dairy foods also provide 46 percent of the calcium, 50 percent of vitamin D, 25 percent of vitamin A and 12 percent of potassium.<sup>18</sup> The other top sources of saturated fat in the diet-- cakes/cookies/pastry and chips/crackers/popcorn-- do not typically provide the wide range of beneficial nutrients that are present in full fat dairy products.

The 2015 DGAC report recommended fat free and low fat dairy products as the best option, in order to limit calories and saturated fat. However, some research has shown that recommending solely fat-reduced dairy products may actually cause people trying to lose weight to reduce the total amount of dairy products they consume, and not necessarily switch to lower-fat products.<sup>19</sup> When people hear the low-fat or fat-free dairy message, they actually consume less dairy overall, which would reverse the intended effect.

Milkfat is unique and different from other saturated fats. While primarily made up of saturated fatty acids, there is also a significant amount of polyunsaturated and monounsaturated fatty acids present.<sup>20</sup> One of the saturated fatty acids present in milkfat is lauric acid, which does raise cholesterol, but primarily HDL-cholesterol resulting in a reduction in the total cholesterol:HDL-cholesterol ratio.<sup>21</sup> In addition to the unique combinations and effects of fatty acids in milkfat, other nutrients in dairy foods such as calcium, potassium and protein may reduce the risk of cardiovascular disease and metabolic syndrome.<sup>22,23</sup>

As indicated above, we believe that the Dietary Guidelines should help consumers understand how to best use the saturated fat in their diets, by consuming nutrient-rich foods that contain some saturated fat. This should include allowances for selecting full-fat or reduced-fat milk and dairy products instead of

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<sup>18</sup> P.J. Huth et al., *Major food sources of calories, added sugars, and saturated fat and their contribution to essential nutrient intakes in the U.S. diet: data from the national health and nutrition examination survey (2003–2006)* 12 *Nutr. J.* 116–25 (2013).

<sup>19</sup> D. Nolan-Clark D et al., *Dietary Consequences of Recommending Reduced-Fat Dairy Products in the Weight-Loss Context: A Secondary Analysis with Practical Implications for Registered Dietitians.* 113 *J. Acad. Nutr. Diet* 452–58 (2013).

<sup>20</sup> U.S. Dept. of Agriculture, USDA National Nutrient Database for Standard Reference (last visited May 7, 2015) <http://www.nal.usda.gov/fnic/foodcomp/search/>.

<sup>21</sup> R.P. Mensink et al., *Effects of dietary fatty acids and carbohydrates on the ratio of serum total to HDL cholesterol and on serum lipids and apolipoproteins: a meta-analysis of 60 controlled trials.* 77 *Am. J. Clin. Nutr.* 1146–55 (2003).

<sup>22</sup> B.H Rice et al., *Dairy components and risk factors for cardiometabolic syndrome: recent evidence and opportunities for future research.* 2 *Adv Nutr.* 396–407 (2011).

<sup>23</sup> L.E. van Meijl et al., *Dairy product consumption and the metabolic syndrome.* 21 *Nutr. Res. Rev.* 148–57 (2008).

fat-free dairy in a judicious way. It is important to note that many consumers are unaware that whole milk contains only 3.25% (8 grams per 8 ounce serving) total fat and 2% (5 grams per 8 ounce serving) saturated fat or that some full fat varieties of cheese such as Swiss, neufchâtel, and feta cheese are lower in fat than other types.

### Sodium

We agree with the DGAC report's conclusion that reducing sodium intakes below the recommended limits of 2300 mg for the general population and 1500 mg for certain populations may not provide any health benefits. These levels were supported by the 2013 Institute of Medicine (IOM) report on "Sodium Intake in Populations: Assessment of Evidence"<sup>24</sup> and have also been supported by more recent peer reviewed journal articles.<sup>25,26, 27</sup> These more recent studies were either dismissed or not considered by the DGAC, in favor of accepting the majority of the recommendations from the American Heart Association and American College of Cardiology's Guidelines on Lifestyle Management to Reduce Cardiovascular Risk. We feel that these studies should be considered in addition to other reports and recommendations, such as those from the Institute of Medicine and the American Heart Association/American College of Cardiology. We encourage HHS and USDA to review these additional studies and include their findings when setting messages regarding sodium in the Dietary Guidelines for Americans.

#### Role of Salt in Cheese

Salt is an integral ingredient in the making of both natural and processed cheeses. It serves a variety of functions beyond flavor, both during the manufacture of cheese and for the function of the finished cheese. For many Italian-type cheeses, including mozzarella, the cheese curd is cooled in a salt brine solution, following cooking and stretching of the curd. Salt also gives a firmness and body to a finished cheese, and allows a cheese to melt appropriately.

Salt content can also affect the shelf life and food safety of cheeses. Lowering the salt and sodium content of these products can reduce the shelf life and increase the food safety hurdles for cheese. Without salt, other substances, such as preservatives, may need to be added to the cheese in order to maintain suitable shelf life and acceptable levels of food safety. These additional substances may not be allowed by cheese standards of identity and may be unattractive to consumers who look for "clean labels" with few ingredients and naturally-derived ingredients.

Processed cheeses contain sodium from two major sources: the sodium present in the natural cheese used as the basis for processed cheese, and the sodium from additional ingredients that assist with the processing and function of the finished processed cheese. Emulsifying and buffering agents used to mix the natural cheeses and prevent oiling off in the finished cheese are often sodium-based, contributing to the overall sodium content of processed cheese.

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<sup>24</sup> Institute of Medicine, Sodium Intake in Populations: Assessment of Evidence (2013) *available at* <http://www.iom.edu/Reports/2013/Sodium-Intake-in-Populations-assessment-of-Evidence.aspx>.

<sup>25</sup> M. O'Donnell et al., *Urinary sodium and potassium excretion, mortality, and cardiovascular events* 371 *New England J. Med.* 612–23 (2014).

<sup>26</sup> N. Graudal et al., *Compared with usual sodium intake, low- and excessive-sodium diets are associated with increased mortality: A meta-analysis.* *Am. J. Hypertens.* (2014).

<sup>27</sup> N.R. Cook et al., *Lower Levels of Sodium Intake and Reduced Cardiovascular Risk.* *Circulation* (2014) *available at* <http://circ.ahajournals.org/content/early/2014/01/10/CIRCULATIONAHA.113.006032>.

There is no one salt substitute that can address all of these functional and flavor uses of salt in cheese. Potassium chloride may be useful in some cases, but its use often requires masking agents to offset the strong off-flavor.

According to IDFA's cheesemaking member companies, the overall sodium content of cheese has remained relatively stable for many years. Companies have been working to lower it, while still providing high quality products for their customers. The level of salt present in cheeses is the ideal amount to provide the various functions necessary for the manufacture of cheese. Cheesemakers use the needed amount of salt, and they do not add more than is necessary.

### Added Sugars

While some dairy products do include added sugars, it is important to note that the DGAC report highlights that "dairy, including sweetened flavored milks and yogurts contribute only 4 percent of total added sugars intake....". Many sweetened flavored dairy products also contain added sugars, which can appeal to people who do not like unsweetened, unflavored dairy foods and encourage consumption of nutrient-dense foods. Sweetened flavored milks and yogurts contain the same beneficial nutrients such as calcium, protein and potassium, as white milk and plain yogurt, so sweetened, flavored options are a great way to make these nutrients available to people who do not like unflavored options.

The definition of added sugars cited in the DGAC report is not appropriate, since it's the definition from FDA's proposed rule on nutrition labeling (reference), and as such has not been finalized and is subject to change. IDFA also has concerns about the definition of added sugars as it may include ingredients such as:

- The lactose in added dairy ingredients, such as whey, nonfat dry milk, or milk protein concentrates, as well as lactose in its pure form.
- Concentrated fruit juices, such as beet juice concentrate, that are added for color rather than sweetness,
- Fruit purees or juice concentrates that retain the natural constituents of the fruit and are used to add fruit flavor, rather than simply to add sweetness or substitute for sugars,
- Concentrated fruit juice that is reconstituted in the finished product, and
- Ingredients that contain sugars such as dextrose that are used as carriers.

Flavored milks and yogurts provide all of the same nutrients as unflavored milk and yogurt, but with a flavor that many children and adults prefer. In a position paper from the American Academy of Pediatrics (AAP) about foods and beverages in schools, the AAP's Council on School Health and Committee on Nutrition declared that "[c]onsideration of a beverage such as flavored milk provides a good example of the balance needed to limit added sugars and yet promote nutrient-rich foods."<sup>28</sup> As the AAP paper on school foods highlights, schools that completely eliminated flavored milk found that kids consumed less milk, meaning they were missing out on the nutrients from milk. Considering all nutrient-rich foods and beverages that have added sugar, the AAP stated: "Used along with nutrient rich foods and beverages, sugar can be a powerful tool to increase the quality of a child's diet." In addition to

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<sup>28</sup> Council on School Health and Committee on Nutrition, Snacks, Sweetened Beverages, Added Sugars, and Schools 135 Pediatrics 575 (2015).

flavored milk, sweetened flavored yogurt can also serve to increase the quality of a child's diet, or an adult's.

Similarly to saturated fat and sodium, IDFA believes that it is important for the Dietary Guidelines for Americans to educate Americans about how to best use the limited amount of added sugars recommended. The same approach, which would allow added sugars as a way to improve the palatability and therefore consumption of nutrient-dense foods, has been supported by the American Academy of Pediatrics for children in school.<sup>29</sup>

As companies look at their product lines and consider their customers' wants and needs, some set a goal of lowering total sugars, while others concentrate on reducing the level of added sugars. Either way, they are lowering sugar levels and may be reducing calories.

Within the past few years, companies providing flavored milk to schools have decreased both calorie and added sugar levels. The average calorie levels of flavored milk sold in school has been reduced by 43 calories over the past six years due to processors' diligent work to reformulate products with less sugar and fat. In 2012-2013, the calorie level for fat-free flavored milk averaged 121.8 calories per cup, which is a significant reduction from the level of 166.1 calories in the 2006-2007 school year.<sup>30</sup> Added sugar in chocolate milk for schools has declined by 45 percent over that same six year period, decreasing from 16.7 grams to 9.2 grams per cup. The naturally occurring milk sugar, or lactose, stayed the same.

Although there is more variation in the sugar content of flavored milks available in retail outlets, there are a number of available flavored milks that qualify for reduced-sugar or no-sugar-added claims. There are also regular flavored milks that have lower levels of added sugars.

"Light" yogurts which have fewer calories and less fat than regular yogurt also have low or no levels of added sugar have also been available for many years. Most of these products are made using non-nutritive sweeteners are targeted to adults. But recently, yogurt manufacturers have also reduced the level of total sugar in children's yogurts without the use of non-nutritive sweeteners.

Many ice cream manufacturers have "healthier for you" product lines that include a wide variety of lower fat products and a few have "no-sugar-added" products. In addition to sugar providing sweetness in frozen desserts, it also affects the freezing temperature and texture of the ice cream. Non-nutritive sweeteners can provide sweet ness, but they do not provide the other functions of sugar. Formulating "no-sugar-added" products is not as simple as trading a non-nutritive sweetener for a caloric sweetener. However, many companies have found ways to develop reduced sugar ice creams and frozen desserts that have lower amounts of added sugars.

Again, IDFA believes the Dietary Guidelines should move away from focusing on specific nutrients and should instead educate Americans on how to include the nutrients of concern. This should include educating them on how they can wisely select nutrient dense foods such as dairy even if they contain saturated fat, sodium or added sugar.

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<sup>29</sup> *Id.*

<sup>30</sup> Milk Processors Education Program, Annual School Survey 2012-2013 (2013) *available at* <http://milkdelivers.org/sites/default/files/2012-13-annual-school-survey-report-final-2.pdf>

## Dairy Can be Included in a Sustainable Diet

Sustainability is a complex, and at times, a controversial, issue. Sustainability is generally evaluated on a system wide basis and requires the evaluation of economic, social, and environmental concerns. The 2005 World Summit on Social Development first devised this three-pillar system, which has been used as the basis for almost all evaluation of system's sustainability since then.<sup>31</sup> According to this system, one must evaluate and balance each factor in order to obtain a sustainable system. It is impossible to evaluate one factor, such as just environmental factors, in order to determine sustainability.

The U.S. federal government has recognized that sustainability involves more than solely looking at environmental impacts of actions. For example, President Obama established a sustainability framework under which federal agencies must set sustainability goals to improve their environmental, energy, and economic performance. Executive Order 13514, which establishes the framework, defines sustainability as “creat[ing] or maintain[ing] conditions under which humans and nature can exist in productive harmony, that *permit fulfilling the social, economic, and other requirements of present and future generations.*”<sup>32</sup> Even though this executive order focuses on an agencies day-to-day operations and not necessarily setting of policy, it clearly shows that considerations of sustainability must consider more than merely environmental impacts.

Even the Environmental Protection Agency (EPA), the federal agency most concerned with protecting the nation's natural resources, considers the three pillars of sustainability when establishing programs. For instance, the EPA's Food Recovery Challenge – an effort to reduce food waste by diverting food waste from landfills – established the Food Recovery Hierarchy.<sup>33</sup> This Hierarchy considers the environmental, social, and economic benefits achieved by the program in order to establish a sustainable food management system.<sup>34</sup> While this effort looks at where food goes after it reaches consumers, it illustrates the importance of considering environmental, economic, and social concerns when considering the sustainability of a system.

In the context of food, defining a sustainable diet always revolves around the balancing of all three sustainability considerations.<sup>35</sup> For example, the United Nation's Food and Agriculture Organization proposed a definition of sustainable diets to include diets “with low environmental impacts which contribute to food and nutrition security and to healthy life” while being “accessible, economically fair and affordable.”<sup>36</sup> When evaluating these factors separately, various aspects are taken into consideration. For an environmentally sustainable food system, factors considered include increasing yields to promote food security while conserving resources, promoting soil health, decreasing carbon emissions, decreasing water use, and protecting biodiversity.<sup>37</sup> Social attributes of sustainability include

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<sup>31</sup> United Nations, 2005 World Summit Outcome 2–3 (2005)

[http://data.unaids.org/Topics/UniversalAccess/worldsummitoutcome\\_resolution\\_24oct2005\\_en.pdf](http://data.unaids.org/Topics/UniversalAccess/worldsummitoutcome_resolution_24oct2005_en.pdf).

<sup>32</sup> Exec. Order No. 13514, 3 C.F.R. 13514 (2009) (emphasis added) *available at* <http://www.gpo.gov/fdsys/pkg/CFR-2010-title3-vol1/pdf/CFR-2010-title3-vol1-eo13514.pdf>.

<sup>33</sup> Env'tl Prot. Agency, The Food Recovery Hierarchy (2014) <http://www.epa.gov/foodrecovery/>.

<sup>34</sup> *Id.*

<sup>35</sup> Institute of Medicine, Nat'l Academy of Sciences, Sustainable Diets: Food for Health People and a Health Planet: Workshop Summary 5 (2014) (noting that a single definition of sustainable diet was not provided or developed due to differing views).

<sup>36</sup> Food & Agriculture Organization of the United Nations, Biodiversity & Sustainable Diets: United Against Hunger 10 (2010) <http://www.fao.org/ag/humannutrition/28506-0efe4aed57af34e2dbb8dc578d465df8b.pdf>.

<sup>37</sup> World Wildlife Federation, Facing the Challenge Together: Sustainable Food for the 21st Century 4 (2014) *available at*

nutrition, food safety and quality, food choice (i.e. ethics, cultural, or religious), affordability, and access to food.<sup>38</sup> An economically sustainable system takes into consideration profitability across the supply chain, jobs provided to communities by the food system, value added, and other factors.<sup>39</sup>

The DGAC review of sustainability focused almost solely on environmental factors while essentially ignoring the other two pillars of sustainability – economic and social sustainability. The Committee reviewed a total of fifteen studies related to its review of sustainable diets – three of which were not exclusively based on evaluating environmental impacts of dietary patterns.<sup>40</sup> This limited review could be due to insufficient scientific evidence to consider *all* aspects of sustainability,<sup>41</sup> rendering consideration of sustainability inappropriate in setting the 2015 Dietary Guidelines for Americans.

While the DGAC did consider certain aspects of social sustainability when considering the healthful nature of the diet, the Committee ignored the studies that examined only one other aspect of social sustainability – the cost associated with eating an environmentally sustainable diet. The Committee considered only three studies that evaluated this relationship. One of the studies found that, based on a healthy and sustainable model Australian diet, the cost of the contents of a typical food basket was increased in five socioeconomic areas, and “the most disadvantaged spent 30 percent more . . .” for the same food.<sup>42</sup> The two other studies, evaluating model United Kingdom and New Zealand diets, found that consumers could eat sustainably without significantly affecting costs, but would have to eat a diet with limited variety.<sup>43</sup> The Committee then determined that the findings of these studies were limited and inconsistent and likely did not factor greatly into their findings.

As described above, the social aspect of sustainability requires the evaluation of several factors including nutrition, food safety, food choice, affordability, and access to food. The Committee’s limited evaluation of social sustainability focused on the nutritional aspects of the diet, which as described in previous sections was lacking. In an attempt to evaluate other aspects of social factors, the Committee reviewed and discarded studies related to the cost of sustainable foods and did not factor in important issues such as food access and affordability. These factors are essential to fully consider sustainability in a holistic fashion.

While IDFA believes it is inappropriate to consider such a limited interpretation of sustainability for the 2015 Dietary Guidelines for Americans, the DGAC report recognizes that, based on its interpretation, dairy can be included in a sustainable diet. The report states that any individual can consume a more environmentally sustainable diet than the current average U.S. diet “without excluding any food groups.”<sup>44</sup> This is significant as the DGCA report noted that moderate to strong evidence existed to support that an individual can eat in a more sustainable fashion by consuming the Healthy US-style

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[http://assets.worldwildlife.org/publications/738/files/original/WWF\\_AG\\_Report\\_111014.pdf?1415723180&\\_ga=1.236953352.825862518.1430493027](http://assets.worldwildlife.org/publications/738/files/original/WWF_AG_Report_111014.pdf?1415723180&_ga=1.236953352.825862518.1430493027).

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> 2015 Dietary Guidelines Advisory Committee, Appendix E-2.37: Dietary Patterns and Sustainability Evidence Portfolio in Scientific Report of the 2015 Dietary Guidelines Advisory Committee 9–21 (2015).

<sup>41</sup> Institute of Medicine, Nat’l Academy of Sciences, Sustainable Diets: Food for Health People and a Health Planet: Workshop Summary 50–55 (2014) (arguing more research should be conducted on sustainable diets).

<sup>42</sup> 2015 Dietary Guidelines Advisory Committee, Chapter 5: Food Sustainability & Safety in Scientific Report of the 2015 Dietary Guidelines Advisory Committee 14 (2015).

<sup>43</sup> *Id.* 14–15.

<sup>44</sup> 2015 Dietary Guidelines Advisory Committee, Chapter 5: Food Sustainability & Safety in Scientific Report of the 2015 Dietary Guidelines Advisory Committee 9 (2015).

Pattern, the Healthy Vegetarian Pattern, and the Healthy Mediterranean-style Pattern.<sup>45</sup> Dairy was included in all of these suggested model dietary patterns with servings ranging from two to three daily, depending upon the pattern followed.<sup>46</sup> Therefore, individuals can follow a more sustainable diet than the current American diet and continue to consume dairy foods.

Dairy foods companies are committed to ensure dairy products are sustainable and have a long history of environmental stewardship. In 2008, dairy industry leaders from across the value chain agreed to support a groundbreaking and comprehensive initiative that would reduce greenhouse gas emissions by 25 percent by the year 2020.<sup>47</sup> More than 500 stakeholders have taken the challenge in order to reduce energy use and increase efficiency. Other sustainability initiatives that dairy food companies participate in include reducing overall water and energy use in plants, implementing anaerobic digestion systems to treat waste water and generate electricity, switching to less energy intensive and more biodegradable packaging, purchasing offsets plants' carbon emissions from energy use, and reducing food waste.

Additionally, dairy food companies exhibit social sustainability by investing in the communities in which they are located. Dairy food companies give back to their communities through both financial contributions and product donations in order to support the communities where they do business. These product donations ensure that community organizations nationwide are able to ensure that needy families have access to wholesome foods. Dairy food companies' community involvement is not just isolated to donating funds and nutritious foods to needy families, their employees also volunteer their time and are involved in many community projects.

Sustainability is a complex issue that requires a holistic evaluation of environmental, economic, and social factors. Because dairy is a nutrient dense food, it can be served in any health diet, including a sustainable one.

### **Dietary Guidelines Should Offer Specific and Practical Messages for Americans to Improve Their Diets**

While the DGAC report identified a number of important nutrition issues and examined the nutrition research on these topics, the significant undertaking of the DHHS and USDA remains to make specific recommendations for the way that people should eat. As highlighted by the 2015 DGAC report itself, "in order for policy recommendations such as the *Dietary Guidelines for Americans* to be fully implemented, motivating and facilitating behavioral change at the individual level is required." For the 2015 Dietary Guidelines to help Americans achieve meaningful behavioral changes that can improve the health of our nation, it is essential that those guidelines feature practical, actionable, specific recommendations that can be communicated with simple messages. A survey conducted in 2013 shows that 78% of Americans agree that they would rather hear messages about what they should eat rather than what they should not eat.<sup>48</sup> People want to know what foods and beverages to choose, rather than a long list of what they should avoid.

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<sup>45</sup> 2015 Dietary Guidelines Advisory Committee, Part D. Chapter 2: Dietary Patterns, Foods and Nutrients, and Health Outcomes in Scientific Report of the 2015 Dietary Guidelines Advisory Committee 125 (2015).

<sup>46</sup> *Id.*

<sup>47</sup> The initiative is a project of the Innovation Center for U.S. Dairy, an organization that brings together the leadership of the entire dairy industry, including dairy producers, dairy cooperatives, processors, and manufacturers. Innovation Center for U.S. Dairy, 2013 Sustainability Report 27 (2014) available at <http://www.usdairy.com/~media/usd/public/2013%20u.s.%20dairy%20sustainability%20report.pdf>.

<sup>48</sup> International Food Information Council Foundation, 2013 Food & Health Survey 17 (2013) available at <http://old.foodinsight.org/LinkClick.aspx?fileticket=spavtJtVkm%3d&tabid=1482#page=17>.

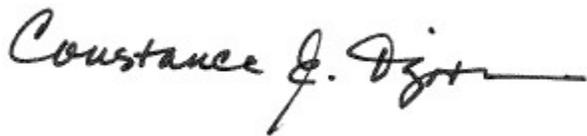
Many public health efforts have also focused on recommending small steps that people can take to move toward healthier diets or more active lifestyles. Since typical American diets are very different from the food patterns recommended by the 2015 DGAC, the Dietary Guidelines should give Americans small steps that they can take to improve their diets.

### **Conclusion**

IDFA and its member companies appreciate the hard work that has already been undertaken by the DGAC and DHHS and USDA staff. We thank DHHS and USDA for the upcoming work of translating the best of nutritional science into consumer messages.

We urge that these messages be positive, understandable and actionable messages about what foods and beverages people should include in their diets. These messages should encourage an eating pattern that is based on nutrient-dense foods and beverages, while educating Americans how to select foods they enjoy while meeting nutritional recommendations.

Sincerely,

A handwritten signature in black ink that reads "Constance J. Tipton". The signature is written in a cursive style with a long horizontal line extending to the right.

Connie Tipton

President & CEO

A handwritten signature in black ink that reads "Michelle Matto". The signature is written in a cursive style.

Michelle Albee Matto, MPH, RDN

Nutrition Consultant to IDFA