Real Food for Kids – Montgomery

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**Re: The Dietary Guidelines for Americans, 2015**

Dear Dr. Olson, Dr. Casavale, Ms. Rihane, and Dr. Bowman:

Real Food for Kids - Montgomery (RFKM) presents these comments on the expert report prepared for the eighth edition of the *Dietary Guidelines for Americans* (DGA) by the Dietary Guidelines for Americans Committee (DGAC). Overall, we strongly support the conclusions and policy recommendations in the report. In particular, however, RFKM would like to see the guidelines strongly encourage Americans to reduce the total intake of added sugars in their diet.

Specifically, we make the following points:

1. We strongly support the DGAC’s focus on the broad range of factors, including policy and environmental approaches, which influence people’s diet and weight-related behaviors. The final DGA report should continue to reflect these sensible and science-based changes to our food environment and public policies to support and facilitate Americans making healthier food and beverage choices across the lifespan.
2. We commend the DGAC’s attention to a variety of healthy dietary patterns and the continued emphasis that healthy diets should meet nutrient needs with whole foods.
3. We have specific views with regard to the following nutrients and food sources:
   1. We unequivocally support the DGAC’s recommendations to reduce consumption of added sugars, including the need for a line on added sugars on the Nutrition Facts label. However, we believe that this line should reflect a percentage of a Daily Value based on no more than 7 percent of calories or less in a 2,000-calorie diet, and for amounts expressed in teaspoons as well as grams to maximize consumer understanding.
   2. We support the DGAC Scientific Report’s conclusion that the Guidelines should include a recommendation to “limit red and processed meat.”
   3. We concur with the DGAC report that additional measures are needed to encourage consumption of fruits and vegetables as part of a healthy diet.
   4. We support the Report’s emphasis on whole grains as part of a healthful diet and encourage USDA and HHS to provide clear recommendations to help people translate this advice into healthier consumption patterns.
4. We support the development of policies, as the DGAC recommends, to promote water as the primary beverage of choice. We also support public education and policy changes to encourage access to clean water, including a symbol for water as part of the graphics for MyPlate.
5. We endorse the DGAC’s recognition of sustainability as an essential component of federal dietary guidance.

We strongly urge those tasked with finalizing the Dietary Guidelines to maintain the emphasis in the DGAC’s report on changing the food environment to improve the nutritional quality of foods and beverages that are widely available, affordable, marketed, and consumed.

***Introduction***

As the DGAC’s expert report recognizes, achieving a healthy overall dietary pattern is more important than any specific food or nutrient. A variety of dietary patterns are linked to reduced risk of chronic diseases, including cancer and heart disease, and those diets share many of the same characteristics, including higher intakes of fruits, vegetables, low- and non-fat dairy foods, fish, poultry, legumes, whole grains, healthy oils, and lower intakes of added sugars, saturated fat, sodium, and red and processed meat. We also applaud the report’s continued recommendation that nutrients in the diet should come from whole foods rather than fortified, processed foods, or supplements.

Moreover, we want to underscore the significance of the report’s recommendations for policies and environments that support and improve public health. Despite public reports to the contrary, the basic nutrition advice in the Guidelines has been largely unchanged for years; what has not yet been altered is under-consumption of fruits, vegetables, and whole grains and over-consumption and over-promotion of unhealthful foods. To translate the unbiased science in the expert report into action is not merely a good idea—it is a necessary and critical corollary to the scientific examination of the evidence in the DGAC’s report and the DGA.

Contrary to some criticism, both concern with policy implementation and a broader view of health is consistent with past Guidelines and reports. In its 2010 report, the DGAC stated, “all segments of society—from parents to policy makers and everyone else in between—must now take responsibility and play a leadership role in creating gradual and steady change to help current and future generations live healthy and productive lives.”[[1]](#footnote-1)

We also provide comments and recommendations regarding several specific food groups, foods, and nutrients, including added sugars, sodium, red and processed meats, saturated fat, fruits and vegetables, and whole grains. We close with comments on water as a primary beverage and sustainability in the food system.

Our detailed comments follow. We would be pleased to provide more information to the DGAC regarding these and other issues. The contact person at our organization is: Lindsey Parsons.

1. **Policy and Environmental Approaches**

**We strongly support the DGAC’s focus on the broad range of factors, including policy and environmental approaches, that influence people’s diet and weight-related behaviors. The final DGA report should continue to reflect these sensible and science-based changes to our food environment and public policies to support and facilitate Americans making healthier food and beverage choices across the lifespan.**

Reversing current obesity trends and changing dietary patterns on a broad scale requires a comprehensive, coordinated system-wide approach that engages all levels of the socio-ecological model. In particular, policy, environmental, and systems changes must make healthy foods and beverages more accessible, affordable, and desirable, while making less healthy foods less accessible, affordable, and desirable, particularly for at-risk populations. This approach to improving diet, promoting health, and reducing diet-related chronic disease through changing the policies and environments where youth and adults spend the majority of their time has been promoted by numerous public health authorities, including the Centers for Disease Control and Prevention,[[2]](#footnote-2) Community Preventive Services Task Force,[[3]](#footnote-3) Institute of Medicine,[[4]](#footnote-4) President’s Cancer Panel,[[5]](#footnote-5) and now the 2015 DGAC.

In addition, education and promotion campaigns and initiatives should be considered as important complements to policy and environmental changes. Such “wrap around” efforts increase the likelihood that policy, systems, and environmental changes will result in positive habits. However, educational interventions by themselves are less likely to be successful if the surrounding environment does not easily enable the behavior change. Policy, systems, and environmental changes can also be used to influence physical activity opportunities and choices and reduce sedentary behavior.

We support the DGAC’s use of the socio-ecological model and recognition that individual diet, physical activity, and weight management behaviors are influenced by individual biological, household, community, societal, and cultural factors, we well as public and private policies, systems, and environments. We are pleased that the DGAC found at least promising, and many times much stronger, evidence that multi-component obesity prevention approaches in child care settings, schools, and worksites improve weight-related outcomes and that the committee found moderate-to-strong evidence that school and worksite policies improve diet outcomes. The fact that the DGAC found that multi-component interventions that addressed both diet and physical activity and used a variety of strategies were most likely to be successful in preventing obesity points to the need for a multi-component, collaborative, and sustainable approach.

*Specific Policy and Environmental Change Recommendations*

We strongly support many of the actions for communities and populations recommended by the DGAC and urge the DGA to include and expand upon these recommendations. We recommend that the DGA states the following recommendations:

* Make healthy lifestyles and chronic disease prevention a national and local priority, and incentivize collaborations by multiple sectors of influence at all levels that promote individual healthy lifestyle behavior change and create a “culture of health;”
* Integrate prevention within the health care system and provide incentives and support for preventive lifestyle screening, referral, interventions, and services;
* Model prevention and create cultures of health within health care settings;
* Make healthy foods accessible and affordable;
* Limit access to high-calorie, nutrient-poor foods and sugar-sweetened beverages in public places;
* Encourage healthy eating and physical activity in child care and education settings;
* Within schools, maintain comprehensive school meal guidelines that increase intake of vegetables, fruits without added sugars, and whole grains, and limit added sugars and trans fats; make drinking water freely available throughout the day; prohibit marketing of unhealthy foods; and eliminate all sugar-sweetened beverages, including mid-calorie drinks;
* Implement Nutrition Facts and Front-of-Package labels that help consumers make healthy choices and, on the Nutrition Facts label, provide added sugar amounts in grams and teaspoons as well as a percentage daily value;
* Align nutrition policies, agriculture policies, and food assistance programs with the DGA and transform the food system to promote population health;
* Reduce added sugars through measures like pricing/taxes of sugar drinks, and reduce sodium content in foods through regulatory limits;
* Expand access to and use of healthy built environments and make physical activity accessible, affordable, and safe;
* Promote a sustainable and safe food supply to ensure long-term food security;
* Encourage consumer behavior consistent with food safety principles to prevent foodborne illness.

*A Call to Action*

We strongly recommend that the DGA prominently feature the DGAC’s recommendations for policies and environments that support and promote healthy diets and lifestyles. The DGA should emphasize the important role that the food environment and public policies play in the ability of Americans to follow the DGA’s recommendations. The DGA should include a call to action for a wide range of stakeholders—including policy-makers at all levels of government, public health experts, the food and beverage industry, restaurants and food retailers, media companies, schools, businesses, community-based organizations, and others—to make healthy lifestyles and disease prevention top priorities.

Those and other sectors all have a role to play in promoting healthy behaviors and creating environments that promote a healthy way of life. The key stakeholders must become champions for a healthy diet and lifestyle and work in partnership across sectors to change policies and environments that make eating healthy foods and beverages and maintaining a healthy weight not just easier, but the cultural norm. Many of the recommended population-level strategies involve changes in federal policies, and the federal government must move forward with making evidence-based changes in policies and practices. The federal government should also encourage and incentivize policy changes at other levels of government and in the private sector that promote healthy environments and behaviors.

1. **Dietary Patterns**

**We commend the DGAC’s recognition of a variety of healthy dietary patterns and the continued emphasis that healthy diets meet nutrient needs with whole foods.**

We applaud the DGAC’s focus on overall dietary patterns and the common characteristics of healthy diets. We further support the DGAC’s assessment that the overall body of evidence identifies a healthy dietary pattern as one that is:

* higher in fruits, vegetables, whole grains, low or non-fat dairy, seafood, legumes, and nuts;
* moderate in alcohol, among those who choose to drink, except for children and other individuals for whom alcohol consumption is not recommended;
* lower in red and processed meats; and
* low in sugar-sweetened foods and drinks and refined grains.

Because individuals may have difficulty piecing together individual aspects of dietary recommendations, and may find certain diets easier to follow than others, the new guidelines should include several dietary patterns[[6]](#footnote-6) as acceptable models of healthy dietary behavior. The 2015 DGA should include these findings into the recommendations and emphasize the importance of consuming an overall healthy dietary pattern, because the combination of healthy dietary habits has more impact on lowering disease risk than any one specific nutrient or food.

Research participants randomized to healthy diet patterns had a lowering of blood pressure,[[7]](#footnote-7) and a lower number of cardiovascular events,[[8]](#footnote-8) compared to participants following standard diets. Additionally, individuals in prospective cohort studies with higher diet scores representing healthy diet patterns are less likely to be overweight or obese,[[9]](#footnote-9) have lower risk of major chronic diseases, including diabetes, cardiovascular disease, and cancer,[[10]](#footnote-10) and have a lower risk of premature death.[[11]](#footnote-11) The patterns most well-studied include those recommended by the 2005 Dietary Guidelines for Americans: Healthy Eating Index (HEI)-2005; an “alternate” HEI-2010 based on the Harvard Food Pyramid; the Dietary Approaches to Stop Hypertension (DASH) diet; and the Mediterranean diet (and alternative scores adapted for non-Mediterranean countries). Furthermore, clinical trials have demonstrated that the DASH and OmniHeart diets lower blood pressure and LDL (“bad”) cholesterol.[[12]](#footnote-12)

Each of the recommended dietary patterns shares many of the same core elements identified by the DGAC, namely higher intakes of fruits, vegetables, low-fat dairy foods, fish, poultry, beans, nuts, whole grains, healthy oils (providing more monounsaturated and polyunsaturated fats), and lower intakes of added sugars, sodium, and red and processed meats.

Both the American Institute for Cancer Research (AICR)’s Recommendations for Cancer Prevention[[13]](#footnote-13) and the American Cancer Society’s guidelines on nutrition and physical activity for cancer prevention[[14]](#footnote-14) call for consuming an overall healthy diet with an emphasis on plant foods, and overlap considerably with the DGAC recommendations and the other diet patterns highlighted above. That overall pattern specifically focuses on vegetables, fruits, whole grains, limiting processed and red meat consumption, limiting sugar-sweetened beverages, and choosing foods and beverages in amounts to help achieve and maintain a healthy body weight. Both organizations’ guidelines have been examined in relation to cancer incidence[[15]](#footnote-15) and mortality;[[16]](#footnote-16) significant reductions in risk were observed with greater adherence to all of the guidelines (diet, alcohol, physical activity, obesity) as well as the diet pattern, specifically. Research has confirmed that nonsmoking (former and never smoker) adult men and women whose lifestyles were most consistent with American Cancer Society (ACS) cancer prevention guidelines for weight control, diet, physical activity, and alcohol had a significantly lower risk of dying from cancer, cardiovascular disease, or any cause.[[17]](#footnote-17)

We agree with the DGAC report that the DGA should continue to recommend that nutrient needs be met primarily by consuming nutrient-dense, whole foods as part of an overall healthy dietary pattern. This approach is consistent with recommendations from the Institute of Medicine,[[18]](#footnote-18) American Cancer Society,[[19]](#footnote-19) American Institute for Cancer Research,[[20]](#footnote-20) and others, and research showing that the nutrient density and overall healthfulness of fruits, vegetables, whole grains, and low-fat dairy products cannot be duplicated by simply adding vitamins or minerals to nutrient-poor foods. The American Cancer Society’s Nutrition and Physical Activity Guidelines for Cancer Prevention notes, “it is likely that foods and nutrients have additive or synergistic effects on health and interact in complex ways that are difficult to study and are poorly understood.”[[21]](#footnote-21) Similarly, the American Institute for Cancer Research’s Recommendations for Cancer Prevention are “base[d]…on foods and whole diets rather than specific nutrients…The recommendations contribute to whole diets and overall level of physical activity most likely to prevent cancer. This does not imply one particular diet, or a specific form of physical activity, but rather key elements designed to be incorporated into existing and traditional diets.”[[22]](#footnote-22)

We support the DGAC’s recommendations that most Americans should rely on healthy diets, not vitamin or mineral supplements, to lower their risk of cancer, heart disease, and other illness. Clinical trials have found that folic acid can lower the risk of neural tube birth defects,[[23]](#footnote-23) calcium supplements lower the risk of recurrent colorectal adenomas,[[24]](#footnote-24) a low-dose multivitamin and mineral supplement may lower the risk of all cancers combined in men,[[25]](#footnote-25) and folic acid can lower the risk of stroke in China, where grains are not fortified with folic acid.[[26]](#footnote-26) However, other clinical trials have found that several nutrients, including beta-carotene, selenium, and vitamin E, do not lower, and may even increase, cancer risk.[[27]](#footnote-27) The majority of the evidence does not suggest that individuals should take single or combined dietary supplements for prevention of cancer or cardiovascular disease.[[28]](#footnote-28)

Another benefit of a focus in the DGA on overall healthy dietary patterns is that it allows individuals to consume a wide range of foods and beverages and meet nutrient needs in a variety of ways. This makes it easier for individuals to consume a healthful diet that is tailored to their individual physical needs and social and cultural preferences but still meets the overarching recommendations for a healthy dietary pattern. The DGA should provide several examples of specific diets that meet the overarching healthy diet pattern recommendations.

1. **We have specific views with regard to the following components of the diet: added sugars, sodium, red and processed meats, saturated fat, fruits and vegetables, and whole grains.**
   1. **Added Sugars**

We unequivocally support the DGAC’s recommendations to reduce consumption of added sugars, including the need for a line on added sugars on the Nutrition Facts label. However, we believe that this line should reflect a percentage of a Daily Value based on no more than 7 percent of calories or less in a 2,000-calorie diet, and for amounts expressed in teaspoons as well as grams to maximize consumer understanding.

First, we concur that the scientific evidence underscoring concerns with added sugars in the diet is strong. With regard to high consumption of added sugars, the DGAC concluded that there was “strong evidence” for an increased risk of excess body weight, obesity, and type 2 diabetes and “moderate evidence” for an increased risk of hypertension, stroke, coronary heart disease, high blood pressure, serum triglycerides, and dental caries. After reviewing the evidence, the Committee found that “strong evidence supports reducing added sugars intake to reduce health risks” and that a limit on “added sugars to a maximum of 10 percent of total daily caloric intake” was supported by the food pattern modeling analysis and the scientific evidence review on added sugar and chronic disease risk.[[29]](#footnote-29) By that 10 percent standard, an individual who consumes a 2,000-calorie diet could consume up to 200 calories’ worth (50 grams, 12 teaspoons) of added sugars.[[30]](#footnote-30)

Convincing evidence from randomized trials suggests that drinking sugar-sweetened beverages, the largest source of added sugars in Americans’ diets, leads to weight gain in both children and adults.[[31]](#footnote-31)  Sugar-sweetened beverages are also associated with cardiovascular disease, type 2 diabetes, the metabolic syndrome, gout, and dental caries.[[32]](#footnote-32) Recent clinical studies have found that high intakes of fructose-containing sugars raise levels of triglycerides, visceral fat, liver fat, blood glucose, insulin, and small, dense LDL-cholesterol.[[33]](#footnote-33) Moreover, the higher diets are in added sugars (with no apparent threshold), the lower they are in a variety of vitamins and minerals.[[34]](#footnote-34)

A recent prospective study of more than 11,000 people in the National Health and Nutrition Examination Survey (NHANES) III—a nationally representative sample of Americans—followed for 15 years found higher risks of cardiovascular mortality with increasing added-sugars consumption. Those who consumed at least 10 percent but less than 25 percent of their calories from added sugars had a 30 percent higher risk of dying of a heart attack, stroke, or other cardiovascular event than those who consumed less than 10 percent of their calories from added sugars. The risk was nearly three times higher for those who consumed at least 25 percent of their calories from added sugars (more than 10 percent of the study population).[[35]](#footnote-35)

In 2003–2006, added sugars (sugar, high-fructose corn syrup, etc.) provided about 14 percent of total calories for the average American, and 25 percent or more of calories for over 36 million Americans.[[36]](#footnote-36) According to data from the National Health and Nutrition Examination Survey (NHANES) 2007–2008 and the U.S. Department of Agriculture’s (USDA) average per-capita loss-adjusted food availability data for 2012, Americans consumed between 18 and 23 teaspoons (about 300 to 390 calories worth) of added sugars per day, though consumption has declined modestly (about 15 percent) in the last 15 years.[[37]](#footnote-37) Consuming foods high in added sugars makes it more difficult to meet nutrient needs and stay within calorie limits. In contrast, foods high in natural sugars, such as fruits and dairy products, are often high in other nutrients.

While we support the DGAC’s recommendation for consuming no more than 10 percent of calories from added sugars, and believe that that could form an adequate basis for FDA to include a percent DV for added sugars on the labels of packaged foods, we believe that a lower recommendation would also be appropriate. Specifically, Americans should get no more than seven percent (of their calories from added sugars. That recommendation would align the DGA with recommendations from the World Health Organization and the American Heart Association (AHA).[[38]](#footnote-38)  Such science-based recommendations and guidelines to reduce added sugar intake have existed for years:

* In 1999, the Center for Science in the Public Interest (CSPI), along with leading health experts and organizations, petitioned the FDA to adopt a DV of 10 teaspoons, or 42 grams, for added sugars (168 calories or about 8 percent of a 2,000-calorie diet).[[39]](#footnote-39) That was based on the U.S. Department of Agriculture’s (USDA) recommendation that people consuming a 2,000-calorie diet limit their consumption of added sugars to 10 teaspoons per day (8.4 percent of calories).[[40]](#footnote-40)
* In 2003, the World Health Organization (WHO) recommended that individuals consume less than 10 percent of their calories from “free” sugars. That includes added sugars and the “free” sugars in fruit juices, honey, and syrups, so the percentage of calories from added sugars would be less than 10 percent.
* In 2005, the DGA recommended quantitative limits for added sugars combined with solid fats based on the discretionary calorie allowance for each level of calorie intake.[[41]](#footnote-41) For example, after lower-calorie, nutrient-dense foods in each food group were selected, someone consuming a 2,000-calorie diet would have up to 267 discretionary calories to expend on solid fats and added sugars (assuming no alcohol, which is not the case for many U.S. adults). Dividing those calories equally between solid fats and added sugars, a reasonable and realistic recommendation, would mean that no more than 133 calories (33 grams or 8 teaspoons) per day should come from added sugars. That would amount to 6 percent of calories in a 2,000-calorie diet.
* In 2009, the American Heart Association (AHA) recommended that women and men consume no more than 100 calories (25 grams) or 150 calories (37.5 grams) per day from added sugars, respectively. That is equivalent to roughly 6 percent of total calories (based on intakes of 1,800 calories for women and 2,200 for men.[[42]](#footnote-42) The AHA recommendation was based on amounts of discretionary calories for added sugars and solid fats detailed in the appendices of previous versions of the DGA.
* In 2015, the WHO, following a comprehensive review of the science, published an evidence-informed guideline that provides two strong recommendations: 1) “a reduced intake of free sugars throughout the life course;” 2) “reducing intake of free sugars to less than 10 percent of total energy intake.”[[43]](#footnote-43) The WHO also made a conditional recommendation for an even lower sugar intake, to “below 5 percent.”

A quantitative recommendation for added sugars must be included in the main body (and not just an appendix) of the DGA, as it has important implications for national programs and policies, including school meals, snacks and drinks in schools, and food labeling.

***Policy Recommendations to Reduce Added Sugars Consumption***

We also support the policy implications of the DGAC’s conclusions on the need for policies that address over-consumption of added sugars. They are on-point and sorely needed. Specifically, we agree that the DGA should endorse policies that would discourage excessive consumption of added sugars, and reduce consumption of sugar-sweetened beverages, including the following:

* Revising the Nutrition Facts label to have a line for added sugars, with amounts expressed in both grams and teaspoons, along with a percent DV;
* Economic and pricing approaches, including incentives and disincentives;
* Continued efforts to reduce added sugars in foods and beverages in school meals and snacks;
* Limiting the presence and advertising of foods and beverages high in added sugars to young children, youth, and adolescents;
* Health promotion efforts and policies to reduce the availability of sugar-sweetened beverages in post-secondary institutions and worksites;
* Public education campaigns to raise public awareness of health harms of and alternatives to added sugars.

All of those policies are an appropriate response to decades of food marketing and promotion, lobbying, and attempted influence over health research findings by sugar interests.[[44]](#footnote-44) Connecting dietary advice to consumption patterns is critical to achieving public health improvements.

***Sugar-Sweetened Beverages***

Sugar-sweetened beverages, including soda pop, fruit drinks, energy drinks, sports drinks, juices and sweet teas, are the largest source of calories in Americans’ diets.[[45]](#footnote-45) Although consumption has slowly been declining,[[46]](#footnote-46) Americans are still consuming far more sugar drinks than is healthy. The National Health and Nutrition Examination Survey (NHANES) 2005­–2008 found that about half the U.S. population consumes sugar drinks on any given day. Males and females aged 12 to 19 consume an average of 273 and 171 total calories per day from sugar drinks, respectively.[[47]](#footnote-47) That is more than any other age group.

Soft drinks are the *only* beverage/food that has been directly linked to obesity, in large part due to the large volumes consumed, the large amounts of added sugars, and the liquid form. Randomized controlled trials have provided convincing evidence that drinking sugar-sweetened beverages can lead to weight gain.[[48]](#footnote-48)  Evidence from intervention studies shows that calories consumed in liquid form are less satiating than the same number of calories consumed from food.[[49]](#footnote-49) That can lead people to overeat and eventually gain weight.

Sugar-sweetened beverages provide calories with few nutrients, which makes it difficult for consumers to meet nutritional needs and stay within calorie requirements. Given that sugar-sweetened beverages make a unique direct contribution to obesity and other non-communicable diseases, the DGA should emphasize strongly that Americans should consume these beverages only rarely, comparing the amount in typical servings to the recommended maximum daily intake and that public policies should be developed that encourage consumption of healthier beverages, including water, and discourage the availability of sugar drinks.

Furthermore, the FDA, as a department within HHS, should align its updates to the Nutrition Facts label by including a percent DV for added sugars on the labels of all processed foods, as the DGA recommended.[[50]](#footnote-50) In addition, added sugars should be indicated on labels in teaspoons to ease consumer understanding. Few Americans are familiar with the metric measures used for total sugars (and other nutrients), because they are unrelated to their common experiences, such as measuring sugar into coffee or tea. They do, however, instantly understand measurements such as teaspoons, tablespoons, and cups, which are commonly used in cooking and baking and used on the Nutrition Facts label to indicate serving sizes.[[51]](#footnote-51)

1. Sodium

The DGAC should strongly recommend reducing daily sodium intake to 2,300 milligrams (mg) per day for the general population and to 1,500 mg per day for at-risk subgroups.

We applaud the DGAC for emphasizing sodium reduction in its Scientific Report. Sodium continues to be a major public health problem, with Americans consuming an average of roughly 3,500 mg per day—far more than the recommended amount. Excess sodium consumption is linked to the development and worsening of high blood pressure and an increased risk of heart disease, stroke, kidney failure, gastric cancer, and osteoporosis. As the DGAC noted, despite the methodological flaws and limitations that plague many studies, it is clear that higher sodium intakes are associated with a higher risk of cardiovascular disease.[[52]](#footnote-52)

To help Americans achieve a healthier sodium intake, the Committee has recommended that the general population limit sodium to less than 2,300 mg or the age-appropriate Dietary Reference Intake (DRI) amount.[[53]](#footnote-53) We also agree with the Committee’s conclusion that adults who would benefit from blood pressure lowering—namely people with prehypertension or hypertension, which includes two-thirds of the adult population—should reduce their sodium intake ideally to 1,500 mg per day.

Confusingly, the DGAC also recommended that people with hypertension or prehypertension should consume no more than 2,400 mg of sodium per day. We recognize that 2,400 mg was recommended because that was the estimated average urinary sodium excretion when subjects in the DASH sodium trial were assigned to a 2,300 mg diet. However, recommending less than 2,300 mg for the general population and no more than 2,400 mg for adults who would benefit from blood pressure lowering would result in confusion.

We urge HHS and USDA to simplify the messaging in the final policy document and recommend less than 2,300 mg for the general population. At-risk subgroups should be advised that a greater reduction to 1,500 mg would be desirable, and that if they cannot immediately reach either target level, that reducing sodium by at least 1,000 mg per day—and more to reach the 1,500 mg/day level—would be beneficial.

To help individuals lower their sodium intake, the Committee has recommended that a “primary emphasis be placed on policies and population-based strategies for sodium reduction while at the same time paying attention to consumer education.” We strongly agree. Despite decades of dietary guidance advising Americans to reduce their sodium consumption, high intakes have persisted. It is clear that relying on individual behavior change alone is not enough. With nearly 80 percent of the sodium we eat coming from packaged and restaurants foods, Americans will continue to have difficulty reducing their sodium intake unless there are changes to the food supply (or people are encouraged to switch to diets based to a much greater extent on low-sodium natural foods, such as fruits and vegetables, as we urge below). As the Committee advised, HHS and USDA should work with the food and restaurant industry to lower the amount of sodium in the food supply. The DGAC said that that could be achieved by implementing the recommendations contained in the 2010 IOM report “Strategies to Reduce Sodium Intake in the United States,” including modifying the GRAS status of salt and establishing sodium limits for foods.

The Agencies should also continue to move forward with existing efforts to reduce sodium intake in children. As the DGAC’s Scientific Report discusses, the concern over excess sodium consumption and negative health effects is not just limited to adults. Children are also at risk of developing heart disease and elevated blood pressure at an earlier age, because about 90 percent of them consume too much sodium. The prevalence of elevated blood pressure in children is already on the rise, and blood pressure rises with age. The evidence shows that in children, just like in adults, blood pressure decreases as sodium intake goes down. In addition, lowering sodium intake can significantly blunt the age-associated rise in blood pressure. Accordingly, federal efforts are needed to lower sodium intake in children, such as continuing the tiered reduction in the School Meals program.

For children and adults, there is consensus that the U.S. population has to reduce sodium intake. A target of 2,300 mg is reasonable for the general population, with a second recommendation to reduce intake ideally to 1,500 mg in people with pre-hypertension or hypertension. Achieving these targets will not happen without a significant commitment from industry to reduce sodium in packaged and restaurant foods and for industry and consumers to reduce portion sizes. Additionally, reducing sodium in the foods purchased or made available through schools, government feeding programs, and workplaces is essential to achieving the enormous health benefits of sodium reduction across the population.

**c) Red and Processed Meats**

**We support the DGAC Report’s conclusion that the DGA should include a recommendation to “limit red and processed meats.”**

We applaud the DGAC for its proposal to alter the current Dietary Guidelines language regarding meat intake from “choose lean meat and poultry” to “limit red and processed meats.” That is an important and necessary change, borne out by clear, consistent, and still-mounting evidence of the link between regular consumption of red and processed meats and certain types of cancer. We believe an emphasis should be placed on consuming lean red meats and portion size as red meat makes up 58% of total meat intake.[[54]](#footnote-54) Additionally, we believe the DGAC should suggest options to reduce fat content in red meat, such as trimming excess fat. We are pleased that the DGAC acknowledged that diet and weight status impact risk for breast and colorectal cancers, two of the most common types. The DGAC’s recommendation to limit red and processed meat carries a significant potential to improve the country’s health. We urge that the 2015 DGA include a recommendation of which red meats should be consumed and emphasis on leaner cuts.

We also applaud the DGAC for recommending that consumption of healthier protein sources—including plant protein sources—be increased. The DGA should recommend other types of protein sources to be consumed in place of red and processed meats. Those should include seafood, nuts, legumes, and lean poultry.

The evidence that diets high in red meat (beef, pork, lamb) and processed meats (hot dogs, bacon, sausage, deli meats, etc.) increase the risk for colorectal cancer is convincing.[[55]](#footnote-55) Many epidemiologic studies have reported a modest but significant association between high intakes of processed meats and red meats and increases in cancer incidence and mortality in a dose-dependent relationship, as well as death from other causes.[[56]](#footnote-56) Current evidence indicates approximately a 15 to 20 percent increased risk of cancers of the colon and/or rectum per 100 grams (g) of red meat or 50 g of processed meats consumed per day.[[57]](#footnote-57) The risks associated with processed meats appear to be greater than those for an equivalent amount of red meat, but consumption of both should be limited. The American Cancer Society recommends limiting consumption of both red and processed meats.[[58]](#footnote-58)

Since the 2010 Dietary Guidelines for Americans were issued, the evidence supporting the link between red meat and processed meat consumption and colorectal cancer has increased. In 2011, AICR and WCRF published a Continuous Update Project report on colorectal cancer, in which new evidence was added to the existing evidence base. The expert panel concluded:

A substantial amount of data from cohort studies showed a dose-response relationship, supported by evidence for plausible mechanisms operating in humans…red meat is a convincing cause of colorectal cancer.

There is a substantial amount of evidence, with a dose-response relationship apparent from cohort studies. There is strong evidence for plausible mechanisms operating in humans…processed meat is a convincing cause of colorectal cancer.[[59]](#footnote-59)

Fatty red and processed meats should be replaced by other lean and healthy protein sources, within calorie and nutrient needs. The DGA should recommend consuming other protein sources, such as fish, poultry, legumes, and nuts, in place of red and processed meats. Major health organizations already support these recommendations for protein foods. For example, the American Cancer Society supports consuming a healthy diet with an emphasis on plant foods.[[60]](#footnote-60) The American Heart Association recommends that the general population eat a variety of (preferably fatty) fish at least twice a week and include oils and foods rich in alpha-linolenic acid (flaxseed, canola, and soybean oils; flaxseed and walnuts).

Similarly, guidance in the DGA to increase other types of protein sources, including seafood, poultry, beans, and nuts, should be coupled with the recommendation to reduce red and processed meats. It is essential that the DGA contain clear, consistent, and actionable guidance for consumers regarding the types of protein foods that should and should not be a regular part of their diet.

**d) Fats**

**The Dietary Guidelines for Americans should continue to advise Americans to replace foods rich in saturated fat with ones higher in monounsaturated or polyunsaturated fats.**

In 2010, the DGA recommended limiting saturated fat intake to less than 10 percent of total calories based on evidence from controlled trials and prospective cohort studies showing that saturated fat intake raises serum total and LDL-cholesterol levels, which increase the risk of cardiovascular disease. Strong evidence from controlled trials shows that replacing saturated fat with polyunsaturated and monounsaturated fats results in favorable effects on lipid profiles and a lower risk of cardiovascular events.[[61]](#footnote-61) The DGA should continue to advise Americans to replace foods rich in saturated fat with ones higher in monounsaturated or polyunsaturated fats.

We note that some meta-analyses have reached flawed conclusions concerning the impact of lowering saturated fat on coronary heart disease and mortality. For example, Chowdhury, et al. concluded that “current evidence does not clearly support cardiovascular guidelines that encourage high consumption of polyunsaturated fatty acids and low consumption of total saturated fats.” However, that conclusion ignored, among other things, the results of its own meta-analysis (buried in a supplement) showing a 19 percent reduction in the risk of heart disease when the authors appropriately excluded a trial that replaced saturated fat with a margarine high in trans fats.[[62]](#footnote-62)

For decades, researchers have acknowledged the difficulties of convincing sufficiently large numbers of subjects to sufficiently change their diets for sufficiently long periods of time to lower not just the *risk* of cardiovascular disease but cardiovascular or all-cause *mortality*. Recognizing those difficulties, the National Heart, Lung, and Blood Institute, AHA, ACC, and other health authorities have concluded that evidence from clinical trials demonstrating a reduction in LDL cholesterol and other cardiovascular risk factors are sufficient to support recommendations to lower saturated fat intake.[[63]](#footnote-63) That conclusion is backed by a strong, consistent, and growing body of evidence from randomized controlled trials on diets that lower LDL cholesterol, along with trials on drugs that lower LDL by different mechanisms (statins and ezetimibe) and lower the risk of cardiovascular disease, cardiovascular mortality, and all-cause mortality.[[64]](#footnote-64)

In 2011–2012, Americans aged 2 and older averaged 11 percent of calories from saturated fat, slightly more than the current DGA recommendation of under 10 percent.[[65]](#footnote-65) Furthermore, 71 percent of the total population consumed more than 10 percent of calories from saturated fat. The American Heart Association and the American College of Cardiology recommended that people who would benefit from LDL-cholesterol lowering (i.e., those at high risk for cardiovascular disease and stroke) should reduce saturated fat intake to even lower levels (i.e., 5 to 6 percent of calories),[[66]](#footnote-66) as used in the OmniHeart, Dietary Approaches to Stop Hypertension (DASH), and the Dietary Effects on Lipoproteins and Thrombogenic Activity (DELTA) trials.[[67]](#footnote-67)

Although we support the DGAC’s recommendation to consume less than 10 percent of calories from saturated fat, we note that the American Heart Association recommends that healthy Americans over age 2 should ideally consume no more than 7 percent of calories from saturated fat.[[68]](#footnote-68) This lower saturated fat intake would more closely match the DASH, OmniHeart, and DELTA trials and would be more consistent with a diet rich in vegetables, fruits, low-fat dairy products, whole grains, poultry, fish, legumes, nuts, and vegetable oils, and limited in sweets, sugar-sweetened beverages, and red meat, as noted by the AHA/ACC 2013 guidelines.

The DGA should recommend that people replace foods high in saturated fat, such as red meat, full-fat dairy products, many desserts, with foods rich in polyunsaturated and/or monounsaturated fats, such as nuts, seeds and seafood. Americans should consume those unsaturated fats as part of a diet rich in fruits, vegetables, whole grains, legumes, and low-fat dairy products.

**e)** **Fruits and Vegetables**

**We concur with the DGAC report that additional measures are needed to encourage consumption of fruits and vegetables as part of a healthy diet.**

Americans currently eat a diet that is low in vegetables and fruits, and this dietary pattern contributes to increased risk of chronic disease and poor health. Among the U.S. population, 90 percent do not eat the daily recommended amount of vegetables, and 80 percent do not eat the daily recommended amount of fruit. Americans eat few vegetables, and consumption has even declined by about 10 percent since 2003.[[69]](#footnote-69) Fruit intake has declined by about 16 percent since the late 1990s, and consumption of fresh fruit has remained low, but stable. With the exception of children 1–8 years of age, fruit and vegetable intake among children is low.

Fresh, frozen, and canned fruits and vegetables contribute many important nutrients of public health concern, including fiber, potassium, iron, folate, and vitamin A. The DASH and OmniHeart diets, which are rich in fruits and vegetables, lower blood pressure, LDL cholesterol, and triglycerides.[[70]](#footnote-70) A diet rich in fruits and vegetables is associated with a decreased risk of cardiovascular disease.[[71]](#footnote-71) High intakes of vegetables and fruits were the only dietary characteristics consistently associated with many positive health outcomes. Therefore, the DGAC recommends that the U.S. population be encouraged to eat a diet rich in fruits and vegetables.

We agree that it will take bold action to achieve healthy dietary patterns in the U.S. and that environmental and policy changes are important in achieving this goal. The DGAC notes the importance of implementing comprehensive nutrition standards to increase fruits and vegetables in school meals. School-based environmental modifications that also include nutrition education and parent involvement are especially effective in increasing children’s fruit and vegetable consumption. The DGA also should recommend that the Supplemental Nutrition Assistance Program (SNAP) give further consideration to financial incentives for people to buy more fruits and vegetables, because studies have shown that discounting the cost at stores or farmers markets leads to greater purchases and, presumably, consumption.[[72]](#footnote-72)

We urge USDA and HHS to:

1. Strengthen their efforts to encourage all Americans to make half their plates fruits and vegetables at every meal;
2. Strengthen and promote policies that increase children’s access to more fruits and vegetables in school meals and the school food environment;
3. Promote policies that increase access to more fruits and vegetables in all other federal nutrition programs;
4. Fund research on best practices, behavioral economics, and multi-component interventions that will add to the evidence base concerning how to most effectively increase American’s fruit and vegetable consumption;
5. Support private efforts to promote the consumption of fruits and vegetables.

**f) Whole Grains**

**We support the Report’s emphasis on whole grains as part of a healthful diet and encourage USDA and HHS to provide clear recommendations to help people translate this advice into healthier consumption patterns.**

The DGA should include a strong recommendation to consume fewer grains and to substitute refined grains with whole grains, as recommended by the DGAC. The advice should be clear that people should substitute refined grains with whole grains, and not eat more whole grains, as most Americans eat too many grain foods. The DGA should recommend that Americans limit their consumption of all grains, particularly white flour and white rice, to four or five small servings a day (for a 2,000 calorie diet) and that at least half those grains should be whole grains. The Guidelines should not advise people to consume at least 3 ounce-equivalents of whole grains per day. Instead, it should focus on percentage of whole grains advice.

To effectively encourage Americans to consume more whole grains without inadvertently encouraging people to overconsume refined grains, it is important that the DGA clearly and articulately address whole grains in the diet.

First, the DGA should clearly recommend that consumers reduce their overall grain intake. As the DGAC pointed out, Americans eat too many grain-based foods. People get the wrong message when recommendations advise them to “Eat *more* whole grains,” since that message could lead people to overeat. Instead, the DGA should warn that most people consume excessive amounts of grains (from breads, cereals, pasta, rice, tortillas, pizza crust, cakes, cookies, pies, etc.), and clearly recommend that consumers reduce grain intake *overall* and replace refined grains with whole grains. Furthermore, the DGA should include illustrations to convey an appropriate size serving of pasta, rice, etc.

Second, the DGA should continue to recommend that consumers *replace* foods made with refined grains with 100% whole grains, including wheat berries, quinoa, rolled or steel-cut oats, brown rice, whole wheat bread, or foods labeled “100% whole grain.” The USDA and HHS should recommend that the percentage of total grains that are whole grains be labeled on foods to help guide consumers. Furthermore, the Guidelinesshould warn consumers that foods with labels such as “8 grams whole grain” or “made with whole grains” may be mostly refined grain. This straightforward advice would help people follow the Guidelinesby encouraging them to avoid foods with high amounts of refined grains.

Third, the DGA should not advise people to consume at least 3 ounce-equivalents of whole grains per day. Instead, focus on the percentage of whole grains advice. The 2010 DGAstates that the minimum recommended amount of whole grains for most Americans is 3-ounce equivalents per day (e.g., 1 one-ounce slice of bread; 1 ounce uncooked pasta or rice; ½ cup cooked rice, pasta, cereal; 1 tortilla; 1 pancake; 1 ounce ready-to-eat cereal). To give consumers examples of ways to meet the recommendation, the Guidelinesprovides three examples (Figure 4-1 of 2010 DGA). However, practically no one understands what an “ounce-equivalent” of grains means.

Consumers cannot assume that one slice of bread or one serving of breakfast cereal is an “ounce-equivalent,” because the weight of a single serving can vary widely. For example, the weight of one serving (1 cup) of Post Shredded Wheat cereal is 1.7 ounces, while one large blueberry muffin weighs almost 5 ounces. Foods labeled as containing “8 grams of whole grain per serving” can be misleading. Moreover, for example, 8 grams of whole grain in a 57-gram serving of uncooked pasta would be only 14 percent whole grain. A 55-gram serving of Post Selects Blueberry Morning cereal contains 17 grams of whole grain and 16 grams of sugars per 55 gram serving. That leaves up to 22 grams of refined grain per serving (assuming other ingredients are minor). Thus, someone would consume more refined grain than whole grain from this “whole grain-rich” cereal. And few consumers take time to check serving sizes to see how many ounce equivalents they contain. Ultimately, the Guidelinesrisks that Americans ignore the whole grain advice altogether—or consume excess calories from bread, cereal, rice, etc.—if they do not communicate adequately about how to implement recommendations.

Instead of the current confusion, the Guidelinesshould advise consumers to look for foods that are 100 percent whole grain, or at least with whole grain the first ingredient.

1. **Water Promotion**

**We support the development of policies to promote water as the primary beverage of choice. We also support public education and policy changes to encourage access to clean water, including a symbol for water as part of the graphics for MyPlate.**

Water is an essential nutrient.[[73]](#footnote-73) Without water, human life can be sustained for only a few days. Adequate hydration is crucial for the proper function and regulation of the kidneys and heart thus affecting heart rate, blood pressure, vaso-vagal response, lipid regulation, removal of body waste products, and thermoregulation; good hydration also supports mental concentration, mood, skin health, helps prevent headaches, and lubricates joints. While hydration can come from many sources, low intake of plain water is associated with poor dietary quality and physical inactivity in youth.[[74]](#footnote-74)

Between 2005 and 2010, more than a quarter (28 percent) of children aged 4–13 years old in the United States did not have a drink of plain water on two consecutive days.[[75]](#footnote-75) Plain water accounted for less than one-third of total daily dietary water intake from beverages and foods for children aged 4-13 years old.[[76]](#footnote-76) While it is possible to meet all hydration needs with other sources, plain tap water is ideal because, unlike sugar-sweetened beverages, it does not contain calories and has virtually no adverse effects.[[77]](#footnote-77)

Recent research shows that substituting drinking water for sugar drinks (sodas, juice drinks, pre-sweetened tea and coffee drinks, sports drinks, and energy drinks) can help reduce intake of calories from added sugars among both children and adults[[78]](#footnote-78) and reduce the risk of dental caries.[[79]](#footnote-79)

Science-based organizations, such as the Institute of Medicine’s Committee on Accelerating Progress in Obesity Prevention,[[80]](#footnote-80) Centers for Disease Control and Prevention,[[81]](#footnote-81) and the American Heart Association’s Voices for Healthy Kids,[[82]](#footnote-82) embrace the importance of water in chronic disease prevention and have called for improvements in community-wide drinking water access. The American Academy of Pediatrics encourages water as the best source of hydration for young people.[[83]](#footnote-83)

We recommend that HHS and USDA promote plain tap water as the primary beverage of choice. That recommendation would build on that provided in the 2010 DGA (“To limit excess calories and maintain healthy weight, individuals are encouraged to drink water and other beverages with few or no calories...”) and the strengthened recommendations for drinking water made in the 2015 DGAC report:

* “Strategies are needed to encourage the U.S. population to drink water when they are thirsty. Water provides a healthy, low-cost, zero-calorie beverage option,”[[84]](#footnote-84) and
* “Approaches might include: Making water a preferred beverage choice. Encourage water as a preferred beverage when thirsty.”[[85]](#footnote-85)

In addition to including strong language on drinking water in the 2015 DGA, including such slogans such as “Water: First for Thirst,” we recommend education and promotion to encourage water as a preferred beverage. In 2014, national leaders in nutrition urged DGAC to encourage a symbol for water on MyPlate.[[86]](#footnote-86) To emphasize the consumption of tap rather than bottled water in the MyPlate diagram, one possibility might be to have a clear, reusable water bottle in the diagram. MyPlate is a powerful teaching tool for young people, to whom SSBs are heavily marketed.[[87]](#footnote-87) The addition of a water symbol would enable MyPlate to promote water consumption along with its other messages. Such a MyPlate message would synergize with the Partnership for a Healthier America’s Drink Up campaign to raise public awareness about the benefits of drinking water,[[88]](#footnote-88) as well as with key strategies of the Centers for Disease Control and Prevention designed to decrease consumption of SSBs.[[89]](#footnote-89)

Encouraging water consumption would build demand for improved access to clean and safe tap water, needed in many homes, schools, and other sites across the country,[[90]](#footnote-90) as recommended by the DGAC:

* “Free, clean water should be available in public settings, as well as child care facilities, schools, worksites, publically funded athletic stadiums and arenas, transportation hubs (e.g., airports) and other community places and should be promoted in all settings where beverages are offered;” and,
* “Make water accessible in public settings, child care facilities, schools, worksites and other community places where beverages are offered.”

Finally, adding water to the MyPlate graphic would support effective implementation of the provisions of the Healthy, Hunger-Free Kids Act of 2010 requiring ready access to water in childcare and in schools, also recommended by the DGAC.

1. **Sustainability**

**We endorse the DGAC’s recognition of sustainability as an essential component of federal dietary guidance.**

To improve population nutrition while ensuring food security over the long-term, dietary patterns and the food production methods to support them must be sustainable. We specifically endorse the conclusion of the DGAC that “the availability and acceptability of healthy and sustainable food choices will be necessary to attain food security for the U.S. population over time.” We commend the DGAC’s careful consideration of the scientific evidence on this topic and its recognition of sustainability as an essential component of federal dietary guidance.

The Committee’s findings on sustainability reflect a rigorous and comprehensive assessment of the latest scientific evidence and were prepared in close consultation with experts spanning nutrition, agricultural, and environmental sciences. Its prioritization of sustainability is consistent with a range of scientific consensus organizations, including the National Research Council, a committee of the Institute of Medicine, and the Academy of Nutrition and Dietetics.[[91]](#footnote-91) Furthermore, the DGAC’s findings on sustainability are well aligned with dietary guidance published by the governments of Germany, Sweden, the Netherlands, Australia, and Brazil.[[92]](#footnote-92)

More specifically, the DGAC’s comprehensive review of the literature found moderate to strong evidence that, “dietary patterns that promote health also promote sustainability.” The DGAC’s conclusion supports the assertion that sustainable dietary choices support both long-term and short-term nutritional health and are closely linked to the choices recommended for optimal nutrition. Less resource-intensive dietary patterns support nutrition and reduce greenhouse-gas emissions, land, water, and energy use, and ecosystem harm. Our nation’s ability to meet future food needs will depend on those environmental outcomes, particularly in the context of a changing climate, with more extremes in weather such as drought, resource shortages, changes in global dietary patterns, and population growth.[[93]](#footnote-93) The DGAC’s review of the effects of individual and population-level dietary patterns on sustainability is both timely and in the interest of public health.

The DGAC’s review indicates that a broad range of dietary patterns high in plant-based foods and low in animal-based foods are more nutritious and sustainable than the U.S. population’s current average dietary pattern. Consistent with current scientific literature, the DGAC notes that diets high in animal-based foods, particularly red and processed meats, are associated with an increased risk of heart disease, diabetes, and cancer, and worse environmental outcomes.

Seafood consumption is another key dietary component in which health and sustainability go hand in hand. However, in recognition of overfishing and rising global demand, the DGAC encourages the consumption of a variety of seafood associated with sustainable fishing and aquaculture practices. We applaud the DGAC’s attention to sustainable seafood production methods. While the report is not comprehensive in its examination of which methods are best to conserve resources and protect public health, sustainability should be part of the Dietary Guidance concerning seafood.

In summary, we endorse the DGAC’s conclusion that, “linking health, dietary guidance, and the environment will promote human health and the sustainability.” The DGAC’s findings reflect a substantial body of science that illustrates the synergies between healthy dietary choices and a sustainable food system.

Respectfully,



Lindsey Parsons, EdD

Executive Director

1. In fact, many substantial matters of policy have been addressed in past Guidelines and Committee reports. These include, in no particular order: the need for physical activity (DG 1980-2010, DGAC 1995-2010); alcohol consumption, warnings against use of driving or machinery (DG 1980-2010, DGAC 1995-2010); reducing healthcare costs through diet (DGAC 1995); poverty as a barrier to nutritional implementation (DGAC 1995, DGAC/DG 2010); racial health disparities (DGAC 2005, DGAC/DG 2010); the cost and availability of fruits and vegetables (DGAC 2005, DGAC/DG 2010); the geographic distribution of fast food and convenience store versus grocery stores (DGAC/DG 2010); opportunities for safe and enjoyable outdoor activities (DGAC 2005, DGAC/DG 2010); benefits of plant-based diets (DGAC/DG, 1995, 2000, 2005, 2010); the need to reduce screen time for children (*i.e*., television, video games, computer use (DGAC/DG 2010); policies impacting sustainable agriculture and aquaculture (DGAC/DG 2010); land use policy and zoning policy (DGAC 2010); food safety and technology (hand sanitation, kitchen cleanliness, temperature control) (DGAC/DG 2000-2010); economic incentives for food manufacturers as barrier for health (DGAC 2010); the need to increase comprehensive education for health, nutrition and physical education (DGAC 2010 in-depth; and included in prior years); improving public/private partnerships for health (DGAC/DG 2010); developing legislation and policies in diverse sectors (public health, retail, transportation, etc.) (DGAC/DG 2010); and the advisability of limiting food and beverage marketing to children (DGAC/DG 2010). [↑](#footnote-ref-1)
2. Keener, D., Goodman, K., Lowry, A., Zaro, S., & Khan, L. K. (2009). Recommended Community Strategies and Measurements to Prevent Obesity in the United States: Implementation and Measurement Guide. *Centers for Disease Control and Prevention.* [↑](#footnote-ref-2)
3. Community Preventive Services Task Force. (2014). Obesity Prevention and Control: Interventions in Community Settings. *The Guide to Community Preventive Services.* Available at <http://www.thecommunityguide.org/obesity/communitysettings.html>. Accessed March 11, 2015. [↑](#footnote-ref-3)
4. Sanchez, E., Burns, A. C., & Parker, L. (Eds.). (2009).  *Local government actions to prevent childhood obesity*. National Academies Press. [↑](#footnote-ref-4)
5. Reuben, S.H. & The President’s Cancer Panel. (August 2007). Promoting Healthy Lifestyles: Policy, Program, and Personal Recommendations for Reducing Cancer Risk. Available at <http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp07rpt/pcp07rpt.pdf>. Accessed March 11, 2015. [↑](#footnote-ref-5)
6. Healthy Eating Index (HEI)-2005), an “alternate” HEI-2010 based on the Harvard Food Pyramid, the Dietary Approaches to Stop Hypertension (DASH) diet, and the Mediterranean diet (and alternative scores adapted for non-Mediterranean countries). [↑](#footnote-ref-6)
7. Appel, L. J., Moore, T. J., Obarzanek, E., Vollmer, W. M., Svetkey, L. P., Sacks, F. M., ... & Harsha, D. W. (1997). A clinical trial of the effects of dietary patterns on blood pressure. *New England Journal of Medicine*, *336* (16), 1117-1124. [↑](#footnote-ref-7)
8. Estruch, R., Ros, E., Salas-Salvadó, J., Covas, M. I., Corella, D., Arós, F., ... & Martínez-González, M. A. (2013). Primary prevention of cardiovascular disease with a Mediterranean diet. *New England Journal of Medicine*, 368(14), 1279-1290. [↑](#footnote-ref-8)
9. Vergnaud, A. C., Romaguera, D., Peeters, P. H., van Gils, C. H., Chan, D. S., Romieu, I., ... & Norat, T. (2013). Adherence to the World Cancer Research Fund/American Institute for Cancer Research guidelines and risk of death in Europe: results from the European Prospective Investigation into Nutrition and Cancer cohort study.  *The American Journal of Clinical Nutrition*, 97(5), 1107-1120; Boggs, D. A., Rosenberg, L., Rodríguez-Bernal, C. L., & Palmer, J. R. (2013). Long-term diet quality is associated with lower obesity risk in young African American women with normal BMI at baseline.  *The Journal of Nutrition*, 143(10), 1636-1641; Romaguera, D., Norat, T., Vergnaud, A. C., Mouw, T., May, A. M., Agudo, A., ... & Riboli, E. (2010). Mediterranean dietary patterns and prospective weight change in participants of the EPIC-PANACEA project.  *The American Journal of Clinical Nutrition*, 92 (4), 912-921. [↑](#footnote-ref-9)
10. World Cancer Research Fund/American Institute for Cancer Research. (2007). Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective. Washington DC: AICR; Thomson, C. A., McCullough, M. L., Wertheim, B. C., Chlebowski, R. T., Martinez, M. E., Stefanick, M. L., ... & Neuhouser, M. L. (2014). Nutrition and physical activity cancer prevention guidelines, cancer risk, and mortality in the women's health initiative.  *Cancer Prevention Research*, 7(1), 42-53; Kabat, G. C., Matthews, C. E., Kamensky, V., Hollenbeck, A. R., & Rohan, T. E. (2015). Adherence to cancer prevention guidelines and cancer incidence, cancer mortality, and total mortality: a prospective cohort study. *The American Journal of Clinical Nutrition*, ajcn-094854; Chiuve, S. E., Fung, T. T., Rimm, E. B., Hu, F. B., McCullough, M. L., Wang, M., ... & Willett, W. C. (2012). Alternative dietary indices both strongly predict risk of chronic disease.  *The Journal of Nutrition*, jn-111; Sofi, F., Abbate, R., Gensini, G. F., & Casini, A. (2010). Accruing evidence on benefits of adherence to the Mediterranean diet on health: an updated systematic review and meta-analysis.  *The American Journal of Clinical Nutrition*, 92(5), 1189-1196. [↑](#footnote-ref-10)
11. Liese, A. D., Krebs-Smith, S. M., Subar, A. F., George, S. M., Harmon, B. E., Neuhouser, M. L., ... & Reedy, J. (2015). The Dietary Patterns Methods Project: Synthesis of Findings across Cohorts and Relevance to Dietary Guidance.  *The Journal of Nutrition*, jn-114; McCullough, M. L., Patel, A. V., Kushi, L. H., Patel, R., Willett, W. C., Doyle, C., ... & Gapstur, S. M. (2011). Following cancer prevention guidelines reduces risk of cancer, cardiovascular disease, and all-cause mortality.  *Cancer Epidemiology Biomarkers & Prevention*, 20(6), 1089-1097; Liese, A. D., Krebs-Smith, S. M., Subar, A. F., George, S. M., Harmon, B. E., Neuhouser, M. L., ... & Reedy, J. (2015). The Dietary Patterns Methods Project: Synthesis of Findings across Cohorts and Relevance to Dietary Guidance. *The Journal of Nutrition*, jn-114. [↑](#footnote-ref-11)
12. Appel, L. J., Sacks, F. M., Carey, V. J., Obarzanek, E., Swain, J. F., Miller, E. R., ... & OmniHeart Collaborative Research Group. (2005). Effects of protein, monounsaturated fat, and carbohydrate intake on blood pressure and serum lipids: results of the OmniHeart randomized trial.  *JAMA*, 294(19), 2455-2464; Appel, L. J., Moore, T. J., Obarzanek, E., Vollmer, W. M., Svetkey, L. P., Sacks, F. M., ... & Harsha, D. W. (1997). A clinical trial of the effects of dietary patterns on blood pressure.  *New England Journal of Medicine*, 336(16), 1117-1124. [↑](#footnote-ref-12)
13. WCRF/AICR, 2007. [↑](#footnote-ref-13)
14. Kushi, L. H., Doyle, C., McCullough, M., Rock, C. L., Demark‐Wahnefried, W., Bandera, E. V., ... & Gansler, T. (2012). American Cancer Society guidelines on nutrition and physical activity for cancer prevention.  *CA: A Cancer Journal for Clinicians*, 62(1), 30-67. [↑](#footnote-ref-14)
15. Vergnaud et al., 2014; Thomson, 2014; Kabat, G. C., Matthews, C. E., Kamensky, V., Hollenbeck, A. R., & Rohan, T. E. (2015). Adherence to cancer prevention guidelines and cancer incidence, cancer mortality, and total mortality: a prospective cohort study. *The American Journal of Clinical Nutrition*, ajcn-094854. [↑](#footnote-ref-15)
16. Romaguera et al., 2010; Thomson, 2014; McCullough et al., 2011. [↑](#footnote-ref-16)
17. McCullough et al., 2011. [↑](#footnote-ref-17)
18. Stallings, V. A., & Yaktine, A. L. (Eds.). (2007).  *Nutrition standards for foods in schools: leading the way toward healthier youth*. National Academies Press. [↑](#footnote-ref-18)
19. Kushi et al., 2012. [↑](#footnote-ref-19)
20. WCRF/AICR, 2007. [↑](#footnote-ref-20)
21. Kushi et al., 2012. [↑](#footnote-ref-21)
22. WCRF/AICR, 2007. [↑](#footnote-ref-22)
23. Williams, J., Mai, C. T., Mulinare, J., Isenburg, J., Flood, T. J., Ethen, M., ... & Kirby, R. S. (2015). Updated Estimates of Neural Tube Defects Prevented by Mandatory Folic Acid Fortification—United States, 1995–2011.  *MMWR. Morbidity and mortality weekly report*, 64 (1), 1-5. [↑](#footnote-ref-23)
24. Grau, M. V., Baron, J. A., Sandler, R. S., Wallace, K., Haile, R. W., Church, T. R., ... & Mandel, J. S. (2007). Prolonged effect of calcium supplementation on risk of colorectal adenomas in a randomized trial.  *Journal of the National Cancer Institute*, 99(2), 129-136. [↑](#footnote-ref-24)
25. Gaziano, J. M., Sesso, H. D., Christen, W. G., Bubes, V., Smith, J. P., MacFadyen, J., ... & Buring, J. E. (2012). Multivitamins in the prevention of cancer in men: the Physicians' Health Study II randomized controlled trial. *JAMA*, 308 (18), 1871-1880. [↑](#footnote-ref-25)
26. Huo, Y., Li, J., Qin, X., Huang, Y., Wang, X., Gottesman, R. F., ... & Hou, F. F. Efficacy of folic acid therapy in primary prevention of stroke among adults with hypertension in China: the CSPPT randomized clinical trial.  *JAMA*. doi:10.1001/jama.2015.2274; March 15, 2015. [↑](#footnote-ref-26)
27. Kushi et al., 2012; Bjelakovic, G., Nikolova, D., Gluud, L. L., Simonetti, R. G., & Gluud, C. (2012). Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases.  *The Cochrane Library*; Klein, E. A., Thompson, I. M., Tangen, C. M., Crowley, J. J., Lucia, M. S., Goodman, P. J., ... & Baker, L. H. (2011). Vitamin E and the risk of prostate cancer: the Selenium and Vitamin E Cancer Prevention Trial (SELECT).  *JAMA*, 306(14), 1549-1556. [↑](#footnote-ref-27)
28. Fortmann, S. P., Burda, B. U., Senger, C. A., Lin, J. S., Beil, T. L., O’Connor, E., & Whitlock, E. P. (2013). Vitamin, mineral, and multivitamin supplements for the primary prevention of cardiovascular disease and cancer: A systematic evidence review for the US preventive services task force.  *Evidence Syntheses* (108). [↑](#footnote-ref-28)
29. Science Based Chapter, Cross-cutting Topics of Public Health Importance, 2015 DGAC slides. *See also* Scientific Report of the Dietary Guidelines Advisory Committee, 2015, Part D. Chapter 6, at 20. [↑](#footnote-ref-29)
30. World Health Organization. (2003). Diet, nutrition and the prevention of chronic diseases. *WHO technical report series* (916) 1-60. [↑](#footnote-ref-30)
31. Te Morenga, L., Mallard, S., & Mann, J. (2013). Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies.  *BMJ*, 346, e7492; de Ruyter, J. C., Olthof, M. R., Seidell, J. C., & Katan, M. B. (2012). A trial of sugar-free or sugar-sweetened beverages and body weight in children.  *New England Journal of Medicine*, 367 (15), 1397-1406. [↑](#footnote-ref-31)
32. Malik, V. S., Popkin, B. M., Bray, G. A., Després, J. P., & Hu, F. B. (2010). Sugar-sweetened beverages, obesity, type 2 diabetes mellitus, and cardiovascular disease risk. *Circulation*, 121 (11), 1356-1364; Malik, V. S., Popkin, B. M., Bray, G. A., Després, J. P., Willett, W. C., & Hu, F. B. (2010). Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes A meta-analysis.  *Diabetes care*, 33(11), 2477-2483; Choi, H. K., & Curhan, G. (2008). Soft drinks, fructose consumption, and the risk of gout in men: prospective cohort study. *BMJ*, 336(7639), 309-312; Touger-Decker, R., & Van Loveren, C. (2003). Sugars and dental caries.  *The American Journal of Clinical Nutrition*, 78 (4), 881S-892S. [↑](#footnote-ref-32)
33. Stanhope, K. L., Schwarz, J. M., Keim, N. L., Griffen, S. C., Bremer, A. A., Graham, J. L., ... & Havel, P. J. (2009). Consuming fructose-sweetened, not glucose-sweetened, beverages increases visceral adiposity and lipids and decreases insulin sensitivity in overweight/obese humans.  *The Journal of Clinical Investigation*, 119 (5), 1322*;* Stanhope, K. L., Bremer, A. A., Medici, V., Nakajima, K., Ito, Y., Nakano, T., ... & Havel, P. J. (2011). Consumption of fructose and high fructose corn syrup increase postprandial triglycerides, LDL-cholesterol, and apolipoprotein-B in young men and women.  *The Journal of Clinical Endocrinology & Metabolism*, 96(10), E1596-E1605; Maersk, M., Belza, A., Stødkilde-Jørgensen, H., Ringgaard, S., Chabanova, E., Thomsen, H., ... & Richelsen, B. (2012). Sucrose-sweetened beverages increase fat storage in the liver, muscle, and visceral fat depot: a 6-mo randomized intervention study.  *The American Journal of Clinical Nutrition*, 95(2), 283-289. [↑](#footnote-ref-33)
34. Marriott, B. P., Olsho, L., Hadden, L., & Connor, P. (2010). Intake of added sugars and selected nutrients in the United States, National Health and Nutrition Examination Survey (NHANES) 2003—2006.  *Critical Reviews in Food Science and Nutrition*, 50(3), 228-258. [↑](#footnote-ref-34)
35. Yang, Q., Zhang, Z., Gregg, E. W., Flanders, W. D., Merritt, R., & Hu, F. B. (2014). Added sugar intake and cardiovascular diseases mortality among US adults.  *JAMA Internal Medicine*, 174(4), 516-524. (We note that the findings were remarkably robust, as they were “largely consistent across age group, sex, race/ethnicity (except among non-Hispanic blacks), educational attainment, physical activity, health eating index, and body mass index.”) [↑](#footnote-ref-35)
36. Marriott et al., 2010. [↑](#footnote-ref-36)
37. Welsh, J. A., Sharma, A. J., Grellinger, L., & Vos, M. B. (2011). Consumption of added sugars is decreasing in the United States.  *The American journal of clinical nutrition*, 94(3), 726-734; U.S. Department of Agriculture, Economic Research Service. (2014) Food Availability (Per Capita) Data System. Available at http://www.ers.usda.gov/data-products/food-availability-%28per-capita%29-data-system.aspx. Accessed March 20, 2015. [↑](#footnote-ref-37)
38. World Health Organization. (2015). Guideline: Sugars intake for adults and children. Geneva; Johnson, R. K., Appel, L. J., Brands, M., Howard, B. V., Lefevre, M., Lustig, R. H., ... & Wylie-Rosett, J. (2009). Dietary sugars intake and cardiovascular health: a scientific statement from the American Heart Association.  *Circulation*, 120 (11), 1011-1020. [↑](#footnote-ref-38)
39. Center for Science in the Public Interest. (August 3, 1999). Petition to the FDA to Require Better Sugar Labeling on Foods. Available at [www.cspinet.org/reports/sugar/sugarpet1.pdf](http://www.cspinet.org/reports/sugar/sugarpet1.pdf). Accessed April 23, 2014. [↑](#footnote-ref-39)
40. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. (1996). The Food Guide Pyramid. *Home and Garden Bulletin*, 252. Available at <http://www.cnpp.usda.gov/sites/default/files/archived_projects/FGPPamphlet.pdf>. Accessed March 20, 2015. [↑](#footnote-ref-40)
41. U.S. Department of Agriculture and U.S. Department of Health and Human Services. (2005). Dietary Guidelines for Americans, 2005. 6th Edition, Washington, DC. [↑](#footnote-ref-41)
42. Johnson, R. K., Appel, L. J., Brands, M., Howard, B. V., Lefevre, M., Lustig, R. H., ... & Wylie-Rosett, J. (2009). Dietary sugars intake and cardiovascular health a scientific statement from the American Heart Association.  *Circulation*, 120(11), 1011-1020. [↑](#footnote-ref-42)
43. World Health Organization. (2015). Guideline: Sugars intake for adults and children. Geneva. [↑](#footnote-ref-43)
44. *See, e.g.,* Union of Concerned Scientists. (June 2014). Added Sugar, Subtracted Science; Union of Concerned Scientists. (May 2014). Sugar-Coating Science. [↑](#footnote-ref-44)
45. U.S. Department of Agriculture and U.S. Department of Health and Human Services. (December, 2010). Table 2-2. Top 25 sources of calories among Americans ages 2 years and older, NHANES 2005–2006. *Dietary Guidelines for Americans, 2010.* 7th Edition, Washington, DC: U.S. Government Printing Office. Page 12. [↑](#footnote-ref-45)
46. Beverage Digest. (2012). U.S. beverage results for 2012. Available at <http://beverage-digest.com/pdf/top-10_2012.pdf>. Accessed November 1, 2013. [↑](#footnote-ref-46)
47. Ogden, C. L. (2011).  *Consumption of sugar drinks in the United States, 2005-2008* (p. 71). US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. [↑](#footnote-ref-47)
48. Te Morenga, L., Mallard, S., & Mann, J. (2013). Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies.  *BMJ*, 346, e7492; de Ruyter, J. C., Olthof, M. R., Seidell, J. C., & Katan, M. B. (2012). A trial of sugar-free or sugar-sweetened beverages and body weight in children.  *New England Journal of Medicine*, 367(15), 1397-1406. [↑](#footnote-ref-48)
49. DiMeglio, D. P., & Mattes, R. D. (2000). Liquid versus solid carbohydrate: effects on food intake and body weight.  *International journal of obesity*, 24(6), 794-800; Mourao, D. M., Bressan, J., Campbell, W. W., & Mattes, R. D. (2007). Effects of food form on appetite and energy intake in lean and obese young adults. *International Journal of Obesity*, 31(11), 1688-1695. [↑](#footnote-ref-49)
50. Percentage Daily Values (DVs) are an essential tool for consumer comprehension and use of nutrition information. In its proposal, FDA notes: “Section 2(b)(1)(A) of the 1990 amendments mandated that FDA regulations implementing section 403(q) of the FD&C Act require that nutrition labeling must be conveyed to the public in a manner which enables the public to readily observe and comprehend such information and to understand its relative significance in the context of a total daily diet. In particular, the percent DV of a nutrient present in food is declared on food labels to help consumers understand the relative significance of nutrition information in the context of a total daily diet, compare the nutritional values of food products, and to plan general diets. We also noted that the percent DV information advises the consumer how much of a recommended intake of that nutrient is provided by the food.” *See* 79 F.R. 11880, 11887. [↑](#footnote-ref-50)
51. A 2010 nationally representative telephone survey conducted by Center for Science in the Public Interest (CSPI) found that 72 percent of respondents thought that including teaspoons as a measurement for sugar on food labels would be of assistance: 38 percent preferred listing *only* teaspoons of added sugars on the label, while 34 percent of respondents preferred both teaspoons and grams. Just 20 percent of those polled preferred listing sugar only in grams. Center for Science in the Public Interest. (August 2, 2011). Unrealistic serving sizes understate calories, sodium, saturated fat, says CSPI. *Press Release*. Available at <http://cspinet.org/new/201108021.html>. Accessed April 23, 2014. [↑](#footnote-ref-51)
52. Reports of increased risks among people with low intakes are likely to be due to reverse causation, residual confounding, or errors in sodium assessment. Cobb, L. K., Anderson, C. A., Elliott, P., Hu, F. B., Liu, K., Neaton, J. D., ... & Appel, L. J. (2014). Methodological Issues in Cohort Studies That Relate Sodium Intake to Cardiovascular Disease Outcomes: A Science Advisory From the American Heart Association.  *Circulation*, 129(10), 1173-1186. [↑](#footnote-ref-52)
53. We recommend that the final policy document specify the amount of sodium that corresponds to the DRI amount for each age group so that policies can be set accordingly. Per the 2006 IOM DRIs for sodium, the Upper Levels (mg/day) are: Age 1-3: 1,500; Age 4-8: 1,900; Age 9-13: 2,200; Age 14-18: 2,300. Hellwig, J. P., Otten, J. J., & Meyers, L. D. (Eds.). (2006).  *Dietary Reference Intakes: The Essential Guide to Nutrient Requirements*. National Academies Press. [↑](#footnote-ref-53)
54. Daniel, C. R., Cross, A. J., Koebnick, C., & Sinha, R. (2011). Trends in meat consumption in the USA. *Public Health Nutrition*, *14*(04), 575–583. http://doi.org/10.1017/S1368980010002077 [↑](#footnote-ref-54)
55. World Cancer Research Fund/American Institute for Cancer Research. (2011). Continuous Update Project Report. Food, Nutrition, Physical Activity, and the Prevention of Colorectal Cancer. [↑](#footnote-ref-55)
56. Kushi et al., 2012; WCRF/AICR, 2007; Sinha, R., Cross, A. J., Graubard, B. I., Leitzmann, M. F., & Schatzkin, A. (2009). Meat intake and mortality: A prospective study of over half a million people.  *Archives of Internal Medicine*, 169 (6), 562-571. [↑](#footnote-ref-56)
57. WCRF/AICR, 2007; Chan, D. S., Lau, R., Aune, D., Vieira, R., Greenwood, D. C., Kampman, E., & Norat, T. (2011). Red and processed meat and colorectal cancer incidence: meta-analysis of prospective studies.  *PloS One*, 6(6), e20456; WCRF/AICR, 2011. [↑](#footnote-ref-57)
58. Kushi et al., 2012. [↑](#footnote-ref-58)
59. WCRF/AICR, 2011. [↑](#footnote-ref-59)
60. Kushi et al., 2012. [↑](#footnote-ref-60)
61. Mensink, R. P., Zock, P. L., Kester, A. D., & Katan, M. B. (2003). 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.  *The American Journal of Clinical Nutrition*, 77(5), 1146-1155; Hooper, L., Summerbell, C. D., Thompson, R., Sills, D., Roberts, F. G., Moore, H. J., & Davey Smith, G. (2012). Reduced or modified dietary fat for preventing cardiovascular disease.  *The Cochrane Library*; Mozaffarian, D., Micha, R., & Wallace, S. (2010). Effects on coronary heart disease of increasing polyunsaturated fat in place of saturated fat: a systematic review and meta-analysis of randomized controlled trials.  *PLoS Medicine*, 7(3), e1000252. [↑](#footnote-ref-61)
62. Chowdhury, R., Warnakula, S., Kunutsor, S., Crowe, F., Ward, H. A., Johnson, L., ... & Di Angelantonio, E. (2014). Association of dietary, circulating, and supplement fatty acids with coronary risk: a systematic review and meta-analysis.  *Annals of Internal Medicine*, 160(6), 398-406; Liebman, B. F., Katan, M. B., & Jacobson, M. F. (2014). Association of dietary, circulating, and supplement fatty acids with coronary risk.  *Annals of Internal Medicine*, 161(6), 454; Willett, W. C., Stampfer, M. J., & Sacks, F. M. (2014). Association of dietary, circulating, and supplement fatty acids with coronary risk. *Annals of Internal Medicine*, *161*(6), 453. [↑](#footnote-ref-62)
63. Levy, R. I. (1985). Cholesterol and cardiovascular disease: no longer whether, but rather when, in whom, and how? *Circulation*; Eckel, R. H., Jakicic, J. M., Ard, J. D., de Jesus, J. M., Miller, N. H., Hubbard, V. S., ... & Yanovski, S. Z. (2014). 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Journal of the American College of Cardiology*, 63(25\_PA), 2960-2984; Ananth Thygarajan, A. (2008). American Academy of Pediatrics recommendations on the effects of early nutritional interventions on the development of atopic disease.  *Current Opinion in Pediatrics*, 20 (6), 698; Antonopoulos, S. (2002). Third report of the National Cholesterol Education Program (NCEP) expert panel on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III) final report.  *Circulation*, 106(3143), 3421. [↑](#footnote-ref-63)
64. Kohno, T. (2014). Report of the American Heart Association (AHA) Scientific Sessions 2014, Chicago. *Circulation Journal: Official Journal of the Japanese Circulation Society*; Stone, N. J., Merz, C. N. B., ScM, F. A. C. C., Blum, F. C. B., McBride, F. P., Eckel, F. R. H., ... & Shero, F. S. T. (2013). 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. [↑](#footnote-ref-64)
65. U.S. Department of Agriculture, Agricultural Research Service. (2014). Energy Intakes: Percentages of Energy from Protein, Carbohydrate, Fat, and Alcohol, by Gender and Age. *What We Eat in America*, NHANES 2011-2012. Available at <http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/1112/Table_5_EIN_GEN_11.pdf>. Accessed March 4, 2015. [↑](#footnote-ref-65)
66. Eckel et al., 2014. [↑](#footnote-ref-66)
67. Appel et al., 2005; Obarzanek, E., Sacks, F. M., Vollmer, W. M., Bray, G. A., Miller, E. R., Lin, P. H., ... & Proschan, M. A. (2001). Effects on blood lipids of a blood pressure–lowering diet: the Dietary Approaches to Stop Hypertension (DASH) Trial.  *The American Journal of Clinical Nutrition*, 74 (1), 80-89; Ginsberg, H. N., Kris-Etherton, P., Dennis, B., Elmer, P. J., Ershow, A., Lefevre, M., ... & Anderson, N. (1998). Effects of reducing dietary saturated fatty acids on plasma lipids and lipoproteins in healthy subjects. The Delta Study, Protocol 1. *Arteriosclerosis, Thrombosis, and Vascular Biology*, 18(3), 441-449. [↑](#footnote-ref-67)
68. American Heart Association. (2015). Know Your Fats. Available at <http://www.heart.org/HEARTORG/Conditions/Cholesterol/PreventionTreatmentofHighCholesterol/Know-Your-Fats_UCM_305628_Article.jsp>. Accessed March 20, 2015. [↑](#footnote-ref-68)
69. U.S. Department of Agriculture, Economic Research Service. (2014). Food Availability (Per Capita) Data System: Loss-Adjusted Food Availability Documentation. Available at <http://www.ers.usda.gov/data-products/food-availability-(per-capita)-data-system/loss-adjusted-food-availability-documentation.aspx>. Accessed March 20, 2015. [↑](#footnote-ref-69)
70. Appel et al., 1997. [↑](#footnote-ref-70)
71. Wang, X., Ouyang, Y., Liu, J., Zhu, M., Zhao, G., Bao, W., & Hu, F. B. (2014). Fruit and vegetable consumption and mortality from all causes, cardiovascular disease, and cancer: systematic review and dose-response meta-analysis of prospective cohort studies.  *BMJ*, 349, g4490; WCRF/AICR, 2007; Thomson, 2014. [↑](#footnote-ref-71)
72. U.S. Department of Agriculture, Food and Nutrition Service. (September, 2014). Evaluation of the Healthy Incentives Pilot (HIP) Final Report: Summary. Available at <http://www.fns.usda.gov/sites/default/files/HIP-Final-Summary.pdf>. Accessed March 20, 2015; Dimitri, C., Oberholtzer, L., Zive, M., & Sandolo, C. (2014). Enhancing food security of low-income consumers: An investigation of financial incentives for use at farmers markets.  *Food Policy*. [↑](#footnote-ref-72)
73. National Research Council. (2005). *Dietary Reference Intakes for Water, Potassium, Sodium, Chloride and Sulfate.* Washington DC; The National Academies Press. [↑](#footnote-ref-73)
74. Park, S., Blanck, H. M., Sherry, B., Brener, N., & O'Toole, T. (2012). Factors associated with low water intake among US high school students—National Youth Physical Activity and Nutrition Study, 2010.  *Journal of the Academy of Nutrition and Dietetics*, 112 (9), 1421-1427. [↑](#footnote-ref-74)
75. Drewnowski, A., Rehm, C. D., & Constant, F. (2013). Water and beverage consumption among children age 4–13y in the United States: analyses of 2005–2010 NHANES data.  *Nutr J*, 12(1), 85. [↑](#footnote-ref-75)
76. Ibid. [↑](#footnote-ref-76)
77. Popkin, B. M., Armstrong, L. E., Bray, G. M., Caballero, B., Frei, B., & Willett, W. C. (2006). A new proposed guidance system for beverage consumption in the United States.  *The American Journal of Clinical Nutrition*, 83 (3), 529-542. [↑](#footnote-ref-77)
78. Pan, A., Malik, V. S., Schulze, M. B., Manson, J. E., Willett, W. C., & Hu, F. B. (2012). Plain-water intake and risk of type 2 diabetes in young and middle-aged women.  *The American Journal of Clinical Nutrition*, 95(6), 1454-1460; Pan, A., Malik, V. S., Hao, T., Willett, W. C., Mozaffarian, D., & Hu, F. B. (2013). Changes in water and beverage intake and long-term weight changes: results from three prospective cohort studies. *International Journal of Obesity*, 37(10), 1378-1385; Tate, D. F., Turner-McGrievy, G., Lyons, E., Stevens, J., Erickson, K., Polzien, K., ... & Popkin, B. (2012). Replacing caloric beverages with water or diet beverages for weight loss in adults: main results of the Choose Healthy Options Consciously Everyday (CHOICE) randomized clinical trial.  *The American Journal of Clinical Nutrition*, 95(3), 555-563; Wang, Y. C., Ludwig, D. S., Sonneville, K., & Gortmaker, S. L. (2009). Impact of change in sweetened caloric beverage consumption on energy intake among children and adolescents. *Archives of Pediatrics & Adolescent Medicine*, 163(4), 336-343; Zheng, M., Rangan, A., Olsen, N. J., Andersen, L. B., Wedderkopp, N., Kristensen, P., ... & Heitmann, B. L. (2015). Substituting sugar-sweetened beverages with water or milk is inversely associated with body fatness development from childhood to adolescence.  *Nutrition*, 31(1), 38-44. [↑](#footnote-ref-78)
79. Guido, J. A., Martinez Mier, E. A., Soto, A., Eggertsson, H., Sanders, B. J., Jones, J. E., ... & LUIS, J. (2011). Caries prevalence and its association with brushing habits, water availability, and the intake of sugared beverages. *International Journal of Paediatric Dentistry*, 21 (6), 432-440. [↑](#footnote-ref-79)
80. Institute of Medicine. (2012). Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation. Washington, DC: The National Academies Press. [↑](#footnote-ref-80)
81. Centers for Disease Control and Prevention. (June 3, 2014). Water & Nutrition. Available at http://www.cdc.gov/healthywater/drinking/nutrition/. Accessed September 5, 2014. [↑](#footnote-ref-81)
82. American Heart Association. (2015). Voices for Healthy Kids: Healthy Drinks. Available at http://www.heart.org/HEARTORG/Advocate/Voices-for-Healthy-Kids--Healthy-Drinks\_UCM\_460610\_SubHomePage.jsp. Accessed September 5, 2014. [↑](#footnote-ref-82)
83. Schneider, M. B., & Benjamin, H. J. (2011). Sports drinks and energy drinks for children and adolescents: are they appropriate?  *Pediatrics*, 127(6), 1182-1189. [↑](#footnote-ref-83)
84. 2015 Dietary Guidelines Advisory Committee Report. Available at <http://www.health.gov/dietaryguidelines/2015-scientific-report/06-chapter-1/d1-3.asp>. Accessed March 8, 2015. [↑](#footnote-ref-84)
85. U.S. Department of Agriculture and Department of Health and Human Services. (2015). Scientific Report of the 2015 Dietary Guidelines Advisory Committee. Available at: <http://health.gov/dietaryguidelines/2015-scientific-report/04-integration.asp>

    Accessed March 8, 2015. [↑](#footnote-ref-85)
86. Ritchie L, et al. (2014). Letter to Chairwoman Millen and Members of the Dietary Guidelines Advisory Committee, September 10, 2014. Available at [www.npi.ucanr.edu/files/207504.pdf](http://www.npi.ucanr.edu/files/207504.pdf). Accessed March 8, 2015. [↑](#footnote-ref-86)
87. Yale Rudd Center for Food Policy and Obesity. (2013). Study Synopses: Sugar-Sweetened Beverage (SSB) Marketing to Youth. Available at <http://www.yaleruddcenter.org/resources/upload/docs/what/policy/SSBtaxes/SSBStudies_Marketing_to_Youth.pdf>. Accessed September 3, 2014; RWJF. (2012). Food and Beverage Marketing to Children and Adolescents: Limited Progress by 2012, Recommendations for the Future. Available at <http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2013/rwjf404379>. Accessed September 3, 2014. [↑](#footnote-ref-87)
88. Partnership for a Healthier America: Drink Up Campaign. Available at <http://ahealthieramerica.org/our-work/you-are-what-you-drink/>. Accessed September 3, 2014. [↑](#footnote-ref-88)
89. Centers for Disease Control and Prevention. (2010). The CDC Guide to Strategies for Reducing the Consumption of Sugar-Sweetened Beverages. Available at <http://www.cdph.ca.gov/SiteCollectionDocuments/StratstoReduce_Sugar_Sweetened_Bevs.pdf>. Accessed September 3, 2014. [↑](#footnote-ref-89)
90. Hood, N. E., Turner, L., Colabianchi, N., Chaloupka, F. J., & Johnston, L. D. (2014). Availability of drinking water in US public school cafeterias.  *Journal of the Academy of Nutrition and Dietetics*, 114(9), 1389-1395; Patel, A. I., Hecht, K., Hampton, K. E., Grumbach, J. M., Braff-Guajardo, E., & Brindis, C. D. (2014). Tapping into water: key considerations for achieving excellence in school drinking water access.  *American Journal of Public Health*, 104(7), 1314-1319. [↑](#footnote-ref-90)
91. Institute of Medicine. (2014). Sustainable Diets: Food for Healthy People and a Healthy Planet: Workshop Summary. Washington, DC: The National Academies Press; National Research Council. (2010). Toward sustainable agricultural systems in the 21st century. Washington, DC: The National Academies Press; Nordin, S. M., Boyle, M., & Kemmer, T. M. (2013). Position of the Academy of Nutrition and Dietetics: Nutrition security in developing nations: Sustainable food, water, and health.  *Journal of the Academy of Nutrition and Dietetics*, 113(4), 581-595. [↑](#footnote-ref-91)
92. Health Council of the Netherlands. (June 2011). Guidelines for a healthy diet: the ecological perspective. Publication no. 2011/08E; Nordic Council of Ministers, Nordic Council of Ministers Secretariat. (2012). Nordic Nutrition Recommendations 2012: Integrating nutrition and physical activity; German Council for Sustainable Development. (2013). The Sustainable Shopping Basket: A guide to better shopping. [↑](#footnote-ref-92)
93. Nellemann, C. (Ed.). (2009).  *The environmental food crisis: the environment's role in averting future food crises: a UNEP rapid response assessment*. UNEP/Earthprint. [↑](#footnote-ref-93)