April 13, 2016

Dr. Stephen Ostroff, M.D.
Acting Commissioner
Division of Dockets Management
Food and Drug Administration
5630 Fishers Lane
Room 1061, HFA-305
Rockville, MD 20852

Re: Comment on Food Labeling: Revision of the Nutrition and Supplement Facts Labels; Supplemental Proposed Rule to Solicit Comment on Limited Additional Provisions, Docket No. FDA-2012-N-1210

Dear Commissioner:

The Society for Nutrition Education and Behavior, which represents nutritionists across the nation and promotes sound nutrition education, strongly supports the Food and Drug Administration (FDA) supplemental proposal to revise the Nutrition and Supplements Facts labels by setting a Daily Value (DV), adding a percentage DV for added sugars, and other additional changes to its 2014 proposal. This comment supplements, but does not replace, earlier comments to the 2014 docket on the Nutrition Facts Panel (NFP).

1. **The agency is appropriately relying upon information from the 2015 Dietary Guidelines Advisory Committee report as well as the robust science upon which that report is based regarding the health risks of added sugars.**

In 2014, FDA proposed that the Nutrition Facts label should declare the amount of added sugars in foods to help consumers who want to adhere to dietary recommendations to limit added sugars and maintain a healthy diet. The current Nutrition Facts Panel (NFP) does not provide information about added sugars in foods, which is of key public health importance given the prevalence of cardiovascular disease, obesity, type 2 diabetes, and tooth decay in the United States. As the 2015 Dietary Guidelines Advisory Committee (DGAC) report states:

> The U.S. population should be encouraged and guided to consume dietary patterns that are rich in vegetables, fruit, whole grains, seafood, legumes, and nuts; moderate in low- and non-fat dairy products and alcohol (among adults); lower in red and processed meat; and low in sugar-sweetened foods and beverages and refined grains."[1]

This recommendation is consistent with recent guidelines from the American Heart Association and the American College of Cardiology.[2] This dietary pattern was based on evidence that received the highest possible grades for certainty and benefit.[3] While both naturally occurring and added sugars are chemically identical, naturally occurring sugars are present in fruits, vegetables, and dairy products—foods that are key components of the recommended dietary pattern. It is therefore critical for the public's health that the NFP distinguish naturally occurring sugars from added sugars.

Furthermore, the DGAC comprehensively reviewed the current scientific literature and concluded that added sugars increase the risk of multiple health outcomes, including excess body weight, type 2 diabetes, cardiovascular disease, and dental caries.[4] That evidence, all of which was graded either as "strong" or "moderate" by the DGAC, further supports the mandatory declaration of added sugars on the NFP and, as the Committee noted, supports the addition of a percentage DV for added sugars on the label. We discuss this evidence below.

We note that while FDA's supplemental proposal cites the evidence linking excess added sugars to cardiovascular disease, the evidence linking added sugars to other serious adverse health outcomes and conditions, including obesity, diabetes, and dental caries, is also robust and should be added to the factors on which the FDA relies as part of its final rule. Doing so would make clear the fuller public health benefits that would accrue from adding a percentage DV to an added sugars line on both food and beverage labels.

Several lines of evidence support the link between added sugars to those health outcomes. Prospective cohort studies consistently report a higher risk of cardiovascular disease, weight gain, type 2 diabetes, and dental caries in people who consume more added sugar or sugar-sweetened beverages, which account for nearly half of the added sugar in the average American's diet. Furthermore, clinical trials demonstrate that sucrose, high-fructose corn syrup, or fructose (which occurs only in sugars) raise triglycerides, LDL cholesterol, visceral fat, liver fat, uric acid, and other risk factors for those diseases. Furthermore, as noted above, the healthy dietary pattern recommended by health authorities has little room for sugar-sweetened foods and beverages.

Added Sugars Are Linked to Risk of Cardiovascular Disease in Adults and Adolescents

The DGAC's systematic review of evidence concluded that added sugars, especially in the form of sugar-sweetened beverages, are consistently associated with increased risk of hypertension, stroke, and coronary heart disease in adults.[5] For example, 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—showed a positive, dose-response association between added sugars consumption and cardiovascular mortality. Individuals who consumed between 10 and 25 percent of their calories from added sugars had a 30 percent higher risk of dying from a heart attack, stroke, or other cardiovascular event than those who consumed less than 10 percent of their calories from sugars. This risk *tripled* for those who consumed 25 percent or more of their calories from added sugars.[6] Furthermore, the DGAC based its findings on its comprehensive review of dietary patterns and concluded that a dietary pattern that lowers blood pressure and is associated with a lower risk of cardiovascular disease is low in added sugars.[7]

In addition, regularly consuming sugar-sweetened beverages has been associated with an increased risk of coronary heart disease and stroke, independent from other risk factors for cardiovascular disease.[8] Furthermore, clinical studies have reported that added sugars increase risk factors for cardiovascular disease, such as serum triglycerides, LDL cholesterol, and blood pressure.[9] Studies suggest that the fructose component of added sugars is responsible for the increases in triglycerides and LDL cholesterol.[10]

Moreover, studies have found that higher added-sugars intake is associated with dyslipidemia (typically high triglycerides and LDL ("bad") cholesterol or low HDL ("good")

cholesterol) in adults and adolescents. Among overweight adolescents, added sugars were also associated with greater insulin resistance. These conditions are risk factors for developing cardiovascular disease.[11] Counter-measures to address risks in this young, vulnerable population should have particular relevance as FDA seeks to address the staggering social and medical costs of childhood obesity.

Added Sugars Are Linked to the Risk of Obesity

Added-sugars consumption, particularly from sugar-sweetened beverages, is associated with increased risk of weight gain and obesity. The DGAC concluded that there is *strong* evidence that the intake of added sugars from food and/or sugar-sweetened beverages is associated with excess body weight in children and adults.[12] The American Heart Association also concluded in its 2009 Scientific Statement that high intake of sugars is associated with increased risk of higher body weight.[13]

In support of that conclusion, two recent reviews of clinical trials and cohort studies of adults and children concluded that intake of added sugars and/or sugar-sweetened beverages is associated with weight gain.[14] For example, a large, double-blind, placebo-controlled randomized clinical trial demonstrated that children aged 4 to 11 who were given 8 oz. a day of a sugar-sweetened beverage gained significantly more weight and body fat over 18 months than those given a sugar-free beverage.[15]

Added Sugars Are Linked to Risk of Type 2 Diabetes, Independent of Body Weight

Diabetes has also been convincingly linked to consumption of added sugars, and particularly of sugar-sweetened beverages. Specifically, the DGAC concluded that sugar-sweetened beverages have been associated with an increased risk of type 2 diabetes both by promoting weight gain and in *a relationship that is not dependent upon body weight*. In the 17 articles reviewed by the DGAC, increased consumption of sugar-sweetened beverages was "consistently associated with increased risk of type 2 diabetes," even after adjusting for body mass index (BMI).

One meta-analysis reviewed by the DGAC reported that people who consumed the most sugar-sweetened beverages (typically 1 to 2 servings a day) had a 26 percent higher risk of developing type 2 diabetes than those who consumed the least (less than one serving per month) and that that relationship existed even after adjusting for BMI.[16]

Added Sugars Are Linked to Development of Dental Caries

High intake of added sugars, particularly consumption of sugar-sweetened beverages, has been consistently associated with an increased risk of dental caries and tooth decay. Based on a World Health Organization (WHO)-commissioned review of the scientific evidence, researchers concluded that there was consistent evidence supporting the relationship between sugar-sweetened beverages and dental caries.[17] A review by Gutpa, *et al.*, found that there was a strong correlation between the amount of added sugars and the frequency of intake, which both contributed to the development of dental caries.[18] Those researchers also noted that products contain "hidden sugars" which are not obvious to consumers.[19]

An added-sugars line on the NFP would be an important source of information for consumers as they try to reduce their risk of developing cavities. In its comment to the DGAC,

the American Dental Association supported an added-sugars line on the NFP and stated that consistent evidence associates high added-sugars intake with dental caries.

Recent and Compelling Consumer Research Demonstrates a Public Preference for a Labeling of Added Sugars

Research demonstrates clear links between added sugars and obesity, type 2 diabetes, cardiovascular disease, and dental caries, and the addition of an added-sugars line would empower consumers to make more informed decisions. In 2014, the Center for Science in the Public Interest (CSPI) commissioned an Internet-based survey (so that various labels could be shown to participants) to assess consumer preference for various NFPs. When asked which label was preferred to make healthier decisions, *80 percent* of respondents selected the NFP with an added-sugars line in lieu of the current NFP.[20]

2. Ample scientific research provides a basis for establishing a Daily Reference Value (DRV) for added sugars and for requiring the declaration of a percent DV on labels to increase consumer understanding of added sugars in foods.

A percent DV would provide much-needed context for consumers regarding the amount of added sugars in a serving of food. FDA noted in its 2014 proposal the purpose of a percentage DV:

> 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 (*Emphasis added; citations omitted.*).

As the agency also made clear in 2014, the rationale for including added sugars on the label is grounded in FDA's concern for overall dietary health and its goal of assisting consumers in making health-minded dietary decisions:

> [O]ur review is based on the need for nutrient information for consumers to implement key dietary recommendations to assist consumers to maintain healthy dietary practices and the need for consumers to be able to readily observe and comprehend the information and to understand its relative significance in the context of a total daily diet.

In the absence of a percent DV, consumers could compare only the relative amounts of added sugars among products but would not know how much of a day's worth of added sugars a food contains. When a 2014 online survey commissioned by CSPI (conducted among a demographically representative U.S. sample of 1,000 adults) showed 500 people an NFP with added sugars listed only in gram amounts, 78 percent of people said they either did not know how much of their recommended daily limit of added sugars was in one serving of the food or could not tell the amount from the label.[21] However, when a percent DV was added to the label, the great majority of people answered correctly.

Another survey sponsored in 2015 by CSPI found that consumers view percent-DVs as

being very helpful for health.[22] The survey asked more than 1,000 consumers whether including a percentage DV for added sugars would help to figure out how many servings of a high-sugar muffin or soft drink fits into a healthy daily diet. For the soft drink, consumers saw two identical labels, one with, and one without, a DV for sugars. A stunning 80 percent of consumers identified the label including the DV as the one that would "make it easier" for them "to determine whether drinking one bottle would fit into a healthy daily diet." The results to the same question (with the label order switched) for the muffin were similar: 84 percent of respondents identified the label with the DV as more helpful.

Since FDA's 2014 proposal, public support for a percentage DV has only increased and we urge the agency to adopt 10 percent of total energy intake as is proposed in the supplemental notice. The DGAC concluded that added sugar intake should be below 10 percent of total energy intake on the basis that high levels of added sugar increase the risk of type 2 diabetes and excess body weight.[23] Based on this strong conclusion, the DGAC report states that "the Nutrition Facts label should include a percent daily value, to assist customers in making informed dietary decisions by identifying the amount of added sugars in foods and beverages."[24]

Furthermore, this conclusion is consistent with the WHO's March 2015 recommendation that added or free sugars be less than 10% of total energy intake.[25] Dr. Franceso Branca, director of WHO's Department of Nutrition for Health and Development, indicated that "[w]e have solid evidence that keeping intake of free sugars to less than 10 percent of total energy intake reduces the risk of overweight, obesity and tooth decay."[26] In addition, numerous other prominent health organizations, including the American Heart Association and the American Diabetes Association, suggest that individuals reduce added sugars in their diets (*See* Appendix 1).

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 five to ten 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. Furthermore, a 2,000-calorie "Healthy U.S.-Style," "Healthy Mediterranean-Style," and "Healthy Vegetarian" dietary patterns developed for the DGAC report included only 6 or 7 percent of calories from added sugars.[27]

FDA should change its added sugar recommendations to 25g or less of added sugar for 1–11 year olds and 50g or less of added sugar for children 12 years and older

As explained above, using the WHO's recommendation for added sugar intake for adults is less than 10 percent of total calories daily.[28] FDA used this recommendation to "determine a DRV of 50 g first by multiplying the 2,000 reference calorie intake by 10 percent (2,000 x .10 = 200 calories)… Dividing 200 calories by 4 calories/g (200 ÷ 4 calories/g = 50 g)."[29] As FDA explains, "[t]he 2,000 calorie value represents a reference intake for adults and *children 4 years* of age and older."[30] [*Emphasis added*.]

Problematically, however, this would extend the added sugar recommendations that are appropriate to adult consuming a 2,000 calorie diet to 4-year-olds. Yet these children, according to the U.S. Department of Agriculture, should be eating 1,400 calories per day, assuming

moderate activity.[31] Under FDA's current recommendations, a 4-year-old could consume more than 14% of calories from added sugar and still be within the guidelines. This disparity does not re-align with the WHO's recommendations of added sugars, accounting for no more than 10 percent of total calories, until age 11 for boys, and age 12 for girls (*see* Appendix 2.

We therefore propose that the FDA change its DRV to 25g of added sugar or less for children aged 1 to 11 years and 50g of added sugar or less for 12-year-olds and older adolescents and teens. This proposed change is simply to bring the FDA's recommendations more in line with its stated goal of consuming less than 10 percent of total calories from added sugars. For products marketed to children between the age of 1 and 11 years old, FDA should require listing of this alternative information for added sugars and other nutrients.

These products could be identified by manufacturers because they qualify for FDA's definition by meeting one or more of the following criteria: they include cartoon characters or other promotions designed to appeal to children, because they use shapes (fish, stars, etc.) designed to appeal to children, because they are marketed or promoted on children's media, or by other criteria FDA determines are reasonable. In addition to providing much-needed specific information on added sugars, such labels would also assist parents and older children by making clear the differences in sodium levels that are relevant to child and adult diets. For products commonly consumed by both children and adults, such as many breakfast cereals and crackers, food manufacturers should be expressly permitted by FDA to voluntarily provide the information specific to both adults and children for calories levels and nutrients on the NFP.

FDA should require added sugars on the Nutrition Facts Labels to be expressed in teaspoons as well as in grams.

Few Americans are familiar or facile with the metric measure (grams) used for total sugars, but virtually everyone understands standard household measures (as are used on labels for serving sizes and in recipes). Therefore, for reasons that are similar to those provided by FDA in the original ruling stating that serving sizes must be listed in household measures, as well as grams, milliliters, or liters,[32] we urge the FDA to require the amount of added sugars to be listed on the label in teaspoons in addition to grams.

A 2010 national telephone survey commissioned by CSPI found that 72 percent of respondents favored listing teaspoons of added sugars on the label (38 percent preferred listing only teaspoons, while 34 percent preferred both teaspoons and grams). Just 20 percent of those polled preferred listing sugar amounts in grams only.[33] CSPI's Internet-based 2015 survey[34] was also instructive, showing that:

1) **Consumers simply don't understand grams**. *Only 18 percent of consumers correctly identified the number of grams of sugar in one teaspoon*, while 53 percent indicated outright that they "didn't know" the amount. Of those who thought they did know, 62 percent were incorrect.

2) **Consumers cannot convert grams into the more familiar measurement of teaspoons.** When informed that a beverage contained 40 grams of sugar per serving, and asked to convert the number to teaspoons of sugar, *40 percent of consumers indicated they did not know the answer, and only about 25 percent came within five teaspoons of the correct answer*—9½ teaspoons. .

3) **Consumers prefer measurements in teaspoons.** Respondents reviewed two nutrition labels, one with sugar expressed only as grams, the other only as teaspoons. When asked which label "more clearly conveys to you the amount of sugar in a 20-ounce bottle," *61 percent of respondents preferred teaspoons while only 28 percent preferred the current measurement of grams.* A second question asked consumers to review three labels with differences in the line for sugars, showing: grams alone, teaspoons alone, and both teaspoons and grams. *A majority—61 percent—preferred grams and teaspoons together, while 18 percent wanted only teaspoons and 14 percent only grams*. In sum, 79 percent identified a desire for measurements in teaspoons (with or without grams), while a mere 14 percent preferred grams alone.

Because it would improve the clarity of the information provided about added sugars, listing the amount of added sugars in both teaspoons and grams would be essential and consistent with FDA's purpose for including the line for added sugars on the NFP, which was, as noted above, "based on the need for consumers to be able to readily observe and comprehend the information on sugars and to understand its relative significance in the context of a total daily diet."[35]

3. FDA Should Require Use of the Term "Total Sugars" Instead of "Sugars" on the Nutrition Facts Panel.

The Society for Nutrition, Education and Behavior appreciates the many factors that must be considered in establishing new reference values for the DVs. Percent DVs should be conveyed to consumers in a manner enabling them "to readily observe and comprehend such information and to understand its relative significance in the context of a total daily diet."[36]

We support FDA's decision to require a declaration of "Added Sugars" on the Nutrition Facts panel; given that change, an analysis of subsequent consumer research by FDA indicates that replacing the term "Sugars" with the term "Total Sugars" on the label will enhance the consumer's ability to discern the overall nutritional value and compare nutrient density of food products at the point-of-selection.

According to a 2015 study, adding "[t]he word *Total* [in front of "Sugars" to the proposed version of the Nutrition Facts Panel] helped to clarify the issue, but did not entirely eliminate the inaccuracies observed in identifying total sugars content."[37] The results of this study, showing better comprehension using a "Total Sugars + Added Sugars" format than simply an "Added Sugars" format, comport with the findings of the FDA's Added Sugars Experiment that are cited in the proposed rule and included in the Docket as Ref. 1.

We also suggest that FDA identify a way to place "Total Sugars" on the label in a way that simultaneously ensures a clear connection between "Total Sugars" and "Added Sugars." We agree with the 2015 Dietary Guidelines Advisory Committee (DGAC) that, "food and calorie label education should be designed to be understood by audiences with low health literacy, some of which may have additional English language fluency limitations,"[38] and urge FDA to adopt use of the heading "Total Sugars" to help achieve this goal. In addition, use of the heading "Total Sugars" is consistent with the manner in which the Nutrition Facts panel lists "Total Carbs" and "Total Fat."

4. We Support Many of FDA's Proposals for Changes to the Footnote Text and Urge the Agency to Conduct Comprehensive Consumer Education to Enhance Public Understanding.

Overall, we support the need to update the proposed text for the footnote on the Nutrition Facts label. The current footnote contains outdated information about nutrient needs and fails to clearly explain the meaning of the term percent daily value.

We are pleased that FDA has conducted consumer research to assess whether modifications to the footnote area and changes to the text affect consumers' interpretation of the Nutrition Facts labels. FDA's research ("Experimental Study on Consumer Responses to Nutrition Facts Labels with Various Formats") found that consumers rated all of the revised footnotes as easier to understand than the current footnote. This strongly supports the need to update the current footnote to make it simpler and easier for consumers to understand.

FDA's study also found that none of the footnotes that were tested had a significant effect on how participants evaluated the product based on its Nutrition Facts label. According to the supplemental proposal, the footnote option that was chosen,[139] a modified version of Footnote 1, was proposed because study participants found it to be more believable than the other footnote options. However, both Footnotes 1 and 2 were perceived to be slightly more useful and Footnote 2 was perceived as slightly more helpful than the current footnote.

Given these findings, we suggest that FDA give additional consideration to Footnote 2, either in its current form or with the statements reversed. Footnote 2 states: "2,000 calories a day is used for general nutrition advice. The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet – 5% or less is a little, 20% or more is a lot." This additional guidelines for what constitutes a "lot" or a "little" of a nutrient may be helpful for consumers in judging the nutrient content of a particular product.

In addition, Footnote 5 may be of real value for consumers seeking more information on nutrients in the diet that should be reduced, and scored well with consumers. We suggest that FDA consider the results of any additional consumer research on the use of nutrition information and nutrition education resources in making its final decision about which statement to choose.

We strongly support FDA's proposal that the footnote contain both a definition of Daily Value and a reference calorie level. We are pleased that the proposed footnote would contain the word "Daily Value," instead of just the abbreviation "DV," and concur that 2,000 calories is the appropriate reference level for most foods because it is the basis of the percent Daily Value for many nutrients and approximates the calorie needs for many adults.

However, we agree with FDA that the footnote statement should not suggest that the percentage Daily Value of all nutrients is linked to a 2,000 calorie diet or that all individuals need 2,000 calories because some individuals' calorie needs may be higher or lower, and consuming 2,000 calories a day would cause them to lose or gain weight. The final footnote statement selected should include the two key components in the proposed footnote.

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[1] The proposed footnote for the new nutrition facts label is: "The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice."

These changes to the footnote do not obviate the need for FDA to conduct consumer education regarding label changes. We recommend that FDA conduct a comprehensive consumer education campaign when the new Nutrition Facts label appears on food labels. A well-funded, coordinated, multi-component consumer education campaign to promote and explain the new Nutrition Facts label is necessary to help consumers understand the information provided by the label and how they could use it to make healthier food and beverage choices.

According to research cited in the preamble to the proposed rule, approximately 40 to 55 percent of Americans regularly use the Nutrition Facts label when purchasing food. This percentage varies significantly by demographic group. Additional education about the meaning of the footnote and how to understand and use the information on the label is needed in order for it be an effective tool in helping consumers make better choices.

5. We do not support the proposed footnote exemptions.

We do not support the proposal to allow footnote exclusion if a food qualifies to use the terms "calorie free," "free of calories," "no calories," "zero calories," "without calories," "trivial source of calories," "negligible source of calories," or "dietary insignificant source of calories." Although these products have little to no impact on the average daily 2,000 calorie intake, which the second part of the footnote addresses, they may contain a significant percentage of the daily value of other nutrients, most notably sodium or vitamins. For calorie-free food products supplying other nutrients that are listed on the NFP, the first part of the proposed footnote, "The % Daily Value tells you how much a nutrient in a serving of a food contributes to a daily diet" should be included.

The Nutrition Facts label on calorie-free foods containing nutrients currently includes the footnote "*Percent Daily Values are based on a 2,000 calorie diet." We believe that the first sentence of the proposed footnote, "The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet" provides consumers with information necessary to understand the vitamin and mineral content of these calorie-free foods.

For example, calorie-free salad dressings, diet beverages, electrolyte beverages, fortified waters, and energy drinks may contain significant amounts of vitamins and minerals. Drinks frequently contain sodium, potassium, B vitamins, and vitamin C. They may also contain vitamin A, vitamin E, calcium, folate, vitamin D, magnesium, or phosphorus. These nutrients can supply 100% of the daily value in a serving. We urge the FDA to require inclusion of the first sentence of the proposed footnote on all foods containing a Nutrition Facts label. Foods qualifying for terms such as "calorie free" should be required to include the sentence: "The % Daily Value tells you how much a nutrient in a serving of a food contributes to a daily diet" and should be excluded only from the second footnote sentence, "2000 calories a day is used for general nutrition advice."

6. FDA Should Require Modifications and Corresponding Labeling Changes to the Footnote on Products Specifically Intended for Infants who are 7 Months through 12 Months of Age and Children 1 through 3 Years of Age

To provide parents and caregivers with useful nutrition information, the footnote on both foods and dietary supplements should be modified on any products specifically intended for consumption by infants 7 through 12 months of age and children 1 through 3 years of age. Some, but not all, products in these categories on the market today specifically provide the calorie level on which their percentage daily values are based and list correspondingly correct percentage daily values. (*See* Figure 1.)

Figure 1 Gerber Graduates lil'Twists Broccoli & Cheddar

Figure 2 Gerber Graduates lil' Crunchies Veggie Dip

As some companies already voluntarily include percentage daily values for different age groups on the same NFP, we know that providing such information is technically feasible. (*See* Figure 2). All of the foods and dietary supplements in these categories should be required to include this information on percentage daily values. Moreover, these products should include an asterisk with a footnote indicating the number of calories on which they have based these calculations, as FDA proposes for dietary supplements.

Table D6.2. Recommendations or statements related to added sugars or sugar-sweetened beverages from international and national organizations

Organization	Recommendation/Statement Related to Added Sugars and/or Sugar-Sweetened Beverages
World Health Organization (WHO)[64]	• WHO recommends reduced intake of free sugars throughout the life-course (*strong recommendation*). • In both adults and children, WHO recommends that intake of free sugars not to exceed 10% of total energy (*strong recommendation*). • WHO suggests further reduction to below 5% of total energy (*conditional recommendation*).
American Heart Association (AHA)[65]	The AHA recommends reductions in added sugars with an upper limit of half of the discretionary calorie allowance that can be accommodated within the appropriate energy intake level needed for a person to achieve or maintain a healthy weight based on the USDA food intake patterns. Most American women should eat or drink no more than 100 calories per day from added sugars (about 6 teaspoons), and most American men should eat or drink no more than 150 calories per day from added sugars (about 9 teaspoons).
HealthyPeople 2020[66]	Objective NWS-17.2: Reduce consumption of calories from added sugars (Target: 10.8%)
American Academy of Pediatrics (AAP)[67-69]	Limit consumption of sugar-sweetened beverages (consistent evidence) Pediatricians should work to eliminate sweetened drinks in schools *Note: Due to limited studies in children, the American Academy of Pediatrics (AAP) has no official recommendations regarding the use of non-caloric sweeteners.*
American Diabetes Association (ADA)[70, 71]	<u>Prevention</u> Research has shown that drinking sugary drinks is linked to type 2 diabetes, and the American Diabetes Association recommends that people limit their intake of sugar-sweetened beverages to help prevent diabetes. <u>Diabetes Management</u> People with diabetes should limit or avoid intake of sugar-sweetened beverages (from any caloric sweetener including high fructose corn syrup and sucrose) to reduce risk for weight gain and worsening of cardiometabolic risk profile. (Evidence rating B)
NHLBI Expert Panel Guidelines for Cardiovascular Health and Risk Reduction in Childhood[72]	Reduced intake of sugar-sweetened beverages is associated with decreased obesity measures (Grade B).

Appendix 2: Recommended Calories by Age and Gender

Recommended Calories* by Age and Gender			Sugar Recommendations	Percent of total calories (based on grams of sugar recommendation)	
Age	Male	Female		Male	Female
2	1000	1000	25g of sugar	10.00%	10.00%
3	1400	1200	25g of sugar	7.14%	8.33%
4	1400	1400	50g of sugar	14.29%	14.29%
5	1400	1400	50g of sugar	14.29%	14.29%
6	1600	1400	50g of sugar	12.50%	14.29%
7	1600	1600	50g of sugar	12.50%	12.50%
8	1600	1600	50g of sugar	12.50%	12.50%
9	1800	1600	50g of sugar	11.11%	12.50%
10	1800	1800	50g of sugar	11.11%	11.11%
11	2000	1800	50g of sugar	10.00%	11.11%
12	2000	2000	50g of sugar	10.00%	10.00%

*Recommended calories based on moderate physical activity. Full recommendations available through: United States Department of Agriculture. Estimated Calorie Needs per Day by Age, Gender, and Physical Activity. http://www.cnpp.usda.gov/sites/default/files/usda_food_patterns/EstimatedCalorieNeedsPerDayTable.pdf. Accessed September 18, 2015.

[1] Scientific Report of the 2015 Dietary Guidelines Advisory Committee, p. 4.

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[3] *Ibid.*, p. 2966.

[4] Scientific Report of the 2015 Dietary Guidelines Advisory Committee (DGAC Report). Dietary Guidelines website. Available at http://www.health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf Released February 23, 2015. Accessed May 8, 2015.

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