Added Sugars in American Children’s Diet: What We Eat in America, NHANES 2015-2016

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The Dietary Guidelines for Americans 2015-2020 (DGA) recommend that Americans limit their added sugars intake to less than 10 percent of daily calories [1]. This study focuses on the major food and beverage sources of added sugars in American children’s diet. The study used What We Eat in America (WWEIA), NHANES 2015-2016, day 1 dietary data and the Food Patterns Equivalents data 2015-2016 [2, 3]. WWEIA Food Categories were used to estimate added sugars contribution [4].

What percentage of American children meet the DGA added sugars recommendation?

Children 2 to 19 years of age, on average, obtained an estimated 14 percent of total energy from added sugars. About 35 percent of all children met the DGA added sugars recommendation (Figure 1). On average, the children who met the recommendation obtained 5.9 percent, and the children who did not meet the recommendation obtained 18.5 percent of total energy from added sugars.

Figure 1. Estimated percentages of children meeting the DGA 2015-2020 added sugars recommendation by age, WWEIA, NHANES 2015-2016

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>34.8</td>
</tr>
<tr>
<td>2-5</td>
<td>47.2</td>
</tr>
<tr>
<td>6-11</td>
<td>31.4</td>
</tr>
<tr>
<td>12-19</td>
<td>31.3</td>
</tr>
</tbody>
</table>

*Percentages with same superscripts are not significantly different from each other at p<0.01*

*Limiting added sugars intakes to less than 10 percent of daily energy*

DATA SOURCE: WWEIA, NHANES 2015-2016, day 1, children 2-19 years and FPED 2015-2016 (N=2,901)
What are the salient sources of added sugars in the diet of children 2-5 years?

The salient sources of added sugars, in grams, in the diet of all children ages 2-5 years (N=665) are in Figure 2., and the mean intake was 44.2 grams. Sweetened beverages such as soft drinks, fruit drinks, and sports and energy drinks, were the top source of added sugars providing 21.3 percent followed by sweet bakery products such as cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries, providing 19.9 percent of added sugars. Other sources were: candy 9.4 percent; ready-to-eat cereals 8.2 percent; other desserts such as frozen dairy desserts and pudding 7.7 percent; and flavored milk 5.5 percent.

Figure 2. Comparison of mean amounts of added sugars, in grams, obtained from salient food and beverage sources, by children 2-5 years, grouped by added sugars intake status

* Means significantly different from each other at p<0.01
DATA SOURCE: WWEIA, NHANES 2015-2016, day 1, children 2-5 years and FPED 2015-2016 (N=665)
The salient sources of added sugars, in grams, in the diet of all children ages 6-11 years (N=1040) are in Figure 3., and the mean intake was 69.5 grams. Sweetened beverages such as soft drinks, fruit drinks, and sports and energy drinks, were the top source of added sugars providing 28.7 percent followed by sweet bakery products such as cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries, providing 14.9 percent of added sugars. Other sources were: candy 10.5 percent; other desserts such as frozen dairy desserts and pudding 7.9 percent; ready-to-eat cereals 7.1 percent; and flavored milk 5.1 percent.

Figure 3. Comparison of mean amounts of added sugars, in grams, obtained from salient food and beverage sources, by children 6-11 years, grouped by added sugars intake status

* Means significantly different from each other at p<0.01
DATA SOURCE: WWEIA, NHANES 2015-2016, day 1, children 6-11 years and FPED 2015-2016 (N=1,040)
What are the salient sources of added sugars in the diet of children 12-19 years?

The salient sources of added sugars, in grams, in the diet of all children ages 12-19 years (N=1196) are in Figure 4., and the mean intake was 76.9 grams. Sweetened beverages such as soft drinks, fruit drinks, and sports and energy drinks, were the top source of added sugars providing 36.5 percent followed by sweet bakery products such as cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries, providing 14.2 percent of added sugars. Other salient sources were: candy 7.7 percent; sweetened tea 7.5 percent; ready-to-eat cereals 6.4 percent; and other desserts such as frozen dairy desserts and pudding 5.5 percent.

Figure 4. Comparison of mean amounts of added sugars, in grams, obtained from salient food and beverage sources, by children 12-19 years, grouped by added sugars intake status

* Means significantly different from each other at p<0.01
DATA SOURCE: WWEIA, NHANES 2015-2016, day 1, children 12-19 years and FPED 2015-2016 (N=1,196)
What is the implication of the study?

Sweetened beverages such as non-diet soft drinks, fruit drinks, and sport and energy drinks were the top sources of added sugars in the diet of children in the study. The percentage contribution of sweetened beverages to added sugars intake was the lowest among young children 2-5 years and increased in adolescence, from one-fifth to about one-third of total added sugars consumed. This finding underscores the need for dietary intervention to limit added sugars at an early age.
Definition of added sugars

**Added sugars** are defined as caloric sweeteners that are added to foods as an ingredient during preparation, processing, or at the table. Added sugars do not include naturally occurring sugars such as lactose present in milk and fructose present in fruit and 100% fruit juice. Examples of added sugars include brown sugar, cane sugar, confectioners sugar, dextrose, granulated sugar, white sugar, corn syrup and corn syrup solids, undiluted fruit juice concentrates, honey, molasses, and all types of caloric syrups such as maple syrup, table syrups, and pancake syrup. One teaspoon equivalent of added sugars is defined as 4.2 grams of sugars, the amount present in one teaspoon of granulated sugar. For details on the computation of added sugars and other Food Patterns food groups, see reference #3.

Salient foods and beverages included in selected WWEIA food categories

**Sweetened beverages** include non-diet soft drinks, fruit drinks, and sports and energy drinks.

**Sweet bakery products** include cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries.

**Other desserts** include ice creams and frozen dairy desserts, puddings, gelatins, ices, and sorbets.

**Candy** include candy containing chocolate and candy not containing chocolate.

Sugars added to tea are included in tea; and added sugars added to ready-to-eat (RTE) cereals are included in RTE cereals.

Data sources

(1) What We Eat in America, NHANES 2015-2016, day 1 dietary data were used to estimate Food Patterns equivalents intakes. The study sample included 2901 children, ages 2-19 years (excluding breast-fed children) with complete and reliable intake records in the survey. Sample weights were applied in the analysis to produce nationally representative estimates.

(2) Food Patterns Equivalents Database 2015-2016 and the corresponding dietary intake data sets 2015-2016 provided Food Patterns equivalents intake data, which included added sugars data.

References


About the authors

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