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Added Sugars in Adults' Diet: What We Eat in America, NHANES 2015-2016

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Highlights

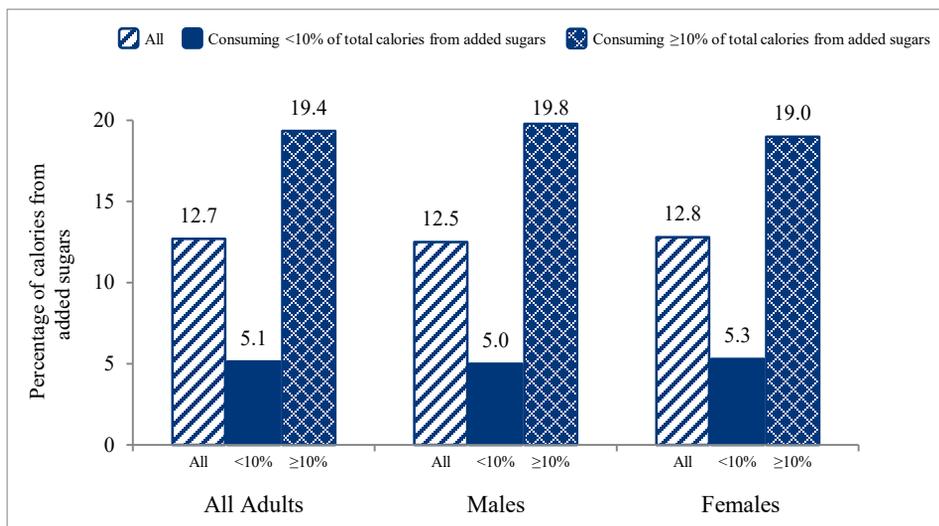
- Overall, 47 percent of adults, 20 years and over, met the 2015-2020 DGA recommendation for added sugars, by limiting added sugars intake to less than 10% of daily calories.
- On average, the adults who met the recommendation obtained 5.1 percent, and the adults who did not meet the recommendation obtained 19.4 percent of total calories from added sugars.
- On average, the adults who did not meet the DGA recommendation consumed about four times more added sugars than the adults who met the recommendation.
- Sweetened beverages were the top source providing about one-third of added sugars in the males' diets and about one-fourth of added sugars in the females' diet.

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 foods and beverages that are major sources of added sugars in the diets of adults in America. 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 group foods and beverages [4]. Mean amounts of added sugars contributed to adults' diets were estimated.

What percentage of adults meet the Dietary Guidelines added sugars recommendation?

Overall, 47 percent of adults, 20 years and over (N=5017), met the DGA added sugars recommendation by consuming <10 percent of calories from added sugars. There was no significant difference between the percentages of males (49%) and females (45%) meeting the recommendation, at $P < 0.01$. In addition, both males and females consumed similar percentages of calories from added sugars (Figure 1).

Figure 1. Estimated mean percentage of total calories from added sugars in adults' diet, by added sugars intake status and sex, WWEIA, NHANES 2015-2016



DATA SOURCE: WWEIA, NHANES 2015-2016, day 1, adults 20+ years and FPED 2015-2016 (N=5,017)



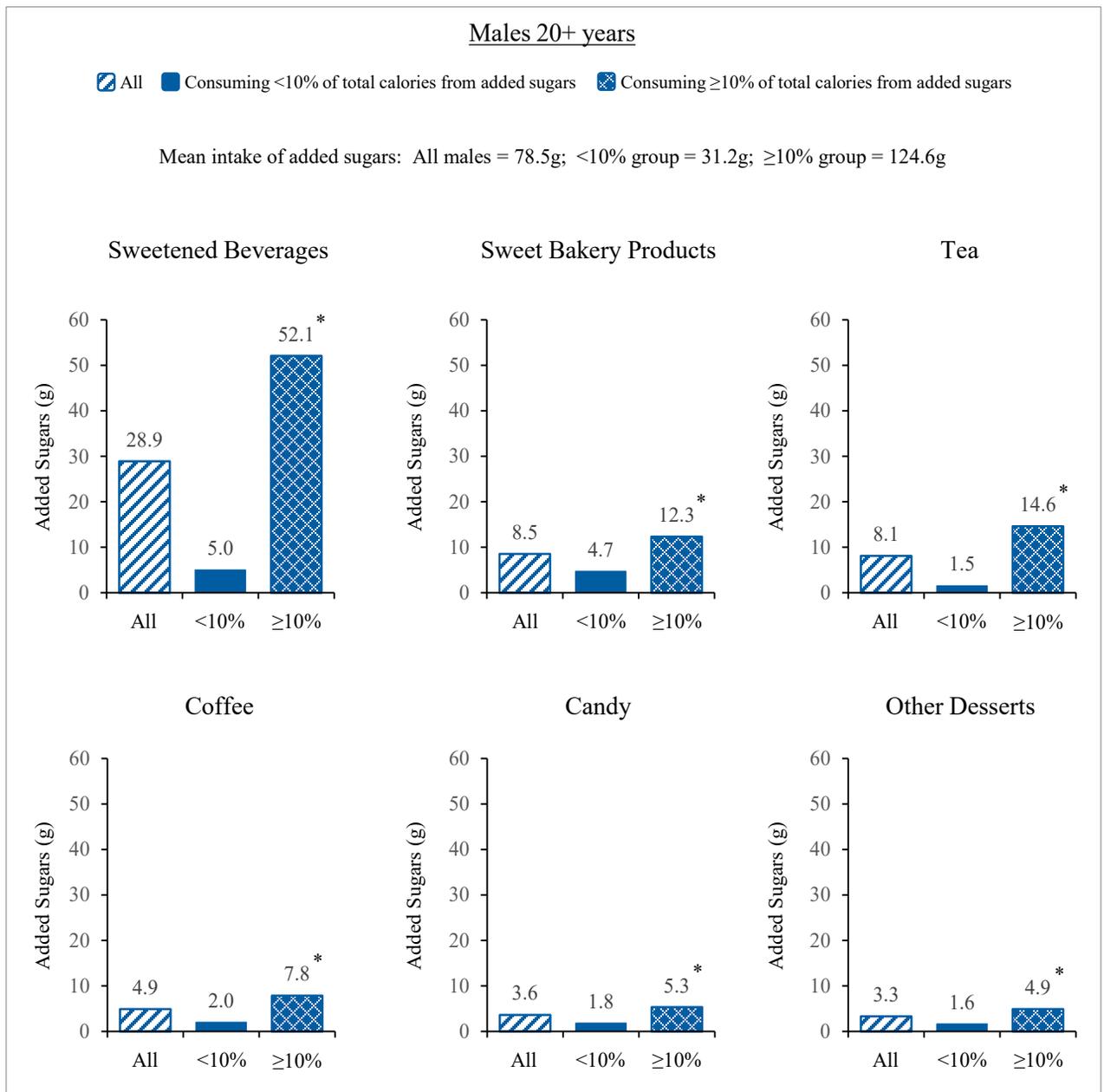
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What are the salient sources of added sugars in adult males' diet?

Males who did not meet the DGA recommendation consumed about four times more added sugars than the males who met the recommendation (Figure. 2). Sweetened beverages such as soft drinks, fruit drinks, and sports and energy drinks were the top source of added sugars. Sweet bakery products such as cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries were the second highest source, followed by tea and then by coffee, each containing added sugars. Other salient sources were candy and other desserts such as frozen dairy desserts.

Figure 2. Comparison of mean amounts of added sugars in grams obtained from salient food and beverage sources by males, 20 years and over, grouped by added sugars intake status



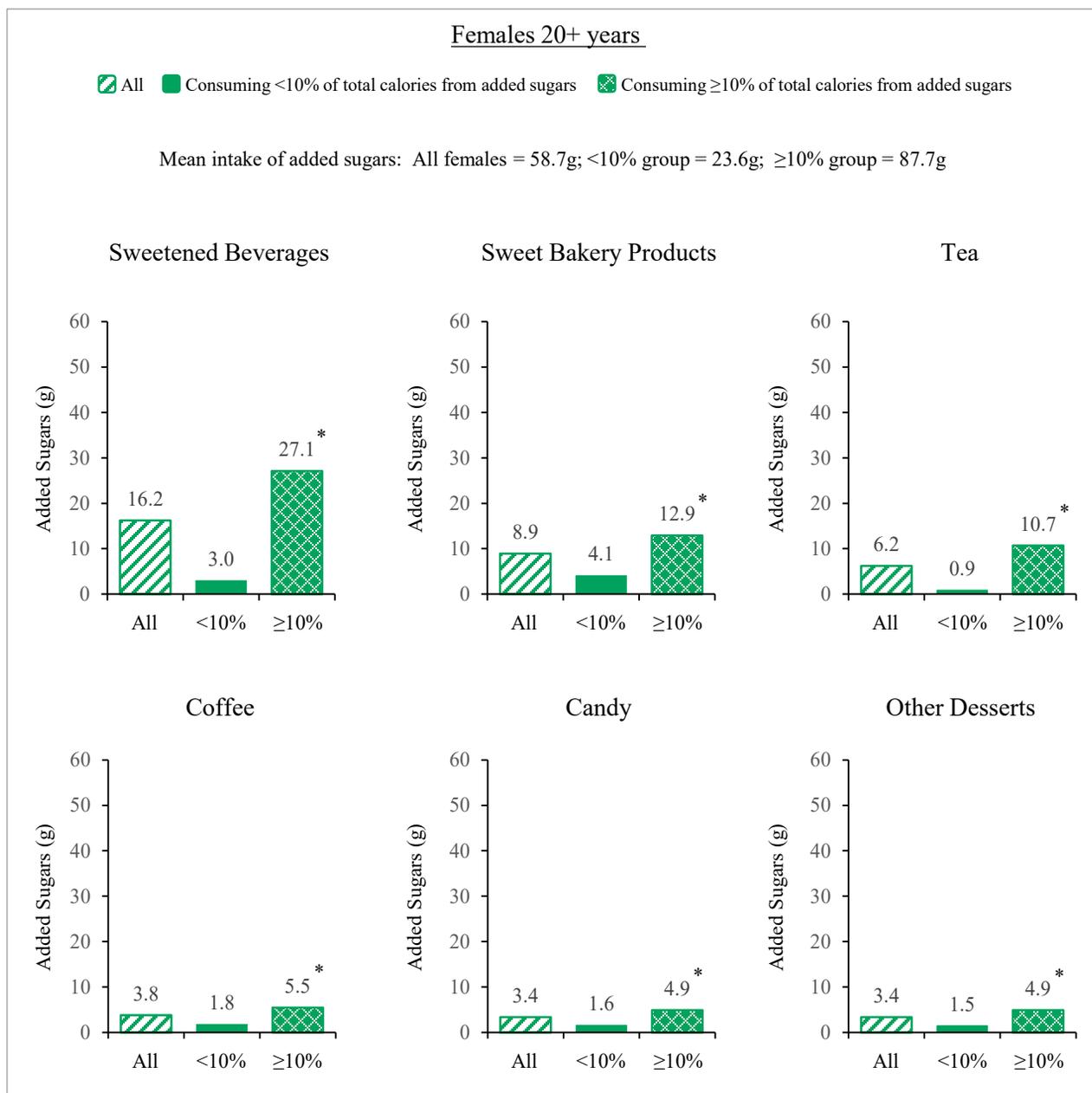
* <10% group (meet DGA recommendation) is significantly different from the ≥10% group (does not DGA recommendation) at p<0.01

DATA SOURCE: WWEIA, NHANES 2015-2016, day 1, males 20+ years and FPED 2015-2016 (N=2,415)

What are the salient sources of added sugars in adult females' diet?

Females who did not meet the DGA recommendation consumed about four times more added sugars than the females who met the recommendation (Figure. 3). Sweetened beverages such as soft drinks, fruit drinks, and sports and energy drinks were the top source of added sugars. Sweet bakery products such as cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries were the second highest source, followed by tea and then by coffee, each containing added sugars. Other salient sources were candy and other desserts such as frozen dairy desserts.

Figure 3. Comparison of mean amounts of added sugars in grams obtained from salient food and beverage sources by females, 20 years and over, grouped by added sugars intake status



*<10% group (meet DGA recommendation) is significantly different from the ≥10% group (does not DGA recommendation) at p<0.01

DATA SOURCE: WWEIA, NHANES 2015-2016, day 1, females 20+ years and FPED 2015-2016 (N=2,602)

What are the main sources of added sugars in adults' diet?

Beverages such as sweetened beverages, tea, and coffee together supplied a high proportion of added sugars in adult's overall diet. On average, males obtained 37 percent and females, 28 percent of added sugars from sweetened beverages; and both males and females obtained about 17 percent of added sugars from tea and coffee, combined.

Sweet bakery products such as cakes, pies, cookies, brownies, doughnuts, sweet rolls, and pastries provided 11 percent of added sugars in all males' and 15 percent in all females' diets.

What are the main findings of the study?

- On average, adults who did not meet the DGA added sugars recommendation consumed about four times more added sugars than the adults who met the recommendation.
- Food and beverage sources of added sugars in the males' and females' diets followed a similar pattern, though the mean amounts differed.
- Beverages provided about one-half of added sugars in adults' diet.

What is the implication of the study?

This finding underscores the need for dietary interventions aimed to limit intakes of beverages that contain added sugars.

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.

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.

Added sugars added to coffee and tea are included in the respective beverages.

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 5,017 adults ages 20 years and over 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 and the corresponding data sets 2015-2016 provided USDA Food Patterns equivalents intake data, including added sugars data.

(3) WWEIA Food Categories 2015-2016.

References

1. U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015-2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Available at <http://health.gov/dietaryguidelines/2015/guidelines/>. Accessed October 25, 2019.
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3. Bowman SA, Clemens JC, Shimizu M, Friday JE, and Moshfegh AJ. 2018. Food Patterns Equivalents Database 2015-2016: Methodology and User Guide [Online]. Food Surveys Research Group, Beltsville Human Nutrition Research Center, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Maryland. September 2018. Available at: <http://www.ars.usda.gov/nea/bhnrc/fsrg>. Accessed October 25, 2019.
4. U.S. Department of Agriculture, Agricultural Research Service, Beltsville Human Nutrition Research Center, Food Surveys Research Group, Beltsville, Maryland. WWEIA Food Categories 2015-2016. Available at: <http://www.ars.usda.gov/nea/bhnrc/fsrg>. Accessed October 25, 2019.

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