



# Beverage Choices among Children: What We Eat in America, NHANES 2015-2016

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## Highlights

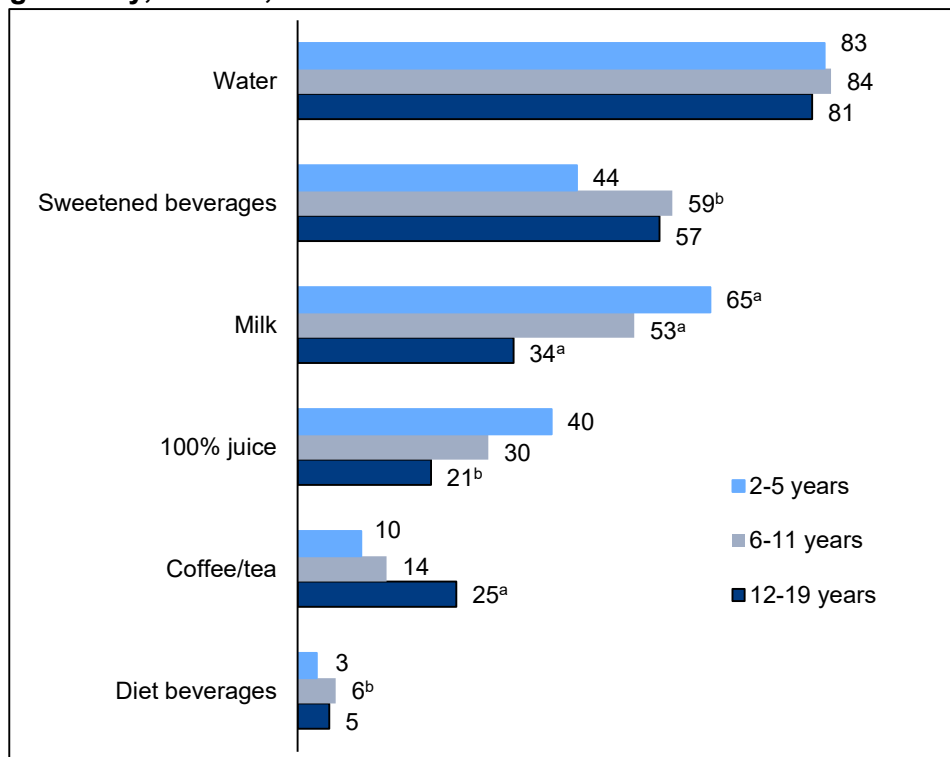
- After water, the most commonly consumed beverages among children were sweetened beverages and milk.
- When comparing beverage choice by race/ethnicity, more non-Hispanic black children consumed sweetened beverages, whereas fewer Asian children did so.
- On any given day, children consumed just over 5 cups of beverages, of which more than half was water.
- Beverages provided 1 out of every 7 calories consumed and 40% of added sugars and vitamins C and D.
- About  $\frac{3}{4}$  of the calories consumed as beverages were from milk and sweetened beverages.

Beverages, an important contributor to energy and nutrients in the diet among youth, has recently been described (1). This report expands on describing beverage choice and amounts consumed, and their contribution to overall dietary intake among children during 2015-2016 by gender, age, and race/ethnicity.

## What beverages did children consume?

After water, the most commonly consumed beverages were sweetened beverages and milk. Older children drank sweetened beverages more often than younger children, most commonly in the form of soft drinks, whereas more than half of sweetened beverages reported by the youngest children were fruit drinks (data not shown). Reports of milk decreased with age. When milk was consumed, reduced fat milk was the most common choice (about 40% of the time) (data not shown).

**Figure 1. Percentage of children who consumed beverages\* on any given day, WWEIA, NHANES 2015-2016**



\* Beverage groups are defined on page 6.

<sup>a</sup> Significantly different than the other two age groups (P<0.01)

<sup>b</sup> Significantly different than age 2 to 5 years (P<0.01)

SOURCE: What We Eat in America, NHANES 2015-2016, day 1, individuals 2-19 years



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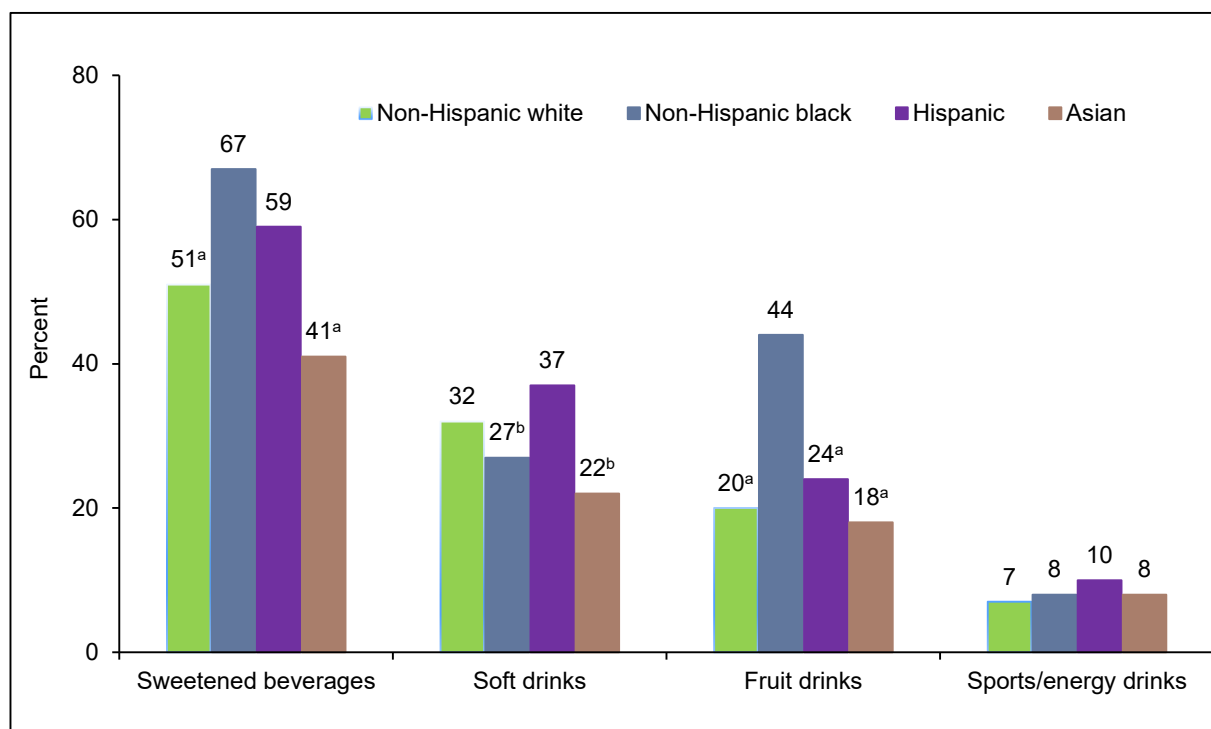
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## Were there differences in beverage choice by race/ethnicity?

When comparing by race/ethnicity, more non-Hispanic black and Hispanic children reported consuming sweetened beverages. Twice as many non-Hispanic black children reported drinking fruit drinks when compared to all other race/ethnic groups. Non-Hispanic white and Hispanic children most often drank soft drinks. Fewer Asian children reported consuming sweetened beverages, including soft drinks and fruit drinks.

Significantly more Hispanic (34%) and non-Hispanic black (33%) children reported drinking 100% juice than non-Hispanic white (25%) or Asian (23%) children. The reverse was true for water; 93% of Asian and 86% of non-Hispanic white children reported drinking water, whereas fewer Hispanic (78%) and non-Hispanic black (76%) children did so. Far fewer non-Hispanic black (34%) children drank milk than children of other race/ethnic groups (45-56%) (data not shown).

**Figure 2. Percentage of children who consumed sweetened beverages on any given day, by race, WWEIA, NHANES 2015-2016**



<sup>a</sup> Significantly different from non-Hispanic blacks (P<0.01)

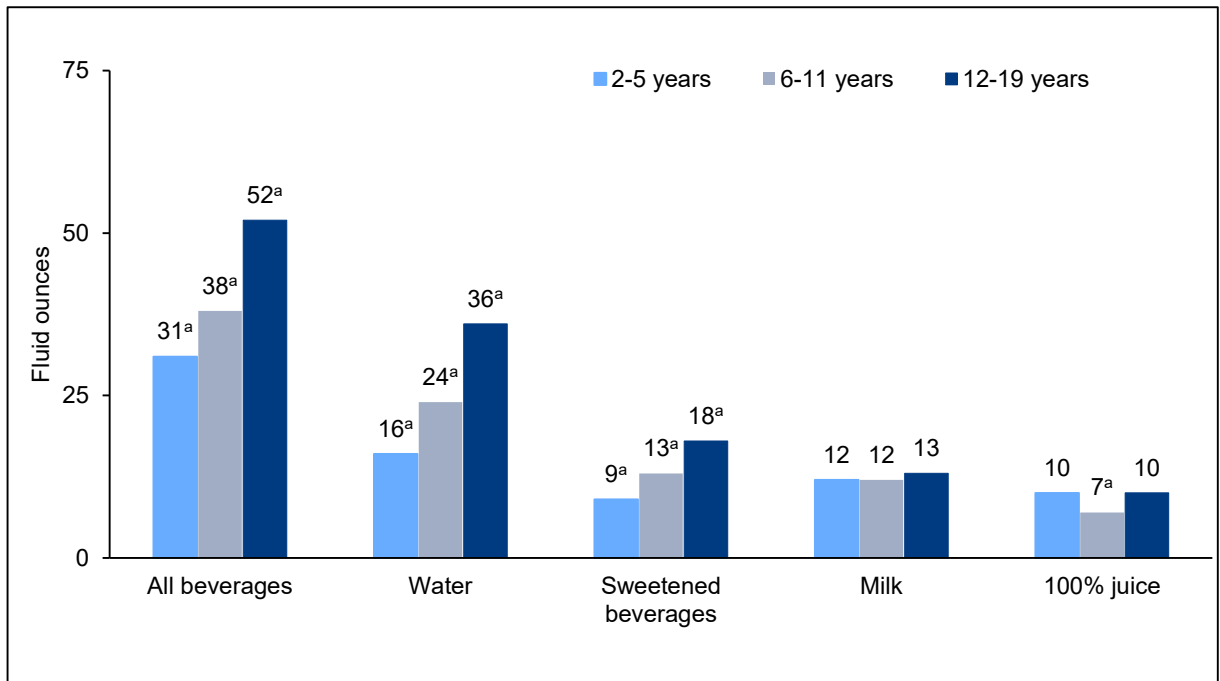
<sup>b</sup> Significantly different from Hispanics (P<0.01)

SOURCE: What We Eat in America, NHANES 2015-2016, day 1, individuals 2-19 years

## How much did children drink in a day?

Children consumed an average of about 5 cups of beverages daily. On any given day, mean daily beverage intake increased with age, with the youngest age group consuming just under 4 cups, and the oldest consuming about 6 ½ cups. Among those consuming water and sweetened beverages, daily amounts increased with age.

**Figure 3. Mean daily beverage\* intake among children consuming each type, WWEIA, NHANES 2015-2016**



\* Mean intake for coffee/tea and diet drinks not available because of small sample size of reporters

<sup>a</sup> Significantly difference than other two age groups (P<0.01)

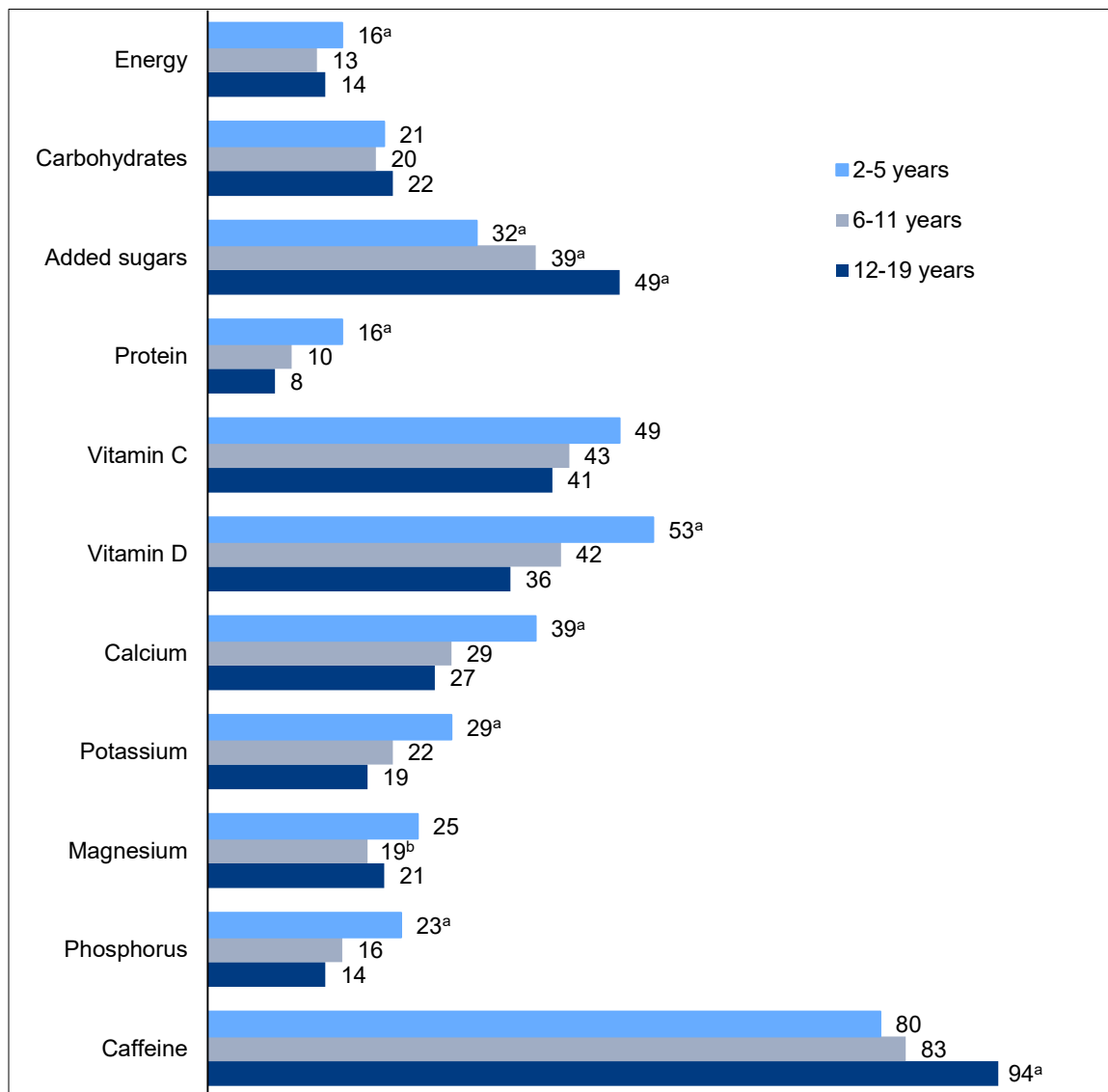
SOURCE: What We Eat in America, NHANES 2015-2016, day 1, individuals 2-19 years

## What percentage of daily nutrients came from beverages?

Beverages contributed 1 out of every 7 calories to mean daily energy intake. In relation to energy, beverages contributed a greater percentage of certain nutrients, including more than 40% of daily intake of added sugars and vitamins C and D, and more than 20% of carbohydrates, calcium, potassium and magnesium. Although daily caffeine intake was small (26 mg), most of it was supplied by beverages (data not shown).

With increasing age, beverage intake provided a greater percentage of daily added sugar. In contrast, the youngest children consumed a greater proportion of their protein, vitamin D, calcium, potassium, and phosphorus intake through beverages, particularly from milk and 100% juice intake.

**Figure 4. Percentage of mean daily energy and selected nutrient intakes contributed by beverages among children, WWEIA, NHANES 2015-2016**



<sup>a</sup> Significantly different than the other two age groups (P<0.01)

<sup>b</sup> Significantly different than age 2 to 5 years (P<0.01)

SOURCE: What We Eat in America, NHANES 2015-2016, day 1, individuals 2-19 years

## What types of beverages contributed the energy that children consumed?

The mean daily energy intake obtained from beverages for children age 2-19 years was ~260 calories, ranging from 240 calories for the youngest group to ~285 calories for the oldest (data not shown). The percentage of beverage calories provided by sweetened beverages and coffee/tea increased with age. The opposite was true for milk and 100% juice. For the youngest age group, more than half of their beverage calories came from milk, whereas in the oldest age group, almost half of calories from beverages were in the form of sweetened beverages.

**Table 1. Percent of daily beverage calories by beverage type among children, WWEIA, NHANES 2015-2016**

Beverage group	2-5 years mean % (SE)	6-11 years mean % (SE)	12-19 years mean % (SE)
<b>Milk</b>	<b>56 (3)<sup>a</sup></b>	<b>46 (3)<sup>a</sup></b>	<b>29 (2)<sup>a</sup></b>
Whole	18 (2) <sup>a</sup>	11 (2)	8 (2)
Reduced fat	22 (3) <sup>b</sup>	15 (1)	11 (1)
Lowfat	10 (2)	9 (1)	4 (1) <sup>a</sup>
Nonfat	3 (1)	7 (2)	3 (<1)
Other milk drinks	3 (1)	4 (1)	3 (1)
<b>100% juice</b>	<b>22 (3)<sup>a</sup></b>	<b>13 (2)</b>	<b>11 (1)</b>
<b>Coffee / tea</b>	<b>3 (1)</b>	<b>5 (1)</b>	<b>13 (2)<sup>a</sup></b>
Coffee	<1 (<1)	1 (<1)	4 (1) <sup>a</sup>
Tea	2 (1)	4 (1)	9 (2) <sup>a</sup>
<b>Sweetened beverages</b>	<b>19 (2)<sup>a</sup></b>	<b>37 (3)</b>	<b>44 (2)</b>
Soft drinks	5 (1) <sup>a</sup>	17 (2) <sup>a</sup>	28 (2) <sup>a</sup>
Fruit drinks	11 (1)	15 (1) <sup>b</sup>	10 (1)
Sports/energy drinks	3 (1)	5 (1)	6 (1)

<sup>a</sup> Significantly different from other two age groups (P<0.01)

<sup>b</sup> Significantly different from 12-19 year old age group (P<0.01)

SOURCE: What We Eat in America, NHANES 2015-2016, day 1, individuals 2-19 years

## Definitions

**Beverages:** Beverages identified using WWEIA Food Categories including any additions to those beverages (e.g., sugar, milk).

### Beverage Groups:

**Milk:** Plain and flavored milk, other milk drinks and milk substitutes (Excludes milk or milk substitutes added to alcoholic beverages, coffee, tea, and/or foods such as cereal).

**100% Juice:** 100% fruit and/or vegetable juice.

**Coffee/tea:** Regular and decaffeinated coffee or tea with additions such as milk, cream and/or sweeteners, and coffee and tea drinks, including ready-to-drink.

**Diet beverages:** Diet soft drinks, diet sport/energy drinks and other diet drinks that are low- and no-calorie-sweetened, containing 40 kcal or less per reference amount customarily consumed.

**Sweetened beverages:** Energy containing soft drinks, fruit drinks, and sports/energy drinks that contain more than 40 kcal per reference amount customarily consumed.

**Soft drinks:** Energy-containing drinks made with carbonated water.

**Fruit Drinks:** Energy-containing fruit and/or vegetable drinks that are not 100% juice.

**Sports/energy drinks:** Energy-containing sport/energy drinks, nutritional beverages and protein/nutritional powders consumed with a beverage, smoothies and grain drinks.

**Water:** Tap, bottled, flavored, carbonated and enhanced/fortified water.

## Data Source

Estimates in this report are based on one day of dietary intake data collected in *What We Eat in America* (WWEIA), the dietary intake interview component of the National Health and Nutrition Examination Survey (NHANES), in 2015-2016. A total of 2901 children age 2-19 years (age 2-5 year, n= 665; age 6-11 years, n=1040; age 12-19 years, n=1196) provided complete and reliable dietary intake data. Sample weights were applied in all analyses to produce nationally representative estimates. Dietary intake of beverages were collected from an in-person 24-hour recall using the interviewer-administered 5-step USDA Automated Multiple-Pass Method.

## References

1. Herrick KA, Terry AL, Afful J. Beverage consumption among youth in the United States, 2013-2016. NCHS Data Brief, no 320. Hyattsville, MD: National Center for Health Statistics. 2018.

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## Suggested Citation

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