



Sugary Drinks in America: Who's Drinking What and How Much?

Introduction

Over the last two decades, the sugary drink landscape has been changing. Between a plethora of new drinks on the market and reported changes in beverage sales, many people are confused or concerned about the current state of sugary drink sales and consumption patterns. This report describes the consumption and sales of sugary drinks in the United States over time and among demographic subgroups. Specifically, the report defines sugary drinks, describes health issues related to sugary drink consumption, and answers questions about how many sugary drinks are being consumed in the US and whether consumption patterns differ by age, race/ethnicity, and income.

Key Points

- A majority of Americans consume at least one sugary drink on a given day.
- Overall, sugary drink consumption has decreased from its peak in 2000 but flattened in recent years. While the most recent self-reported consumption data show that consumption may have dropped between 2012 and 2014, industry sales data do not show a recent decline. More current self-report data and additional sales data are needed to confirm whether or not sugary drink consumption is trending downward again.
- Sales and consumption of sugary soda and fruit drinks are down, while other categories such as sports drinks, energy drinks, teas, and coffee are increasing, partially mitigating the large soda decline. However, soda is still the dominant sugary drink, making up 65 percent of sugary drink sales. Consumption and sales of diet beverages are also in decline.
- Sugary drink consumption varies by age, race/ethnicity, and income:
 - Adolescents and young adults are the heaviest consumers of sugary drinks. Even young infants and toddlers drink a lot of sugary drinks, primarily fruit drinks.
 - Consumption has gone down in all age groups, with largest declines in 2-5 year olds and 12-19 year olds.
 - Differences by race/ethnicity are larger in adults than in children. White adults are less likely to consume sugary drinks on a given day and consume fewer calories from sugary drinks than Black or Hispanic adults. While White children are less likely to drink sugary drinks on a given day than Black or Hispanic children, calories consumed from sugary drinks by children do not vary much by race/ethnicity. Asian American children and adults are the least likely to consume sugary drinks.
 - Low-income Americans consume more sugary drinks than those with higher incomes. This disparity has persisted over time, and the gap may be widening by some measures.



What are sugary drinks?

A “sugary drink” is any beverage that contains added sugars or other caloric sweeteners, including soda, fruit-flavored drinks, flavored water, sports drinks, energy drinks, and sweetened coffee and tea.



Flavored waters without sugar, plain or sparkling water, and 100% fruit juice are not considered sugary drinks because they do not contain any added sugars. Diet drinks that are sweetened with artificial or other no-calorie sweeteners are also not considered sugary drinks, because they do not contain caloric sweeteners. Drinks that contain both no-calorie sweeteners and caloric sweeteners are sugary drinks.

How much sugar is in that drink?





Why worry about sugary drinks?

Sugary drinks are uniquely harmful to health. Sugary drinks, thanks to their high added sugar content, are major culprits in the obesity and diabetes epidemics. They are associated with numerous other medical conditions, such as high blood pressure, heart disease, and cavities. When sugar is consumed in a liquid form, it bypasses the body's defense against taking in too many calories; in other words, sugary drinks don't make you feel full. These beverages offer little to no nutritional benefits, and the extra calories and sugar in these drinks outweigh any health benefits from added vitamins. Sugary drinks also replace healthier foods in the diet.

There is no doubt that sugary drinks are driving America's overconsumption of added sugars and adding calories to the diet.

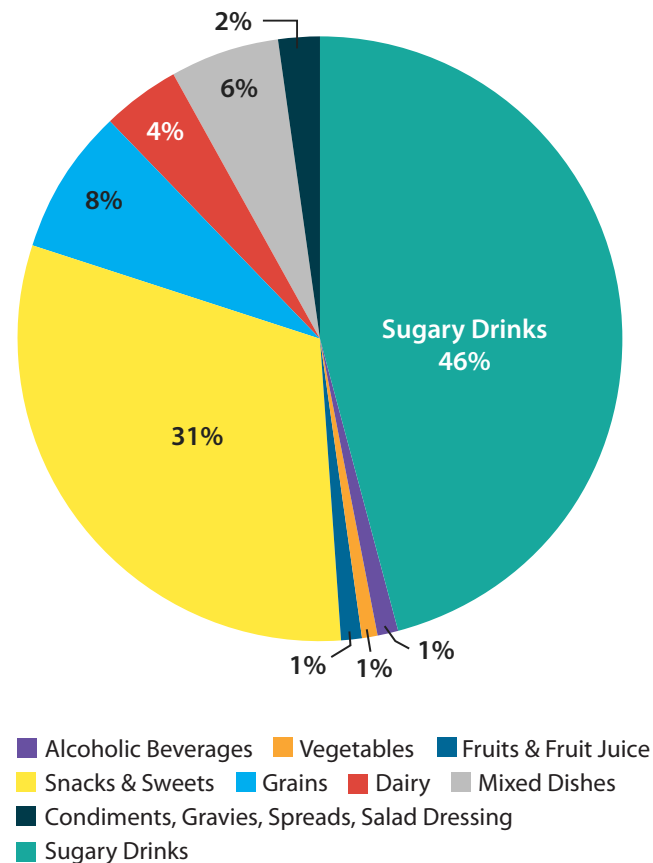
Sugary drinks represent almost half of all added sugars that Americans consume (see Figure 1). Just one 20-oz. Coca-Cola has over 16 teaspoons of sugar, which is well over the maximum of 12 teaspoons per day of added sugars recommended for a healthy diet by the 2015 Dietary Guidelines for Americans and the World Health Organization. Sugary drinks may also be driving the obesity epidemic by contributing extra empty calories to Americans' diets – daily calorie intake among Americans increased by about 300 calories between 1979 and 2001, and 43 percent of those extra calories came from sugary drinks.¹

How much are we drinking?

In 2015, there were enough sugary drinks for sale in the US for every American to drink 44 gallons, or more than 15 ounces every day.² Fifteen ounces of Coca-Cola translates into an extra 175 calories, which is slightly less than the maximum number of calories from all added sugars recommended in the Dietary Guidelines for Americans.

Globally, the US ranks third in the world for sales of sugary drinks (see Figure 2), and is the world leader for consumption of added sugars.

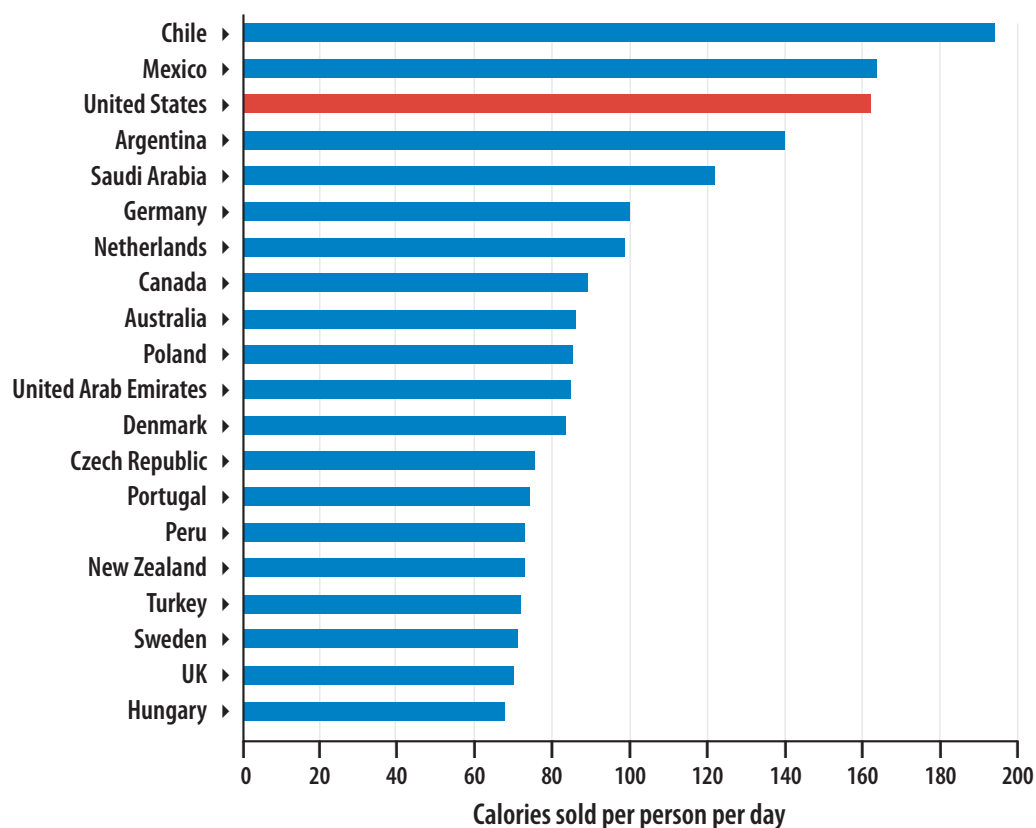
Figure 1. Sugary drinks are the key driver of our overconsumption of added sugars



Source: 2009-2010 data from US Department of Health and Human Services and US Department of Agriculture. 2015 – [2020 Dietary Guidelines for Americans](#). 8th Edition. December 2015.



Figure 2. Sales of sugary drinks by country, calories per person per day



Source: Popkin and Hawkes, 2016

How many calories per day are we drinking from sugary drinks?

According to data from a national dietary survey (National Health and Nutrition Examination Survey – NHANES), average calories per person per day from sugary drinks quadrupled between 1965 and 2000. Sugary drink calories have been declining since then, but this decline has not been steady. Consumption dropped sharply from about 2004 to 2008, but seemed to level off after 2008 (see Figure 3).

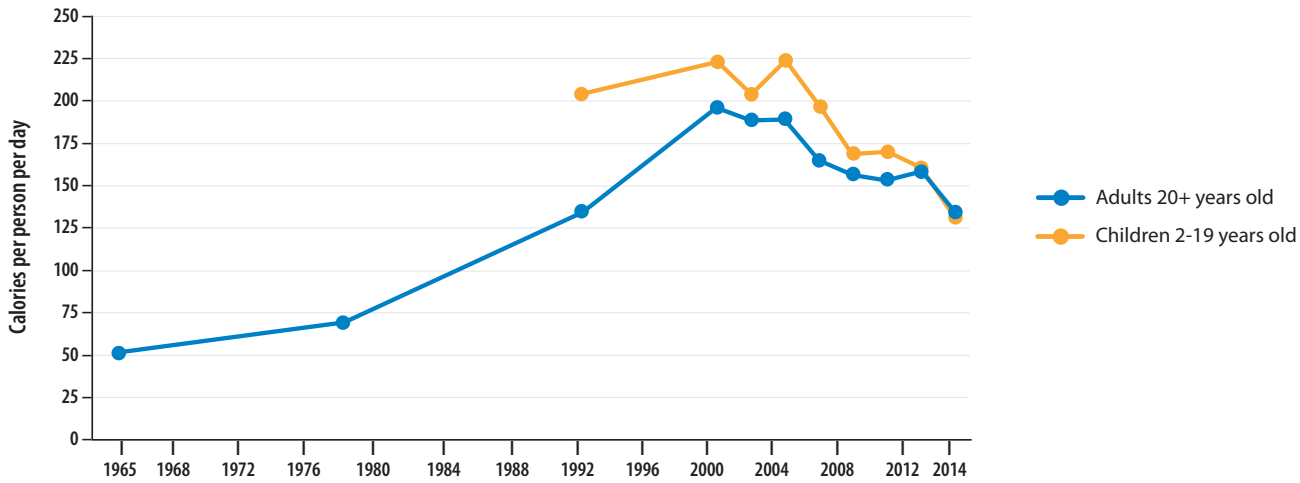
How do we measure sugary drink consumption?

There are three widely used and complementary measures of consumption of sugary drinks:

- Calories consumed per day per person from sugary drinks. This measure describes the contribution of sugary drinks to the overall diet. It is derived from either nutrition surveys (self-report) or industry sales data.
- The proportion of people consuming a sugary drink on a given day. This measure describes how widespread consumption is across a population. It is obtained by asking people about sugary drink consumption in the past 24 hours in a survey.
- The volume of sugary drinks sold per person. This measure describes the amount of sugary drinks sold (and presumably consumed) based on industry sales data.



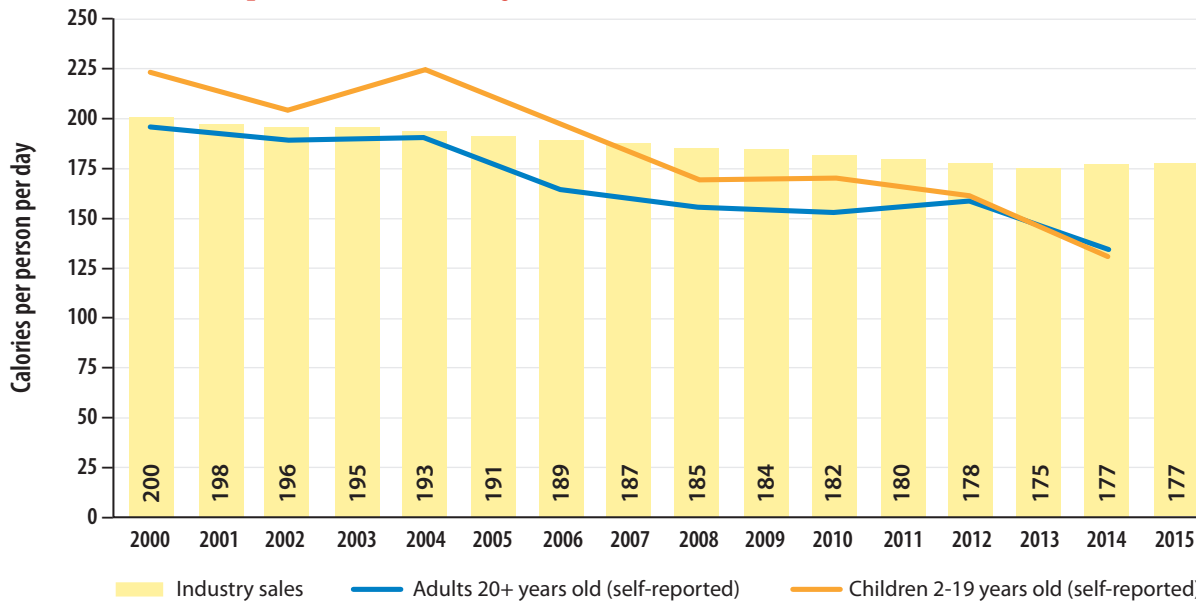
Figure 3. Trends in calories per person per day from sugary drinks, 1965-2014



Sources: National Health and Nutrition Examination Survey (NHANES); Duffey and Popkin, 2007; Kit et al, 2013; Bleich et al, 2017; Wang et al, 2008

These most recent self-reported survey data suggest that consumption is starting to drop again, but this drop is not reflected in industry sales data. Industry data show that calories from sugary drinks have remained around 175 calories per person per day since 2012 (see Figure 4). While it is unclear why these two data sources show different trends, what is clear is that Americans are still consuming too many calories from sugary drinks.³

Figure 4. Trends in calories per person per day from sugary drinks, 2000 to 2015, self-reported vs. industry sales



Sources: Beverage Digest Fact Book, 2016; Kit et al; 2013; Bleich et al, 2017

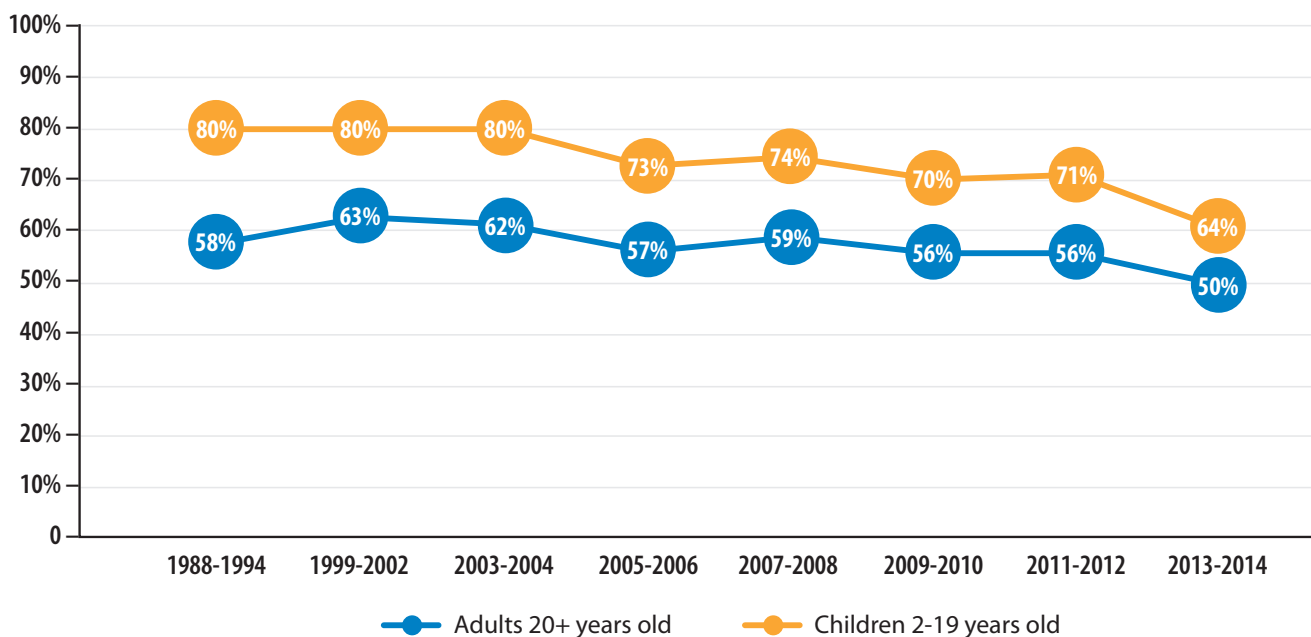
It is also important to note that these numbers are the average number of calories per person per day, but not everyone in the US drinks sugary drinks every day. About half of adults and two-thirds of children consume sugary drinks on a given day, and the number of calories consumed per day by those who are actually drinking sugary drinks is nearly 350 calories.⁴



How many people consume a sugary drink on a given day?

The proportion of children consuming sugary drinks has gone down substantially since the early 1990s when about 80 percent of children were drinking sugary drinks on a given day, but the decline for adults has been slower (see Figure 5).

Figure 5. Trends in percent of children and adults consuming sugary drinks on a given day, 1988-1994 to 2013-2014



Sources: (NHANES) Kit et al, 2013; Bleich et al, 2017; Wang et al, 2008

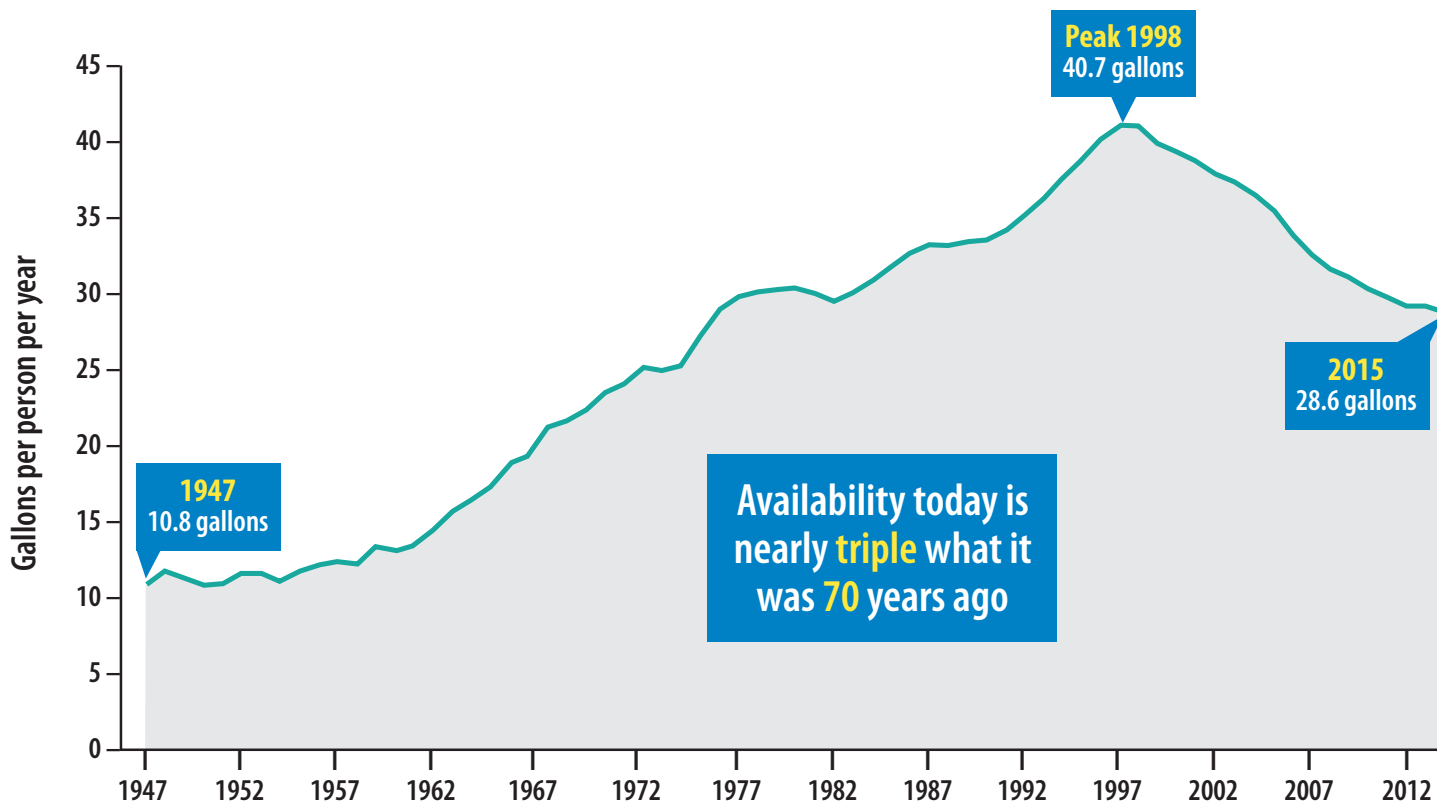


What kind of sugary drinks are we drinking?

Soda is the most consumed sugary drink.

Soda availability has risen dramatically since the 1950s - at its peak in 1998, the volume of soda for sale was quadruple that of 1947. While soda sales have been declining since 2000, the decline has slowed down more recently, suggesting there is still more work to do to bring sales and consumption down to healthier levels (see Figure 6).

Figure 6. Availability of regular soda, 1947-2015



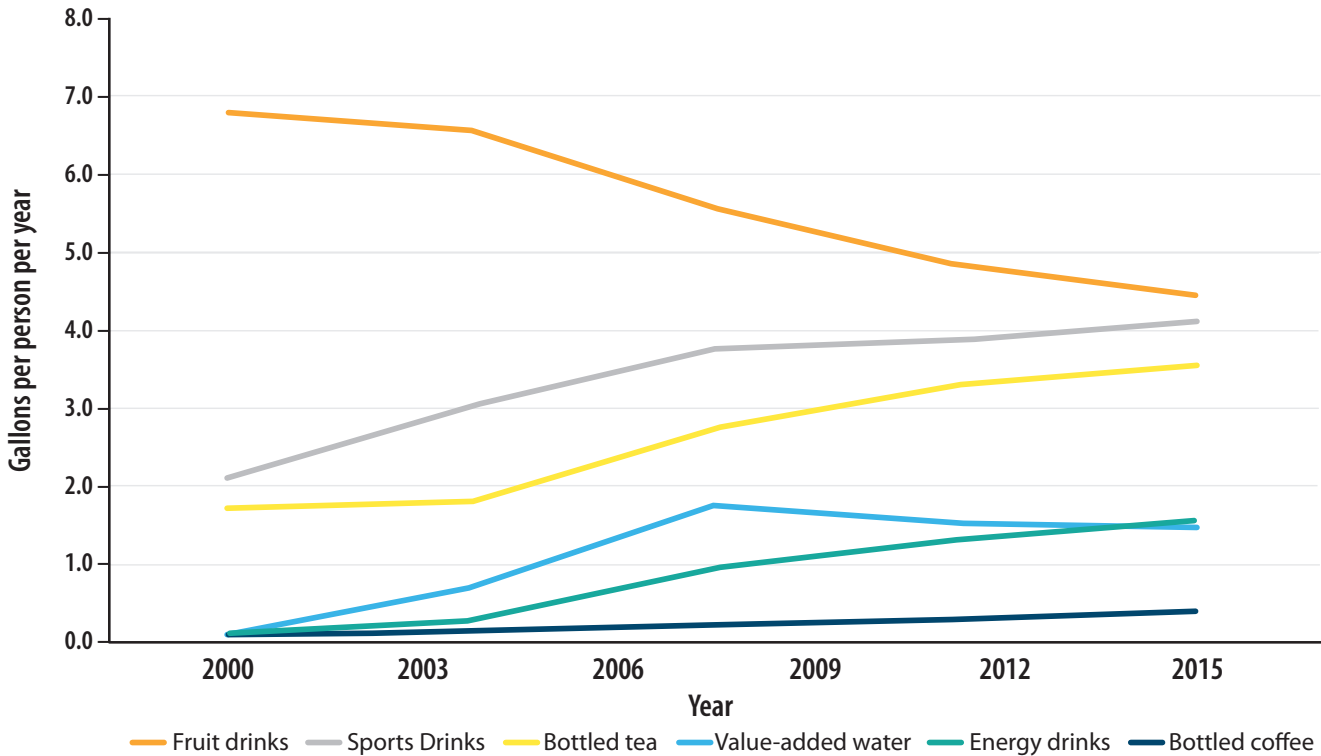
Sources: 1947-1983: United States Department of Agriculture, Economic Research Service Food Availability (Per Capita) Data System; 1984-2015: Beverage Marketing Corporation, 2016



Soda isn't the only sugary drink on the market.

As consumers get the message about the health harms of soda, they are turning to other sugary drinks that are marketed as healthier alternatives to soda. Beverage companies, in response, are creating new drinks all the time to fill the sales void left by soda. Sales of sports drinks, energy drinks, bottled coffees and teas, and “value-added” waters have been rising in the past decade (see Figure 7).

Figure 7. Trends in sales of non-soda sugary drinks, 2000 to 2015



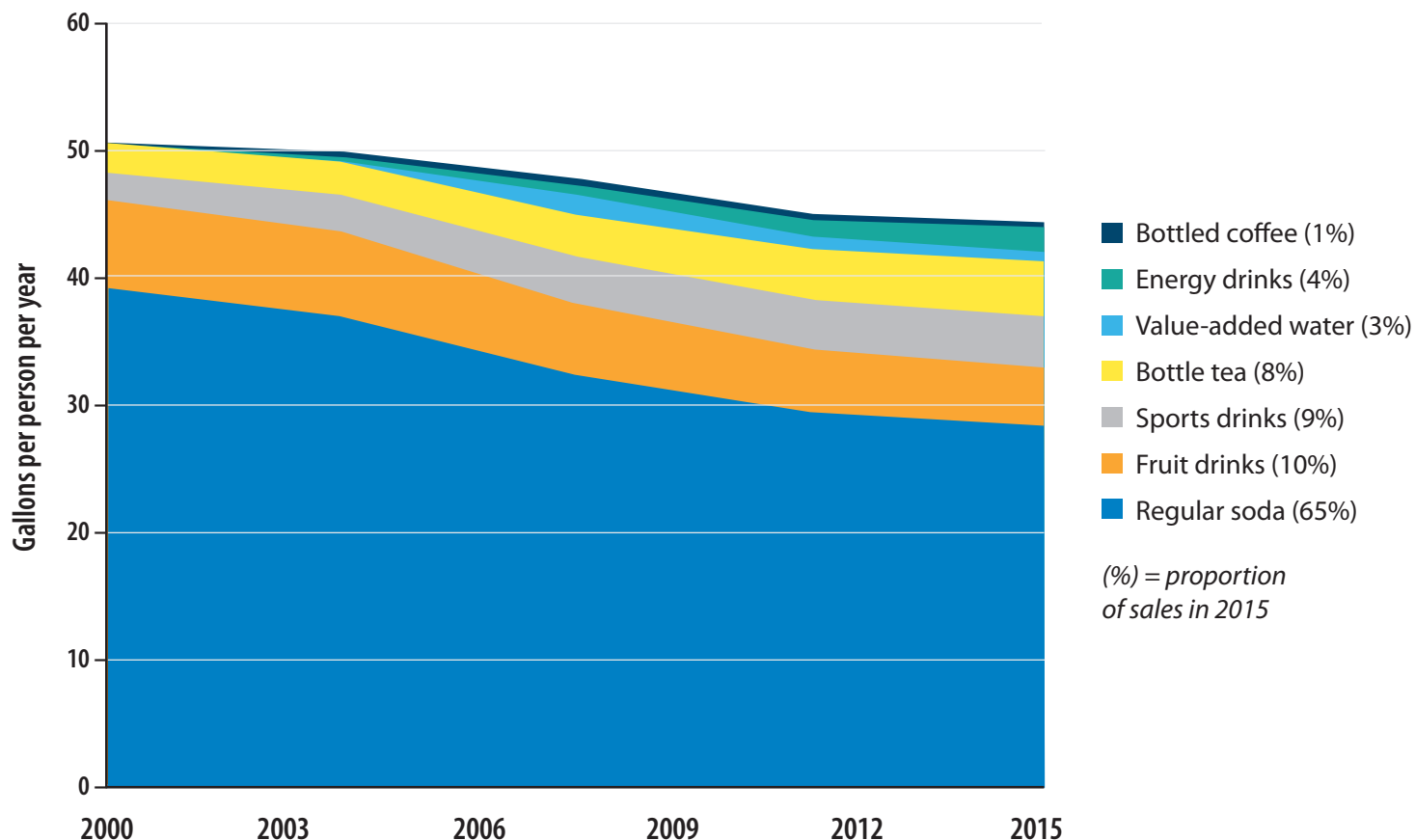
Source: Beverage Marketing Corporation, 2015

These trends have resulted in decreases in the proportion of sugary drink sales from soda and fruit drinks and increases in the contributions from sports drinks, teas, and other sugary drinks. As a result, total sugary drink sales have only gone down 12 percent since 2000, even though soda sales have decreased nearly 30 percent.⁵



Today, regular soda (not including diet) remains the most popular sugary drink, making up about 65 percent of the sugary drinks sold in the US, followed by fruit drinks (10 percent), sports drinks (9 percent), and bottled teas (8 percent). Value-added water (with added sugars) (3 percent), energy drinks (4 percent) and bottled coffee (1 percent) comprise a much smaller proportion of sales (see Figure 8).

Figure 8. Trends in sales of sugary drinks in the US, 2000 to 2015

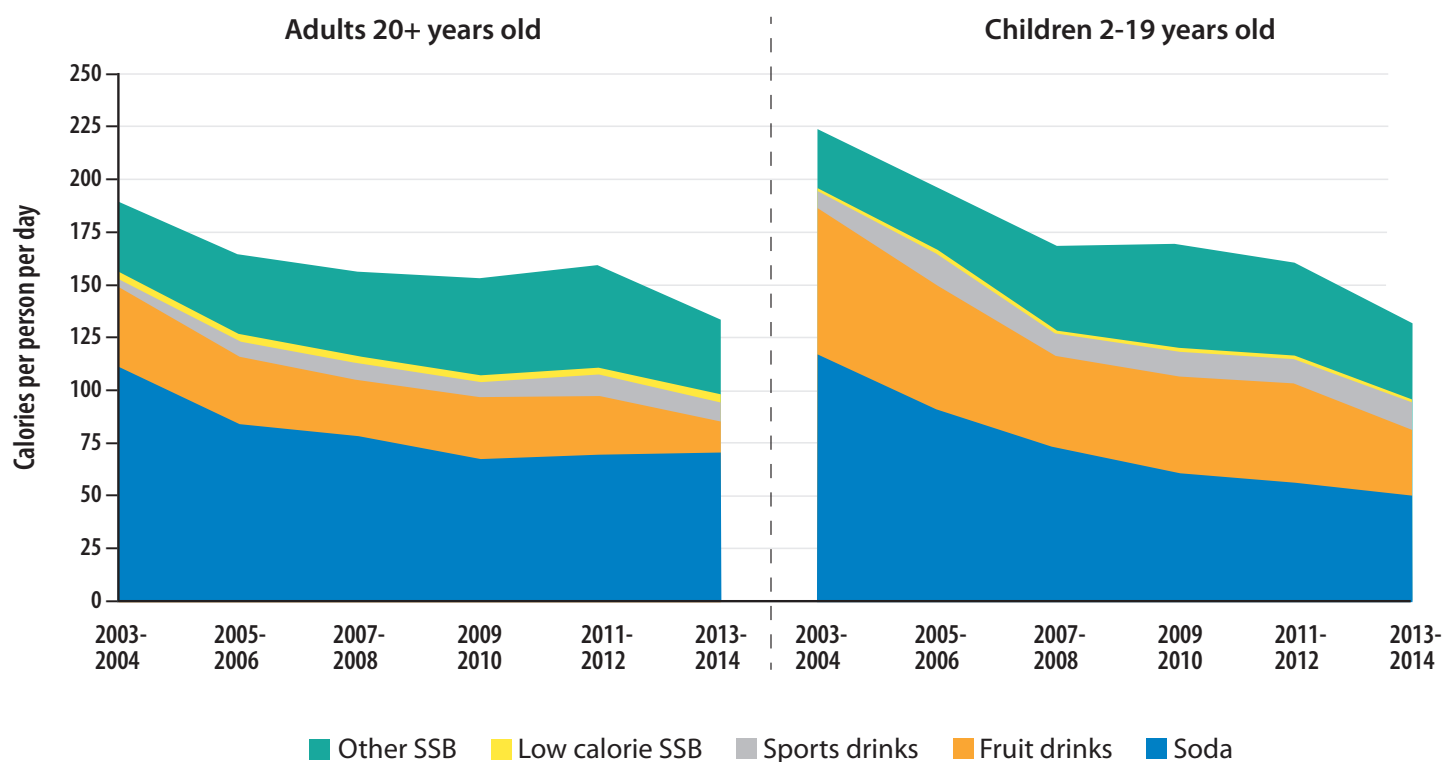


Source: Beverage Marketing Corporation, 2015



Data from a national dietary survey (NHANES) confirms that consumption of soda and fruit drinks (as measured by calories per person per day) has declined since 2003 in children and adults and that soda consumption has not been declining as much in recent years, especially among adults. The most recent decline in calories from sugary drinks was driven by a drop in fruit drink consumption (see Figure 9).

Figure 9. Trends in calories per person per day from sugary drinks, by drink type, 2003-2004 to 2013-2014



Source: (NHANES) Bleich et al, 2017



Who is drinking sugary drinks?

The data above show overall sugary drink consumption among all Americans, but consumption varies substantially by age, gender, race/ethnicity, and income.

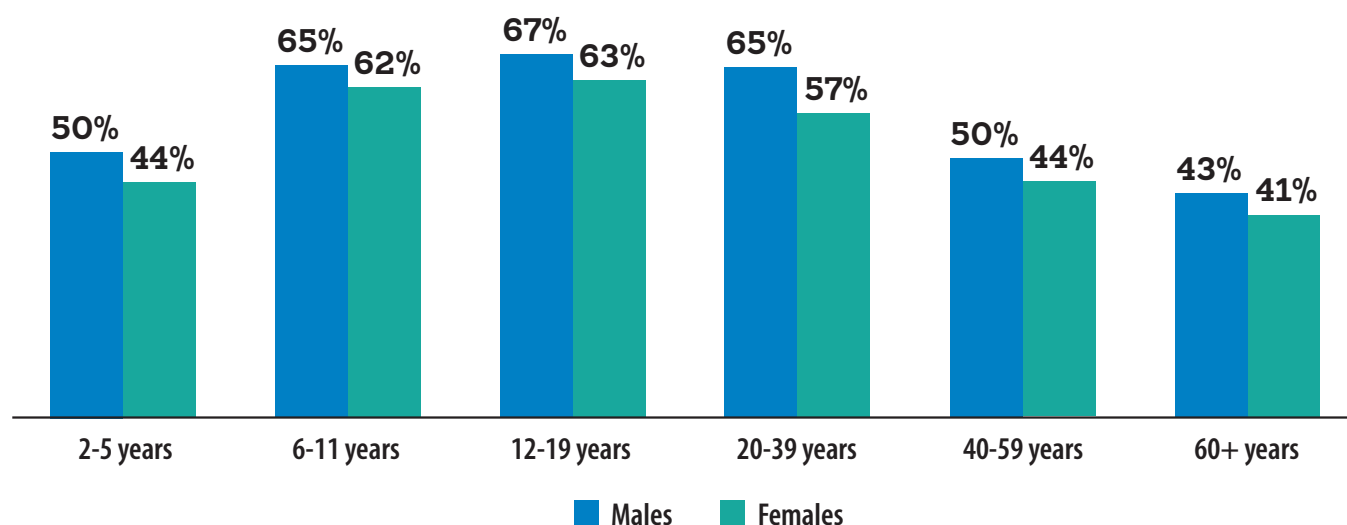
Differences by age and gender

Sugary drink consumption starts very early in the US - more than 30 percent of one-year-olds (12-23 months) consume sugary drinks on a given day and nearly half of all preschool children (2-5 year olds) consume sugary drinks on a given day. Children, adolescents, and young adults are by far the heaviest consumers of sugary drinks. Among 12-19 year olds, 63-67 percent consume sugary drinks on a given day compared to only 38-41 percent among people 60 years and older (see Figure 10).

The proportion of men and women who consume sugary drinks is not significantly different, except among 20-39 year olds. In this age group, significantly more men consume sugary drinks than women (65 percent vs. 57 percent) (see Figure 10).

Early eating patterns set the course for lifelong preferences and habits, so it's alarming that every day nearly a third of children ages 12-23 months consume sugary drinks.

Figure 10. Percent of males and females consuming sugary drinks on a given day, by age, 2013-2014

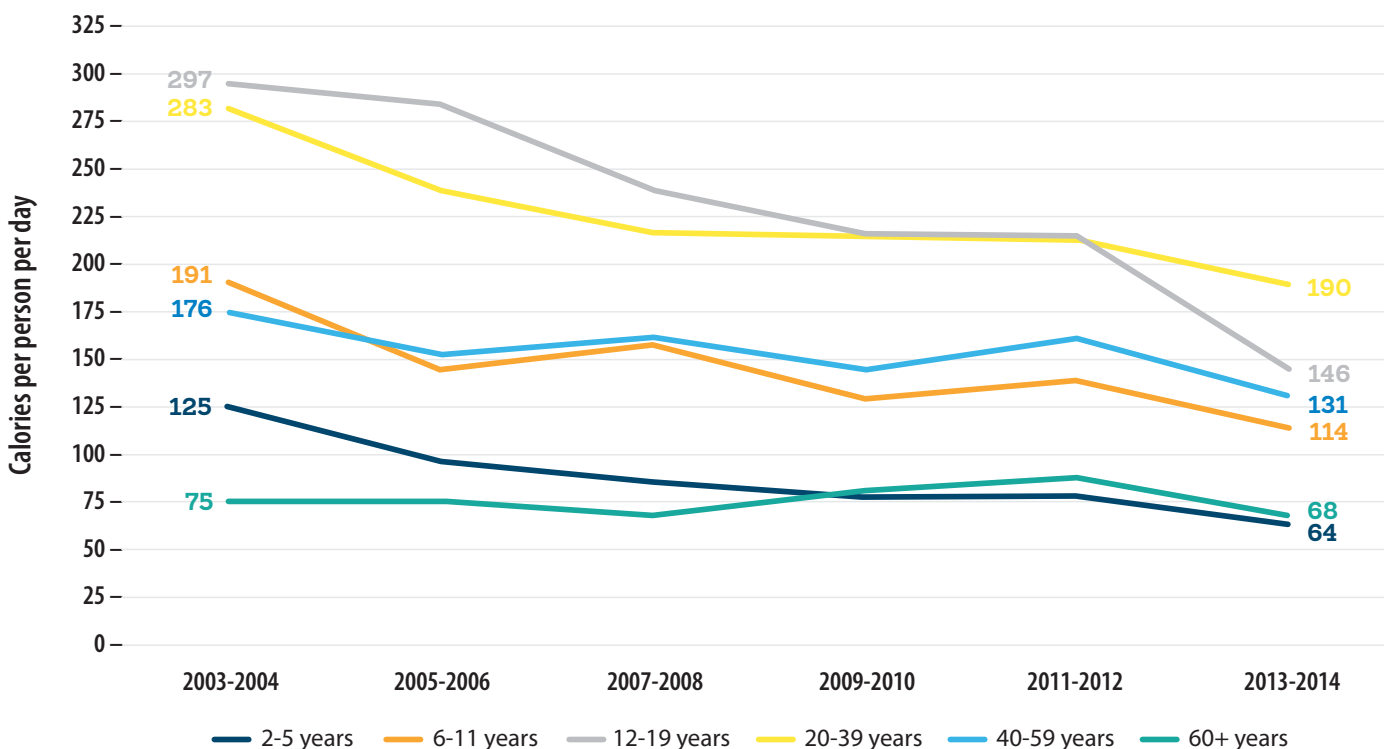


Source: (NHANES) Bleich et al, 2017



Calories from sugary drinks have been declining among all age groups, but especially among people under 40 years old. The greatest declines are among 2-5 year olds and 12-19 year olds – they both are drinking about half as many calories from sugary drinks as they were in 2003. Significant declines in calories consumed have also occurred among 6-11 year olds and 20-39 year olds (40 percent and 33 percent less, respectively) (see Figure 11).

Figure 11. Trends in calories per person per day from sugary drinks, by age, 2003-2004 to 2013-2014

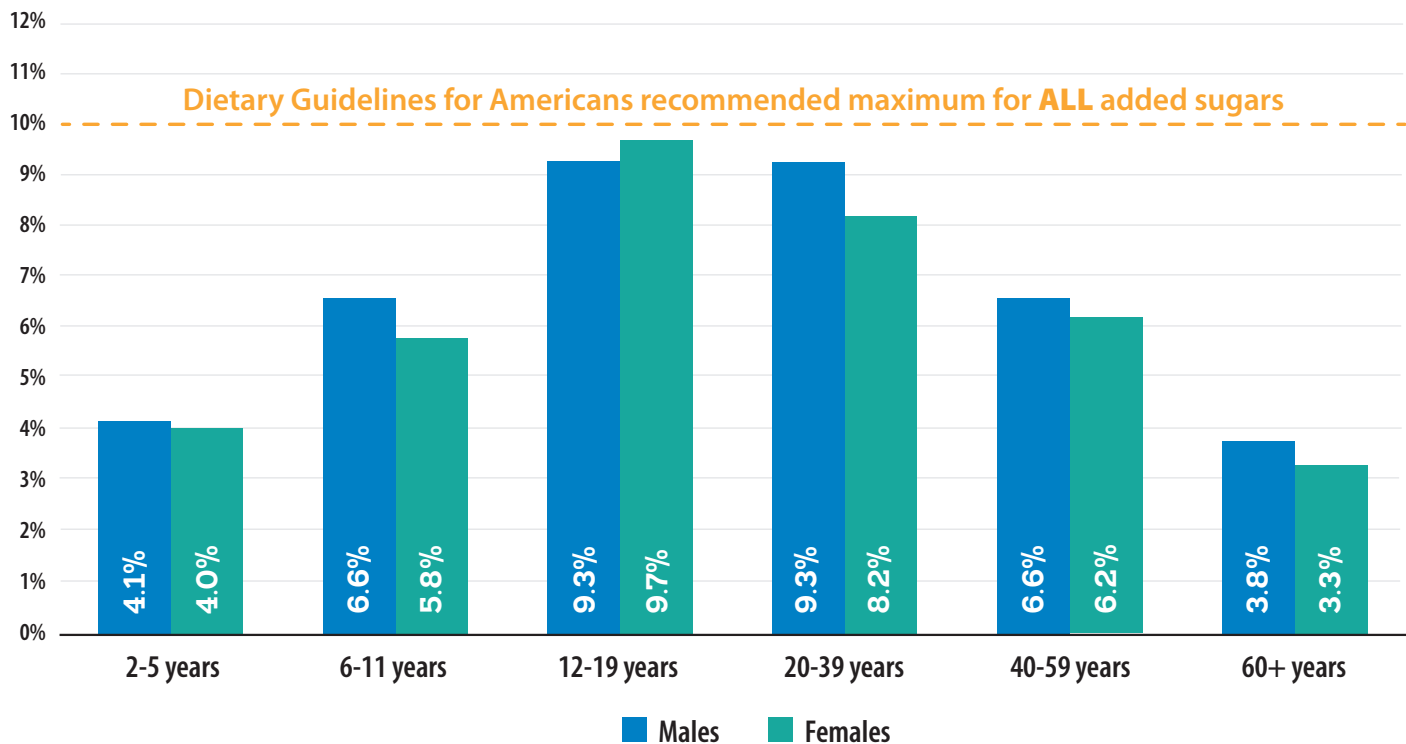


Source: (NHANES) Bleich et al, 2017



However, adolescents and young adults are still the heaviest consumers of sugary drinks, and nearly 10 percent of their daily calories are coming from sugary drinks alone (see Figure 12).

Figure 12. Percent of total daily calories from sugary drinks, by age and gender, 2011-2014



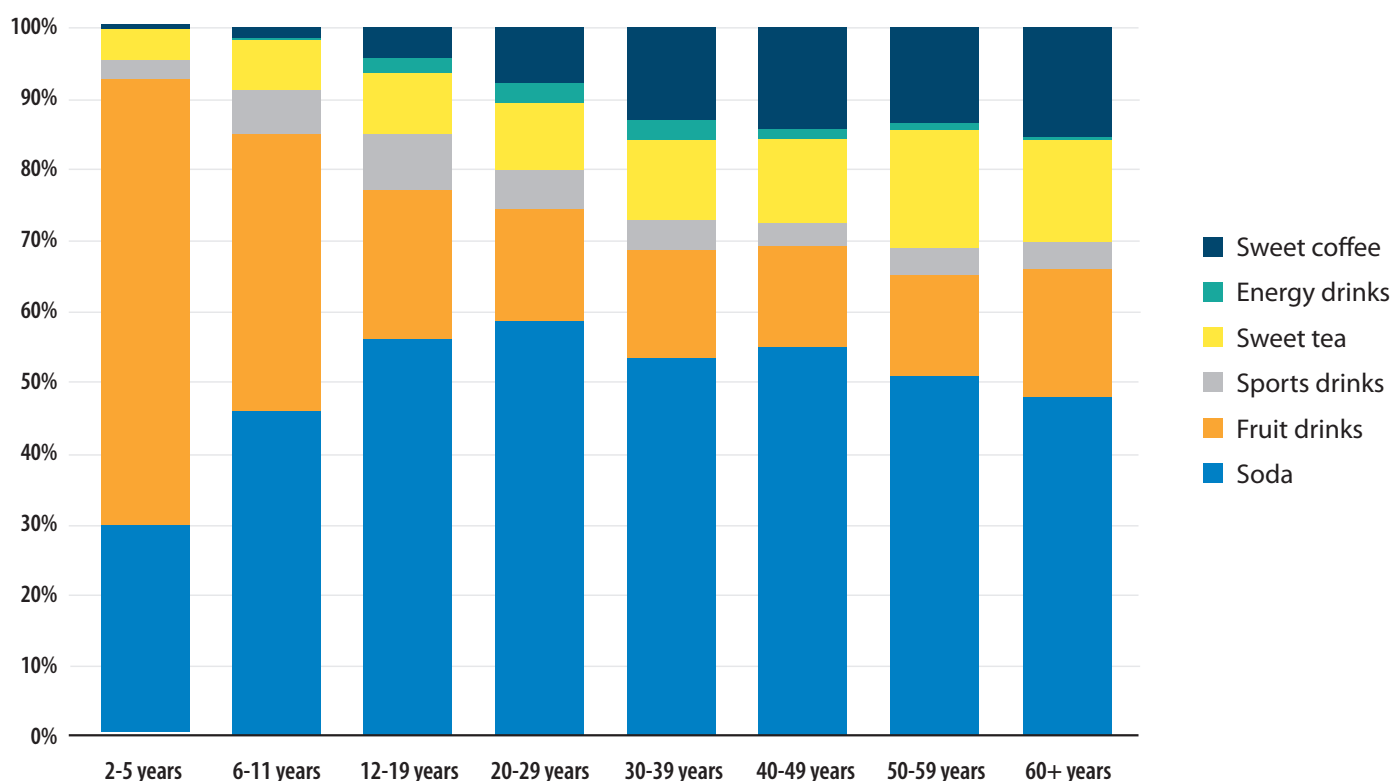
Sources: (NHANES) Rosinger et al. NCHS data brief, no 271, 2017; Rosinger et al, data brief, no 270, 2017.



Nearly 10 percent of calories consumed by teenagers and young adults come from sugary drinks, meaning that they are nearly exceeding the Dietary Guidelines recommended maximum for total added sugars *from sugary drinks alone*.

Children and adults get their sugary drink calories from different types of beverages. Fruit drinks are by far the largest source of sugary drink calories for preschool children (2-5 years old). Soda and fruit drinks are about equal for 6-11 year olds, and soda is the largest source of calories for age groups over 12 years old. Sweetened tea and coffee are significant sources of calories for older adults (see Figure 13).

Figure 13. Proportion of calories from different types of sugary drinks by age, 2005-2012



Source: National Health and Nutrition Examination Survey (NHANES) HFA, 2017



One reason consumption of sugary drinks remains high among children is that industry marketing has succeeded in convincing some parents that sports and fruit drinks are healthy beverages.

Many parents believe sports and fruit drinks are healthy

- One-fifth believed sports drinks are “good, healthy drinks for children”
- One-third believed children need sports drinks for hydration
- More than one-quarter believed fruit-flavored drinks are somewhat/very healthy

Parents are likely to provide children and youth with sugary drinks

- 77 percent reported providing their children with fruit-flavored drinks
- 62 percent reported providing their children with soda
- 51 percent reported providing their children with sports drinks

Zytnick et al, 2016; Munsell et al, 2016

RELATED: Check out HFA’s research brief on fruit juice: [Is 100% fruit juice as harmful as drinks with added sugar?](#)

Differences by race/ethnicity

There is variation in sugary drink consumption by race/ethnicity, and the disparities are stronger among adults than children. First we describe variation in consumption of sugary drinks on a given day and then in calories consumed per day.

Consumption among infants and toddlers varies by race/ethnicity. Significantly more Black and Mexican American infants and toddlers (0-24 months) consume sugary drinks on a given day than White children (see Figure 14).

Figure 14. Percent of infants and toddlers (0-24 months) consuming sugary drinks on a given day, by race/ethnicity and by income,* 2005-2012

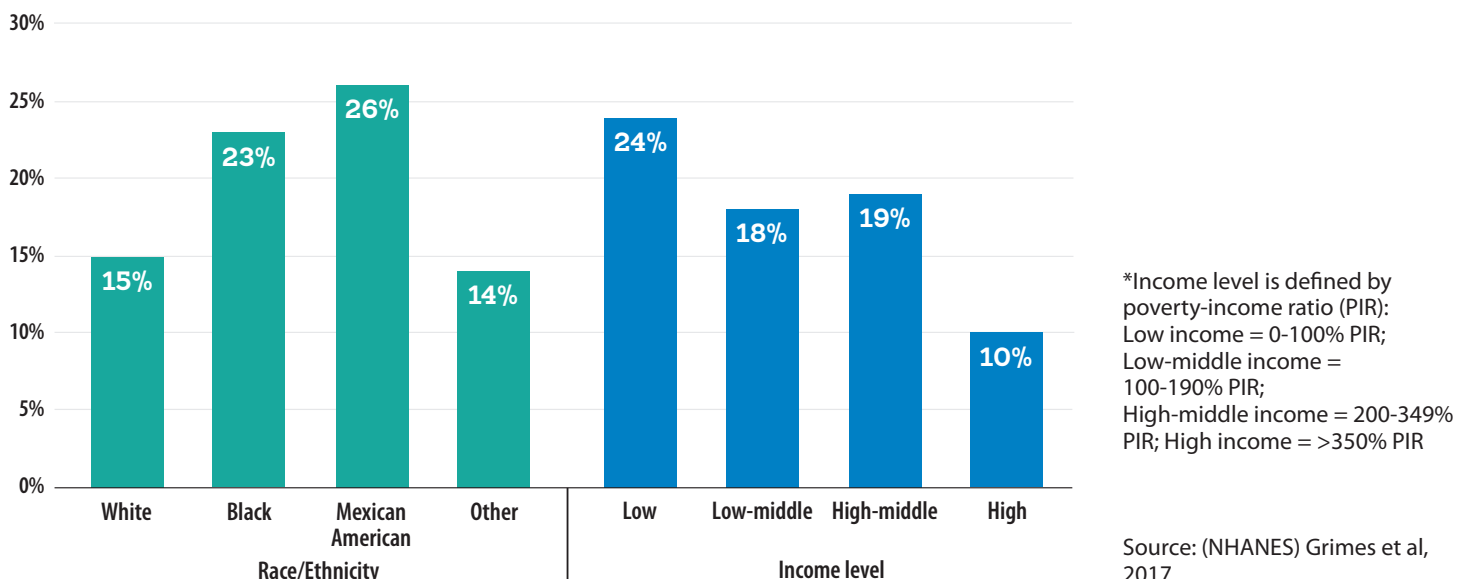
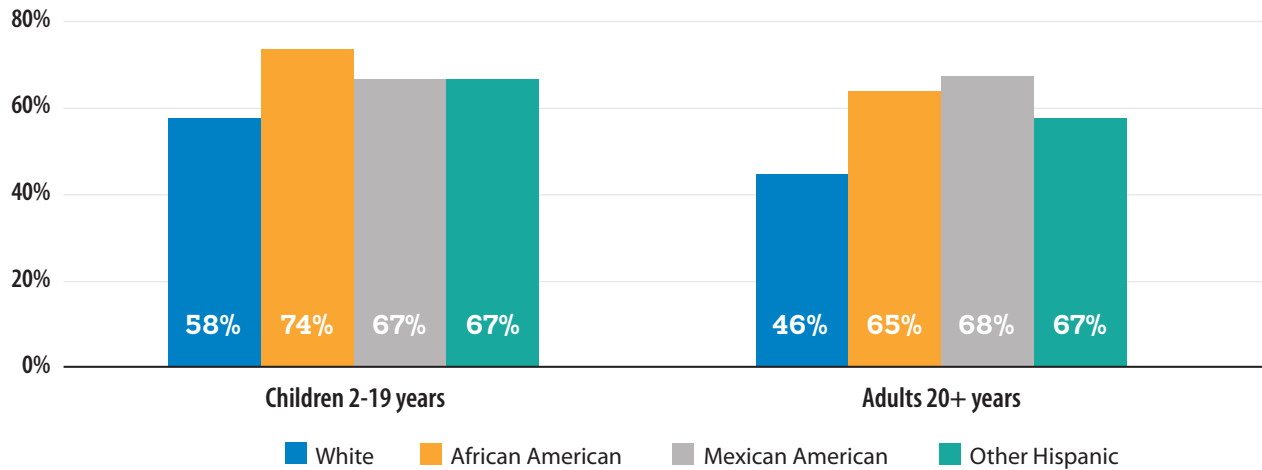




Figure 15. Percent of children and adults consuming sugary drinks on a given day, by race/ethnicity, 2013-2014

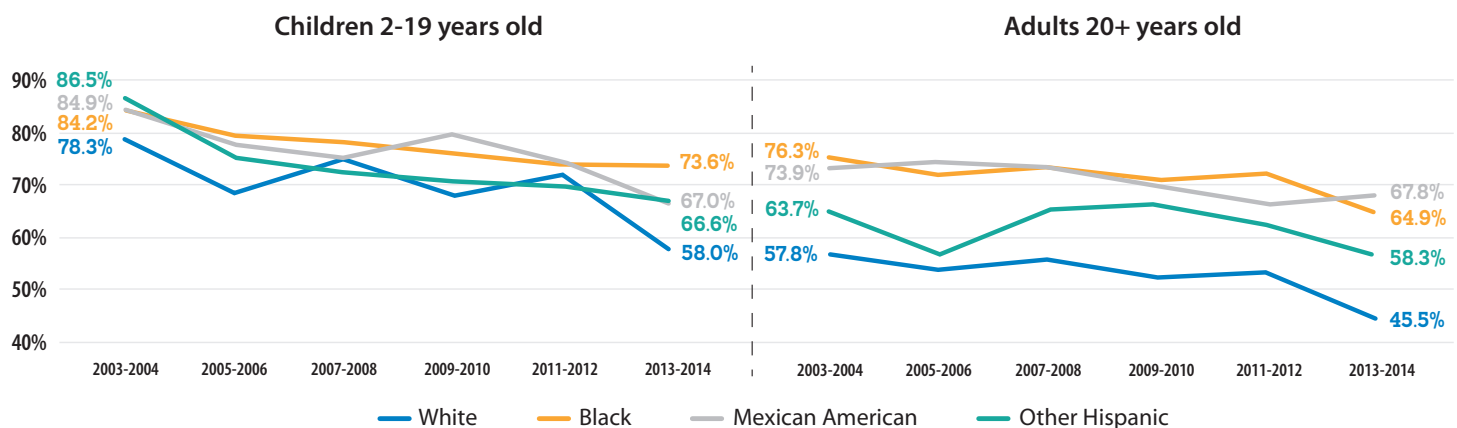


Source: (NHANES) Bleich et al, 2017

White children are significantly less likely to consume sugary drinks on a given day than Black, Mexican American, and Other Hispanic children (see Figure 15). There have been significant declines in the percent of children in each of these groups consuming sugary drinks on a given day, but Black children have made the least progress (about 10 percent less since 2003 compared to about 25 percent less for White, Mexican American, and other Hispanic children) (see Figure 16)

White adults are also significantly less likely to drink sugary drinks on a given day than Black, Mexican American, or other Hispanic adults (see Figure 15). Since 2003, White adults have seen the greatest decline in percent consuming sugary drinks on a given day (21 percent less compared to 15 percent less for Black adults and about 8 percent less for Mexican American and other Hispanic adults) (see Figure 16).

Figure 16. Percent of children and adults consuming any sugary drinks on a given day, by race/ethnicity, 2003-2014



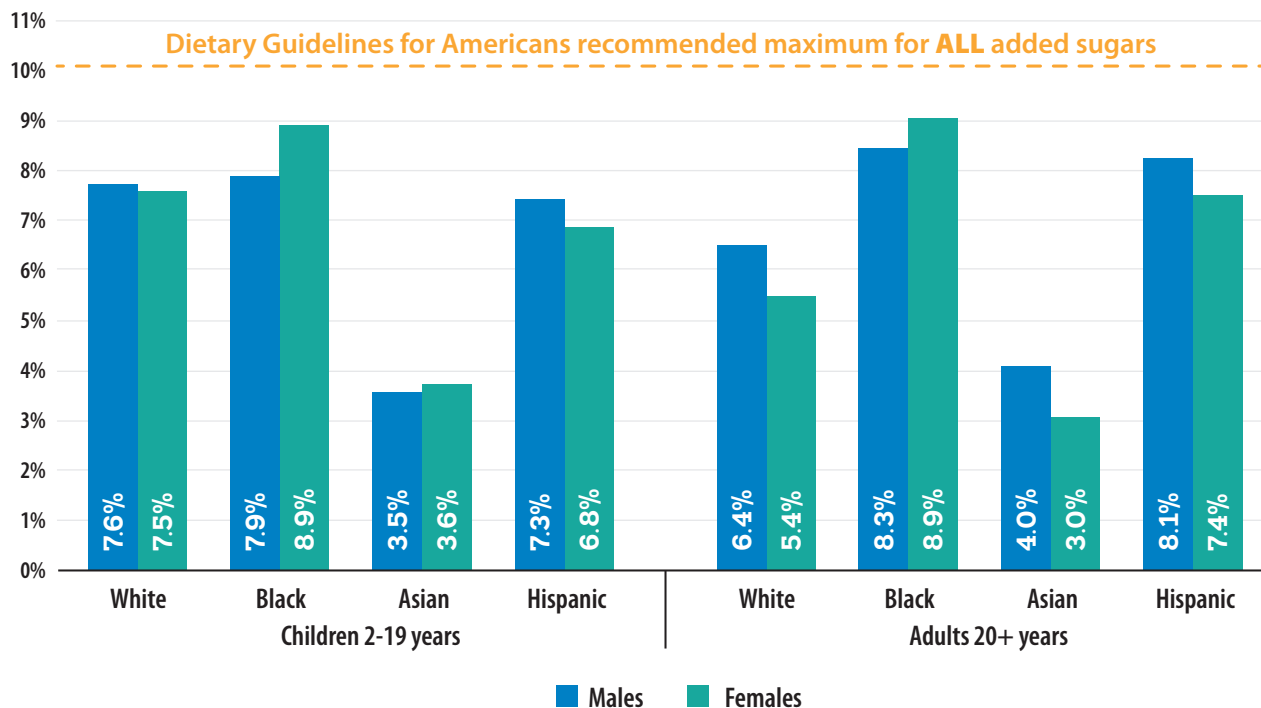
Source: (NHANES) Bleich et al, 2017



Overall, Asian American children and adults consume the least calories from sugary drinks. White adults consume significantly fewer sugary drink calories than Black and Hispanic adults, but there are no significant differences between White, Black, and Hispanic children (see Figure 17).

Among Black children, girls consume significantly more calories from sugary drinks than boys. Among White adults, men consume significantly more calories from sugary drinks than women (see Figure 17).

Figure 17. Percent of total daily calories from sugary drinks among children and adults, by race/ethnicity and gender, 2011-2014

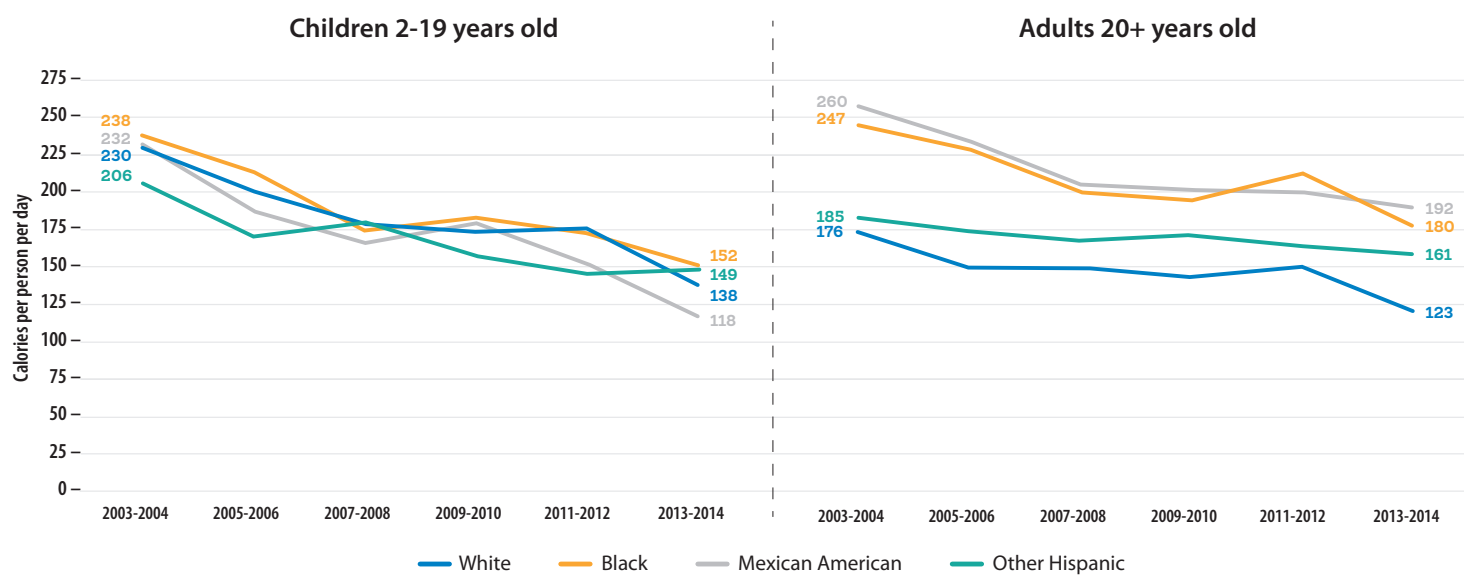


Source: Rosinger et al, 2017, NCHS data briefs 270 and 271



White, Black, Hispanic, and Mexican American children are all consuming fewer calories from sugary drinks (about 30-50 percent less) than they were in 2003 (see Figure 18). Among adults, White adults consume significantly fewer calories per person per day than Black or Mexican American adults, and this disparity has remained consistent over time. Adults of all races/ethnicities have had less of a decline in calories from sugary drinks than children since 2003 (see Figure 18).

Figure 18. Trends in calories per person per day from sugary drinks, by age and race/ethnicity, 2003-2004 to 2013-2014

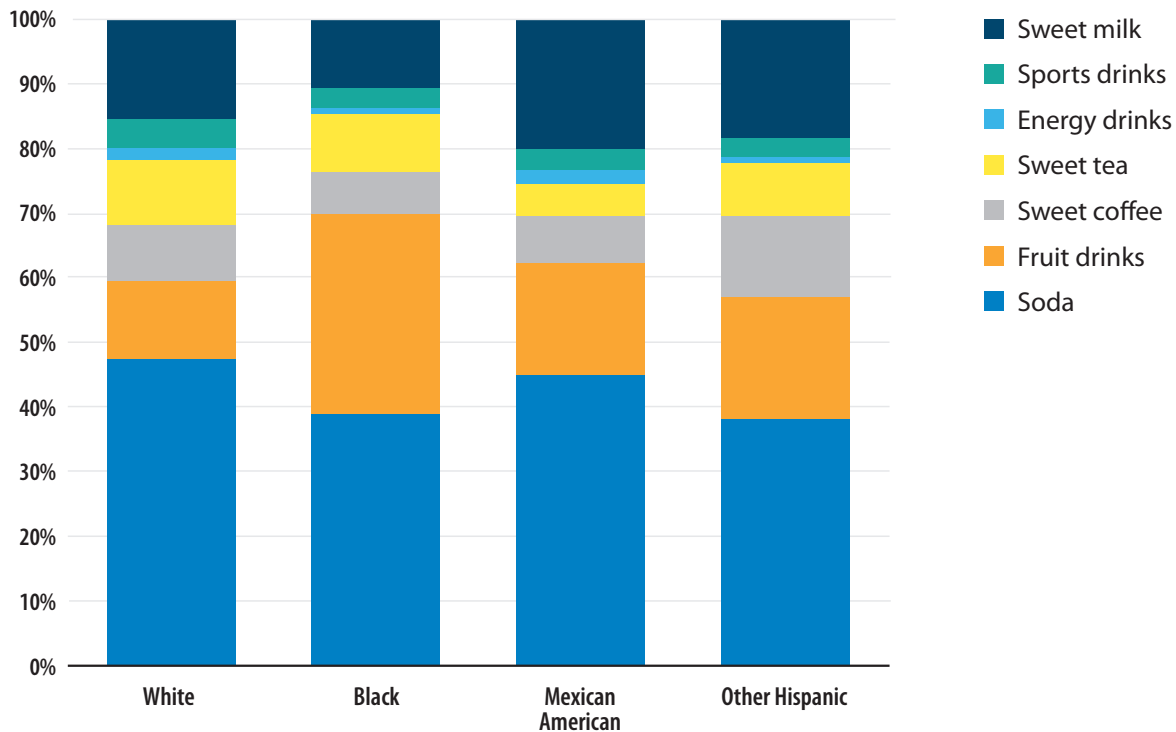


Source: (NHANES) Bleich et al, 2017



There is variation in the type of sugary drinks consumed among different races/ethnicities – most notably, Black people consume a much larger proportion of sugary drink calories from fruit drinks than White, Mexican American, or Hispanic people (see Figure 19).

Figure 19. Proportion of calories from sugary drinks per person, by race/ethnicity, 2005–2012



Source: (NHANES) HFA, 2017

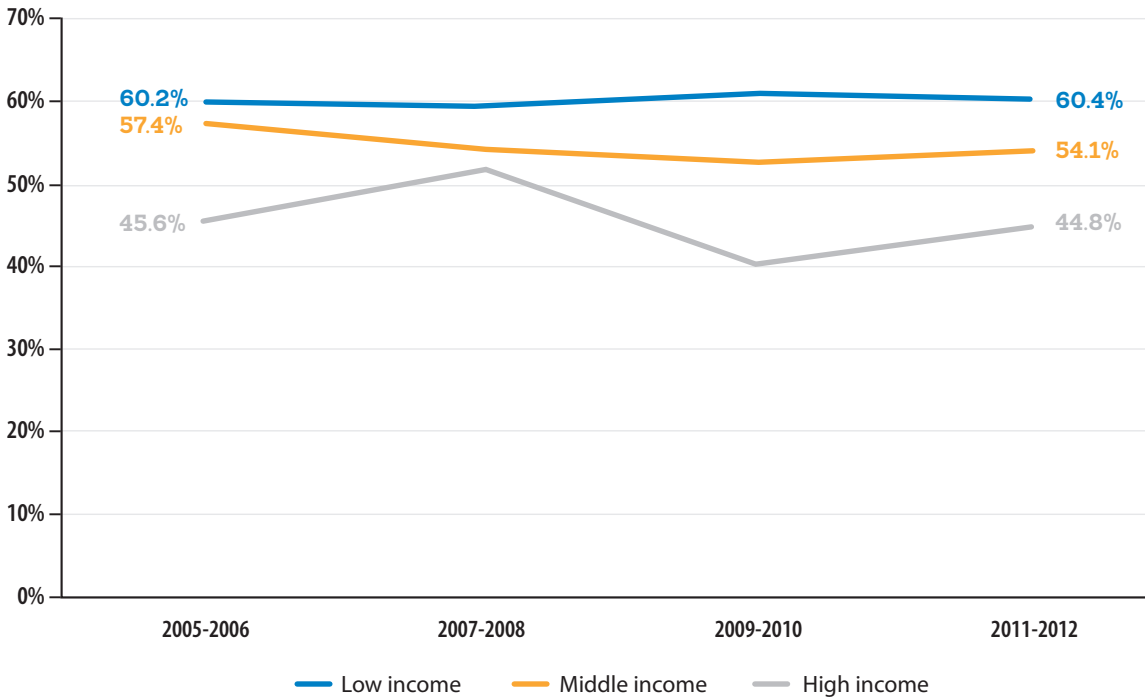
Differences by income

More low-income Americans consume sugary drinks on a given day than high income (60 percent vs. 45 percent) (see Figure 20), and this translates to about 35 percent more calories per person per day from sugary drinks among low-income people than higher-income people (236 vs. 140 calories) (see Figure 21). This disparity has persisted over the past decade, and some metrics show that it may be widening. In particular, the percent of “heavy consumers” (people drinking 3 or more servings of sugary drinks on a given day) among low-income people has remained relatively stable, while dropping nearly 25 percent among higher-income people.⁷

There are no major differences in the type of sugary drinks consumed by income level; soda is the largest contributor of sugary drink calories in all income levels.

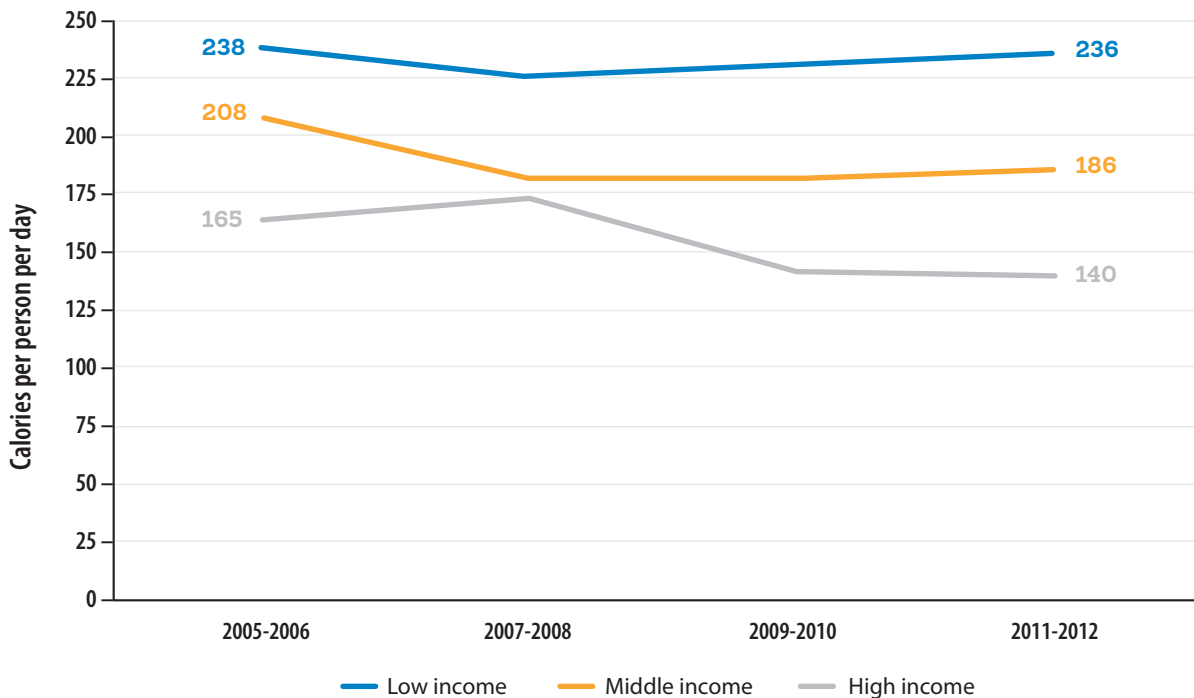


Figure 20. Trends in percent consuming sugary drinks on a given day, by income level,* 2005-2006 to 2011-2012



*Income level is defined by poverty-income ratio (PIR): Low income = 0-185% PIR; Middle income = 186-400% PIR; High income = >400% PIR
Source: (NHANES) HFA, 2017

Figure 21. Trends in calories per person per day, by income level,* 2005-2006 to 2011-2012



*Income level is defined by poverty-income ratio (PIR): Low income = 0-185% PIR; Middle income = 186-400% PIR; High income = >400% PIR
Source: (NHANES) HFA, 2017



What is the Role of Marketing?

The overconsumption of sugary drinks is in part driven by industry spending on marketing. In 2017, the beverage industry spent over 1.2 billion dollars in marketing, with 45 percent dedicated to marketing full-sugar carbonated drinks.⁸ Beverage marketing is often targeted towards young people, low-income individuals, and people of color. In 2013, Black youth saw more than twice as many television ads for sugary drinks and energy drinks as White youth.⁹ This targeted marketing may contribute to inequities in sugary drink consumption and the associated chronic health problems.

What can we do to reduce consumption of sugary drinks?

While the ultimate goal is to decrease consumption of added sugars from food and drinks, focusing on sugary drinks is a good first step since they are the number one source of added sugars in Americans' diets. While there are many ways to approach this challenge, some core strategies have been gaining popularity in the US and around the world. Below is a list of these strategies and links to further information about each strategy.

Core sugary drink strategies:

Affordability—Make sugary drinks more expensive to produce or buy.

- [Taxing sugary drinks](#)
- Changing institutional pricing

Acceptability/Appeal—Engage in counter-advertising and education and limit marketing.

- Public awareness campaigns
- [Warning labels](#)
- [Nutrition facts](#)
- [Marketing restrictions](#)

Availability—Reduce the availability of sugary drinks.

- [Removing sugary drinks from institutional settings](#) (hospitals, schools, government, etc.)
- [Removing sugary drinks from kid's meals](#)
- Reducing the amount of sugar found in beverages ([product reformulation](#))
- Reducing the portion sizes of sugary drinks: by regulation (e.g. [proposal \[not adopted\] from New York City](#)) or by [industry voluntary action](#).

For more ideas on how to reduce exposure to added sugars, see Six Key Policies aimed at both foods and drinks.



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Notes

1. Woodward-Lopez et al, 2011
2. Beverage Marketing Corporation, 2015 – This total includes sugary drinks only and excludes diet drinks and 100% fruit juice
3. The major difference between the two data sources is that the national survey is based on a self-report of sugary drink consumption from a sample of Americans, while the industry data is based on the total volume of sugary drinks sold in the US, divided by the total population. Industry data also includes calories from 100% fruit juice, which are not included in the national survey data (because 100% fruit juice is not considered a “sugary drink”)
4. Healthy Food America (2017), NHANES 2005-2012. Unpublished data
5. Beverage Marketing Corporation, 2015
6. Grimes et al, 2017
7. (NHANES) HFA, 2017
8. University of Connecticut Rudd Center for Food Policy and Obesity (2018). Nielsen. Unpublished Data.
9. Harris et al, 2015