

# SICKLY SWEET: WHY FOCUS ON SUGARY DRINKS?

## Sugary Drinks and Health in Minnesota



Although many factors influence unhealthy weight and diet-related chronic diseases, sugary drinks play a key role.

Some argue that singling out sugary drinks does not make sense because any sugary food can be consumed in moderation and people eat many sugary foods. The fact is, however, that sugary drinks have become a daily habit for many — not a special treat — and they are the single largest source of added sugars in our diets. The scientific evidence connecting sugary drink consumption and poor health also continues to grow. This is why reducing sugary drink consumption is widely supported by public health authorities, including the Centers for Disease Control and Prevention, the National Academies of Science, the American Medical Association, the American Heart Association, the American Academy of Pediatrics, and the American Cancer Society.<sup>1</sup>



*The Public Health Law Center and the American Cancer Society have partnered to develop resources to help organizations create healthier food environments, with a special focus on hospital and healthcare settings. This publication, which is part of a larger toolkit, explains why reducing sugary drink consumption is a crucial part of organizational food service policies.*

## Sugary Drinks – The Largest Source of Added Sugar in U.S. Diets

Products containing added sugars (sugars added to food during processing or preparation) pervade the U.S. food supply — more than two-thirds of packaged foods and beverages purchased in the U.S. contain added sugar.<sup>2</sup> Although added sugar intake has decreased in recent years,<sup>3</sup> most of the sugar consumed by Americans continues to come from added sugars, and a majority of adults still consume quantities of added sugar in excess of current dietary guidelines, which call for added sugars to make up no more than 10% of a person’s daily calories.<sup>4</sup>

### Figure 1: What Is a Sugary Drink?

Sugary drinks contain added sugars, including high fructose corn syrup, honey, molasses, and other caloric sweeteners. These are examples of common sugary drinks:\*

<b>Soft drinks</b>	Coke, Pepsi, Mountain Dew, Dr. Pepper
<b>Fruit drinks<sup>†</sup></b>	Sunny D, Hawaiian Punch, Capri Sun
<b>Tea and coffee drinks</b>	Arizona Iced Tea, Snapple Iced Tea, Starbucks Bottled Frappuccino
<b>Energy drinks</b>	Red Bull, Monster, Rock Star
<b>Sports drinks</b>	Gatorade, Powerade
<b>Sweetened milk<sup>†</sup></b>	Nesquik Chocolate Milk, Silk Vanilla Soy Milk



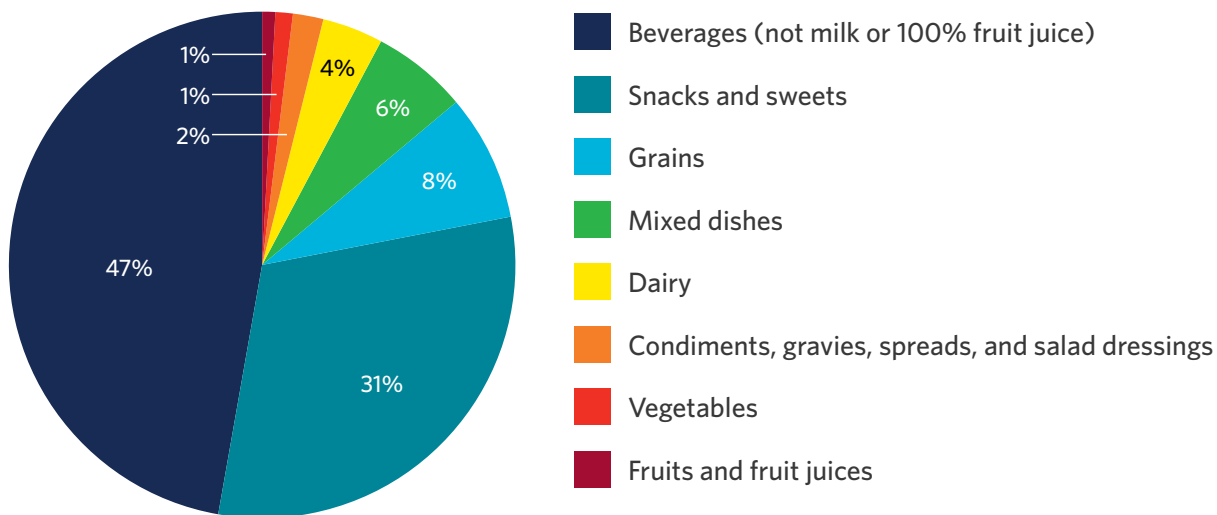
\* This is not an exhaustive list. Furthermore, many of these drinks are now available in diet and low-calorie varieties, which are sweetened with non-caloric sweeteners.

† Flavored milks with added sugars sometimes are not considered sugary drinks because they provide some nutritional value despite being sugary. 100% fruit juice sometimes is not classified as a sugary drink because it does not contain added sugars; however, health experts recommend portion control and limited consumption because juice is sugary.

Added sugars account for more than 13% of all calories in the U.S. diet, and sugary drinks are the largest source of added sugar for all age groups<sup>5</sup> (see Figure 2). For example, a 20-ounce bottle of sugary soda contains the equivalent of 17 teaspoons of added sugar.<sup>6</sup> Forty-six percent of adult males and 38% of adult females consume at least one sugary drink on one or more days per week, resulting in an average daily intake of 23 ounces and 16 ounces, respectively.<sup>7</sup> Higher

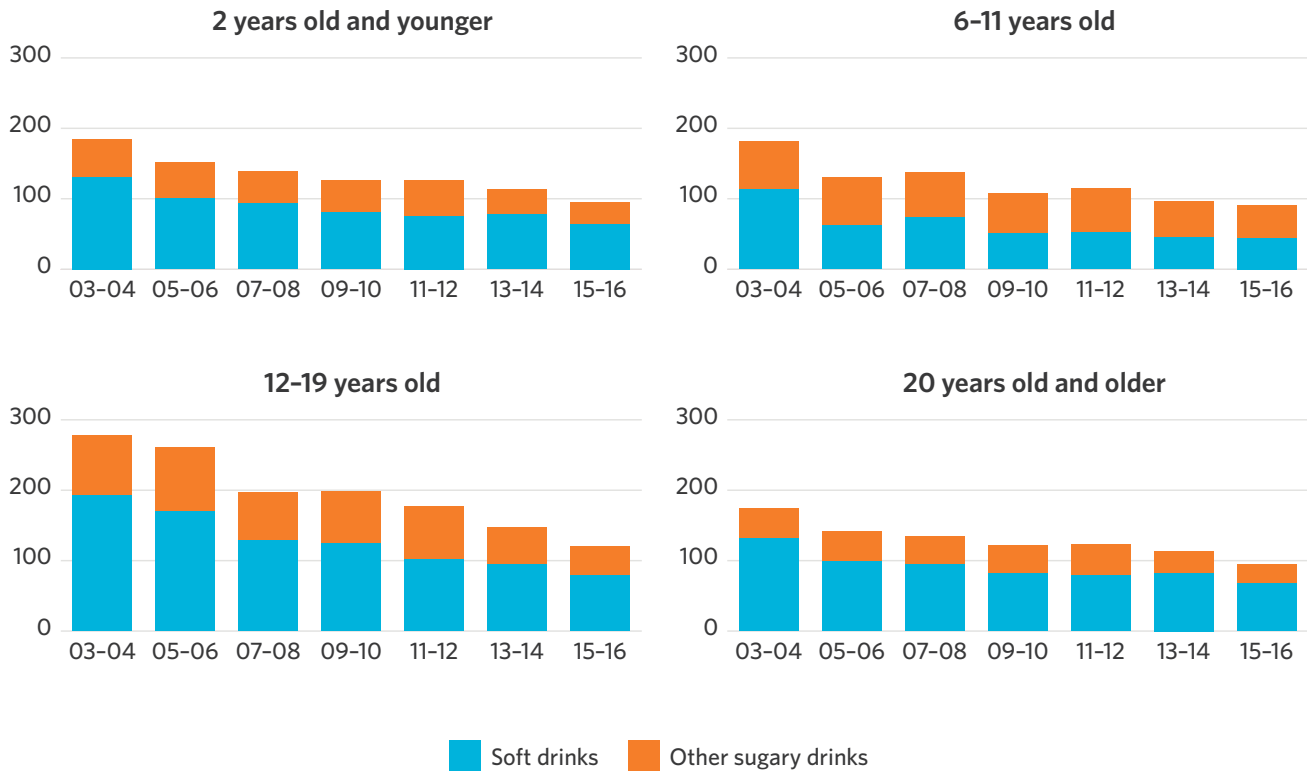
intake of sugary drinks is more common among adults and children of color and American Indian/Alaska Native peoples,<sup>8</sup> adults with less education, adults who currently smoke and who are physically inactive,<sup>9</sup> adults with a disability,<sup>10</sup> those from lower income households,<sup>11</sup> and those living in certain regions of the country.<sup>12</sup> For example, non-Hispanic Black children aged 4-5 years consumed 59% more sugary drinks in 2011-2014 compared to their non-Hispanic white counterparts (9.12 ounces versus 5.74 ounces),<sup>13</sup> and in 2016, non-Hispanic Black and Hispanic adults were 71% more likely to be daily sugary drink consumers compared to non-Hispanic white adults.<sup>14</sup> Although national data for American Indians/Alaska Natives is lacking, studies from individual states have found that daily sugary drink consumption was 23% more prevalent among American Indian/Alaska Native adults in Arizona in 2017,<sup>15</sup> and heavy sugary drink consumption (three or more per day) was 58% more prevalent among American Indian/Alaska Native adults in Oklahoma in 2015 compared to their white counterparts.<sup>16</sup>

**Figure 2: Sources of Added Sugar in the U.S. Population, Ages Two Years and Older<sup>17</sup>**



Children and adolescents are even less likely than adults to meet the current recommended limits for added sugar consumption,<sup>18</sup> and sugary drinks are the most popular beverage consumed after water. In fact, nearly one-third of children ages one to two years old, half of children ages two to five years old, and 58% of children and adolescents six to 19 years old consume a sugary drink on any given day.<sup>19</sup> Similar to adults, there are notable disparities in sugary drink consumption among children and adolescents. In 2015-2016, 67% of non-Hispanic Black children and adolescents ages two to 19 years old consumed sugary drinks daily compared to 51% of their non-Hispanic white counterparts.<sup>20</sup>

**Figure 3: Trends in Daily Energy Intake (kcal) from Sugary Drinks from 2003–04 to 2015–16 by Age Group, United States<sup>21</sup>**



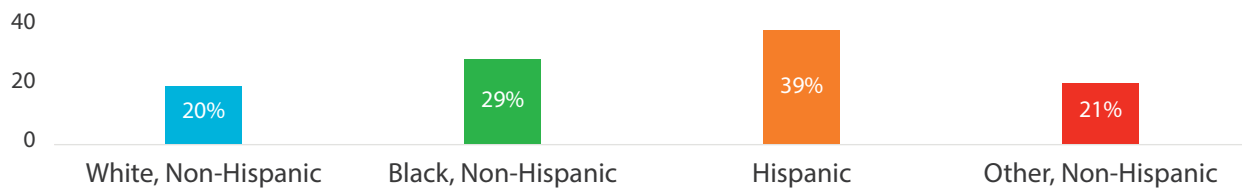
While there has been a decline in overall sugary drink consumption over the past two decades, progress has stagnated in recent years (see Figure 3).<sup>22</sup> One factor has been the rise of energy drink consumption among youth and young adults. Between 2003 and 2016, consumption increased 600% and 1000% respectively among these groups.<sup>23</sup>

Researchers have documented that sugary drink companies frequently target their marketing toward communities of color and other socially disadvantaged and marginalized groups, which contributes to disparities in sugary drink consumption.<sup>24</sup> Food marketing studies by the UConn Rudd Center on Food Policy & Obesity have repeatedly found that food and beverage companies “often target Black and Hispanic consumers with marketing for their least nutritious products, primarily fast-food, candy, sugary drinks, and snacks.”<sup>25</sup> For example, a 2019 Rudd Center report found that advertisements for sugary drinks were more likely than any other food and beverage category to be targeted to Black and Hispanic consumers.<sup>26</sup>

## Sugary Drink Consumption in Minnesota

- Nearly a quarter of Minnesota adults were daily sugary drink consumers in 2013. Among young adults ages 18–34, this figure was one in three.
- The same year, daily sugary drink consumption was 50–100% more prevalent among adults of color in the state (see Figure 4), and more than twice as prevalent among adults with less than a high school education compared to those with a college degree (31% versus 13%).
- Three in four Minnesota students in grades 5–11 consumed at least one sugary drink daily in 2018. Among daily sugary drink consumers, 12.3% consumed fruit drinks, 12.1% consumed regular soda, 10.4% consumed a sports drink, and 2.7% consumed an energy drink. One in four students consumed 100% fruit juice daily.

Figure 4: Daily Sugary Drink Consumption Among Minnesota Adults, 2013



Sources: Sohyun Park et al., 65 MORBIDITY MORTALITY WKLY. REP. at 169-171 (2016); MINN. STUDENT SURVEY INTERAGENCY TEAM, MINN. STUDENT SURVEY STATEWIDE TABLES 33 (2019).

## Sugary Drinks and Health Risks

Most sugary drinks offer “empty” calories, meaning they have no nutritional value and do nothing to support health. Sugary drink consumption also is often associated with an unhealthy diet pattern and increased energy intake.<sup>27</sup> The fact that sugary drinks are liquid calories is a major factor in why regulating energy intake is harder for people when consuming sugary drinks. Liquid calories are not as filling as calories from solid food, and studies indicate that people who add calories to their diet through sugary drinks do not tend to reduce the calories they consume from other sources.<sup>28</sup>

Whatever the biological mechanism, sugary drink consumption has been consistently linked to body weight, weight gain, and obesity. Since 2006, at least nine systematic reviews have reached this conclusion.<sup>29</sup> For example, one study found that a one-serving-per-day increase in sugary drink consumption was associated with a 0.25–0.5 pound increase in weight over a one-year period.<sup>30</sup> For children and adolescents, this same per-day increase in consumption was linked to a 0.06-unit increase in body mass index (BMI).<sup>31</sup> Over time, these effects compounded. A different study, which pooled data from 1977 to 2007, concluded that sugary drinks likely accounted for at least 20% of the weight gained by Americans during this time.<sup>32</sup>

Research has also observed associations between sugary drink consumption and long-term changes to visceral fat and waist circumference, which themselves are linked to other chronic conditions independent of weight gain.<sup>33</sup>

Current obesity trends highlight the importance of focusing on sugary drinks. One in three Americans has obesity.<sup>34</sup> Between 1988–1994 and 2015–2016 the prevalence of obesity increased more than 70% among adults and 85% among children, and now 93.3 million adults and 13.7 million children have this chronic disease.<sup>35</sup> Obesity is also significantly more prevalent among non-Hispanic Black, Hispanic, and American Indian/Alaska Native adults and children compared to their non-Hispanic white counterparts.<sup>36</sup> In 2015–2016, 46.8% of non-Hispanic Black, 47.0% of Hispanic, and 43.7% of American Indian/Alaska Native adults had obesity compared to 37.9% of non-Hispanic white adults.<sup>37</sup> The same year, 22.0% of non-Hispanic Black, 25.8% of Hispanic, and 29.7% of American Indian/Alaska Native children and youth had obesity compared to 14.1% of their non-Hispanic white counterparts.<sup>38</sup> Type 2 diabetes has followed a similar trajectory. The prevalence of diagnosed and undiagnosed diabetes in the U.S. increased from 8.8% in 1988–1994 to 13.9% in 2013–2016, with considerable disparities. In 2013–2016, 20.4% of non-Hispanic Black, 22.1% of Hispanic, and 23.5% of American Indian/Alaska Native adults had diabetes compared to 12.1% of non-Hispanic white adults.<sup>39</sup>

### Diabetes and Unhealthy Weights in Minnesota

- In 2018, 8.9% of Minnesota adults had diabetes, a 14% increase from 2017. In addition, 1.4 million Minnesota adults, or 35.1%, had prediabetes in 2018.
- Available diabetes data differs by state; however in Minnesota, diabetes was more prevalent among American Indian/Alaska Native (24.2%), Hispanic (9.6%) and non-Hispanic Black (10.6%) adults in 2018 compared to their non-Hispanic white counterparts (8.7%), and among adults with less than a high school education (12.8%) versus college graduates (6.0%).
- Two-thirds of Minnesota adults were overweight or had obesity in 2018. Available obesity data differ by state; however, that year, the adult prevalence of overweight and obesity was 78.0% for American Indian/Alaska Natives, 72.1% for Hispanics, 63.4% for non-Hispanic Blacks (63.4%) and 66.0% for non-Hispanic whites in the state.
- In 2014, 12.3% of children ages 2 to 4 in Minnesota had obesity, and in 2016–2017, 10.4% of youth aged 10 to 17 had obesity.

Sources: CDC, Behavioral Risk Factor Surveillance System; American Diabetes Association, The Burden of Diabetes in Minnesota (2019); CDC, Diabetes Report Card 2017; Trust for America's Health, The State of Obesity 2019.

In addition to diabetes,<sup>40</sup> weight gain and obesity,<sup>41</sup> consumption of sugary drinks also is associated with higher risk for tooth decay,<sup>42</sup> coronary heart disease,<sup>43</sup> hypertension,<sup>44</sup> stroke,<sup>45</sup> metabolic syndrome,<sup>46</sup> fatty liver disease,<sup>47</sup> mortality,<sup>48</sup> and worse overall cardiometabolic health.<sup>49</sup> More specifically, increasing sugary drink consumption merely by one serving per day increases a person's risk for type 2 diabetes by 13%, for stroke by 13%, and for heart attack by 22%.<sup>50</sup> Further, roughly 9% of type 2 diabetes cases in the US can be attributed to sugary drink consumption.<sup>51</sup> Research also has found that daily sugary drink consumers have a 56% higher risk of developing fatty liver disease compared to non-daily consumers.<sup>52</sup>

Although evidence linking sugary drinks and health consequences is clear and robust, food industry-funded research in this area has often led to some uncertainty. It is noteworthy that, similar to the experience with commercial tobacco-related research, food industry sponsorship of sugary drink research has been found to bias study results,<sup>53</sup> which contributes to ongoing challenges to efforts to interpret the state of evidence to inform public health action.<sup>54</sup>

## Conclusion

People in the U.S. consume too much added sugar, and sugary drinks are the single largest source of added sugars in most people's diets. Sugary drink consumption is a risk factor for a host of chronic conditions, including obesity, type 2 diabetes, heart disease, and tooth decay. People from low-income communities, communities of color and American Indian/Alaska Native populations consume more sugary drinks compared to white individuals, and these same groups are also at higher risk of developing diet-related chronic diseases. Reducing sugary drink intake lowers health risks among children and adults and is a public health priority. Hospitals and other organizations can play a key leadership role in these efforts by implementing food and beverage policies that promote healthy choices.



### Additional Resources

The latest sugary drink trends, including those related to consumption and its health effects, are monitored by several organizations, including the [Centers for Disease Control and Prevention](#), [SugarScience at the University of California San Francisco](#), the [Harvard T.H. Chan School of Public Health](#), and [Healthy Food America](#).

The other resources in this series can be found on the Public Health Law Center's website at [publichealthlawcenter.org](#). The [Healthy Healthcare Toolkit](#) includes:

- *Beverage Policies & Drinks with Artificial Sweeteners*
- *Building Blocks for Success: Developing Healthy Beverage Policies & Initiatives*
- *Food & Beverage Pledges & Policies for Hospitals & Healthcare Systems*
- *Frequently Asked Questions about Healthy Beverage Initiatives*
- *Healthcare Can Lead the Way: Making the Healthy Choice the Easy Choice*
- *Healthy Beverage Hot Spots: Identifying & Utilizing the Institutional Access Points*
- *Healthy Beverage Policies, Healthy Bottom Lines*
- *Healthy Beverage Policies: Key Definitions & Sample Standards*
- *Sickly Sweet: Why Focus on Sugary Drinks?*
- *Thirsty for Health — Tap Water & Healthcare*

This publication was prepared by the Public Health Law Center at Mitchell Hamline School of Law in St. Paul, Minnesota. This version was made possible with funding from the American Cancer Society and builds from a previous version developed in partnership with Health Care Without Harm and supported by Blue Cross and Blue Shield of Minnesota and the Minnesota Cancer Alliance, with funding support from the Centers for Disease Control and Prevention (CDC). It was informed by the Boston Public Health Commission's *Healthy Beverage Toolkit*, which was used with permission. The contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC or those of any other person. The Center also acknowledges the valuable contributions of its Research Assistants, including Anusha Garimella and Nicole Dailey, who provided research and writing support for this publication, and thanks the following people at the American Cancer Society for their review and comments on drafts of this publication: Richard Alteri, MD, Medical Editor; Marji McCullough, Sr. Scientific Director, Epidemiology Research; Kristen Sullivan, Director, Nutrition and Physical Activity; and Tracy Wyant DNP, RN-BC, AOCN, CHPN, CPPS, Director, Cancer Information.

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## Endnotes

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