







Consumption of Sugar-sweetened Beverages

YOUTH AND SUGAR-SWEETENED BEVERAGES (SSBs)

- The leading contributor of empty calories consumed by children and teens (aged 2-18 years) is calories from SSBs.¹
- In California, 15% of children and adolescents (2–17 years) reported drinking at least one glass of soda on the previous day², and 19% reported drinking at least one glass of other sugary beverage (sweetened fruit, sports, or energy drinks) the previous day.³
- Children and adolescents from low socioeconomic status households are more likely to be heavy consumers (≥500 kcal/day) of SSBs.⁴

YOUTH AND ENERGY DRINKS

- The American Academy of Pediatrics advises that children and adolescents should never consume energy drinks because of the potential health risks associated with the stimulants that energy drinks contain.⁵
- The Rudd Center for Food Policy and Obesity found that sugar-sweetened energy drinks contain nearly the same amount of calories from sugar that sodas and juice drinks contain, have three times the amount of sodium, and the contain the

same amount (or more) of caffeine as the average cup of coffee.⁶

• The majority of energy drinks companies label their products as dietary supplements, which exempts some of their ingredients (e.g., herbs or botanicals) from requiring approval from the Food and Drug Administration.⁶

YOUTH AND SPORTS DRINKS

The American Academy of Pediatrics recommends that

- children and adolescents avoid or restrict consumption of sports drinks, because they may lead to overweight and obesity, as well as dental erosion.⁷
- children and adolescents drink water instead of sports drinks to keep hydrated. Sports drinks should only be consumed by youth athletes in combination with water during prolonged, vigorous physical activity.⁷

YOUTH AND FLAVORED, ENHANCED, OR VITAMIN WATER

 Many popular brands of flavored, enhanced, or vitamin water beverages have between 6–8 teaspoons of sugar (90–120 calories) per 20 ounce bottle.⁸ There is little evidence of the health benefits of vitamin-fortified water beverages.⁹

ADULTS

- In California, ten percent of adults aged 18–34 report consuming, on average, regular soda one or more times per day.¹⁰
- In California, thirteen percent of adult Latinos and 11% of African Americans drink, on average, regular soda one or more times per day, compared to 7% of non-Hispanic Whites.¹⁰
- The odds of drinking SSBs one or more times per day are significantly greater among:
 - » Younger adults
 - » Males
 - » Non-Hispanic blacks
 - » Adults with lower education
 - » Low-income adults
 - » Adults with fruit intake of less than 1 time a day (relative to adults who consume fruit 1 or more times a day)
 - » Adults who are physically inactive (relative to highly active adults).¹¹
- Data from the National Health and Nutrition Examination Survey indicate that there are significant associations between heavy total SSB consumption (>500 kcal/ day) and low-education and low-income.¹²
- Although adults have decreased their overall calorie consumption from SSBs, between 1999–2000 and 2007–2008, adult consumption of sports and energy drinks has increased, particularly among young adults (20–34 years).¹²

HEALTH CONSEQUENCES AND DIET

- The overall diet quality of people who consume SSBs is lower than those who consume none or few.¹³
- Consumption of SSBs may lead to excess weight gain, type 2 diabetes, and cardiovascular issues.¹⁴
- Higher consumption of added sugars is associated with increased dental caries in children, which can affect levels of dental caries into adulthood.¹⁵
- A study with third-grade children found that for each additional sugary drink consumed per day, the third grader's risk of developing dental caries increased by 22%.¹⁶
- People may not compensate for the extra calories consumed in SSBs by subsequently eating less calories, because sugar consumed in beverage form is less filling than when consumed in solid food.¹⁷
- Emergency department visits involving energy drinks doubled from 2007 to 2011, from 10,068 visits to 20,783 visits. Energy drink related emergency department visits occurred more for males than females and more often for people aged 18 to 39 years than other age groups.¹⁸
- Consuming large amounts of caffeine in energy drinks can cause adverse effects such as insomnia, nervousness, headache, fast heartbeat, and seizures.¹⁹

ADVERTISING, MARKETING, AND SALES

- In 2013, an analysis of available data showed that beverage companies spent \$866 million in advertisements promoting SSBs and energy drinks.¹⁹
- Beverage companies market SSBs (soda, fruit drinks, sports drinks, iced tea, flavored water, energy drinks and shots) in many different marketing venues, exposing children and teens to these messages daily.¹⁹

- Americans spend more money on SSBs than on other types of beverages—in 2013, U.S. households spent \$14.3 billion on SSBs, compared with \$10.7 billion spent on 100% juice, plain bottled water, diet soda, and other diet drinks.¹⁹
- Americans purchased less soda (regular and diet) and fruit drinks from 2010 to 2013, but increased their purchase of other SSBs such as flavored water, sports drinks, and energy drinks. The volume of energy drinks sold from 2010 to 2013 increased 41 percent.¹⁹
- Hispanic populations—in 2013, seven beverage companies spent \$83 million in advertisements for SSBs and energy shots on Spanish-language television programs, in comparison to a combined total of \$9 million in advertisements for diet drinks, 100 percent juice, and water.¹⁹
- African American populations—in 2013, black children and teens were exposed to more than twice as many SSB and energy drink advertisements in comparison with white children and teens.¹⁹
- Beverage companies specifically target youth, spending more money on promotions and sponsorships aimed at youth than any other food category.¹⁹
- Most beverages aimed at children are high in sugar and have nutrition-related messages on their packaging that could mislead parents into believing these beverages are healthier choices than other types.¹⁹
- From 2010 to 2013, many beverage companies increased non-traditional marketing directed at youth, including brand appearances in prime-time television, social media, and mobile marketing. These types of marketing are more difficult for youth to distinguish as advertisements and for parents to monitor.¹⁹

 Research has shown that high schoolaged youth who have high exposure to electronic media, including television, computers, and video games, are more likely to drink SSBs and less likely to drink water and milk.²⁰

GENERAL RECOMMENDATIONS

The United States Department of Agriculture (USDA) 2015 Dietary Guidelines for Americans

- State that the major source of added sugars in a typical U.S. diet is beverages, which include soft drinks, fruit drinks, sweetened coffee and tea, energy drinks, alcoholic beverages, and flavored waters.²¹
- State that SSBs, such as soft drinks, sports drinks, and fruit drinks that are less than 100% juice, can contribute excess calories while providing few or no key nutrients. Beverages that are caloriefree—especially water—or that contribute beneficial nutrients, such as fat-free and low-fat milk and 100% juice, should be the primary beverages consumed.²¹
- Recommends that added sugars be limited to less than 10% of calories per day.²¹

REFERENCES

- Reedy J, Krebs-Smith SM (2010). Dietary sources of energy, solid fats, and added sugars among children and adolescents in the United States. *J Am Diet Assoc.*, 10(10):1477-84.
- UCLA Center for Health Policy Research. AskCHIS 2017. Sodas consumed yesterday (California). Available at <u>http://ask.chis.ucla.edu</u>. Exported on August 1, 2019.
- UCLA Center for Healthy Policy Research. AskCHIS 2017. Sugary drinks consumed yesterday (other than soda; California). Available at <u>http://ask.chis.ucla.edu</u>. Exported August 1, 2019.
- 4. Han E, Powell LM (2013). Consumption patterns of sugar-sweetened beverages in the United States. *J Acad Nutr Diet.*, 113:43–53.
- Schneider, MB, Benjamin HJ (2011). Sports drinks and energy drinks for children and adolescents: Are they appropriate? *Pediatrics*, 127(6): 1182-1189.
- Yale Rudd Center. *Energy drinks fact sheet*, November 2011. Accessed on August 1, 2019 from http://www.powerprism.org/Alliance-2011-11-YaleRudd.pdf.
- Committee on Nutrition and the Council on Sports Medicine and Fitness (2011). Sports drinks and energy drinks for children and adolescents: Are they appropriate? *Pediatrics*, 127(6): 1182-1189.
- Yale Rudd Center for Food Policy & Obesity (2010). Sugar-sweetened beverages fact sheet: Flavored or enhanced waters. Accessed August 1, 2019 from http://www.kickthecan.info/files/documents/ Rudd SSB EnhancedWater Fall2010.pdf.
- Kalman, D.S. et al. (2009). A pilot trial comparing the availability of vitamins C, B6, and B12 from a vitaminfortified water and food source in humans. *Intl J Food Sci & Nut.*, 60, 114-124.
- UCLA Center for Health Policy Research. AskCHIS 2017. During the past month, how often did you drink regular soda or pop that contains sugar (California). Available at http://ask.chis.ucla.edu. Exported on August 1, 2019.
- Park S, Pan L, Sherry B, Blanck HM (2014). Consumption of sugar-sweetened beverages among US adults in 6 states: Behavioral Risk Factor Surveillance System, 2011. *Prev Chronic Dis.*, 11:E65

- Han E, Powell LM (2013). Consumption patterns of sugar-sweetened beverages in the United States. J Acad Nutr Diet., 113:43–53.
- Piernas C, Mendez MA, Ng SW, Gordon-Larsen P, Popkin BM (2014). Low-calorie- and caloriesweetened beverages: diet quality, food intake, and purchase patterns of US household consumers. *Am J Clin Nutr.*, 99(3):567-77.
- Malik VS, Popkin BM, Bray GA, Despres JP, Hu, FB (2011). Sugar-sweetened beverages, obesity, type 2 diabetes mellitus, and cardiovascular disease risk. *Circulation*, 121:1356–64.
- Moynihan PJ, Kelly SA (2014). Effect on caries of restricting sugars intake: systematic review to inform WHO guidelines. *J Dent Res.*, 93:8-18.
- Wilder JR, Kaste LM, Handler A, Chapple-McGruder T, Rankin, KM. The association between sugarsweetened beverages and dental caries among thirdgrade students in Georgia. *Journal of Public Health Dentistry*. 2016; 76, 76-84.
- Mourao DM, Bressan J, Campbell WW, Mattes RD (2007). Effects of food form on appetite and energy intake in lean and obese young adults. *International Journal of Obesity*, 31(11), 1688-1695.
- Mattson, ME (2013). Update on emergency department visits involving energy drinks: A continuing public health concern. The CBHSQ Report. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); Accessed August 1, 2019 from: https://www.ncbi.nlm.nih.gov/books/NBK384664/
- Clauson KA, Shields KM, McQueen CE, Persad N (2008). Safety issues associated with commercially available energy drinks. *Journal of the American Pharmacists Association: JAPhA*, 48(3):e55-63; quiz e64-57.
- Harris, JL, et al (2014). Sugary Drink FACTS 2014: Some progress but much room for improvement in marketing to youth. Rudd Center for Food Policy and Obesity. Accessed on August 1, 2019 from https://www.issuelab.org/resources/20556/20556.pdf
- Demissie, Z, Lowry, R, Eaton, DK, Park, S, Kann, L (2013). Electronic media and beverage intake among United States high school students - 2010. *J Nutr Educ Behav.*, 45.6, 756 - 760.
- 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.

The California Department of Public Health, with funding from the United States Department of Agriculture's Supplemental Nutrition Assistance Program – USDA SNAP, produced this material. These institutions are equal opportunity providers and employers. For important nutrition information, visit <u>www.CalFreshHealthyLiving.org</u>. Ver. 02/20