Healthy Eating Research

Building evidence to prevent childhood obesity

Recommendations for Healthier Beverages

March 2013

Introduction

Beverage choices contribute significantly to dietary and caloric intake in the United States. Many Americans drink high-calorie, sugar-sweetened beverages on a regular basis. On any given day, one half of the U.S. population consumes at least one sugary drink, and 25 percent of the population consumes more than one.[1] Soda, sweetened fruit drinks, sports drinks, and energy drinks account for nearly half of all added sugar consumption in the average American diet.[2]

Research has demonstrated a clear link between the consumption of sugar-sweetened beverages and increased risk of poor diet quality, higher rates of obesity and diet-related health problems,[3,4,5] as well as poor oral health.[6] Given that more than two-thirds of U.S. adults and nearly one-third of children are overweight or obese,[7,8] replacing consumption of sugary beverages with healthier options that contain no or low amounts of sugar and calories is a key public health priority.

This document was developed by a national panel of experts convened by *Healthy Eating Research,* a national program of the Robert Wood Johnson Foundation, to address this critical public health issue. The members of the expert panel are listed on page 5.

The beverages included in the recommendations are organized by age group and reflect a range of options. Healthy beverage choices should consist primarily of water; appropriate amounts of unflavored nonfat and low-fat milk, and comparable soy beverages; and 100% fruit or vegetable juice in limited quantities (if provided at all). However, other options, including low-calorie beverages, can help meet calorie goals, prevent excess weight gain, and support weight reduction for certain age groups. The recommended beverages include healthy beverages as well as lower-calorie options. Overall, the recommended options are healthier than the majority of high-calorie beverages that are widely available in the marketplace.

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Age Group	Healthier Beverage Recommendations
Preschool children (Ages 2 to 4)	■ **Water**—With no added sweeteners or carbonation • Require access to free, safe drinking water wherever beverages are served and/or sold ■ **Milk**—Only unflavored, low-fat and nonfat milk, and soy beverages (calcium and vitamin D fortified) in no more than 8-ounce portions ■ **Juice**—0- to 4-ounce portions of 100% fruit or vegetable juice or fruit juice combined with water, no added sweeteners, and no more than 70 mg of sodium per portion **All beverages shall be free of synthetic food dyes, stimulants (e.g., caffeine), and other additives (e.g., electrolytes, artificial flavors).**
Children (Ages 5 to 10)	■ **Water**—Including carbonated water, with no added sweeteners • Require access to free, safe drinking water wherever beverages are served and/or sold ■ **Milk**—Unflavored, low-fat and nonfat milk, and soy beverages (calcium and vitamin D fortified) in no more than 8-ounce portions* ■ **Juice**—0- to 6-ounce portions of 100% fruit or vegetable juice or fruit juice combined with water, no added sweeteners, and no more than 100 mg of sodium per portion **All beverages shall be free of synthetic food dyes, stimulants (e.g., caffeine), and other additives (e.g., electrolytes, artificial flavors).**
Youths (Ages 11 to 13)	■ **Water**—Including carbonated water, with no added sweeteners • Require access to free, safe drinking water wherever beverages are served and/or sold ■ **Milk**—Unflavored, low-fat and nonfat milk, and soy beverages (calcium and vitamin D fortified) in no more than 12-ounce portions* ■ **Juice**—0- to 8-ounce portions of 100% fruit or vegetable juice or fruit juice combined with water, no added sweeteners, and no more than 140 mg of sodium per portion **All beverages shall be free of synthetic food dyes, stimulants (e.g., caffeine), and other additives (e.g., electrolytes, artificial flavors).**
Adolescents (Ages 14 to 18)	■ **Water**—Including carbonated water, with no added caloric sweeteners • Require access to free, safe drinking water wherever beverages are served and/or sold ■ **Milk**—Unflavored, low-fat and nonfat milk, and soy beverages (calcium and vitamin D fortified) in no more than 12-ounce portions* ■ **Juice**—0- to 8-ounce portions of 100% fruit or vegetable juice or fruit juice combined with water, no added caloric sweeteners, and no more than 140 mg of sodium per portion ■ **Other beverages**—Non-caffeinated, non-fortified beverages with no more than 40 calories per container
Adults (Ages 19 and above)	■ **Water**—Including carbonated water, with no added caloric sweeteners • Require access to free, safe drinking water wherever beverages are served and/or sold ■ **Milk**—Low-fat and nonfat milk and soy beverages (calcium and vitamin D fortified) with no more than 130 calories per 8 ounces in no more than 12-ounce portions ■ **Juice**—0- to 8-ounce portions of 100% fruit or vegetable juice or fruit juice combined with water, with no added caloric sweeteners, and no more than 140 mg of sodium per portion ■ **Other beverages**—Low- to mid-calorie beverages with no more than 40 calories per container • Pre-packaged coffee or tea beverages with no more than 40 calories per container; if coffee or tea beverages prepared on site contain milk (e.g., cappuccino, latte, chai), the milk must be low-fat or nonfat with no added caloric sweeteners in no more than 12-ounce portions

* Flavored milk is not recommended; if flavored milk is offered, it should be nonfat or low-fat with no more than 130 calories per 8 ounces. Only unflavored milk is appropriate for young children ages 2 to 4.

Rationale

The 2010 *Dietary Guidelines for Americans* recommend that children, adolescents, and adults limit intake of added sugar generally, and sugar-sweetened beverages in particular, to reduce caloric intake, improve overall diet quality, and promote health.[9] As a result, there has been a proliferation of different standards and recommendations to guide consumers, parents, policy-makers, and the beverage industry about healthier beverage options. The variety and sheer number of different standards may contribute to public confusion about healthy, less healthy, and unhealthy beverage choices.

Healthy Eating Research convened an advisory panel of prominent researchers, nutritionists, and policy experts with expertise in nutrition and obesity prevention to develop a comprehensive set of age-based recommendations defining healthier beverages. The panel reviewed and analyzed current beverage standards, recommendations, and guidelines from scientific bodies, national organizations, public health organizations, and the beverage industry to develop the *Recommendations for Healthier Beverages*.

Key Panel Findings

- **Water**: Water should be available and promoted in all settings where beverages are offered. Water provides a healthy, low-cost, zero-calorie beverage option, and water consumption is associated with a number of health benefits including preventing obesity,[10] reducing dental caries,[11,12] supporting proper hydration, and improving cognitive function.[13,14]

- **Milk**: Milk consumption is critical for the many children and adolescents who do not get adequate amounts of key nutrients, such as calcium, vitamin D, and potassium from other sources. Sugar-sweetened beverage consumption reduces intake of these key nutrients by displacing milk consumption.[15] The 2010 *Dietary Guidelines for Americans* recommend preschool children consume 2 to 2.5 cups of milk and milk products a day and all other age groups consume 3 cups each day; the recommended amounts listed in the table provide guidance for appropriate portion sizes. The panel recommends only unflavored milk as a healthier beverage option for children and adolescents. Although limited evidence suggests that flavored milk increases key nutrient consumption,[16] recent analysis of the contribution of flavored milk to added caloric intake supports the panel's milk recommendation.[17] While not endorsing flavored milk as a healthy beverage, given the wide availability of flavored milk in schools, the panel provided a calorie limit for flavored milk (no more than 130 calories per 8-ounce serving) to help limit calories and added sugar intake.

- **Fruit juice:** 100% fruit juice provides some key nutrients, such as vitamin C, however juice lacks fiber and contributes to excess calorie intake.[18] The 2010 *Dietary Guidelines for Americans* recommend that the majority of fruit consumed should come from whole fruit rather than fruit juice.[19] The panel used this recommendation as a guide in developing the juice recommendations. Daily juice consumption should not exceed the amounts listed in the recommendations for healthier beverages.

- **Non-nutritive sweeteners:** Evidence suggests that when used judiciously, non-nutritive sweeteners could help reduce added sugar intake, and as a result, reduce caloric intake.[20] The panel therefore included a low-calorie beverage category for adolescents and adults based on the Food and Drug Administration definition of a low-calorie food.[21] This beverage category provides adolescents and adults with a wider range of beverage choices consistent with obesity prevention goals.

- **Caffeine:** The panel did not support offering products containing significant amounts of caffeine for school-age children and adolescents due to the safety concerns for this demographic, and the potential for adverse effects, including physical dependency and withdrawal.[22,23,24] In addition, there are currently no specific recommendations for caffeine intake and caffeine content is not required to be disclosed on nutrition labels, at this time, making it difficult to gauge intake. The Food and Drug Administration should consider the addition of caffeine content to future revisions of nutrition labels.

Conclusion

Consumption of sugary beverages is a key contributor to many obesity-related health issues. This document provides information and advice for choosing beverages that support efforts to achieve and maintain a healthy weight. The reduction or elimination of sugar-sweetened beverage consumption has great potential to help Americans reduce caloric intake, improve diet quality, and reduce their risk for obesity. Implementation of the recommendations for healthier beverages across a variety of places and environments, such as child-care and afterschool settings, schools, workplaces, parks, recreational facilities, government property, and hospitals will support these efforts and help improve the health of all Americans.

Glossary

Sugar-sweetened beverages or what are commonly called sugary drinks include all regular sodas, fruit drinks, sport drinks (e.g., fluid or electrolyte replacement beverages), energy drinks, and other beverages that contain added caloric sweeteners, such as sweetened tea and pre-mixed sweetened coffees.

Water consists of still or carbonated water without sweeteners, flavoring, additives (e.g., electrolytes), or stimulants (e.g., caffeine). Carbonated water is not recommended for preschool children ages 2 to 4, but is allowed for all other age groups. Any water beverages (including enhanced waters) that contain additional ingredients, must be considered under the "Other Beverage" category and are not recommended for children and adolescents.

Sweeteners consist of caloric or non-caloric sweeteners. The term sweeteners encompasses both caloric (e.g., sucrose, high fructose corn syrup, honey, evaporated cane juice) and non-caloric (e.g., sucralose, aspartame, PureVia, Erythritol) sweeteners.

Fortified beverages include all beverages with added nutrients, additives, or substances, such as vitamins, minerals, antioxidants, herbal ingredients, and caffeine.

Synthetic food dyes/color additives are defined by the Food and Drug Administration as any dye, pigment, or other substance not derived from natural sources, such as vegetables, minerals, or animals, that can impart color to a food.

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Endnotes

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