

# Sugary Drinks: A Big Problem for Little Kids

## Sugary Drinks & Obesity in Young Children

Increasingly, the obesity epidemic in children is pointing to sugary drinks as a prime source of added calories. Young children are consuming far more calories from sugar-sweetened beverages now than they did 30 years ago,<sup>1</sup> and the consumption of these sugary drinks is strongly correlated with weight gain.<sup>2</sup> These beverages are full of empty calories in the form of added sugars and provide little to no essential nutrients. They are linked not only to weight gain,<sup>3,4</sup> but also to poor diets,<sup>5,6,7</sup> poor health and tooth decay in children.<sup>8</sup>

Beverage choices matter from birth. For optimal health and growth, there is no better food than breast milk for a baby's first six months of life,<sup>9</sup> then continuing as long as mother and child desire, according to American Academy of Pediatrics.<sup>10</sup> Plain water and—unless advised otherwise by a pediatrician—low-fat (1 percent) or nonfat milk are the most appropriate beverages for healthy children older than 2.

The annual cost (overweight and obesity) to California families, employers, the health care industry and the government is estimated to be \$21 billion.<sup>11</sup> Changing behaviors around sugary drinks requires more than public education about their harmful effects. Powerful forces, including popular culture, local conditions and heavy corporate advertising, drive parents, caregivers and children to continue these unhealthy habits. Strong public policies can support parents and caregivers by providing environmental changes that assist the development of healthier eating habits in children and reduce the health costs to the public at large. Policy changes affecting nutrition and menu labeling, vending machine choices, as well as public meeting, school district and child care beverage standards, have moved us in the right direction. More needs to be done at the policy level to stem this epidemic.



## WHAT IS A SUGARY DRINK?

In this policy brief, a sugary drink is defined as any beverage that has added calories from sweeteners — referred to as “added caloric sweeteners” or “added sugars.” All such sweeteners are considered to be sugar or sugars, regardless of manufacturers’ efforts to disguise them with complicated or atypical terms. Common sugary drinks are regular (non-diet) sodas, sports drinks, bottled teas, fruit-flavored drinks, juice cocktails, vitamin-fortified juice drinks, vitamin waters and energy drinks. (Beverages labeled as “juice drink,” “juice beverage” or “juice cocktail” are not 100 percent fruit juice and typically contain added caloric sweeteners.)

### Identifying Added Caloric Sweeteners and Sugars

Added caloric sweeteners, or added sugars, are listed under the ingredients on product labels under many different names, but they are all comparable in that they only contribute extra calories, not extra nutrition. Common names of added sugars include, but are not limited to, sucrose, dextrose, evaporated cane juice, cane sugar, high-fructose corn syrup, corn syrup, beet sugar, malt syrup, rice syrup, honey, fructose and crystalline fructose.

Consumers may mistakenly believe that if an added caloric sweetener has the word “natural” or “organic” in its name, it is a healthier sweetener and, therefore, beneficial to the body. However, “natural” and “organic” caloric sweeteners behave identically in the body to table sugar and simply contribute unnecessary calories. “All-natural evaporated cane juice” and “high fructose corn syrup” both have approximately four calories per gram in the form of sugars despite their very different names.

Many consumers also incorrectly believe that if a beverage doesn't have bubbles, it is a more healthy choice. However, carbonation is not the key offender in these drinks: added sugar content is.

## Are Fruit Drinks and Juices Better Choices?

Fruit-flavored drinks are generally sweetened with added sugar and contain little or no real fruit juice — making them a poor nutritional choice for children. One hundred percent fruit juices do not contain added sugars and offer most of the nutrients found in whole fruit. However, because 100 percent fruit juices are concentrated in naturally occurring fruit sugars, and therefore calories, they should be limited in young children's diets.

Infants under 6 months old should not be provided juice at all. From 6 months to 6 years of age, a child's intake of fruit juice should be limited to four to six ounces per day, served from a cup, not a bottle. If children do drink fruit juice, parents and caregivers should ensure they are providing 100 percent fruit juice with *no* added sugars.<sup>12</sup> Juice diluted with water is recommended by many pediatricians.

## Flavored Milk: To Drink or Not to Drink?

Most flavored milks contain at least double the sugar of plain milk. One cup of flavored milk provides the daily maximum amount of added sugar per serving that the

American Heart Association recommends for children. Both plain and sugar-sweetened flavored milks provide ample calcium, vitamin D, and other essential nutrients for children. A question arises as to whether the trade-off of children obtaining essential nutrients contained in flavored milk is worth having them also consume the added sugars.

To understand the possible nutritional implications of plain versus flavored milk, it is helpful to compare sugar content. An 8-ounce (1 cup) serving of plain, unflavored dairy milk contains about 12 grams of the naturally occurring milk sugar, lactose. Chocolate, strawberry and other flavored milks commonly are sweetened with 12 to 18 grams of added sugars per 8-ounce serving, the equivalent of 3 to 4½ teaspoons. Given that the American Heart Association recommends no more than three teaspoons of added sugars per day for children, just one 8-ounce serving of most flavored milks meets or exceeds that recommendation.

Flavored milks are often sold in 16-ounce bottles, which is two servings. If a child drinks a 16-ounce bottle of flavored milk in one day, she doubles her intake of added sugars, far exceeding the maximum recommended limit.

## Plain Milk versus Sugar-Sweetened Flavored Milks

Milk Type	Plain Low Fat (1 percent) Milk	Nestle Nesquik Chocolate Low Fat Milk	Nestle Nesquik Strawberry Low Fat Milk
Typical container size in fluid ounces	8 oz	16 oz	16 oz
Grams/Calories of added sugar per container	0 g/0 cal	32 g/128 cal	36 g/144 cal
Teaspoons of added sugar per container	0 t	8 t	9 t
Number of times more added sugar than recommended for a child	0x	2.7x	3x



Three recent developments reflect greater attention to how flavored milk can add excess sugar to children's diets. First, in 2010, California enacted AB 2084, which sets beverage standards for all licensed child care providers. Providers will not be allowed to serve flavored milk to children in care, effective January 2012. Second, the Institute of Medicine recently recommended changes to the federal nutrition program serving child care settings, the Child and Adult Care Food Program. Among the recommended changes was one prohibiting flavored milk from being served in child care. The third relevant development is the decision of Los Angeles Unified School District in June 2011 to join 40 other school districts in eliminating flavored milk from its breakfast and lunch programs, beginning in September 2011.

## Recommendations for Added Sugar for Kids

The American Heart Association recommends children consume no more than 3 teaspoons of added sugars (not including naturally occurring sugars in whole foods such as fruit and plain milk) – about 50 calories – a day. Typical container sizes of popular sugary drinks marketed to children far exceed this recommendation.

## CONSEQUENCES OF INCREASED CONSUMPTION

### Sugary Drinks Are Bad for Children's Health – and the Health of California's Economy

There is ample evidence that when children consume sugary drinks, they are at greater risk for being overweight or obese and suffering from the consequences of this added weight.

#### Sugary Drinks Increase Overweight and Obesity

Preschoolers who are at risk of being overweight further increase their risk of obesity when they habitually consume sugary drinks. **For each additional sugary drink a child consumes per day, his or her risk of obesity increases by an astonishing 60 percent.**<sup>13</sup> Children who are already overweight are more likely to remain overweight if they drink sugary drinks every day.<sup>14</sup> The connection between drinking sugary drinks and gaining excess weight is amplified by the fact that liquid calories are not as satisfying as calories from solid food. Research has shown that when we intake calories from a sugary drink, we do not fully compensate for those calories by eating less at the next meal, as we would if those same calories had come from solid food. Consequently, calories from these beverages tend to be “extra” calories that lead to higher total caloric intake and therefore weight gain.<sup>15 16</sup>

#### Obesity Presents Numerous Health Risks to Children

Childhood obesity is strongly associated with grave health risks. Like adults, obese children are more likely to have high cholesterol, high blood pressure<sup>17</sup> and type 2 diabetes<sup>18</sup> — all of which increase their risk for cardiovascular disease.

Obese children also suffer more often from sleep apnea, asthma,<sup>19,20</sup> joint problems,<sup>21,22</sup> fatty liver, gallstones and acid reflux (heartburn).<sup>23, 24</sup> Obese children are more likely to become obese adults,<sup>25</sup> further increasing their risks for higher rates of type 2 diabetes, heart disease, and some cancers<sup>26</sup> later in life. Profound mental health and quality of life impacts are seen in children with severe obesity.

#### Childhood Obesity by the Numbers

Nationwide, obesity rates have more than doubled in children ages 2 to 5 since the 1980s, when those rates were just 5 percent. Today, 10.4 percent of the nation's young children are considered obese.<sup>27</sup> In California, 10.5 percent of children ages 2 to 5 are overweight for their age.<sup>28</sup> Lower-income children under 5 are even more likely to be overweight. Among these children, 17 percent are considered obese, up from 14.6 percent in 1995.<sup>29</sup>






#### Childhood Overweight and Obesity Defined

Body mass index (BMI) is a measure calculated using a child's weight and height to determine childhood overweight and obesity. BMI does not measure body fat directly, but it is a reasonable indicator of body fatness for most children. The 2000 CDC Growth Charts for children more than 2 two years old provide these definitions:

**Overweight** is defined as a BMI at or above the 85th percentile and lower than the 95th percentile for children of the same age and sex.

**Obesity** is defined as a BMI at or above the 95th percentile for children of the same age and sex.

### Added Sugars in Popular Drinks Far Exceed Recommended Amounts for Children

Beverage	Arizona Green Tea with Ginseng and Honey - Extra Sweet 	Capri Sun Mountain Cooler 	Coke Classic 	Snapple Grape Berry Punch 	Sunny D Tangy Original 
Typical Container Size in fluid ounces	23.5 oz	6.75 oz	20 oz	16 oz	16 oz
Grams/Calories* of Added Sugar Per Container	68 g/270 cal	16 g/64 cal	65 g/240 cal	108 g/420 cal	28 g/112 cal
Total Teaspoons of Added Sugar Per Container	17.25 t	4 t	16.25 t	27 t	7 t
Number of times more added sugar than recommended for a child/day	5.8x	1.3x	5.4x	9x	2.3x

\* Added sugars in beverages are carbohydrates. All carbohydrates have four calories per gram. A teaspoon of sugar contains approximately 4 grams, or about 16 calories.





## **The Empty Calories of Sugary Drinks Affect Growth and Development**

High in calories, sugary drinks contribute little more than excess sugar to a child's diet without the essential nutrients he needs to grow. These drinks crowd out nutrient-rich beverages, particularly milk, which is a good source of protein and rich in the calcium and vitamin D needed for crucial bone development. In the 1970s, children drank nearly three times more milk than sugar sweetened drinks. Today, they consume these beverages in equal amounts.<sup>30</sup>

Children who substitute sugary drinks for more nutritious choices may not receive enough essential nutrients, such as iron, folate and vitamin A,<sup>31</sup> which can leave them vulnerable to malnutrition and at risk for nutrient deficiencies.

## **Little Kids Are Drinking Too Many Sugary Drinks**

Children are consuming nearly twice as many calories from sugary drinks today than they did 30 years ago.<sup>32</sup> Sugary drinks now represent the biggest source of added sugar in children's diets.<sup>33</sup> Of particular concern are consumption patterns for the youngest children — toddlers to preschoolers. A national random sample found that 44 percent of toddlers 1 ½ to 2 years old consume a sugary drink on any given day.<sup>34</sup> Alarmingly, that proportion grows to 70 percent of 2- to 5-year-olds consuming a sugary drink on a typical day.<sup>35</sup> Fewer than half of the sugary drinks consumed by toddlers are carbonated,<sup>36</sup> indicating that caregivers may be unaware that carbonated sugary drinks and non-carbonated sugary drinks are similarly detrimental to children's health because of their high added sugar content. The L.A. County Health Survey found that 28.6 percent of children 5 and under consumed one or more sodas or sweetened drinks (such as Gatorade, Red Bull or Sunny Delight) per day. This percent grows to roughly 50 percent for African American and Latino children of the same age.<sup>37</sup>

## **Sugary Drinks, Cavities and Tooth Erosion**

Sugary drinks are bad news for teeth. Sugar is a known cause of cavities, providing "food" for bacteria that promote tooth decay. Moreover, the acidity in carbon-

ated drinks exacerbates the problem, as it can cause erosion of tooth enamel after as little as one sip.<sup>38</sup> Tooth decay is the most common chronic childhood illness in the United States, five times more prevalent than asthma.<sup>39</sup> California's 874,000 missed school days due to dental problems in 2007 translates to a statewide average loss of nearly \$30 million in attendance-based school district funding.<sup>40</sup> The prevalence of dental caries in the baby teeth for youths from 2 to 5 years old continues to increase.<sup>41</sup> The current standard of care for treatment of severe early childhood caries usually necessitates general anesthesia with all of its potential complications. The estimated cost for facilities and general anesthesia, excluding dental services, for the treatment of a child with early childhood caries at the University of California, San Francisco is between \$3,700 and \$4,700.<sup>42</sup>

## **The Economic Loss**

The annual cost (overweight and obesity) to California families, employers, the health care industry and the government is estimated to be \$21 billion.<sup>43</sup> This includes \$6 billion in costs in Los Angeles County alone.<sup>44</sup> Because obese children are likely to continue to be obese into adulthood, the childhood obesity trend translates to tremendous public health care costs.

## **THE POWER OF MARKETING AND ACCESS**

What we drink is shaped by the beverages that are available, promoted and sold in our surrounding environment. Soda companies make sure their products are within reach of most Californians at all times of day, and market their drinks everywhere.

This kind of accessibility is partially responsible for Americans consuming more than twice as many calories from sugary drinks than they did 30 years ago. And certainly, the ever-expanding container size sugary drinks are sold in is also to blame. Soda companies have more than doubled the size of the standard drink container, from 8 to 20 ounces (with fast-food restaurants, movie theaters, and stadiums typically selling 32-ounce cups with free refills). It is no wonder that sugary drinks have been such a huge part of the obesity epidemic.

Children are especially targeted in the industry's drive to gain new sugary drink customers. Soda companies spend \$500 million a year,<sup>45</sup> including fees to highly trained psychologists and marketing experts, to promote their products to children. They market their products on websites popular with children and send text messages directly to children's phones.<sup>46</sup> Parents barely have a chance to be heard above the marketing din and are themselves vulnerable to promotional tactics.

Marketers exploit these human vulnerabilities by tapping into what research has shown are the hard-wired automatic decision-making processes<sup>47</sup> that cause our instinctive attraction to foods high in calories.<sup>48</sup> Placing

sugary drinks prominently and abundantly in stores so that consumers can't avoid seeing them, leads to such unconscious decision-making. It is difficult to override multiple cues that overwhelm shoppers with more information than is possible to process quickly and efficiently.<sup>49</sup>

Marketers also delude consumers with images of colorful fruit or attractive athletes on labels, leading them to believe the product is healthful and rich in nutrients the body needs when in reality, the opposite is true.

Making matters worse, the cost of sugary drinks is deceptively low, giving a false impression to the consumer that the product is a bargain. In reality, the long-term health consequences of consuming the product regularly are quite costly.

### TURNING THE TIDE: WE MUST START EARLY!

Learned habits start early and are difficult to undo as children grow. Habits that contribute to excess weight gain, such as consuming sugary drinks, can set a child up for a potential lifelong struggle with excess body weight and the health problems that can come with it.<sup>50</sup>

The benefits of reducing sugary drink consumption in childhood are significant. They include lowering BMI, reducing the risk of obesity and improving dietary intake — all of which reduce the risk of diabetes and other health effects of overweight and obesity.<sup>51, 52, 53</sup>

### Diet Drinks: Not a Panacea for Obesity

While no studies have been published on children's consumption of diet drinks (sodas, teas, etc. that are artificially sweetened), one study shows that obese adults who consume diet soda have a 41 percent increase in risk of being overweight for every can or bottle of diet soft drink a person consumes each day.

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### Reducing Sugary Drinks Means Reducing Weight

Sugary drink intake at age 5 is associated with higher body fat, larger waist circumference, and heavier weight from ages 5 to 15.<sup>54</sup> Randomized controlled trials in children found that reducing consumption of sugary drinks leads to reductions in weight.<sup>55, 56</sup>

### Role of Government in Improving Community Environments

*"It is unreasonable to expect that people will change their behavior easily when so many forces in the social, cultural, and physical environment conspire against such change."* — The Institute of Medicine

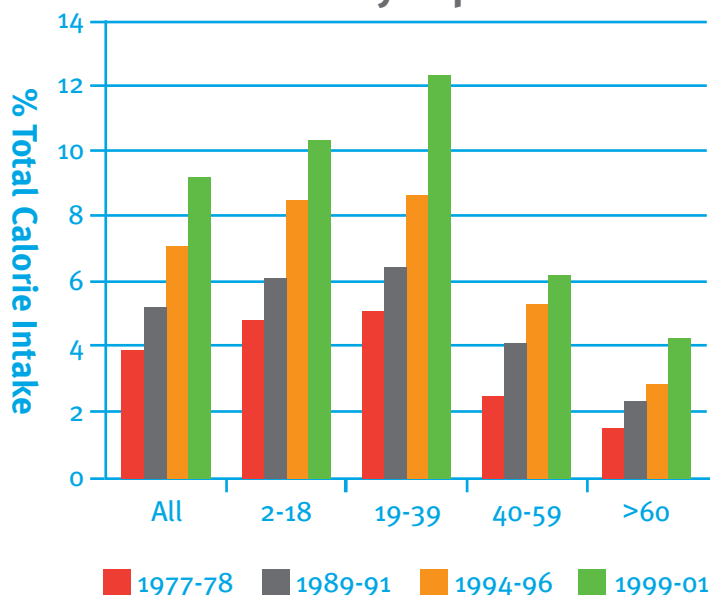
It is difficult for people to maintain healthful lifestyles if public policies are not in place to support their ability to consistently engage in healthful behaviors. Solutions to the obesity epidemic therefore must include public policies that assure healthful choices are the easiest choices.

With strong policies that promote healthy eating, we can change the environment in a way that not only discourages unhealthy behaviors, but also provides incentives to choose healthier food and drinks. Policy makers, planners and senior management responsible for government agencies, such as parks and recreation officials, have an important role in protecting the public's health. Government staff and officials can develop, adopt and implement policies that reform the food and beverage environment. Early childhood educators also play an important role by implementing policy change at their local sites, and educating children and families about healthy choices such as the importance of choosing water and milk over sugary drinks.

Because obese children are likely to continue to be obese into adulthood, incurring the health care costs discussed earlier, the state has a great interest in interrupting this cycle. The high prevalence of childhood obesity — coupled with its direct link to consuming sugary drinks — calls for public policy reform at the local, state and federal levels to decrease access to sugary drinks, increase access to healthier beverages and increase awareness of the risk factors associated with frequent sugary drink consumption beginning in infancy.

Parents cannot shoulder the sole responsibility to moderate and decrease their children's consumption of sugary drinks. The fact that there are many environmental factors influencing children's desire for these beverages calls for environmental changes at the policy level.

### Sweetened beverage intake nearly tripled



# POLICY RECOMMENDATIONS

The following policy recommendations support decreased access to sugary drinks for children while improving access to healthful food and beverages. They pertain to early childhood agencies as well as federal, state and local governments.

## **First 5 LA's central recommendation is to institute taxes on added sugar in beverages.**

A minimum of a penny per ounce excise tax that creates a dedicated revenue stream for prevention and treatment of childhood overweight and obesity has the twin benefits of reducing consumption while providing resources to address the damage done by harmful beverages.

Other groups that endorse taxation as an effective approach to this problem include the American Academy of Pediatrics and the U.S. Conference of Mayors. Reports from the Bipartisan Policy Center, Brookings Institution, the Institute of Medicine, the Urban Institute and Children Now, among others, also recommend this strategy.<sup>57</sup>

Additional policy recommendations below complement the taxation approach. They are intended to strengthen and empower public education and behavior change strategies.

*"At least 30 cities and states have considered taxes on soda or all sugar-sweetened beverages, and they're a logical target: of the 278 additional calories Americans on average consumed per day between 1977 and 2001, more than 40 percent came from soda, "fruit" drinks, mixes like Kool-Aid and Crystal Light, and beverages like Red Bull, Gatorade and dubious offerings like Vitamin Water, which contains half as much sugar as Coke.*

*Some states already have taxes on soda — mostly low, ineffective sales taxes paid at the register. The current talk is of excise taxes, levied before purchase," wrote Mark Bittman on the Opinion Page of The New York Times on July 24, 2011. His op-ed continues, "Much of the research on beverage taxes comes from the Rudd Center for Food Policy and Obesity at Yale. Its projections indicate that taxes become significant at the equivalent of about a penny an ounce, a level at which three very good things should begin to happen: the consumption of sugar-sweetened beverages should decrease, as should the incidence of disease and therefore public health costs; and money could be raised for other uses."*

## Federal Government

- Protect and enhance funding for food and nutrition programs including the Women, Infant and Children's Program (WIC) and the Child and Adult Care Food Program (CACFP).
- Protect and enhance funding for the Special Nutritional Assistance Program (SNAP), which allows low-income parents to make the healthier (and often more expensive) beverage choices for their children.
- Protect and enhance funding and regulations to support breastfeeding.
- Urge the United States Department of Agriculture (USDA) to implement the Institute of Medicine's recommendations to align the CACFP with the 2010 Dietary Guidelines for Americans. Specifically, implement the provision that states that beverages with added sweeteners, natural or artificial, may not be served or made available in child care settings that receive CACFP reimbursement.
- Urge the Interagency Working Group (the Federal Trade Commission, Centers for Disease Control and Prevention, Food and Drug Administration or the USDA) to report to Congress as soon as possible its guidelines on food marketed to children to Congress as soon as possible.
- Implement guidelines to eliminate advertising of sugary drinks and other nutrient-poor foods to young children. Also, eliminate the inclusion of healthy images such as fruits and vegetables, or cartoon characters and other characters appealing to young children, on product packaging of sugary drinks.
- Urge the development of guidelines for fast food restaurants to promote water as an option and make water more accessible to patrons.
- Urge fast food restaurants to voluntarily reduce the standard and maximum serving sizes for sugary beverages.



## State Government

- Establish a state excise tax of a minimum of one penny per ounce on sugary drinks, designated to fund programs to prevent and treat the childhood overweight and obesity.
- Eliminate the sale and serving of sugary drinks at state-funded programs and events, especially those frequented by children (e.g. preschool programs, after-school programs and parks and recreation facilities). Ensure access to free drinking water at state events and in state parks.
- Eliminate sugar sweetened beverage product sponsorships or advertising at state events, sports leagues, facilities and programs.
- Provide adequate resources and direction to the California Department of Social Services to fully implement AB 2084.
- Request that the California Restaurant Association develop, implement and monitor voluntary guidelines to reduce the provision of sugar-sweetened beverages to young children, such as discontinuing soda from happy meals.
- Support public awareness campaigns to educate the public about the health benefits, safety, cost savings, and positive environmental impact, of drinking tap water rather than sugary drinks and water sold in cans and bottles.
- Eliminate the sale of sugary drinks in vending machines in property owned or leased by the state.

## Cities and Counties

- Establish local excise taxes of a minimum of one penny per ounce, where permissible, on sugary drinks, designated to fund programs to prevent and treat childhood obesity.
- Notify all grantees, contractors and community partners about the provisions of AB 2084 (see below).
- Eliminate sugary drinks from being sold or provided at city- and county-sponsored programs or events, especially those attended by children (e.g. preschool programs, after-school programs, parks and recreation facilities). Ensure sufficient access to clean, free drinking water in public parks, increasing points of access when feasible.
- Include nutrition standards for beverages as a condition of contracts with outside organizations when applicable. Eliminate sugary drinks in vending machines in government-owned or government-leased property, with special consideration placed on child-oriented facilities.
- Eliminate sugar-sweetened beverage product sponsorships or advertising at city and county events, sports leagues, facilities and programs. Ensure ac-

cess to clean, free drinking water at city- and county-sponsored events when beverages are provided or sold.

- Encourage food retailers to remove sugary drinks at checkout lanes.

## Early Childhood Education Agencies

- Implement the provisions of California Assembly Bill AB 2084, legislation passed in 2010, that set the following nutrition standards for beverages served in early childhood programs:
- Serve only 1 percent or nonfat milk to children 2 and older.
- Limit juice to no more than one serving of 100 percent fruit juice per day.
- Serve no beverages with added sweeteners, natural or artificial.
- Ensure water is available throughout the day (especially at meal and snack times).
- Provide training and materials on AB 2084 provisions, such as how to identify non-fat and 1 percent milk in the store and how to read food labels. Provide education on regarding the health and economic benefits of water—preferably tap water — and non-fat or 1 percent milk.
- Encourage and support child care providers to participate in the Federal Child and Adult Care Food Program (CACFP) in order to receive federal and state reimbursements as well as sustain consistent meal patterns and nutrition standards.
- Coordinate education efforts with the Women Infants and Children's Program (WIC)
- Encourage providers to offer parents and children information regarding the detrimental effects of sugary drinks have on children's diets.



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