

**Juice Board – Week 7**  
**Activity Description**  
**What Has More Sugar?**

**Materials**

Week 7 display board

**Juice Drink**

Hi-C Flashin Fruit Punch – juice drink juice box  
6.75 fl.oz 24 grams of sugar  
6 sugar packets – 6 teaspoons of sugar

**Soda**

Coca-Cola 90 calories per can  
7.5 fl.oz 25 grams of sugar  
6 sugar packets –6 teaspoons of sugar

**100% Juice**

Juicy Juice or Mott's 100% juice box  
6.75 fl oz 24 grams of sugar  
6 sugar packets – 6 teaspoons of sugar

**Domino sugar packets –18 are needed for activity; pack at least 30 so there are more than are needed for distribution**

Reinforcers – Sugar scrub

Basket/container for reinforcers

Raffle box

Raffle slips

Parent handouts

Evaluation form

Table for supporting board (folding table)

Raffle prize to give away for current week – Fruit basket (mangos, oranges, apples)

Raffle prize for following week – Set of Pyrex measuring cups – FOR DISPLAY ONLY

Raffle prize winner's name

**Target Audience**

Parents of Pre – School Children

**Table/Board Set Up**

Place board on folding table

Place raffle box, pens/pencils, and raffle slips on table

Place parent handouts on table

Place all activity materials on table

Place raffle prize and raffle winner's name on table  
Place raffle prize for following week on table (If there is space)

**Activity: Parent will learn that 100% juice, juice drinks, and soda all contain the same amount of sugar.**

1. The student will set the four beverages on the table and have several sugar packets available.
2. The student will greet the parent and ask him/her if they want to enter their name in the weekly raffle or receive a giveaway.
3. If parent says yes, engage him/her in the activity (following). If parent says no, say thank you, provide them with a parent handout and let parent go on his/her way.
4. The student will ask the parent to identify how many sugar packets he/she would add to a cup of tea or coffee. The student will record the parents answer on the evaluation form provided.
5. The student will then ask the parent to place the amount of sugar packets he/she believes is in each beverage and record the information on the evaluation sheet.
6. The student will then inform the parent that each drink has approximately the same amount of sugar and that if he/she wishes to reduce their child's sugar intake, he/she should reduce the amount of sweetened drinks that his/her child is consuming. Water is a good alternative to drink rather than drinking 100% juice or other sweetened beverages.
7. The student will hand the parent a reinforcer (sugar scrub and body lotion) and the parent handout.
8. The student will have the parent fill out their name on the raffle slip and drop it in the raffle box.
9. The student will thank the parent for his/her time.

**Reinforcer**

Sugar scrub and body lotion

**Raffle Prize To Give Away This Week**

Fruit basket (mangos, oranges, apples or other assortment of seasonal fruit)

**Take-Home Message**

Juice drinks, 100% juice and soda often have about the same amount of sugar

**Student Talking Points**

- Juice drink, 100% fruit juices, and regular (non-diet) soda all contain sugar.
- In the display board example using Hi-C Juice drink, Coke and 100% Juice Juicy Juice: these all contain about the same amount of sugar – 6 packets per item.
- Use the Nutrient label to help participants find the following:

- Number of servings per package
- Serving size in ounces
- Number of grams of sugar per serving
- % juice in the beverage – if applicable

Using the ingredients list help identify if there is any added sugar and what other ingredients are contained in the beverage.

- The labels of some fruit punches or juice drinks may read: 100% vitamin C, however do not be misled by the label. Food manufactures want to make these sugar-sweetened beverages seem essential for good health, when in fact they are nothing more than different forms of sugar water.
- Not all the good nutrient found in fruits make it to the juice. There is very little if any fiber in juice and some of the vitamins (like Vitamin C) are destroyed during processing - pasturization. So, although juice is more nutritious than most other beverages in the market (juice drinks and sodas), we should be aware that any time we process fresh whole food, something is lost. Then the better option is the fresh fruit.



# AMERICAN ACADEMY OF PEDIATRICS

## POLICY STATEMENT

Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of All Children

Committee on School Health

### Soft Drinks in Schools

**ABSTRACT.** This statement is intended to inform pediatricians and other health care professionals, parents, superintendents, and school board members about nutritional concerns regarding soft drink consumption in schools. Potential health problems associated with high intake of sweetened drinks are 1) overweight or obesity attributable to additional calories in the diet; 2) displacement of milk consumption, resulting in calcium deficiency with an attendant risk of osteoporosis and fractures; and 3) dental caries and potential enamel erosion. Contracts with school districts for exclusive soft drink rights encourage consumption directly and indirectly. School officials and parents need to become well informed about the health implications of vended drinks in school before making a decision about student access to them. A clearly defined, district-wide policy that restricts the sale of soft drinks will safeguard against health problems as a result of overconsumption.

#### BACKGROUND AND INFORMATION

##### Overweight

Overweight is now the most common medical condition of childhood, with the prevalence having doubled over the past 20 years. Nearly 1 of every 3 children is at risk of overweight (defined as body mass index [BMI] between the 85th and 95th percentiles for age and sex), and 1 of every 6 is overweight (defined as BMI at or above the 95th percentile).<sup>1</sup> Complications of the obesity epidemic include high cholesterol, high blood pressure, type 2 diabetes mellitus, coronary plaque formation, and serious psychosocial implications.<sup>2-6</sup> Annually, obesity-related diseases in adults and children account for more than 300 000 deaths and more than \$100 billion per year in treatment costs.<sup>7-9</sup>

##### Soft Drinks and Fruit Drinks

In the United States, children's daily food selections are excessively high in discretionary, or added, fat and sugar.<sup>10-15</sup> This category of fats and sugars accounts for 40% of children's daily energy intake.<sup>10</sup> Soft drink consumers have a higher daily energy intake than nonconsumers at all ages.<sup>16</sup> Sweetened drinks (fruitades, fruit drinks, soft drinks, etc) constitute the primary source of added sugar in the daily diet of children.<sup>17</sup> High-fructose corn syrup, the principle nutrient in sweetened drinks, is not a problem

food when consumed in smaller amounts, but each 12-oz serving of a carbonated, sweetened soft drink contains the equivalent of 10 teaspoons of sugar and 150 kcal. Soft drink consumption increased by 300% in 20 years,<sup>12</sup> and serving sizes have increased from 6.5 oz in the 1950s to 12 oz in the 1960s and 20 oz by the late 1990s. Between 56% and 85% of children in school consume at least 1 soft drink daily, with the highest amounts ingested by adolescent males. Of this group, 20% consume 4 or more servings daily.<sup>16</sup>

Each 12-oz sugared soft drink consumed daily has been associated with a 0.18-point increase in a child's BMI and a 60% increase in risk of obesity, associations not found with "diet" (sugar-free) soft drinks.<sup>18</sup> Sugar-free soft drinks constitute only 14% of the adolescent soft drink market.<sup>19</sup> Sweetened drinks are associated with obesity, probably because overconsumption is a particular problem when energy is ingested in liquid form<sup>20</sup> and because these drinks represent energy added to, not displacing, other dietary intake.<sup>21-23</sup> In addition to the caloric load, soft drinks pose a risk of dental caries because of their high sugar content and enamel erosion because of their acidity.<sup>24</sup>

##### Calcium

Milk consumption decreases as soft drinks become a favorite choice for children, a transition that occurs between the third and eighth grades.<sup>12,15</sup> Milk is the principle source of calcium in the typical American diet.<sup>11</sup> Dairy products contain substantial amounts of several nutrients, including 72% of calcium, 32% of phosphorus, 26% of riboflavin, 22% of vitamin B<sub>12</sub>, 19% of protein, and 15% of vitamin A in the US food supply.<sup>25</sup> The percent daily value for milk is considered either "good" or "excellent" for 9 essential nutrients depending on age and gender. Intake of protein and micronutrients is decreased in diets low in dairy products.<sup>19,26</sup> The resulting diminished calcium intake jeopardizes the accrual of maximal peak bone mass at a critical time in life, adolescence.<sup>27</sup> Nearly 100% of the calcium in the body resides in bone.<sup>27</sup> Nearly 40% of peak bone mass is accumulated during adolescence. Studies suggest that a 5% to 10% deficit in peak bone mass may result in a 50% greater lifetime prevalence of hip fracture,<sup>28</sup> a problem certain to worsen if steps are not taken to improve calcium intake among adolescents.<sup>29</sup>

## STATEMENT OF PROBLEM

Soft drinks and fruit drinks are sold in vending machines, in school stores, at school sporting events, and at school fund drives. "Exclusive pouring rights" contracts, in which the school agrees to promote one brand exclusively in exchange for money, are being signed in an increasing number of school districts across the country,<sup>30</sup> often with bonus incentives tied to sales.<sup>31</sup> Although they are a new phenomenon, such contracts already have provided schools with more than \$200 million in unrestricted revenue.

Some superintendents, school board members, and principals claim that the financial gain from soft drink contracts is an unquestioned "win" for students, schools, communities, and taxpayers.<sup>31,32</sup> Parents and school authorities generally are uninformed about the potential risk to the health of their children that may be associated with the unrestricted consumption of soft drinks. The decision regarding which foods will be sold in schools more often is made by school district business officers alone rather than with input from local health care professionals.

Subsidized school lunch programs are associated with a high intake of dietary protein, complex carbohydrates, dairy products, fruits, and vegetables.<sup>16</sup> The US Department of Agriculture, which oversees the National School Lunch Program, is concerned that foods with high sugar content (especially foods of minimal nutritional value, such as soft drinks) are displacing nutrients within the school lunch program, and there is evidence to support this.<sup>26</sup>

There are precedents for using optimal nutrition standards to create a model district-wide school nutrition policy,<sup>33</sup> but this is not yet a routine practice in most states. The discussion engendered by the creation of such a policy would be an important first step in establishing an ideal nutritional environment for students.

## RECOMMENDATIONS

1. Pediatricians should work to eliminate sweetened drinks in schools. This entails educating school authorities, patients, and patients' parents about the health ramifications of soft drink consumption. Offerings such as real fruit and vegetable juices, water, and low-fat white or flavored milk provide students at all grade levels with healthful alternatives. Pediatricians should emphasize the notion that every school in every district shares a responsibility for the nutritional health of its student body.
2. Pediatricians should advocate for the creation of a school nutrition advisory council comprising parents, community and school officials, food service representatives, physicians, school nurses, dietitians, dentists, and other health care professionals. This group could be one component of a school district's health advisory council. Pediatricians should ensure that the health and nutritional interests of students form the foundation of nutritional policies in schools.

3. School districts should invite public discussion before making any decision to create a vended food or drink contract.
4. If a school district already has a soft drink contract in place, it should be tempered such that it does not promote overconsumption by students.
  - Soft drinks should not be sold as part of or in competition with the school lunch program, as stated in regulations of the US Department of Agriculture.<sup>34</sup>
  - Vending machines should not be placed within the cafeteria space where lunch is sold. Their location in the school should be chosen by the school district, not the vending company.
  - Vending machines with foods of minimal nutritional value, including soft drinks, should be turned off during lunch hours and ideally during school hours.
  - Vended soft drinks and fruit-flavored drinks should be eliminated in all elementary schools.
  - Incentives based on the amount of soft drinks sold per student should not be included as part of exclusive contracts.
  - Within the contract, the number of machines vending sweetened drinks should be limited. Schools should insist that the alternative beverages listed in recommendation 1 be provided in preference over sweetened drinks in school vending machines.
  - Schools should preferentially vend drinks that are sugar-free or low in sugar to lessen the risk of overweight.
5. Consumption or advertising of sweetened soft drinks within the classroom should be eliminated.

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Web address:

<http://www.sciencedaily.com/releases/2009/04/090406192350.htm>

## Week 7

# Substituting Water For Sugar-Sweetened Beverages Can Reduce Excess Calorie Consumption

ScienceDaily (Apr. 7, 2009) — Replacing consumption of sugar-sweetened beverages (SSBs) with water could eliminate an average of 235 excess calories per day among children and adolescents, according to a study published in the April 2009 *Archives of Pediatrics & Adolescent Medicine*.

The study's authors conclude that such a replacement would be a simple and effective way to reduce excess intake of calories causing childhood overweight and obesity, as well as address dental cavities and other health problems associated with added sugar. And they predict no detrimental effects on nutrition.

"The evidence is now clear that replacing these 'liquid calories' with calorie-free beverage alternatives both at home and in schools represents a key strategy to eliminate excess calories and prevent childhood obesity," said Y. Claire Wang, MD, ScD, assistant professor of Health Policy and Management at Columbia University Mailman School of Public Health and the study's lead author.

Dr. Wang and colleagues analyzed what children and teens reported they ate and drank on two different days, using nationally representative data from the 2003-2004 National Health and Nutrition Examination Survey. They then estimated the impact of substituting water for SSBs on the total energy intake of youths ages two to 19.

No data suggest that youths increase their consumption of other foods and beverages to compensate for drinking fewer SSBs, and so every can of soda or fruit drink that is replaced by water means a net reduction of calories. Almost 90 percent of U.S. children and adolescents currently consume SSBs on any given day, including soda, fruit drinks, punches, sports drinks and sweetened tea, and the calories contained in these drinks can represent more than 10 percent of their total daily intake. There is growing evidence that sugar-sweetened beverage consumption is an important contributor to rising youth obesity rates in the United States.

"This study shows the substantial impact that replacing sugar-sweetened beverages with water could have," said C. Tracy Orleans, senior scientist and distinguished fellow at the Robert Wood Johnson Foundation, which co-funded the study along with the Centers for Disease Control and



Prevention. "Reversing the rise in childhood obesity requires finding approaches like this to close the gap between daily energy intake and daily energy expenditure. Changes such as this one can potentially add up to significant benefits for the population as a whole."

In contrast to the caloric reduction noted when replacing SSBs with water, the researchers found no difference when replacing SSBs with milk. But they emphasized the calcium, protein and other nutritional benefits that reduced-fat milk provides, in contrast to most SSBs. Though the findings suggest that reducing SSB consumption may prevent unhealthy weight gain, the researchers say that widespread recommendations to decrease SSB consumption are unlikely to lead to unnecessary or harmful weight loss in healthy-weight or underweight teens.

A 2008 study by the same team of researchers found that children consume SSBs in a variety of locations-homes, schools, fast-food establishments and other restaurants. Up to 70 percent of the consumption occurs in the home environment, whereas seven to 15 percent of consumption occurs in schools.

"Making children and teens more active is important," Dr. Wang noted, "However, simply eliminating the extra calories they don't need from these sugary drinks can tip the energy balance in a major way." A typical 15-year-old boy would need to jog for 30 minutes in order to burn off the calories contained in a 12-oz can of soda. The alternative drink best suited to reduce excess caloric consumption is water.

"These beverages are nothing more than different forms of sugar water, which kids don't need." said Steven Gortmaker, PhD, professor of the Practice of Health Sociology at the Harvard School of Public Health and the senior author on the study. "Unless they are running marathons, which we do not recommend for kids, water is the best choice for quenching their thirst. It is also low cost, especially when it comes from a clean tap source."



# Grams of Sugar in Your Common Drinks

Key:

1 sugar packet 

= 4 grams of sugar

= 1 teaspoon



8oz. **Soda (Sprite)<sup>®</sup>**

(about 40g sugar)

8oz. **Capri-Sun<sup>®</sup>**

(about 30g sugar)

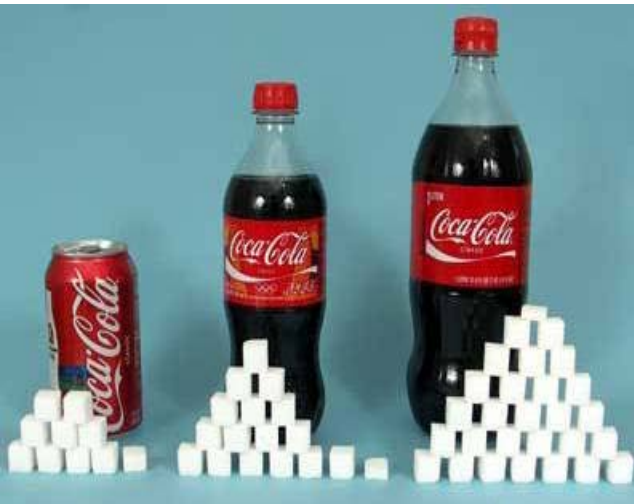
8oz. **100% Orange Juice**

(about 30g sugar)

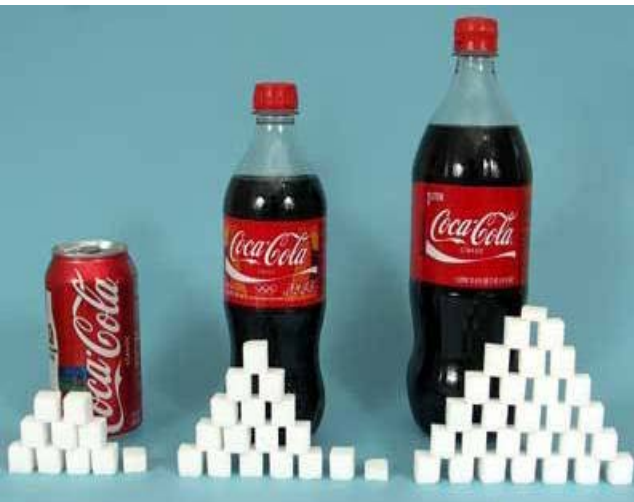
8oz. **Water**

- No Sugar-  
Your Best  
Choice!

Which has more sugar?



Which has more sugar?



Parent	How many packs of sugar would be s/he add to a cup of coffee or tea	Believes that s/he can guess the correct amount of sugar in their child drink	# of packets of sugar guessed for <b>SODA</b>	# of packet of sugar guessed for <b>100% real juice – Juicy Juice</b>	# of packets of sugar guessed for <b>Juice Drink Hi-C drink</b>
A.					
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