

Minnesota Department of Health Fact Sheet

Soft Drinks

Why are Carbonated Soft Drinks a Concern for Health?

Excessive use of carbonated beverages, sports drinks and fruit drinks can impact bone health, oral health and lead to obesity in young people. The typical 12-ounce can of non-diet pop provides approximately 150 calories, nine teaspoons of sugar, and no minerals or vitamins. Sports drinks and fruit drinks have similar amounts of sugar and calories but often have some vitamins and minerals

Replacement of Calcium-Rich Foods

Youth may replace calcium-rich beverages such as milk with soft drinks.¹ Because of rapid skeletal growth and development of lean muscle mass, adolescents need more calcium.

Adolescents also need more calcium in order to develop higher peak bone mass to lower future osteoporosis risk.² The dietary reference intake (DRI) for adolescents is 1300 mg/day.

National Data

- Youth ages 12 to 19 years drink twice as many carbonated soft drinks as milk.³
- Girls drink an average of 14 oz of carbonated beverages per day and boys, 21 oz. More than 62% of girls and nearly 70% of boys drink a carbonated soft drink daily.³ Only 18% of students drink the suggested 3 or more glasses of milk per day.³
- Youth who drink the largest amount of pop drink the least amount of milk.¹
- Only 13% of girls and 36% of boys ages 12 to 19 years have adequate calcium intake.³ Girls start eating less calcium around puberty; when calcium requirements are highest.⁴
- Dieting by decreasing milk and increasing diet soft drinks decreases calcium intake.

Minnesota Data

According to the 2001 Minnesota Student Survey⁵, many students, especially girls, do not drink the recommended 3 to 4 servings of milk daily. Between 60 and 77% of students, however, have at least one glass of pop or soda a day. Approximately 1/3 of boys have at least one sports drink a day. Although many students report drinking 100% fruit juice at least once daily, roughly equal numbers report consuming fruit drinks with little or none actual fruit juice.

Three or More Glasses of Milk

	6 th Grade	9 th Grade	12 th Grade
Boys	46 %	44%	37%
Girls	37%	27%	19%

One or More Glasses of Pop or Soda

	6 th Grade	9 th Grade	12 th Grade
Boys	70%	76%	77%
Girls	60%	60%	62%

One or More Glasses of Sports Drinks

	6 th Grade	9 th Grade	12 th Grade
Boys	33 %	32%	27%
Girls	21%	14%	8%

One or More Glasses of Fruit Drinks

	6 th Grade	9 th Grade	12 th Grade
Boys	61 %	57%	59%
Girls	60%	52%	43%

One or More Glasses of 100% Fruit Juices

	6 th Grade	9 th Grade	12 th Grade
Boys	64 %	64%	62%
Girls	63%	59%	56%

Five or More Glasses of Water

	6 th Grade	9 th Grade	12 th Grade
Boys	46 %	38%	32%
Girls	42%	32%	27%



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Oral Health

The high acid and sugar content of pop provide a rich environment for dental decay.

- Dental caries affect 50% of young people ages 5 to 17 years and 84% of young people age 17 years.⁶
- More than 50 million hours of school time are lost annually in the U.S. because of dental problems or dental visits.⁷

Obesity

The high calorie content of pop may add to the increasing rate of obesity in youth. Overweight adolescents are more likely to become overweight adults.⁸

- Overall 10.5% of adolescents ages 12 to 19 are overweight. This proportion has nearly doubled since the 1970s.⁹
- Adolescent boys are more likely than girls to be overweight; 11.3% compared to 9.7%.⁹

Caffeine

Because many carbonated soft drinks are high in caffeine, they are also mildly addictive, leading to increased consumption. Girls ages 12 to 19 years consume an average of 59 mg of caffeine per day and boys consume an average of 86 mg of caffeine per day. One can of cola contains 40 to 45 mg of caffeine.³

Healthy Food Policies at School¹¹

Student's eating habits are greatly influenced by the types of food and drink that are available to them. Policies that are intended to promote healthy eating need to address all food and beverages sold or served to students, including those available outside of school meals and those offered as part of fund-raising efforts or classroom rewards.

A sound policy ensures that:

- Nutritious foods are always available as an option whenever food is served or sold;
- Students have limited opportunities to eat snacks high in fat, sodium, or added sugars;
- Competition with meals served by the school food service program is minimized.

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Vending Machine Placement and Hours¹¹

Placing vending machines in convenient locations can encourage their use; conversely, placing them in out-of-the-way places can discourage their frequent use. Placement near dining areas can detract from student's participation in the school food service program.

Vending Sales Contracts

Commercial activities in US public schools have been growing in visibility throughout the last decade, a period characterized by tightened school budgets. Commercial activities include the sale of products, direct advertising in schools, indirect advertising and market research.

Many schools depend heavily on profits from vending machine sales of carbonated beverages. Exclusive beverage marketing contracts with bottling companies include incentives that link revenues for schools to the volume of beverages sold and, thereby, give educators a strong incentive for students to buy soft drinks.¹¹

Often times the money gained from vending machines fund important school functions such as music, art and athletic programs. Asking schools to give up vending machine contracts requires them to make hard choices about what programs to cut and what programs to keep.

References

1. Harnack L, Stang J, Story M. Soft drink consumption among U.S. children and adolescents: nutritional consequences. *J Am Diet Assoc* 99:436-41. 1999
2. Sandler RB, Slemenda C, La Porte R, et. al. Postmenopausal bone density and milk consumption in childhood and adolescence. *Am J Clin Nutr* 42:270-4. 1985.
3. Department of Agriculture, Agricultural Research Service. *Food and Nutrient Intakes by Children 1994-1996*; 1998.
4. Story M, Alton I. 1996. Adolescent nutrition: current trends and critical issues. *Top Clin Nutr*; 11:56-69.
5. Minnesota Student Survey, 2001. cfl.state.mn.us
6. National Institute of Dental Research. Oral health of the United States children; the national survey of dental caries in U.S. school children: 1986-87. National and regional findings. Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health, 1989, NIH pub no. 89-2247.
7. Gift HC, Reisine ST, Larach DC. The social impact of dental problems and visits. *Am J Public Health* 1992;82(12):1663-8.
8. Guo SS, Roche AF, Chumlea WC, Gardner JD, Siervogel RM. The predictive value of childhood body mass indices values for overweight at age 35y. *Am J Clin Nutr* 1994;59:810-9.
9. National Center for Health Statistics. Health, United States, 2000 With Adolescent Health Chartbook. Hyattsville, Maryland:2000.
10. United States General Accounting Office. Commercial Activities in Schools. GAO/HEHS-00-156, September 2000.
11. Bogden JF, Vega-Matos CA. Fit, Healthy, and Ready to Learn. A School Health Policy Guide. Alexandria, VA: National Association of State Boards of Education, .2000. www.nasbe.org

Updated 5/02