

# **Vending & Childhood Obesity**

## **A Backgrounder**

### ***Balanced for Life Will Educate Students about Nutrition and Physical Activity***

#### **Why Balanced for Life?**

Across the country, obesity rates are skyrocketing and questions arise daily from concerned parents, teachers, health officials and legislators about the best way to solve this grave health problem. Overweight children are at risk for cardiovascular diseases, diabetes, and other serious health problems, and the latest findings from the Centers for Disease Control and Prevention's (CDC) National Health and Nutrition Examination Survey (NHANES) show more children and teens are overweight than ever. According to the study, over the past two decades, the number of overweight children and teens nearly doubled<sup>1</sup>.

As the pressure to solve the problem mounts, all too often school systems and legislators point to school vending machines as the culprit, and turn to changing products or removing the machines altogether as a potential solution to the problem. Pulling products from machines or even yanking machines altogether from the schools, so the thinking goes, will solve the problem by eliminating the opportunity for children to purchase products that are making them obese.

Unfortunately, not only is this thinking just wrong, but, in fact, it ignores the underlying root causes behind obesity, which is why we are launching our Balanced for Life campaign. We believe that these are short-sighted solutions that will only allow the problem to continue to grow. Even proponents of fresh organic food for children such as Alice Waters, founder of Chez Panisse restaurant in Berkley, CA, says, “You can’t just take the vending machine out of the cafeterias and think that solves the problem.”<sup>2</sup>

Simply removing vending machines from school cafeterias is not only ineffective, but it also does nothing to address the underlying causes behind growing obesity rates. First, children are presented with any number of opportunities to purchase

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<sup>1</sup> National Center for Health Statistics News Release, March 12, 2001.

<sup>2</sup> “Food Fighter,” New York Times Magazine, March 7, 2004.

the identical foods offered in school vending machines, and if they can't find their choice at school, they will likely purchase the same product somewhere else, such as a convenience or grocery stores. Removing the vending machines only ensures they will make the purchase from a different retail outlet.

Second, a recent study conducted by the National Automatic Merchandising Association (NAMA) found that most children purchase less than one candy bar or salted snack product from a vending machine per week. The idea that one product purchased from a vending machine per week is a major contributing factor to skyrocketing obesity rates is unrealistic.

Third, other factors such as reduced physical activity and a society that increasingly has decided to "super-size" food choices, contribute to the problem. Most school systems today have eliminated daily physical education programs, while the rise in cable programming and the growing popularity of computer games like Nintendo mean our children are less active than ever.

### **Vending Machines Offer a Wide Array of Balanced Products**

Today's vending machines offer a sweeping variety of products including all the components necessary for a healthy diet. Water, fruit juice, yogurt, granola bars, even salads and fresh fruit are all available from a vending machine. These products, when balanced with a variety of other snack choices, such as candy or salted snacks, clearly offer all the elements of a healthy, balanced diet. Students who understand how to make healthy choices and how different food options fit into a healthy diet will be much less likely to become another obesity statistic. As they become more educated they will also understand how snacks like chips, candy and soda can fit into an overall healthy and balanced diet.

Given all these factors, the obvious solution to the critical problem of swelling obesity rates is not removing vending machines from schools, but instead, educating children about how to make the choices that create an overall healthy and balanced diet, which is why the vending industry is proud to launch the Balanced for Life campaign.

The campaign is designed to partner with parents, teachers, school systems and students as together we work to educate students about the elements of a balanced diet

and the importance of physical activity. Parents, school officials and nutritionists need to know that the vending industry wants to work with them to make sure a variety of choices is available in school vending machines, and that students understand how different choices fit into a balanced diet.

To help students easily understand those dietary issues, as part of the campaign we are proud to partner with the Children’s Hospital Borden Center for Nutrition and Wellness to promote their Snackwise Nutrition Rating System. The Snackwise system helps students understand how different food choices fit into an overall diet by ranking them as either “choose rarely,” “choose moderately” or “choose frequently.”

Finally, Balanced for Life calls for kids to learn about nutrition and be more physically active, which is why we’re proud of our partnership with non-profit America Scores, an after-school health and literacy program that combines poetry and soccer. Through America Scores, NAMA Balanced for Life will deliver nutrition education directly to students in 12 cities, and sponsor after-school soccer programs in four cities across the country: Washington, DC, Chicago, Denver and San Francisco/Oakland.

In addition, through America Scores, NAMA Balanced for Life dietitians will deliver nutrition education training programs directly to teachers and students in the target America Scores schools. Bi-lingual written Balanced for Life educational materials and posters will be provided to students, teachers, parents and school officials as well. At the end of the spring semester the program will culminate in a day-long soccer Balanced for life Jamboree! in each of the four cities, where hundreds of students, parents, teachers and community leaders will turn out for a day-long Balanced for Life event to watch the students play back-to-back soccer matches. Thanks to the America Scores Balanced for Life partnership, thousands of students who in many instances don’t have access to any school PE programs at all will learn all about nutrition and have the chance to be active after school playing organized soccer.

NAMA’s Balanced for Life campaign is one of the most important initiatives our industry has ever launched because it will help our nation’s youth to understand how they can take steps to live better, healthier lives. On behalf of the thousands of dedicated industry professionals working in our industry, we’re proud to be offering these tools designed to protect the health and well being of our nation’s youth.

# The Facts About Childhood Obesity

**Obesity Rates are Rising.** The percentage of school age children 6-11 who are overweight more than doubled between the late 1970s and 2000, rising from 6.5 percent to 15.3 percent. The percent of overweight adolescents ages 12-19 tripled from 5 percent to 15.5 percent during the same period.<sup>3</sup>

**Medical Costs Associated With Obesity Are Rising.** Hospitalizations among children and adolescents (6-17 years of age) for diseases associated with obesity increased sharply between 1979 and 1999. Hospital costs (based on 2001 constant US Dollars) more than tripled, from \$35 million to \$127 million.<sup>4</sup>

## **Mexican, African-American Youth are More Affected than Others:**

- ♣ Obesity is affecting Mexican and African American youth more severely: 27.5 percent of Mexican male teenagers are reported as overweight and 26.6 percent of non-Hispanic black young women are reported as overweight.<sup>5</sup>
- ♣ Hispanic (25.9 percent) and non-Hispanic black (24.1 percent) children were significantly less likely to participate in organized physical activity compared to white, non-Hispanic (46.6 percent) children. Children of parents with lower incomes and educational levels were also less likely to participate in organized physical activity.<sup>6</sup>

**Lower Income Hit Hardest.** Adolescents from families below 130 percent of the federal poverty threshold are twice as likely to be overweight (16 percent) compared to those from families that are above 130 percent of the federal poverty level (8 percent).<sup>7</sup>

## **Some research connects obesity with television viewing habits:**

- ♣ Several studies<sup>8</sup> have shown that the risk for being obese is strongly related to TV viewing. One study analyzed data from more than 4000 children and youth, ages 8-16 years, who took part in a 1988-1994 national US survey. They found that the prevalence of obesity was highest among those watching TV four or more hours daily and lowest among those watching one hour or less per day. Television viewing was positively associated with obesity among girls, even after controlling

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<sup>3</sup> National Center for Health Statistics, Health, United States, 2002 with chart book on trends in the health of Americans.

<sup>4</sup> Wang G and Dietz WH. Economic burden of obesity in youths aged 6-17 years: 1979-1999. *Pediatr.* 2002; 109 (5) e81-89.

<sup>5</sup> National Center for Health Statistics, Health, United States, 2002. Overweight children and adolescents 6-19 years of age, according to sex, age, race and Hispanic origin, United States, selected years 1963-65 through 1999-2000.

<sup>6</sup> US Centers for Disease Control and Prevention. Physical activity levels among children aged 9-13 years, United States, 2002.

<sup>7</sup> US Department of Health and Human Services. Healthy People 2010: objectives for improving health, Washington DC, US Government Printing Office, 2000.

<sup>8</sup> Crespo, C. J., E. Smit, R.P. Troiano, S.J. Bartlett, C.A. Macera, and R.E. Andersen (2001). Television watching, energy intake, and obesity in US children: results from the third National Health and Nutrition Examination Survey, 1988-1994. *Arch. Pediatr. Adolesc. Med.* 155:360-365.

for age, race/ethnicity, family income, weekly physical activity, and energy intake.

- ♣ Another study<sup>9</sup> has shown that the likelihood of being obese is three-fold greater in adolescents who watch TV more than 5 hours/day, compared with those who watch 0-2 hours/day (Gortmacher et al., 1996). The same study demonstrated that the likelihood of remission of obesity over a four-year period is considerably greater among adolescents who watch TV less than one hour/day compared with those watching 5.5 hours or more each day. The authors concluded that (even though most studies of this problem are cross-sectional, not experimental) there is a cause-and-effect relationship between the extent of television viewing and juvenile obesity.

## **The Role of Phys-Ed:**

**Phys Ed Can Help.** Increasing physical education instruction in kindergarten and first grade by as little as one hour per week could reduce the number of overweight 5- and 6-year-old girls nationally by as much as 10 percent. Based upon their findings, [RAND Health](#) researchers estimate that providing every kindergarten and first grade student with five hours per week of physical education instruction — close to the level recommended — could cut the number of overweight girls in those grades by 43 percent, and the number of girls in those grades at risk for being overweight by 60 percent.<sup>10</sup>

**Most Students Don't Get Daily PE:** Only eight percent of elementary schools, 6.4 percent of middle/junior high schools and 5.8 percent of senior high schools provide daily physical education during the school year.<sup>11</sup>

### **Parents Think Nutrition Education and Exercise Will Help:**

- ♣ Ninety-six percent of parents believe that educating students about nutrition and exercise is important.<sup>12</sup>
- ♣ Ninety-five percent of parents think physical education should be part of a school curriculum for all students in grades k-12.<sup>13</sup> Seventy-six percent of parents think “more school physical education could help control or prevent childhood obesity.”<sup>14</sup>
- ♣ Eighty-five percent of parents said they would support programs in schools to help fight childhood obesity.<sup>15</sup>

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<sup>9</sup> Gortmacher SL, et al (1996, April). Television viewing as a cause of increasing obesity among children in the United States, 1986-1990. *Archives of Pediatric Adolescent Medicine*, 150, 356-362.

<sup>10</sup> Rand Institute, Rand Study Finds Modest Increase in Physical Education Can Help Cut Number of Overweight Young Girls, August 27, 2004.

<sup>11</sup> Burgeson CR, Wechsler, H., Brener ND, et al., Physical education and activity: results from the school health policies and programs study 2000.

<sup>12</sup> The Center for Health and Health Care in Schools, Parents Overwhelming Favor Providing Health Care Services in Schools, available at <http://www.healthinschools.org>.

<sup>13</sup> National Association for Sport & Physical Education, “Parents Believe Physical Activity Key to Preventing Childhood Obesity,” 2003.

<sup>14</sup> IBID

<sup>15</sup> The Center for Health and Health Care in Schools, Parents Overwhelming Favor Providing Health Care Services in Schools,

## Additional Research & Findings

### Studies on the Importance of Physical Activity

**UNC Study<sup>16</sup>** – The University of North Carolina study concludes that while calorie intake for adolescents has remained fairly constant, physical activity has declined. In addition, the increased percentage of overweight corresponds almost exactly to the decrease percentage of physical activity.

**National Institute of Health Care Management Foundation** – This study of 11,192 students from 1,000 schools who entered kindergarten in 1998 concluded that adding as little as one hour a week of exercise could reduce the prevalence of obesity and being overweight by 10 percent. The researchers also believe that giving kindergartners at least five hours of physical education time per week – the amount recommended by the federal government – potentially could reduce the prevalence of obesity and overweight among girls by 43 percent. As summarized by Kelly Borwnell, a Yale University obesity researcher, “This is probably the strongest statement yet that physical activity may help prevent obesity.”

**American Medical Association:** The Association’s Archives of *Pediatric and Adolescent Medicine* magazine published the findings of one of the largest studies ever to look at factors of diet, physical activity and sedentary behavior on obesity in adolescents. Published in the April 2004 issue of the magazine, the report concluded that lack of vigorous physical activity is the main contributor to obesity in adolescents ages 11 to 15. Researchers at the University of California, San Diego (UCSD) School of Medicine, in collaboration with investigators at San Diego State University, conducted the study of 878 adolescents.

**State and Selected Local Obesity Rates and Daily PE Attendance.** This NCA study<sup>17</sup> looked at the correlation between the policies governing competitive food sales in schools, the high school obesity rate and the percentage of students who attended daily PE. The study had three basic conclusions:

- ♣ Current USDA regulations governing sales of competitive foods are sufficient. Utah, the state with the lowest obesity rate, uses only USDA regulations to achieve an obesity rate of 6.2 percent, which is 40 percent below the median for all states.

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available at <http://www.healthinschools.org>.

<sup>16</sup> Health Trends in US Adolescents Over the Past 20 Years, UNC School of Public Health & School of Medicine, Department of Nutrition. See Appendix A for copy of study.

<sup>17</sup> Study provided by the National Confectioner Association that collected data from the Department of Health and Human Services, Center of Disease Control and Prevention, Youth Risk Behavior Surveillance 2001 and the USDA Food & Nutrition Service, Healthy Eating Environment. See Appendix A for study.

- ♣ Physical Education can play an important role in the fight against obesity. Illinois, which has a daily attendance rate in PE of 70.6 percent (the highest in the nation), has an obesity rate of 9.2 percent compared with a nationwide median of 10.4 percent and the local median of 12.5 percent.
- ♣ Restrictive competitive food regulations won't solve the problem. In Maine, where competitive foods have been banned since 1978, but where only 4.8 percent of students attend daily PE, the obesity rate is equal to the high national median of 10.4 percent.

The findings on competitive food restrictions provide more evidence that simply banning certain foods from vending machines, or banning the machines altogether, will have little if any impact on the problem, and that a much more compelling argument can be made for increasing physical activity.

## Quotes

“The fight against obesity involves no less than changing the culture of the United States and its relationship to food and physical activity. Changing eating and activity behavior is hard work. Only by involving the whole family, neighborhood, schools, industry, worksites and society can we succeed.”

*Dr. George Blackburn serves as the Associate Director of the Division of Nutrition at Harvard Medical School and the Director of the Center for the Study of Nutrition Medicine in Boston, Massachusetts.*

“If we are to help future generations develop and maintain healthy lifestyles for the long-term, we must first give them the tools and resources necessary to do so. This requires a balanced approach that focuses on providing sound nutrition information to parents, students and teachers and encouraging and funding more physical education and recreational opportunities.”

*Susan Finn, Ph.D., R.D.  
Chair, American Council for Fitness and Nutrition*

“This is probably the strongest statement yet that physical activity may help prevent obesity,” commenting on a study conducted by the National Institute of Health Care Management Foundation that concluded that adding as little as one hour a week of exercise could reduce the prevalence of obesity and being overweight by 10 percent.

*Kelly Borwnell, Yale University obesity researcher*

“People should have choices in vending machines; there should be alternate types of snacks.”

“Physical activity is important, but so is intake.”

“Sedentary kids require lower calories; keep your kids moving and watch the amount they eat.”

*Theresa Nicklas, DRPH, LN, Professor of Pediatrics,  
Children’s Nutrition Research Center, Depart of Pediatrics,  
Baylor College of Medicine*

“Kids need choices, too, and the bottom line is that it’s everything in moderation. Get your nutrients and then there is room for extras.”

“Basically, it is a question of choices; I am not opposed to vending machines.”

“Kids should have an hour a day of active play and work up a sweat. They should have three meals and two snacks: one a healthy snack and the other one is free.”

*Christine Williams, MD, PhD  
Professor of Clinical Pediatrics, Director, Children’s Cardiovascular  
Health Center  
Babies and Children’s Hospital  
Columbia University*