

Changing school environment curbs weight gain in children

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Fourth-grade students Gloria Albandoz (foreground) and Jaritza Ponce (middle), with help from Nomfundo Msomi of the Food Trust, determine which neighborhood stores have the healthiest foods. Nutrition education was found to be a key part in school-based interventions to prevent childhood obesity. Credit: Joseph Labolito, Temple University

Small changes in schools lead to big results when it comes to preventing childhood obesity, according to a study published in the April issue of *Pediatrics*. The school-based intervention, which reduced the incidence of overweight by 50 percent, offers a potential means of preventing childhood weight gain and obesity on a large scale.

“The increasing prevalence and serious consequences of childhood obesity have pushed us to find solutions that go beyond the clinic and reach greater numbers of children,” said lead author Gary Foster, Ph.D.,

director of the Center for Obesity Research and Education at Temple University. “We focused on school because children spend most of their lives there and eat at least one if not two meals there.”

The two-year study was conducted in 10 K-8 Philadelphia schools. Half the schools implemented a multi-faceted nutrition policy, including social marketing and family outreach, which was developed by The Food Trust, a non-profit organization committed to ensuring that everyone has access to affordable, nutritious food.

“We incorporated healthy eating into every part of the school day in order to have a greater impact on the students,” said Sandy Sherman, Ed.D., director of nutrition education at The Food Trust. “The intervention fundamentally changed the school environment.”

The other five schools served as a comparison. The study focused on 1,349 students in grades 4 through 6, and followed them for a two-year period, measuring weight, height and physical activity before and after.

The intervention, also called the School Nutrition Policy Initiative, included the following components: school self-assessment, nutrition education, nutrition policy, social marketing and parent outreach.

“Every member of the school community worked together to create a healthier environment,” said Sherman.

Nutrition policy

Soda was replaced with water, 100 percent fruit juice and low-fat milk. Snacks were capped at 7 grams of total fat, 2 grams of saturated fat, 360 milligrams of sodium and 15 grams of sugar per serving. Candy was eliminated from the school premises.

Nutrition education

Teachers received 10 hours of training in teaching nutrition, and students received 50 hours of nutrition education over the course of the year.

Social marketing

Kids were rewarded for healthy snacking and encouraged to save their appetites for healthy meals. Nutritious snacks and drinks earned them raffle tickets to win prizes.

Family outreach

Nutrition educators encouraged parents and students to purchase healthy snacks. Students were challenged to be less sedentary and more physically active, and to eat more fruits and vegetables.

For details on the School Nutrition Policy Initiative, go to www.thefoodtrust.org/php/programs/comp.school.nutrition.php

Only 7.5 percent of children became overweight in intervention schools, compared with 15 percent of children who became overweight in comparison schools. The intervention was even more effective in African American students, who were less likely to be overweight than those in the comparison schools after two years.

The results are particularly interesting for urban schools, where rates of childhood obesity are disproportionately higher than in suburban areas and greatly affected by the surrounding environment.

“In some inner-city neighborhoods, it’s safer to stay inside after school than to go outside and play. When money is tight, it’s cheaper to feed

your kids convenience foods, which are usually higher in fat and calories. Multiple environmental factors are responsible for the childhood obesity epidemic,” said Foster.

Despite the success of the interventions, the fact that 7.5 percent of children in School Nutrition Policy Initiative schools still gained weight over the two-year period suggests that stronger or additional interventions are needed, such as more time spent on physical education, more aggressive nutrition policies, and interventions that target the environment outside of schools.

The researchers also recommend that prevention programs begin even earlier than 4th grade, as the prevalence of overweight children (BMI above the 85th percentile) in grades 4 through 6 is already high at 41.7 percent.

Temple and The Food Trust are currently working together on a corner store initiative, designed to improve the nutrition of food and snacks for sale at neighborhood stores.

Source: Temple University

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