

New data support community-wide approach to addressing child obesity

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Community wide interventions hold promise as an effective approach to reducing childhood obesity rates according to new research from the Friedman School of Nutrition Science and Policy at Tufts University and Tufts University School of Medicine. An analysis of data from the first two school years (20 calendar months) of the Shape Up Somerville: Eat Smart Play Hard™ intervention showed that schoolchildren in Somerville, Massachusetts gained less weight and were less likely to be obese or overweight than schoolchildren in two similar control communities. The results are published online ahead of print in the journal *Preventive Medicine*.

Designed and implemented by Tufts University researchers and the community of Somerville, Shape Up Somerville, targeted the city's public school students in grades 1-3 and engaged the adults who shaped their daily environment. Parents, teachers, school food service and [health care providers](#), as well as city departments and local media outlets participated in and promoted initiatives that included overhauling school lunch menus; introducing [nutrition education](#) curriculum in schools; attempting to increase energy expenditure through in-school and after-school physical activity programs; and working with area restaurants to offer healthier menu items.

Compared to the control communities, the data show fewer Somerville children were obese or overweight after two full school years of the intervention. Principal Investigator Christina D. Economos, Ph.D., associate professor at the Friedman School, and colleagues used a

measure called Body Mass Index (BMI) z-score to calculate the relative weight of 335 children from the [intervention group](#) and 693 children from the control group.* Over two school years, including one summer vacation, BMI z-scores decreased by 0.06 in Somerville children, signaling a modest reduction in weight gain compared to children in communities that did not receive the intervention.

"These results are more meaningful than the modest reduction in weight gain suggests," said Economos, who is also Vice Chair and Director of ChildObesity180, an organization that, in collaboration with the Friedman School, is committed to cross-sector partnerships that reverse [childhood obesity](#). "The early years of elementary school are when we expect children to gain weight as they grow. What's driving the child obesity rate is pervasive unhealthy weight gain in children at a young age, particularly in low-income and often culturally diverse communities where access and availability of healthy food and physical activity options are limited."

After the first school year, the day-to-day responsibilities of Shape Up Somerville gradually transferred from Economos and the research staff to the community. "We were very encouraged to see the data show progress in the second [school](#) year when we started to step back and the community took the reins," Economos said. "The fact that Shape Up Somerville remains a vibrant city program that has expanded significantly over the last eight years attests to its sustainability."

"Reversing the child obesity rate requires widespread policy and environmental changes and involvement of just about everyone with a stake in the community; including children and families, schools, health professionals, business leaders, health insurers and policy makers," Economos continued. "Shape Up Somerville and its enduring presence are a reflection of their buy-in."

Following the researchers' blueprint, Shape Up Somerville has operated independently of Tufts University for several years. School breakfast and lunch menus continue to emphasize fruits, vegetables, whole grains, low-fat dairy and healthy snacks. Improvements to bike and walking paths and the development of physical activity spaces and recreation programming encourage community participation. Somerville now offers year-round farmer's markets that accept Supplemental Nutrition Assistance Program (SNAP) benefits and encourages restaurants to add healthier dishes offered on menus as "Shape Up Approved."

"The initial study's blueprint told us that making the healthy choice the easy choice required a community-based effort, holistically addressing the systems that shape our environment," Somerville Mayor Joseph A. Curtatone said. "A top-down plan cannot address the needs of a diverse community. It cannot sustain over the long haul, because leadership has limited time to devote any single program, and leadership also changes over time. Cultivating a strong grassroots effort is the only way to see an effort like this take root, sustain and grow.

"Everyone must be invested, transforming their own spheres of influence to transform our environment," Curtatone added. "We've now seen, time and time again, that if we can give people ubiquitous and accessible options, they will choose to eat healthier, get active and live better lives."

More information: Economos CD, Hyatt RR, Must A, Goldberg JP, Kuder J, Naumova EN, Collins JJ, and Nelson ME. Shape Up Somerville Two Year Results: community-based environmental change intervention sustains weight reduction in children. *Preventive Medicine*. doi: [dx.doi.org/10.1016/j.ypmed.2013.06.001](https://doi.org/10.1016/j.ypmed.2013.06.001). Published online ahead of print June 9, 2013.

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