

# Improving Nutrition and Increasing Fitness in Schools and Communities

By Michael S. Broder

*Over the past 15 years, the prevalence of obesity among children and adolescents has doubled according to the CDC, and numerous studies have documented that overweight adolescents are likely to become overweight or obese adults. To meet this alarming public health problem head-on, alumni of the UC Berkeley School of Public Health are leading intervention efforts to improve nutrition and increase physical activity in children, adolescents, and teens. While some programs are based in the schools, others are geared toward after-school programs and community organizations, and still others work with government agencies and policymakers.*

## Improving Food Offerings At School

**Pat Crawford, Dr.P.H. '94. R.D.**, is co-director of the Center for Weight and Health, a UC Berkeley center that links researchers and the community to solve weight, health, and hunger-related problems. Crawford has led or co-led many programs aimed at preventing child obesity. One such program is the Sodas Out of Schools (SOS) study, a pilot research project for which Crawford is principal investigator, funded by the NIH and The California Endowment. Project leader **Suzanne (Barkshire) Rauzon, R.D., M.P.H. '86**, launched the study last year in four high schools—two intervention schools and two control schools. In the intervention schools, highly sweetened drinks have been replaced by other beverages in vending machines, cafeterias, and school stores.

“We’re capturing information on the opinions of the stakeholders—the students, school food service, teachers, administrative staff—and we’re collecting cost information. Nobody seems to know how much money the schools will lose if they stop selling sweet drinks in the

school,” says Crawford. “We’re also measuring the students to look at their BMI [body mass index] change over two years. We know that kids drink on average one to two sodas a day—so if that is reduced even by one or two per week, we should see a change in the BMI.”

Working with Crawford and Rauzon on the SOS study is **Sarah Samuels, Dr.P.H. '82**, president of Samuels & Associates, Inc., a public health research, evaluation, and policy consulting firm. Samuels is looking at the stakeholder attitudes and environmental changes. In addition, Samuels & Associates is conducting cases studies in 10 school districts that have already adopted policies eliminating sweetened beverages from their campuses.

In 2000, Samuels & Associates conducted a survey of fast food sales on California high school campuses. “We found that more than 90 percent of the schools had fast food sales on campus,” says Samuels. The resulting report led to the introduction of California Senate Bill 19, the Pupil Nutrition, Health, and Achievement Act, sponsored by Sen. Martha Escutia, which set minimum nutrition standards for foods and beverages sold on elementary and middle school campuses in the state. Although signed into law by the governor, the bill has not yet been funded.

“The bill was supposed to provide each school 10 cents more per school meal served in that school,” says Crawford. “If the schools made all the choices more healthy, the state of California would give them more money for the meals that they served. Unfortunately, there wasn’t the money to do that, and it was never implemented. So the NIH funded a project to look at the effects of implementing this bill, and The California Endowment offered to provide that 10 cents per meal. Now we can see what happens.”

Indeed, Samuels & Associates, the UC Berkeley Center for Weight and Health,

WestEd, and UCLA are collaborating to evaluate the SB 19 nutrition standards in 28 elementary and middle school sites in California. They will measure the impact on students and schools by looking at body composition, aerobic capacity, blood pressure, and selected diet, physical activity, and weight control behaviors.

Can these school interventions really make a difference? Crawford believes so. “In this work, we have observed schools with a plethora of fast foods and snack foods, no cooking facilities, snack breaks, snack carts at the entrance to cafeterias, and no nutrition education,” she says. “But we have also observed how a school food policy can create a positive movement within a school, how the media can be a potent stimulus for change, and how important leadership is from the school’s food service director and principal.”

## Partnering With State Government

Government agencies are another venue



for making changes to improve children's health. Crawford was principal investigator for the recently completed FitWIC Five-State Child Obesity Intervention Project, which looked at how state WIC (Women, Infants, and Children) agencies and local WIC sites could be more responsive to the problem of childhood obesity. Researchers developed a "how-to" manual for addressing pediatric obesity that was distributed to WIC programs in all 50 states, developed from model projects in California, Kentucky, Vermont, Virginia, and the Intertribal Council of Arizona. Samuels & Associates evaluated the FitWIC California Project.

Samuels & Associates has also been involved in a number of youth-oriented projects conducted for California Project LEAN (Leaders Encouraging Activity and Nutrition), a statewide initiative led by the California Department of Health Services and the Public Health Institute. Samuels developed a teen policy tool kit, *Playing the Policy Game*, which identifies key policy areas for youth action and provides a step-by-step guide to changing nutrition and physical activity related policies.

California Project LEAN originated from a program developed by Samuels when she was a program officer at the Henry J. Kaiser Family Foundation. The Kaiser Family Foundation's project, which included advertising using food professionals as spokespersons, was the first privately funded social marketing program in nutrition. Samuels is currently examining the impact of marketing and advertising aimed at children, such as commercials that use popular television characters. "The whole area of reducing and regulating advertising to kids is an important issue. Kids watch 20,000–40,000 commercials per year," says Samuels. "That's quite a lot of exposure."

### Engaging Communities and Building Capacity

The California Adolescent Nutrition and Fitness (CANFit) program is a statewide



nonprofit organization that works to improve the nutrition and physical activity status of California's low-income African American, American Indian, Latino, and Asian/Pacific Islander youth ages 10–14. At the helm of CANFit is executive director **Arnell Hinkle, R.D., M.P.H. '90, C.H.E.S.**, who started the organization in 1993 and was honored last year with a Robert Wood Johnson Community Health Leadership Award.

CANFit began as the result of a lawsuit against a cereal company that had advertised a sugared cereal as being healthy for children. "After 17 years, the lawsuit was settled out of court," says Hinkle, who was hired to build the organization from the ground up using the settlement

funds. "There was a needs assessment, a set of recommendations in terms of age group and ethnic breakdown, and a check for \$2 million—that was it."

Hinkle drew on her public health training, as well as her experience as a nutritionist, a chef, and an organic farmer to develop CANFit. The organization's work has four major components: It provides training and technical assistance to youth providers; awards academic scholarships in the fields of nutrition and fitness for students studying in California; funds innovative community projects in nutrition education activity; and advocates for policies that enhance nutrition and physical activities at the national, state, and local levels.

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## Personalizing Communication for Better Health




Public health is a paradox: it seeks large-scale population change but must achieve it person-by-person.

Chronic diseases, such as those related to overweight, poor diet, inactivity, and smoking, can only be prevented or managed if people change their behaviors. In fact, the World Health Organization estimates that over half of the global burden of disease is related to people's behaviors.

Communication has been public health's primary strategy to encourage people to make healthy changes and reduce chronic disease. Unfortunately, many of these communication efforts have had disappointing outcomes. Almost all adults have heard the messages to lose weight, exercise, and eat more vegetables—and yet Americans are becoming larger, more sedentary, and increasingly fond of fast food. Research at the School of Public Health is uncovering inherent weaknesses in approaches to communication interventions and is pointing to better strategies. Traditional health communication consists of generic one-way messages from experts to the public. While the messages are scientifically based, they fail to engage people to change within the complexity of their lives. They tell people what to change, but not *how* to do it.

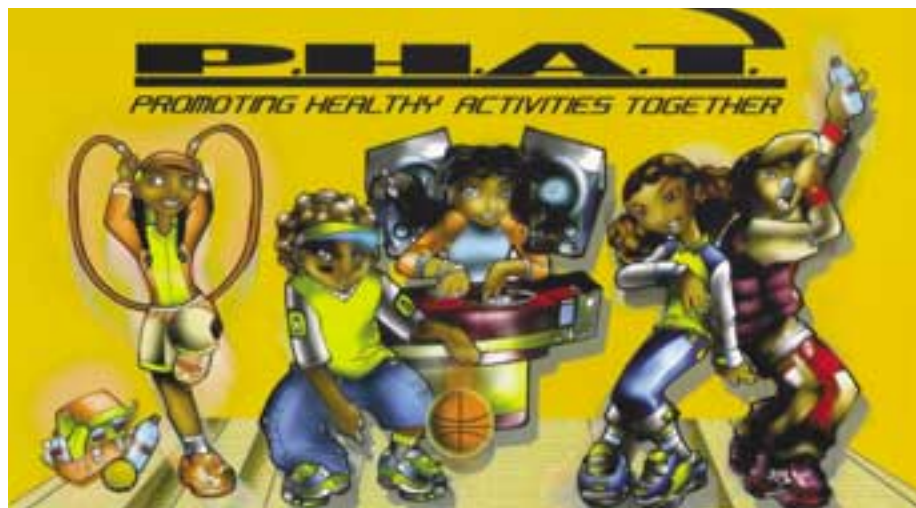
The challenge is to personalize information so that it works within people's specific values, culture, habits, and media preferences. Over the past 16 years, the School's Center for Community Wellness has developed such an approach in

which consumers develop their own communication resources. The *Wellness Guide* series, in multiple languages, has now reached more than 10 million people with successful results. Likewise, the *UC Berkeley Wellness Letter* has helped millions by translating complex scientific advice into easy to follow steps.

Modern technology makes it possible to personalize health communication by giving people access to information about their bodies and ways to measure their own progress. For example, pedometers now allow people to measure how many steps they walk in a day. Other "e-health" tools being tested by the School of Public Health help people monitor their chronic conditions daily and report results over the Internet to their physicians. The new era of personalized communications holds great promise to improve public health—one person at a time. 

—Linda Neuhauser, Dr.P.H., is a clinical professor at the School of Public Health.

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P.H.A.T., a program developed by the California Adolescent Nutrition and Fitness Program, uses elements of hip-hop culture to communicate with African American youth about the importance of healthy eating and exercise.

"The model we use in terms of intervention is one of community empowerment. That's why we chose to take the money

from the settlement and also the money that we raised, and put it back out into the community in the form of mini-

grants, scholarships, and training and technical assistance," says Hinkle. Over the years, CANFit has worked with about 60 organizations. "Through that experience, we've been learning what works with different ethnic groups, what works with kids, and what doesn't," she says.

In addition to supporting organizations and students, CANFit has developed some original campaigns. Promoting Healthy Activities Together (P.H.A.T.), a project geared toward African American youth, uses music, dance, emceeing, and other elements of hip-hop culture to deliver important messages about healthy eating and physical activity. CANFit developed a follow-up multimedia package in which youth, hip-hop artists, and deejays discuss why it is important to eat healthy and be active. "People all over the world are using it," says Hinkle.

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## One Size Doesn't Fit All



Patricia Crawford presented data from UC Berkeley community-based intervention programs at “Confronting Obesity: Science, Health, & Society,” a conference held this past April at the Berkeley City Club. The meeting was cosponsored by the UC Berkeley Center for Health Research, the UC Berkeley Center for Weight and Health, and the Kaiser Permanente Institute for Health Policy.

### *Interventions...continued from page 10*

Another CANFit initiative was the development of an African American-specific curriculum for the 100 Black Men of America, a national mentoring organization with many chapters across the United States. The curriculum incorporates nutrition and fitness into the organization’s existing mentorship program. The curriculum has also been adapted for use with a variety of after-school programs and will soon be printed by the USDA Food and Nutrition Services.

“By working with community-based organizations, staff are trained, youth and parents are trained, and that expertise stays in that community,” says Hinkle. “You start to build a social norm around eating well and being active, and you start to build a constituency for the issue that’s local and community-driven instead of imposed from the outside. That’s why we have chosen to work this way.” 🌀

Although the nationwide trend toward weight gain has raised much concern about public health, not all health professionals are convinced that health promotion efforts should focus on reducing body mass. A growing number believe that programs should focus on improving health without regard to a person’s size. Proponents of this approach, called “size acceptance,” point out that long term weight loss is, for most people, nearly impossible to maintain, while improved health is an achievable goal.

“Size acceptance means saying that a person is okay at the size she or he is right now, and that one does not have to lose weight in order to be healthy or to become healthier,” says [Joanne Ikeda, M.A., R.D.](#), a Cooperative Extension nutrition education specialist and codirector of the Center for Weight and Health at UC Berkeley. She and others assert that becoming healthy means improving aerobic capacity and metabolic fitness — not attaining a predetermined weight.

Ikeda, together with other health professionals, crafted a document called “Tenets of Size Acceptance,” which affirms the diversity of human body size and shape, the importance of self-esteem and positive body image, and the benefits of healthy lifestyles for people of all sizes and shapes. Size acceptance advocates note that the pressure to conform to unattainable ideals sets people up to feel discouraged and have low self-esteem—and when people feel bad about themselves, they are less likely to engage in healthy behavior.

“Our current challenge is to develop programs that celebrate the benefits of a healthy way of life: programs that promote body satisfaction and the achievement of realistic and attainable health goals without concern for weight change,” says Ikeda.

One alumna who has taken on this challenge is [Chaya Gordon, M.P.H. ’00](#), who started an aerobic dance class for large women called AbunDANCE. She estimates that hundreds of women participated over the five years she led the class.

“Large people in this culture experience discrimination in many ways,” says Gordon, “and most women in this culture, regardless of their size, have terrible body image, because we get the message every day that no woman can ever be satisfied with her body.”

Gordon, who studied community health education, found that much of what she learned at the School of Public Health was directly relevant to her work in the area of physical activity for large women, as well as her work as research manager at the American Society on Aging, where she promotes physical activity for older adults and elders of color.

“There are connections between barriers to participation in physical activity for large women and other groups of people, such as older adults,” says Gordon.

Many women responded to her flier advertising AbunDANCE, and she had long talks with them over the phone. Her greatest challenge, she says, was getting them to actually come to the class. “A lot of them could not overcome the various barriers to get themselves there, but many did.” The sense of community created in the class allowed the women to network with one another, talk about issues that concerned them, and become empowered in other aspects of their lives.

“Part of the problem is that most large women have never had the opportunity to connect with the joy of movement in their life,” says Gordon. The supportive environment of AbunDANCE helped the participants realize that they were entitled to experience that joy. The class involved a thorough, head-to-toe workout that worked every major muscle group. Gordon encouraged each woman to work at her own pace, enjoy the music, and have fun.

“The wonderful thing I found in my classes was that the more women moved, the more they *could* move,” says Gordon. “And they loved it.” 🌀

— [Michael S. Broder](#)