

Anti-obesity program for low-income kids shows promise, study finds

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An approach that attempted to prevent childhood obesity in African-American girls produced beneficial changes in cholesterol, diabetes risk and depressive symptoms but had little effect on youths' weight, in a trial conducted by researchers at the Stanford University School of Medicine and Lucile Packard Children's Hospital.

Although researchers had hoped to see a change in body mass index across the entire study population from the program — culturally-tailored dance classes and screen time reduction for African-American girls in low-income neighborhoods of Oakland, Calif. — they did find statistically significant benefits to weight reduction among two high-risk subgroups of children: girls from single-parent households and those who watched a lot of TV. They also noted that the large-scale, randomized trial produced other important benefits: It lowered participants' total cholesterol and LDL cholesterol levels, reduced the onset of high insulin levels and reduced symptoms of depression.

Researchers said that those results are important signs of progress in the efforts to design health-promotion and disease-prevention campaigns for populations that are most plagued by obesity and also the most difficult to reach. And they added that the lack of better weight loss results underscore the challenges these programs face.

"Although we had obstacles we had to overcome, we had tremendous successes as well," said Thomas Robinson, MD, professor of pediatrics and of medicine and the primary author of the new research. He noted

that almost 85 percent of families stayed in the study at least two years. "It's important that people not be discouraged from doing research in areas that have the greatest need, because that's where we really need answers to help the populations that are at highest risk."

The findings will be published in the November issue of *Archives of Pediatric and Adolescent Medicine*.

"Low-income African-American girls are one of the groups at highest risk of obesity and its complications, yet very little had ever been done to try to address this group," said Robinson, who also directs the Center for Healthy Weight at Lucile Packard Children's Hospital. "Our focus was on intrinsic motivation: trying to identify behaviors kids would enjoy doing for their own sake that also happen to be health-promoting."

The researchers tested a two-year program of dance classes for 134 randomly assigned pre-teen African-American girls in Oakland. In addition to learning hip-hop, step and traditional African dancing, participants received home visits to encourage them to watch less TV, an intervention that has previously been shown to reduce obesity. The comparison group consisted of 127 similar girls who received health education classes. Health assessments and measures of such behaviors as TV watching and physical activity were collected regularly during the study.

"We designed this intervention to be culturally relevant to the children participating," said Robinson, who is also the Irving Schulman, MD, Professor in Child Health. "They were learning about the history of dance and the important contributions traditional African dance has made to contemporary hip-hop dance." The dancers also had several opportunities to perform at community events.

Onset of elevated insulin, or pre-diabetes, was 65 percent lower among

the dance and screen-time-reduction girls than the comparison group, and the total cholesterol and LDL [cholesterol](#) reductions in the dancers were large enough to translate into substantial reductions in cardiovascular risk, according to the researchers.

The smaller-than-expected effect on obesity may have been due in part to challenges faced in the neighborhoods where the study was conducted, Robinson said. For instance, attendance at dance classes was hampered by six changes of venue that resulted from changes in community-center leadership and violent crime at or near centers where the classes were held. Dance classes were offered five days per week, and the researchers hoped girls would attend three days each week, but median attendance was less than one class per week.

The next step in the research is to translate the connection between fun and health promotion to many other settings. Robinson's team is now evaluating a variety of "stealth interventions" for weight-gain prevention and control: ways to tap people's intrinsic motivations to engage in behaviors that also happen to be healthy. For example, they are using interest in climate change and environmental sustainability to encourage people to eat healthier diets.

"Weight loss is considered a chore — it shouldn't be," Robinson said. "If, instead of focusing on weight, which is very difficult to change, you can focus on behaviors that provide more positive rewards, the health benefits can come along as a side effect."

Provided by Stanford University Medical Center

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