

# Preschoolers benefit from daycare program to prevent obesity

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A preschool-based intervention program helped prevent early trends toward obesity and instilled healthy eating habits in multi-ethnic 2- to 5-year-olds, according to a report presented at the American Heart Association's Conference on Nutrition, Physical Activity and Metabolism.

"Nobody would dispute that we are experiencing an epidemic of obesity in this country," said Ruby Natale, Ph.D., Psy.D., author of the study and assistant professor of clinical pediatrics at the University of Miami, Miller School of Medicine in Miami, Fla. "Children as young as 7 years old are experiencing health consequences of being overweight, suggesting that intervention must occur as early as possible and involve the entire family.

"Inner-city minority children spend many hours of the day in preschool, making it a significant influence in many aspects of their lives. Children depend on their parents for nutrition and physical activity choices at this age, so the home environment must be accounted for as well."

Natale and colleagues studied 2- to 5-year-old children from ethnically diverse, low-income families in eight subsidized childcare centers in Miami Dade County, Fla. The intervention group received a six-month home- and school-based obesity prevention program with two tiers.

The classroom-based (tier one) program included menu modifications and education:

- The menu promoted water as the primary beverage for staff and children; offered only skim or 1 percent milk; limited juices and other sweetened beverages; and incorporated fruits and vegetables in snacks as much as possible.
- Classroom teachers were educated weekly about how to incorporate nutrition and physical activity curriculums and how to better understand and overcome children's cognitive, cultural and environmental barriers to implementing a healthy low-fat, high-fiber diet.

The family-based (tier two) program reinforced what the children learned at childcare, including:

- Monthly parent dinners to educate parents about food labels, the food guide pyramid and portion sizes.
- Newsletters focusing on topics such as picky eaters, healthy cooking tips, healthy fast food options and recipes for healthy snacks.
- At-home activities such as sampling different vegetables and various types of lower-fat milks.

Comparing data from the intervention group to a control group of children, researchers found that intervention is an effective obesity prevention strategy.

“While 68.4 percent of children were at normal weight at the start of the study, this increased to 73 percent at follow-up,” said Sarah E. Messiah, Ph.D., M.P.H., lead author of the study and research assistant professor in the Division of Pediatric Clinical Research, University of Miami, Miller School of Medicine. “Also, the percentage of children who were at risk for overweight decreased from 16 percent to 12 percent.”

From the beginning to the end of the intervention, children changed the amounts and types of foods they ate. Those at two intervention sites ate less junk food, more fresh fruits and vegetables, and drank less juice and

more 1 percent milk compared to those at control sites.

Specifically, on average in the intervention groups:

- Chip consumption decreased from daily to no consumption.
- Cookie consumption decreased 50 percent.
- Fresh fruit and vegetable consumption increased 25 percent.
- Juice consumption decreased 50 percent and was replaced with a 20 percent increase in water consumption.
- One percent milk consumption increased 20 percent.

“In the control sites, cake and cookie consumption actually increased 35 percent and 75 percent, respectively, while average fresh fruit and water consumption decreased,” Messiah said. “We are hoping that our study will impact policy around the country leading to healthier standards for meals served at childcare centers. If we are successful in improving attitudes toward nutrition and physical activity in early childhood, we can potentially influence adult behavior and begin to hope that the public health epidemic of obesity can be ended.”

Source: American Heart Association

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