

## Improving the Nutritional Intake and Physical Activity of Children from Low-Income Households via Family, School, and Workplace Policy

by Daphne C. Hernandez, Ph.D., M.S.Ed., FAAHB, Kendall Brice, B.A., and Jerica M. Berge, Ph.D., M.P.H., LMFT, CFLE

### ABSTRACT

Childhood obesity remains high, especially among children from racially and ethnically diverse and low-income households, and it is associated with numerous negative health consequences in adulthood. Family, home, school, and workplace environments are recommended areas for expanding policies and implementing strategic interventions for child obesity designed to improve nutritional intake and increase physical activity. Family-based interventions offer a variety of strategies to lower the incidence of obesity. Programs such as the federally funded Child and Adult Care Food Program can be extended to work with families and caregivers in schools. Further workplace wellness programs could use federal programs such as the USDA Expanded Food and Nutrition Education Program to establish policies and initiatives that extend obesity interventions to employees' families.

### Child and Family Obesity and Health

Childhood obesity prevalence has reached epidemic status in the United States. It is associated with a predisposition for adulthood obesity and with negative health, interpersonal, and economic outcomes that endure throughout an individual's life span. Childhood obesity is associated with adolescent and adulthood obesity, the risk of chronic diseases (including type 2 diabetes and metabolic syndrome), functional

limitations, depression and poor self-esteem, and premature adult mortality.<sup>1</sup> Obesity is also associated with children's lower academic performance, increased behavioral problems, and increased likelihood of being bullied.<sup>1</sup> Furthermore, individuals with obesity incur higher health care expenditures than those of normal weight.<sup>2</sup> It is estimated that obesity-related health care costs will reach between \$860 billion and \$957 billion by 2030, which equates to 16%–18% of total health care costs incurred by all

Americans in the health care system.<sup>3</sup> These negative health and economic outcomes associated with obesity necessitate prevention-based research as well as program and policy interventions.

Many home-based efforts to reduce childhood obesity have shown promise, yet childhood obesity prevalence continues to increase, especially in children from low-income and racially and ethnically diverse households. Extending the successful elements of existing interventions to other

### SUGGESTED TALKING POINTS

- Childhood obesity remains high in racially and ethnically diverse low-income families.
- By 2030, 16%–18% of all health care costs in the United States will be obesity related.
- Factors in the home environment have shown promising results in addressing childhood obesity; as a result, similar strategies could be implemented in other environments.
- Nutrition, physical activity, and family meals can be integrated into existing workplace and school intervention programs.
- The entire family can be included in interventions that take place outside the workplace and schools to reduce childhood obesity.

## RECOMMENDATIONS FOR PRACTITIONERS, SCHOLARS, AND POLICYMAKERS

1. Provide opportunities for parents to participate in school-provided breakfast and lunch meals.
2. Extend workplace wellness programs to improve child and family physical activity.
3. Increase the prevalence of family meals by redirecting resources from existing federally funded programs such as the Summer Food Service Program.
4. Encourage family-based research in nontraditional family settings, such as schools and workplaces, to evaluate nutrition and physical activities policies that are designed to address childhood obesity.

## Author Bios

**Daphne C. Hernandez** is an Associate Professor and Lee and Joseph Jamail Distinguished Professor at the University of Texas Health Science Center at Houston's Cizik School of Nursing. Her work focuses on food insecurity, stress, and health among vulnerable populations, including Hispanic immigrants.

**Kendall R. Brice** graduated with an undergraduate degree in kinesiology from Rice University. She is currently working on her Master's of Science in prosthetics and orthotics at Baylor College of Medicine. She has found nutrition to be a common intersection of her interests in athletics, kinesiology, agriculture, and orthotics and prosthetics.

**Jerica M. Berge** is a Professor and Vice Chair for Research in the Department of Family Medicine and Community Health at the University of Minnesota Medical School. She is both a behavioral health clinician and a researcher. She is also the director of the Healthy Eating and Activity Across the Lifespan Center.

environments that also influence familial interaction, such as school and work, may produce more dramatic effects on reducing the prevalence of childhood obesity. Within both environments, policies and practices exist that, if extended and expanded, could apply family-inclusive intervention strategies to increase children's diet quality and physical activity.

## Avenues to Address Childhood Obesity

Primary strategies for reducing obesity among children from low-income households focus on bolstering the nutritional value of food intake and increasing physical activity levels. Interventions focus on these areas because they address two main causes of obesity: increased consumption of energy-dense, nutrient-poor foods and increasingly sedentary lifestyles.<sup>9,10</sup> Research examining the association between calorie density and weight gain has called for enhancements in the "healthfulness" of food-related infrastructure to reduce obesity prevalence.<sup>11</sup> Therefore, efforts to substitute energy-dense foods with more nutritious options lower calorie-density ratios and act in opposition to obesity-causing overconsumption of calories. Children from low-income households are especially vulnerable to consuming energy-dense, nutrient-poor foods, as these foods are most affordable and abundant in neighborhoods classified as low income.<sup>9</sup>

Family meals have been linked with healthier diet quality among children, including greater intake of fruits, vegetables, and grains and lower intake of sugar-sweetened beverages.<sup>12,13</sup> In addition, frequent family meals are associated with fewer unhealthy weight-control practices or disordered eating behaviors,<sup>14</sup> and are associated with reduced risk of overweight and obesity.<sup>14-16</sup> In general, children from low-income households have less frequent family meals than children from higher-income households.<sup>13</sup> Interventions to improve the frequency of family meals among lower-SES families have shown improvements in children's weight,<sup>17</sup> and improve nutritional status and reduce obesity risk among lower-SES families.

Encouraging physical activity in children augments the positive effects of enhanced nutrition and is crucial to healthy development. It is recommended that children aged 6–17 years participate in moderate to vigorous physical activity for at least 1 hour daily to meet standards set by the U.S. Department of Health and Human Services.<sup>18</sup>

*See the full brief for more information about physical activity in this section. Also see sections focusing on improving nutrition, promoting family meals, and increasing physical activity among children from low-income households. All policy extensions and recommended initiatives enumerated in this brief are listed in Table 1.*

*See the full brief for a complete list of references and full information about the authors.*

### National Council on Family Relations

661 LaSalle Street, Suite 200  
St. Paul, MN 55114  
Toll free: 888-781-9331

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