

Opportunities to Reduce Childhood Hunger and Obesity

Restructuring the Supplemental Nutrition Assistance Program (the Food Stamp Program)

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CHILDHOOD IS A TIME OF SUBSTANTIAL NUTRITIONAL needs. However, many children in low-income families do not consume adequate amounts of nutritious foods for optimal physical development, cognitive performance, and psychological well-being. The pending reauthorization of the Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program), a \$75 billion annual federal food assistance program, provides a critical opportunity to improve the nutritional health of its 46.6 million recipients, nearly half of whom are children.¹

Nutritional Adequacy in Childhood

The nutritional needs of children can be divided in 2 categories, food *quantity* (caloric intake) and food *quality* (biological effects independent of calories). Children require more dietary energy relative to their body size than at any other time in life, roughly equaling 1000 kcal/d in the first year of life and an additional 100 kcal/d for each year of age after that until puberty. For example, the daily energy requirements for an 8-year-old would typically approach 1800 kcal—approximately that of an adult woman. Intellectual development also depends on a high-quality diet. In addition to essential nutrients, the types of carbohydrate, fat, and protein; the content of fiber and associated phytochemicals; and the regularity of meals have immediate and long-term implications for health in children.

Food Insecurity and Obesity

Historically, the image of food insecurity in the United States was an underweight child with inadequate calorie intake. However, government food assistance programs including SNAP have been successful in reducing, although not entirely eliminating, this form of deprivation. Today, however, the picture of food insecurity is increasingly an overweight or obese child consuming a poor-quality diet.² Indeed, the highest rates of obesity are found in people with the lowest incomes. Among poor populations, 7 times as many chil-

dren are obese as are underweight.³ Typically, the challenge for low-income families in today's modern food environment is not obtaining enough food, but rather having dependable access to high-quality food. An estimated 16.7 million youth younger than 18 years do not consistently know when, or how adequate, their next meal will be.⁴

Studies in animals provide insights into the relationship between food insecurity and obesity. In one experiment, normal mice exposed to random, intermittent fasting developed increased body weight and fatness compared with animals with predictable food availability.⁵ Moreover, the intermittently fasted animals had increased expression of a hunger-stimulating brain neuropeptide and decreased body temperature, biological changes that would predispose to weight gain. Although these studies were conducted in animals, parallels might be drawn with food insecurity in humans. Families with limited financial resources may experience long-term, cyclical variation in food availability, with overconsumption at the beginning of the month after distribution of SNAP benefits followed by deprivation at the end of the month when benefits have been exhausted.

Another possible reason for this relationship is that low-income families may spend their limited food budget on high-calorie, low-quality products. SNAP has no regulations to influence the quality of foods purchased and pays for an estimated \$4 billion in soft drinks per year, or about 20 million servings each day.⁶ Research suggests that if a child consumes 20 oz (600 mL) of a sugary drink, she will become hungrier more quickly than if she ate a large apple and a heaping tablespoon of peanut butter, even though both have about the same number of calories. Thus, the present lack of focus on food quality in SNAP may simultaneously exacerbate hunger and promote obesity.

The effects of food insecurity on children's physical and mental health have been well documented and include iron-deficient anemia, developmental delays, learning difficul-

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ties, impaired acquisition of social skills, and a variety of emotional and behavioral problems. Over the long term, poor diet quality among low-income children will fuel the pandemic of obesity and its related diseases.⁵ Without public health intervention, the economic costs arising from this pandemic may have catastrophic consequences to society as this generation ages.

Recommendations

Congress recently passed legislation to improve the nutritional quality of several major federal food assistance programs. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), established in 1972, was revised in 2009 to provide a defined food package aligned with the *Dietary Guidelines for Americans*. In addition, the Healthy, Hunger-Free Kids Act of 2010 requires that the National School Lunch Program, the School Breakfast Program, and the Child and Adult Care Food Program be modified to improve nutritional quality of provided meals. However, no such policy changes have been made in SNAP, whose budget is larger than all other federal food assistance programs combined. Presently, SNAP benefits can be used to purchase any food or beverage, except alcohol, tobacco, vitamins, and hot prepared items. Recent data indicate that, among low-income adults, SNAP participants have lower dietary quality than nonparticipants.⁷ The public pays for sugary drinks, candy, and other junk foods included in SNAP benefits twice: once at the time of purchase, and later for the treatment of diet-induced disease through Medicaid and Medicare.

A recent report identified multiple opportunities and strategies to improve nutrition among SNAP recipients.⁸ Presently, the exact types and amounts of food purchased in SNAP remain largely unknown, so strengthening of the program must begin with a more systematic approach to data collection by the US Department of Agriculture (USDA). Special effort should be made to promote consumption of healthy foods and discourage the purchase of products that undermine nutritional quality among children, since half of the population will be enrolled in SNAP at some time by age 19 years. In addition, increased cross-departmental collaboration is needed between the US Department of Health and Human Services and the USDA to develop a national strategy to improve food security and prevent obesity among low-income children now and in the years ahead.⁸

SNAP is essential for hunger prevention in the United States, but its exclusive focus on food quantity contributes to malnutrition and obesity, and is misaligned with the goal of helping beneficiaries lead healthier lives. The nation's \$75 billion investment in SNAP could provide a major opportunity to reduce the burden of diet-related disease among low-income children and families if policies that promote nutritional quality are instituted.

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