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United States Department of Agriculture

Economic Research Service

Childhood Obesity and the Role of USDA

Food Assistance Research Brief

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General

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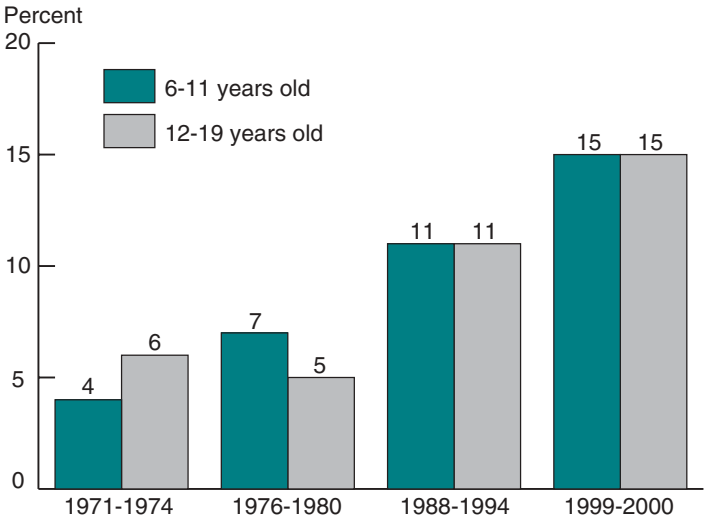
Issue: The rapid increase in the prevalence of overweight and obesity among children is one of the most serious public health concerns in the United States today. Overweight children tend to become overweight adults and overweight adults are at increased risk for a number of ailments including hypertension, type 2 diabetes, osteoarthritis, coronary heart disease, congestive heart failure, stroke, and some types of cancer. In addition to increased health risks, overweight children may suffer from ostracism and diminished self-esteem. Although most of USDA's child nutrition programs were established in response to documented problems of underconsumption and undernutrition among the low-income population, they now have the potential to reduce the prevalence of childhood obesity. Emerging obesity-related research will help shape the direction of the child nutrition programs in the future.

Background: An estimated 15 percent of children ages 6-11 were overweight in 1999-2000, up from only 4 percent in 1971-74. The incidence of overweight among adolescents age 12-19 has also increased: from 6 percent in 1971-74 to 15 percent in 1999-2000 (fig. 1). Given the suddenness of the rise in overweight and obesity in the United States, most researchers attribute it to lifestyle, diet, and the changing environment in which we live rather than to genetic conditions, which tend to cause change much more slowly.

Due to the difficulty of achieving long-term weight loss, prevention of obesity is critical. The increase in the prevalence of overweight among children suggests that prevention efforts need to begin at an early age. USDA's child nutrition programs are a natural entry point for early intervention because they reach a large number of the Nation's infants and children. Almost 50 percent of all infants, and nearly 25 percent of all children age 1-4, currently participate in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and on an average school day, over half of all schoolchildren eat a school lunch provided by USDA's National School Lunch Program. Consequently, these programs can have a positive effect on reducing overweight by providing early intervention in the eating habits of children.

USDA uses a number of program and policy tools to improve the nutrient content of meals served in the child nutrition programs. For example, the National School Lunch and School Breakfast Programs use the food and nutrition recommendations of the *Dietary Guidelines for Americans*, including limiting calories from total fat to 30 percent or less and saturated fat to less than 10 percent, in setting meal standards. In addition, many schools have implemented Team Nutrition, a comprehensive program that emphasizes nutrition education for students and their parents and promotes healthy eating and physical activity. In WIC, "at risk of becoming overweight" has been added

Figure 1. Prevalence of overweight among U.S. children and adolescents, ages 6-19 years

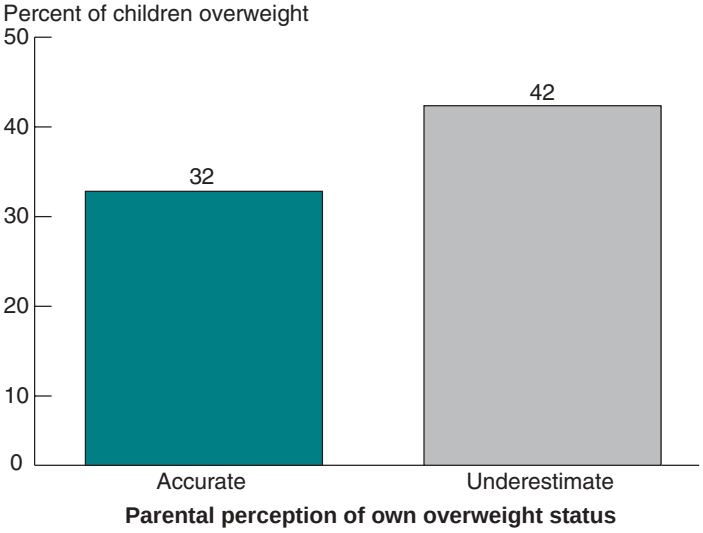


Source: Centers for Disease Control and Prevention, National Center for Health Statistics.

as one of the nutritional risks that qualify low-income children for certification in the program. Once enrolled, local WIC agencies may tailor the WIC food packages for children based on the individual's nutritional need (e.g., may decrease the amounts of food provided to reduce calories). Nutrition education stressing healthy eating habits provided in programs such as WIC may also contribute to lowering the prevalence of childhood obesity. However, more information is needed about the factors that affect obesity. Through its inhouse and extramural research programs, the Economic Research Service is finding answers to some of the difficult questions on childhood obesity.

Findings: Research funded by the Economic Research Service has shown that the presence of an obese parent greatly increases the risk of overweight in preschoolers even when no overt signs of overweight in the child are present. However, childhood obesity experts have stressed the positive role of parental involvement in treating and preventing overweight in children. An ERS study has shown that fewer children are overweight among parents who correctly perceived themselves as being overweight, compared with parents who failed to recognize their own overweight status (fig. 2). This study also found that greater parental nutrition knowledge and parental use of nutrition labels are associated with lower prevalence of overweight children.

Figure 2. Children of parents who underestimate their own weight status have a greater likelihood of being overweight



Source: Variyam, J.N., 2001.

As children grow older, other ERS research suggests displacement of milk by soft drinks is a factor that contributes to children being overweight. On average, for each 1-ounce reduction in milk consumption, a child consumes 4.2 ounces of soft drinks, resulting in a net gain of 31 calories and a loss of about 34 milligrams (mg) of calcium. Another ERS-funded study is examining the relationship between food insecurity and other factors and overweight among 8- to 16-year-old African American girls, among the most vulnerable groups for obesity. A previous ERS-funded study found that African American girls who lived in households that experienced food insecurity were nearly two-and-a-half times as likely to be overweight as those not experiencing food insecurity.

Summary: It is essential that we improve our understanding of the factors that affect obesity. Through its extramural research programs, ERS is funding a number of studies related to the determinants of childhood obesity, including: eating patterns associated with obesity in children; identification of the school, family, parent, and child predictors of persistent childhood obesity; parenting practices and obesity in low-income African American preschoolers; diet patterns, nutrients, and development of adolescent obesity; and the role of food insufficiency and food assistance participation in obesity. ERS is also evaluating a pilot project to promote fresh fruit and vegetable consumption among the Nation's schoolchildren in an effort to combat the growing problem of overweight and obesity among schoolchildren. The insights obtained from these analyses will be useful in the development of educational programs and intervention strategies aimed at reducing the incidence of obesity. More detailed information about these research projects is available at: http://www.ers.usda.gov/briefing/foodnutritionassistance/projects.

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