

Back to the Beginning:

Obesity Prevention in Early Childhood

Recent efforts in the field of child obesity prevention have placed emphasis on the school-age population, and with good reason. Schools present a unique opportunity to reach large groups of children on a regular basis with healthy foods and physical activity. However, about 10 percent of children come to kindergarten already obese, up from 5 percent in 1980, indicating that more attention needs to focus on the period of life before school, and possibly even before birth (CDC 2010).

EARLY RISK FACTORS

Researchers have identified several preconception and prenatal risk factors for childhood obesity, including a woman's prepregnancy weight. On top of higher rates of pregnancy complications, such as preeclampsia and cesarean delivery, obesity among pregnant women doubles a child's risk of becoming obese during early childhood (Walters and Tayler 2009). This connection illustrates the need for women to be at a healthy weight before pregnancy; yet about 50 percent of women of childbearing age (20 - 44 years) are overweight or obese (Vahratian 2009). In addition, mothers who smoke are more likely to have babies that become obese, even though they are often small when born (Rabin 2010).

Soon after birth, early sleeping and feeding practices can influence an infant's future weight. Getting less than 12 hours of sleep a day can double an infant's chance of becoming overweight or obese compared with children who sleep more (Taveras et al. 2008). On the other hand, breastfeeding, known to protect against type 1 and 2 diabetes, heart disease, hypertension, allergies, and asthma, has been shown to reduce the risk of childhood obesity (American Dietetic Association 2009). One reason may be that breastfeeding encourages a healthy rate of weight gain and self-regulation of caloric intake, an important trait for maintaining an appropriate weight at any age.

Although the very earliest years can start a child on the path toward obesity, the time between infancy and kindergarten is another critical period. The establishment of unhealthy behaviors, such as drinking too many sugary drinks or being too sedentary, can set the stage for obesity and its related health problems. In fact, obese children as young as three exhibit signs of inflammation that have been linked to heart

disease in adults (Skinner et al. 2010).

VULNERABLE POPULATIONS

Children who are economically and socially disadvantaged experience the greatest prevalence of obesity. For example, about one-third of children entering Head Start, a federally funded preschool program for low-income families, are overweight or obese (Hughes et al. 2010). Racial and ethnic disparities are also apparent by preschool due to the uneven distribution of certain early obesity risk factors. A recent study finds African-American and Latino women are more likely to be overweight or obese when they become pregnant, and their children generally sleep less during infancy and consume more

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sugar-sweetened beverages and fast food than white children (Taveras et al. 2010). According to the study's main author, although more research is needed, dietary and behavioral risk factors appear to be the result of culturally embedded practices and not socioeconomic status (Science Daily 2010).

OPPORTUNITIES FOR FUNDERS

The clear advantages of childhood obesity prevention versus treatment illustrate that this area is ripe for investment. And while few interventions have been developed to address the preconception, prenatal, infant, and early childhood risk factors that have been linked with obesity, many foundations have begun to focus on this younger population, particularly children ages two to five (Taveras et al. 2010).

► **Make a Long-Term Investment** – Recognizing the need for a continuous and comprehensive effort to successfully reduce childhood obesity, the Greater Rochester Health Foundation developed a 10-year strategic plan focused on children ages 2-10 in the surrounding county. To begin, input was gathered from community members; professionals from childcare, clinical, and academic settings; and national childhood obesity experts. A multidisciplinary Childhood Overweight and Obesity Task Force was developed and cochaired by the County Department of Public Health

and a local child and family services organization. With investments of \$2 million a year from 2007 to 2017, the foundation's goal is for 85 percent of local children to be at a healthy weight by the end of the initiative (Greater Rochester Health Foundation 2007).

As part of the plan's early childhood component, grants were awarded to three well-established community organizations: the YMCA; Head Start; and The Children's Institute, a collaborative that works with more than 100 local childcare centers. Different approaches have been taken at each organization, but one unique aspect of the YMCA program is its focus on improving nutrition and physical activity for staff, with hopes that they will serve as role models of good health (DeVinney 2010).

- **Convene Key Players and Advocate for Sound Policy** – Compared to K-12 schools, the structure of the U.S. early childcare system lacks a centralized infrastructure, making it difficult for key stakeholders to stay on the same page with childhood obesity prevention initiatives for young children. In response, Nemours' Office of Policy and Advocacy organized a multidisciplinary conference in the fall of 2009 for leading private, public, and government sector leaders in early care and education, nutrition, physical activity, and child health. This conference, titled *Healthy Kids, Healthy Future: Promising Practices and Policies for Obesity Prevention and Health Promotion in Early Care and Education*, represented the first national venue in which these sectors came together to help identify innovative practices, policy opportunities, and research gaps for early childhood health promotion and obesity prevention. Moving forward, Nemours and the Centers for Disease Control and Prevention have formed a steering committee to support continued collaboration among the field's leaders (Nemours 2010).

Many promising approaches were discussed during the meeting, including opportunities created by the Child and Adult Care Food Program (CACFP), which supplies meal subsidies for childcare centers serving low-income families. In Delaware, Nemours and the state CACFP collaborated to develop new regulations for the program, from serving only fat-free or 1 percent milk to children over age two, to not offering juice to children under age one. Childcare centers in the state found that implementation was not difficult and was generally cost neutral (Nemours 2008).

- **Evaluate ChildCare Centers and Provide Technical Assistance** – The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC), produced by the University of North Carolina Center for Health Promotion and Disease Prevention, aims to improve nutrition and physical activity in childcare settings to prevent obesity in preschool-age children. With this goal in mind, the BlueCross BlueShield of North Carolina Foundation invested just over \$240,000 in the NAP SACC pilot

program for 10 North Carolina counties from 2008-2009.

The pilot program was directed by the North Carolina Partnership for Children, which identified NAP SACC as a strategic, high-impact approach. To begin, centers completed the NAP SACC survey and selected two to three key focus areas to address. Childcare health consultants then provided technical assistance to improve targeted issue areas. More than 90 percent of the centers showed progress, and about half demonstrated statistically significant improvement in nutrition and physical activity policies and practices (BlueCross BlueShield of North Carolina Foundation 2009).

- **Increase Exposure to Healthy Foods in a Kid-Friendly Environment** – Since 2007 the HNHfoundation has supported the Early Sprouts Gardening and Nutrition Experiences for the Young Child curriculum model. Early Sprouts aims to expand the food preferences of young children to include healthy choices, to promote healthy eating at home, and to reduce the risks associated with childhood overweight and obesity. Preschool children learn to garden and prepare seasonal produce, and become familiar with healthy choices through multiple exposures. Because parent engagement is so important, family members are invited to participate in garden planting, classroom-based sensory and cooking activities, and food-based special events (Early Sprouts Program 2010).

To build on their obesity prevention work with young children, the HNHfoundation released a request for proposals in May 2010 to support policy and environmental change in early learning settings using the previously mentioned NAP SACC assessment. In addition to the NAP SACC project, the foundation will also fund an effort to identify a common obesity prevention message for use in early learning settings throughout New Hampshire. This project is the result of an early learning stakeholder meeting held by the foundation last fall in which attendees agreed that a consistent message would allow for easier communication with parents and for joint use of materials and resources between Head Start; Women, Infants, and Children; and childcare settings (Baum 2010).

CONCLUSION

From the preschool and childcare efforts described here, to the opportunities provided by breastfeeding promotion and maternal health, early interventions are integral to the prevention of childhood obesity and its harmful consequences. At the same time, these efforts should also be valued for their natural role in the healthy development of all children, regardless of weight.

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