



A publication of the  
California Center for  
Health Improvement

# Field Lessons

Strategies to Support California's  
Children and Families First Act



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## Preschoolers Increasingly Overweight

### Preventing Childhood Obesity: A Prop 10 Opportunity

**Nearly eight percent of all four to five-year-old children in the United States are overweight.**

Among girls of that age group, the prevalence of overweight almost doubled from 5.8 to 10.8 percent between 1971 and 1994.<sup>1</sup> This alarming trend is further reflected in the number of grammar school children identified as overweight. Currently, one in five school-age children is overweight,<sup>2</sup> and the number is rising.<sup>3</sup> The prevalence in overweight California children is higher than the national average.<sup>4</sup>

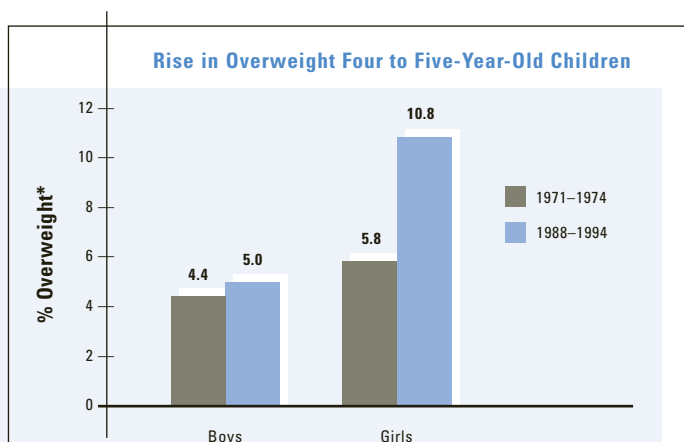
*Through promotion of proven educational strategies and healthy family lifestyle behaviors, California Children and Families (Prop 10) Commissions have a unique opportunity to help address this serious public threat to the health and well-being of our children.*

Obese/overweight children become sick more often, perform more poorly in school, are at heightened risk for a number of chronic childhood diseases and conditions, and are increasingly being diagnosed with “adult” diseases, such as type 2 diabetes, hypertension, and increased blood cholesterol.<sup>5</sup> Overweight children often experience discrimination and stigmatization by society and their peers, which contributes to psychological stress and low self-esteem.

Parents and caregivers of young children play a vital role in the establishment of healthy patterns for life. Recent studies have shown that food intake patterns established in early childhood predict a child's eating patterns in adulthood and that foods consumed during infancy and childhood may have long-term, and perhaps permanent, effects on health and metabolism.<sup>6</sup>

Experts advise that prevention efforts must begin early and address two crucial issues:

- the increasingly unhealthy and sedentary lifestyle of children, and
- inadequate parent and caregiver knowledge of basic infant and toddler nutrition and physical activity needs.



Source: Ogden CL, Troiano RP, Briefel RR, Kuczmarski RJ, Flegal KM, Johnson CL. Prevalence of overweight among preschool children in the United States, 1971 through 1994. *Pediatrics*. 1997; 99(4): E1.

\*Results based on children above the 95th percentile of the weight-for-stature growth reference. The weight-for-stature growth reference was used because BMI charts were unavailable for four to five-year-old children at the time of the study.



### Glossary

**Obesity/overweight** are defined as an excessive accumulation of body fat.

### **The Body Mass Index (BMI)**

is a standard formula to assess a person's body weight relative to height. It is a useful, indirect measure of body composition because it correlates highly with body fat in most people. In calculating the BMI, weight in kilograms is divided by height in meters squared ( $\text{kg}/\text{m}^2$ ). Due to growing concern over childhood obesity, the U.S. Department of Health and Human Services Centers for Disease Control and Prevention recently revised pediatric growth charts and introduced BMI charts for children as young as age two. In general, children with a body mass index between the 85th and 95th percentile are considered "at risk of overweight." Children whose weight falls at or above the 95th percentile are considered "overweight" or "obese."

## Understanding the Causes of Childhood Obesity

Weight gain among children is often due to a combination of factors, including unhealthy eating habits, sedentary behavior, genetic makeup, family lifestyle and income status.

While obesity is on the rise among *nearly all* American racial/ethnic groups, some low-income members of Latino, Native American and African American communities appear to be at greater risk.<sup>7,8</sup> Recent studies show that second generation Hispanic and Asian American adolescents are twice as likely to become obese as their parents.<sup>9,10</sup>

### • **Deteriorating Eating Habits**

Young children are eating more added sugars and fat. Approximately 70 percent of U.S. children aged two to eleven years exceed the current dietary recommendations for intake of total and saturated fats. Further, 91 percent of children six to eleven are not eating the recommended amounts of fruits and vegetables.<sup>11</sup> Many experts believe that this is due, at least in part, to increased consumption of convenience foods.

## **WARNING: Growing Children and Brain Development**

Restricting calories and nutrients of young children can retard or stunt growth and impair learning. The American Academy of Pediatrics (AAP) Committee on Nutrition recommends that children older than two years old gradually adopt eating habits that by age five reflect the following pattern of nutrient intake: saturated fatty acids should be less than ten percent of total energy; total fat over several days should be no more than thirty percent of total energy and no less than twenty percent of total energy; and dietary cholesterol should be less than 300 mg per day.<sup>12</sup> Children should increase their fruit and vegetable consumption to five or more servings daily.

Furthermore, experts agree that parents should not cut fat and cholesterol in the diets of children under age two. Infants and one year olds need high levels of fat for proper growth and development, particularly brain development.<sup>13</sup>

- ***Low Physical Activity Levels***

Today's children participate in less physical activity, spending more than 17 hours a week watching television and playing video and computer games. Research has shown that the odds of being overweight are nearly five times greater for youth watching more than five hours of television per day compared to those who watch from zero to two hours per day.<sup>14</sup> A pattern of inactivity begins early in life, making imperative the promotion of physical activity among very young children.

### **Strategies for Prevention**

- ***Breastfeeding Promotion: A Healthy Start***

Some studies have shown that longer durations of infant breastfeeding may reduce the risk of childhood obesity.<sup>15</sup> Recent findings also suggest that breast-fed infants more readily accept a variety of new foods,<sup>16</sup> enabling them to develop healthy eating habits more easily.

The AAP recommends that infants be exclusively breastfed for the first six months and that breastfeeding continue until at least the age of twelve months. However, women face many cultural, societal and logistical barriers to breastfeeding. Strategies to address these barriers include: healthcare provider prenatal counseling on breastfeeding, early home visits that include culturally competent lactation education, breastfeeding help lines, and access to lactation professionals. The U.S. Department of Agriculture (USDA) Women, Infants and Children (WIC) nutrition program implements proven strategies to promote and support breastfeeding. Other USDA child nutrition programs such as the Child Care and Adult Food Program promote breastfeeding in childcare centers and daycare homes.

- ***Parent and Primary Caregiver Education***

Parents and other primary caregivers have a tremendous impact on children's eating and physical activity patterns. Many lack basic knowledge of nutrition.<sup>17</sup> Family members have been shown to consume similar nutrients, with the strongest associations found between mothers and their children. In fact, a child's vegetable consumption is positively correlated with a mother's belief in the importance of disease prevention when choosing her child's food.<sup>18</sup>

Educational programs should be tailored to the beliefs, behaviors and needs of the target populations. For example, a focus group study of WIC mothers suggests that many rely primarily on the child-feeding advice of their mothers, even when it contradicts that of their WIC nutritionist.<sup>19</sup> Numerous proven programs and curricula exist for educating parents on proper early childhood nutrition and developmentally appropriate feeding practices.

Children's food preferences are not inborn; they are learned through repeated **exposure to foods.** Parents and other primary caregivers can **provide opportunities** for children to learn to enjoy a variety of nutritious foods.<sup>20</sup>

Parents are also often the gatekeepers of their children's physical activity patterns. A California study of preschool Mexican-American and White children found that household rules about play impact children's physical activity. However, the strongest correlate of children's activity was time spent outdoors. Access to safe outdoor play areas can support parents' promotion of physical activity.<sup>21</sup> Studies of obese children show that rewarding children for decreasing sedentary time leads to more physical activity as well as weight loss.<sup>22</sup>

Although few studies have evaluated physical activity interventions for preschool children, several elementary school studies show that enhanced physical education programs can increase children's physical activity.<sup>23</sup> High quality physical activity curricula are needed for preschool children, and local Prop 10 commissions can make an important contribution by supporting the development and testing of such programs.

### Model Nutrition Programs

Effective prevention programs for families with preschoolers utilize multiple nutrition education strategies including intergenerational family education, social marketing and caregiver training.

**La Cocina Saludable** (The Healthy Kitchen) is an innovative parent nutrition education program designed for low-income Latino and migrant farm workers. The key feature of this comprehensive program is the use of Hispanic grandmother and *abuela* (grandmother figure) educators. An evaluation of this bilingual, culturally appropriate, intergenerational approach found it to be successful in improving the nutrition-related knowledge and food shopping and cooking behaviors of the participating mothers of preschool children.<sup>24</sup>



The primary and most preventable causes of childhood obesity are poor dietary habits and low levels of physical activity.

**The Family Nutrition Program, Infant-Toddler Component (FNP-IT)** is a Hartford, Connecticut-based comprehensive program that improves the nutrition knowledge and food choices of Latino food stamp recipients. Funded by the USDA through the University of Connecticut, the program employs a three-pronged, community participatory approach that emphasizes culturally and linguistically appropriate nutrition education, extensive public information and ongoing evaluation. Each year, the project reaches about 200,000 adults and more than 10,000 children through preschool nutritional education, garden produce distribution, health fairs, puppet shows and other community activities. Evaluations indicate that the FNP-IT program has facilitated a better understanding of the nutritional situation of low-income Latino preschoolers.

• *Children Require More Exercise*

Many scientific and governmental organizations recommend regular physical activity for children. The National Association for Sports and Physical Education and the Year 2000 Dietary Guidelines for Americans<sup>25</sup> recommend that children accumulate at least sixty minutes per day of moderate to vigorous activity. The sixty-minute guideline is based on observations that virtually all young people appear to be meeting the thirty-minute guideline for adults, yet obesity is rapidly increasing. Several organizations also recommend that TV viewing be limited to two hours per day. The AAP recommends that children under two do not watch any television.<sup>26</sup>

• *Teaching by Example*

Preschools and other childcare centers provide excellent venues for educating children about the importance of healthy eating and physical activity. Research shows that with increased knowledge, children display better eating behaviors and increased physical activity levels.<sup>27</sup> In addition to formal nutrition education programs, preschools and childcare centers can also teach by example. By providing nutritious foods and substantial amounts of physical activity for children, they can contribute to the development of healthy habits. Experts stress the need for both educational and environmental change components.

The California Department of Education Healthy Kids Resource Center and its Nutrition Services Division are good resources for early childhood nutrition education materials. In addition, the national Healthy Start program is a comprehensive preschool health education program that includes a proven curriculum developed for three to five-year-old children in Head Start, preschool and other childcare settings. Two of the twelve educational units address nutrition—developing healthy eating patterns and food preferences in young children. A third unit focuses on fitness. Included in this program are teacher training, take-home educational materials for parents, and a food service modification model, which trains cooks how to reduce the total and saturated fat in school meals and snacks.<sup>28</sup>

Other child-friendly teaching tools are available from the USDA, such as a recently developed new food pyramid for children ages two to six years and accompanying booklet designed for preschoolers and their families about healthy food choices.

California WIC and California Healthy Start are currently developing new curricula for children under age five.

- *Comprehensive, Community-Based Approaches*

The deteriorating health habits of children, families and communities have contributed to the recent increase in childhood obesity. An effective long-term strategy for improving these habits is to create local structures that support active, healthy lifestyles.

Community infrastructure-building projects—such as community gardens, community recreational center activities for young children and families, safe and conveniently located parks and playgrounds, and farmers' markets—aim to provide opportunities for affordable healthy foods and safe places for physical activity. Many experts associate access to and time spent in neighborhood play areas, such as parks, with preschoolers' overall activity levels.<sup>29</sup>

The WIC Farmers' Market Nutrition Program provides additional coupons to WIC participants to purchase fresh fruits and vegetables at participating local farmers' markets. The goals of this program, currently available through sixty California WIC agencies for 160 certified farmers' markets, are to provide nutritious, locally grown produce to WIC participants and to expand their awareness and use of farmers' markets.

Community parks and recreation centers can provide safe places for families and young children to exercise. KaBOOM!, a national nonprofit, develops partnerships with communities and businesses to design and build or restore safe community playgrounds. Since 1995, KaBOOM! has built 200 playgrounds in 31 states with the help of 50,000 local volunteers. This proven community-building model saves money and engages communities in providing young children with healthy play opportunities.

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## Resources

- USDA for Kids, [www.usda.gov/news/usdakids/index.html](http://www.usda.gov/news/usdakids/index.html)
- Education Training Unit, Nutrition Services Division, California Department of Education, 916.322.4792
- Healthy Kids Resource Center, 510.670.4581 or [www.californiahealthykids.org](http://www.californiahealthykids.org)
- The Connecticut Family Nutrition Program, Infant-Toddler Component, Anir Gonzalez, 860.527.0856, ext 256, [anir@hispanichealth.com](mailto:anir@hispanichealth.com) or Rafael Perez-Escamilla, 860.486.5073, [rperez@canr.uconn.edu](mailto:rperez@canr.uconn.edu) or [www.hispanichealth.com/pana.htm](http://www.hispanichealth.com/pana.htm)
- La Cocina Saludable, Jennifer Anderson, 970.491.7334, [jela@lemar.colostate.edu](mailto:jela@lemar.colostate.edu) or [www.colostate.edu/Depts/FSHN/extension/programs/la\\_cocina\\_saludable](http://www.colostate.edu/Depts/FSHN/extension/programs/la_cocina_saludable)
- The national Healthy Start preschool education program, B.J. Carter, 207.361.1850 or [www.healthy-start.com](http://www.healthy-start.com)
- WIC breastfeeding promotion or Farmers' Market programs, contact your local WIC agency
- KaBOOM!, Sarah Gores, 312.822.2213 or [www.kaboom.org](http://www.kaboom.org)
- "Childhood Obesity: A Food and Nutrition Resource List for Educators and Researchers," Food and Nutrition Information Center, Child Care Nutrition Resource System, <http://www.nal.usda.gov/childcare/>
- USDA Food Guide Pyramid for Young Children, USDA Center for Nutrition Policy and Promotion, <http://www.usda.gov/cnpp/KidsPyra/index.htm>

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## Preventing Childhood Obesity: Recommendations

It has become imperative that professionals interested in young children develop and implement practical methods to prevent obesity early in life. Prevention work in this area is just beginning. More research and data are required to document the extent of the problem and establish benchmarks to measure progress. Increased collaboration among early childhood and health professionals is needed, especially in developing guidelines for physical activity in pre-kindergarten children. Prop 10 local commissions can take a leadership position by linking prevention to overall child health indicators.

1. ***Strengthen local programs that promote and support breastfeeding.*** Include breastfeeding promotion in other Prop 10-funded efforts. Partner with local healthcare providers, existing lactation programs or WIC to expand existing breastfeeding programs.
2. ***Assure access to high quality community programs that provide parent and caregiver education on early childhood nutrition and physical activity.*** Gather ongoing evidence of improved outcomes in local programming for family nutrition education and healthy lifestyles. Improve access to and availability of quality programs that include grandparents, other family members and other caregivers for young children in educational outreach.
3. ***Create and implement nutritional and physical education training and leadership programs for preschool teachers and daycare providers.*** Preschool teachers and daycare providers are central figures in many children's lives. Like parents, these caretakers should be educated with regard to the fundamentals of early childhood nutrition and the importance of physical activity to the health and well-being of young children. Effectively implemented preschool nutrition education and physical activity curricula can enhance children's knowledge of a healthy lifestyle.
4. ***Promote physical activity as a family activity and build community awareness about healthy lifestyles.*** Replicate successful comprehensive, community-based strategies and partner with existing infrastructure-building programs, such as WIC Farmers' Market Nutrition Program, local parks and recreation departments, or KaBOOM! to strengthen community resources. Support national and community efforts to turn televisions off for young children.
5. ***Enhance the quality standards for preschoolers' nutrition and physical activity levels in your community.*** Ensure Prop 10-funded preschools and daycare centers provide foods that meet dietary guidelines and provide sixty minutes of daily activity for each child. Determine if preschools and daycare facilities have sufficient equipment and supplies to support a good physical activity program. Make sure that Prop 10-sponsored events teach by example.
6. ***Partner with healthcare providers to educate the families of young patients and the wider community about effective strategies to prevent childhood obesity.*** Family health providers have a unique opportunity to counsel parents and caregivers on effective nutrition and physical activity practices for growing children and the availability of community supports. Involve pediatricians and other providers in community efforts to promote healthy lifestyles.



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