

Salud America!

The Robert Wood Johnson Foundation Research
Network to Prevent Obesity Among Latino Children



Addressing Nutrition, Overweight and Obesity Among Latino Youth

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RESEARCH BRIEF

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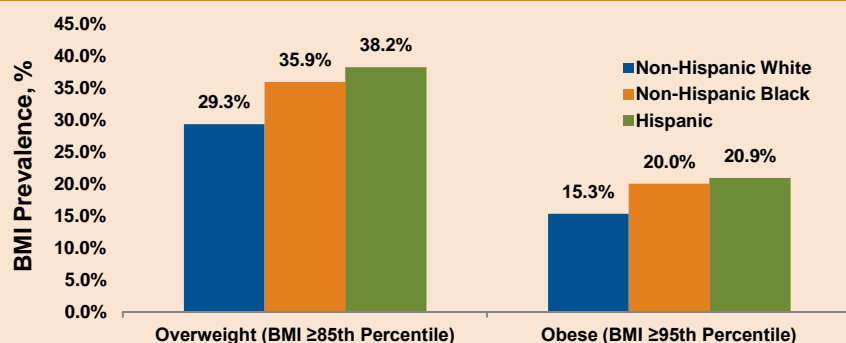
Addressing Nutrition, Overweight and Obesity Among Latino Youth

Introduction

Latino youth are more likely to be overweight or obese than their white peers (Figure 1).¹ According to current estimates, more than 38 percent of Latino youth ages 2-19 in the United States are overweight and almost 21 percent are obese.¹ The higher prevalence of overweight and obesity among Latino youth places them at greater risk for developing health and psychological problems such as cardiovascular disease, asthma, type 2 diabetes, liver disease, sleep apnea, depression, anxiety and psychological stress.^{2,3} These negative effects on Latino youth—and the nation as a whole—cannot be understated, as Latinos currently represent the most populous and fastest growing ethnic minority in the United States. In 2010, the 50.5 million Latinos in the United States comprised 16 percent of the total population—a figure that grew by 43 percent between 2000 and 2010.⁴ In the coming years, the negative effects felt in this large minority population will likely ripple through the health of the nation as a whole, resulting in greater health care expenditures, higher disability rates, lost work productivity, stunted economic growth, and perhaps even threats to national security.⁵⁻⁹

FIGURE 1

High body mass index (BMI) among U.S. youth ages 2-19 is most prevalent in Latinos, 2007-2008¹



Data source: National Health and Nutrition Examination Survey 2007-2008.

A complex interplay of environmental, socioeconomic and cultural factors contributes to the higher rates of overweight and obesity among Latino youth. The modern urban environment, replete with convenience stores and fast-food restaurants, has provided easy access to generally unhealthy foods and beverages while not always providing access to healthy ones. This imbalance is further driven by the fact that calories tend to be cheaper in unhealthy foods than in healthy ones.^{10,11} Low rates of physical activity also contribute to this imbalance.

Studying this epidemic in the Latino population entails an additional challenge, since the word “Latino” encompasses more than one culture. Latinos come from many different countries and have adapted to American culture to varying degrees. These differences may be among the factors that account for variation in obesity among Latino youth. To fully appreciate the scope of the problem and counteract the growing tide of overweight and obesity among Latino youth, we need a clear understanding of the factors underlying the phenomenon.

This research brief examines the environmental, socioeconomic and cultural factors that influence nutrition, overweight and obesity among Latino youth.

Key Research Results

- **Families and youth residing in low-income, minority neighborhoods, including communities predominantly consisting of Latinos, often face limited access to supermarkets, chain grocery stores and healthy foods.** Several studies completed in the United States report that grocery stores are less prevalent in low-income minority neighborhoods than in wealthier ones and when present are less likely to carry healthy food choices. Additionally, fast-food restaurants and convenience stores (which typically sell more energy-dense foods) are more prevalent in lower-income and minority neighborhoods.¹²⁻¹⁴
- **Food and beverage purchases made in corner stores located near schools significantly contribute to calorie intake among children in urban areas.** An observational study of children in grades 4-6 across ten urban K-8 schools found that youth frequently shopped at corner stores on their way to and from school. The most commonly purchased items were energy-dense, low-nutrient foods and beverages, with each purchase averaging more than 350 calories.¹⁵ More than 80 percent of the students in the study were eligible for free or reduced-priced meals, and 23 percent were Latino.
- **Latino high school students have greater access to both unhealthy and healthy food choices than do other high school students.** In a nationally representative sample of U.S. high schools, access to regular ice cream, but also to fruits and vegetables, was significantly greater for Latino students than for their white or black peers. Additionally, compared with white or black students, Latino youth were more likely to attend high schools that offered brand-name fast-food items for lunch.¹⁶

Several environmental factors can pose barriers to healthy eating among Latino youth and their families.



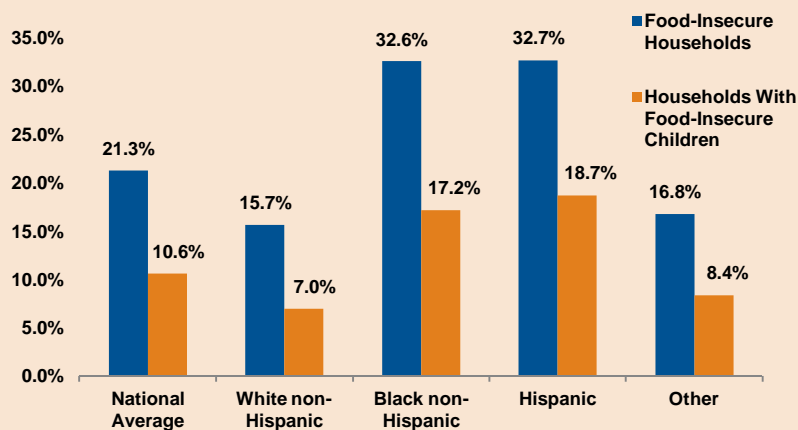
- **Socioeconomic status influences children’s BMI via the cost and accessibility of healthy foods.** The correlation between living in a household with income below 150 percent of the federal poverty level and overweight or obesity was stronger for Latino children than for white or African-American children, according to nationally representative data from the National Survey of Children’s Health. A major contributor to the greater risk of overweight or obesity among Latinos in these lower-income households is lack of available and/or affordable healthy foods.¹⁷
- **Children living in disadvantaged neighborhoods have less healthy diets.** A cross-sectional study of 182 children ages 7-12 (26% of whom were Latino) found that children living in disadvantaged neighborhoods—based on poverty, unemployment, increased vacant housing and single-parent, female-headed households—consumed a significantly higher proportion of calories from fat and trans fat and consumed significantly more sodium than did children living in more advantaged neighborhoods.¹⁸
- **Compared with the national average, food insecurity is substantially higher in Latino households and in households with lower incomes.** Unreliable access to sufficient food for an active, healthy life for all household members was higher than the national average (14.7%) among Latino households (26.9%) and among households with incomes near or below the federal poverty level (39.7%), according to data from the US Department of Agriculture’s Economic Research Service. Of all racial/ethnic groups assessed, Latino and black households had the highest prevalence of food insecurity, and the majority of these households had food-insecure children (Figure 2). Food insecurity in households with children

Socioeconomic factors can also pose barriers to healthy eating among Latino youth and their families.

appeared to be slightly more common in Latino households than in black households.¹⁹

FIGURE 2

In 2009, the prevalence of food insecurity was highest in Latino and black households.¹⁹



Data source: USDA 2009 Food Security Survey, a supplement to the US Census Bureau Current Population Survey.

- **Latino parents were more likely than White parents to say their child’s doctor gave insufficient advice about preventing childhood obesity.** Latino parents of overweight or obese children were 2.8 times more likely than their white counterparts to say that, during a primary care visit, they received “poor” or “fair” advice regarding nutrition, physical activity and their child’s weight. This difference remained even after adjusting for factors such as parental education and household income.²⁰
- **More acculturated Latino families demonstrate less healthy dietary behaviors than less acculturated families.** An obesity-prevention study conducted by researchers at San Diego State University found that Latino families (predominantly Mexican/Mexican-American families) who visited fast-food, buffet, or sit-down restaurants at least once per week were significantly more acculturated to U.S. culture compared with those who visited such restaurants less frequently. Children in families who ate at restaurants at least weekly consumed more sugary beverages, more sweet/savory snacks, and less water compared with families who visited restaurants less frequently.²¹

Latino identity and selected trends among Latinos can pose barriers to healthy eating for Latino youth.

- **Latino youth spend more time watching television than white youth.**^{17,22} **Television watching has been positively associated with increased caloric intake, overweight and obesity.**²³⁻²⁵ According to a nationally representative Kaiser Family Foundation study, Latino children spend just under 5.5 hours per day watching television, compared with roughly 3.5 hours per day for white youth.²² Research has reported that increased television viewing is associated with increased snacking and caloric intake among youth—a relationship mediated by increased consumption of energy-dense foods.^{23,24} One study revealed that each 1-hour increase in television viewing correlated with the consumption of an additional 167 calories per day, typically consisting of the foods commonly advertised on television.²³
- **The influence of meals on Latino nutrition and overweight is complex: Eating away from home *and* at home can both contribute to poor dietary behaviors and obesity among certain Latino subgroups.**^{21,26} One study documented that the prevalence of overweight Latino children (predominantly Mexican/Mexican-American children) was 5.2 percent higher in families that consumed foods at least once a week at fast-food, buffet, or sit-down restaurants and 5.3 percent higher in families that consumed foods at least once a week in the homes of relatives, neighbors or friends, as compared with families who ate at these sites less frequently.²¹ A national study found that eating more family meals together marginally increased the risk of obesity among Latino boys, but not Latino girls.²⁶
- **“Empty” calories from solid fat and added sugars constitute a large proportion of total calories consumed by Mexican-American and other Latino children.**^{27,28} Cross-sectional data from the National Health and Nutrition Examination Survey (years 2003-2006) indicate that of all calories consumed by Mexican-American youth, more than 40 percent are so-called “empty” calories, those from fat and added sugars. Of the 1930 calories consumed per day on average, solid fats accounted for 430 calories (22.3%) and added sugars for 351 calories (18.2%). Major sources of these empty calories included Mexican mixed dishes, whole milk, soda and grain desserts (cakes, cookies, donuts, pies, crisps, cobblers and granola bars).²⁷
- **Cultural traditions about infant and toddler feeding may contribute to subsequent overweight among Latino children.** One study found that Latino mothers were more likely to introduce solid foods early to their children (before 4 months of age) and restrict child feeding at 1 year compared with white mothers. Latino infants also were less likely to be exclusively breastfed through 6 months compared with white infants.²⁹ All of these behaviors increased the risk of obesity among Latino children, from at least 2-fold to more than 3-fold.
- **Research suggests that small dietary changes can greatly improve health status among Latino youth.**^{30,31} One long-term study reported that overweight Latinos aged 11-17 who modestly increased their fiber intake over a 2-year period showed significant decreases in visceral fat independent of any other dietary changes.³⁰ In another study, Latino teenagers who reduced their sugar intake by the equivalent of one can of soda per day and/or increased their fiber intake by the

Several encouraging studies suggest that barriers to optimal nutrition among Latino youth may not be insurmountable.

equivalent of ½ cup beans per day showed significant improvements in visceral fat (mean volume decrease of 10%) and insulin secretion (mean decrease of 33%)—key risk factors for type 2 diabetes. BMI also decreased by 2 percent, on average.³¹

- **The menus of Mexican-American-style “taquerias” tend to offer healthier options than the menus of typical fast-food restaurants.** Baseline evaluation of an intervention to implement healthy food options in taquerias in Salinas, Calif., identified several healthier food options as compared with fast-food restaurants, including one or more non-fried carbohydrate offering, food prepared without lard and three or more fruit/vegetable offerings. A midpoint evaluation found that the intervention resulted in positive changes, as taqueria owners promoted healthier menu items and modified items to reduce fats and increase the content of fruits and vegetables.³²
- **Intensive, multi-component, culturally relevant, school-based interventions that integrate nutrition, physical activity, behavior change and social marketing can improve healthy eating and promote weight loss in Latino youth.**³³⁻³⁵ For example, implementation of an intensive (i.e., daily), multifaceted, 12-week intervention among Mexican-American middle school students in Texas yielded significantly greater reductions in BMI at 3 and 6 months after the start of the intervention compared with a control group of students assigned to a 12-week self-help intervention. BMIs in the first group declined by 0.37 points over 6 months while they rose by 1.13 points in the control group. Total cholesterol and low-density lipoprotein cholesterol also improved significantly at 6 months for youth in the intensive intervention compared with controls.³³ A follow-up study found that 79 percent of children in the intensive intervention had BMI reductions at 1 year, and notably, the majority maintained this loss at 2 years.³⁴ Perhaps key to the success of the intervention, the program content was made to be culturally relevant by focusing on modifications to traditional Mexican-American foods, promoting physical activities chosen by the children, communicating information to parents in both English and Spanish, and including extended family members involved in the children’s health.

Conclusions

- Low-income neighborhoods tend to have disproportionately higher numbers of fast-food restaurants and convenience stores and fewer supermarkets, thereby limiting access to healthy foods.
- Good nutrition in Latino youth may be undermined by lack of available and/or affordable healthy foods.
- The family and social environments in which Latino children are raised may play a vital role in establishing nutrition patterns and influencing the risk of obesity.
- Even small improvements in nutrition can yield clinically important health benefits in Latino youth.
- Comprehensive, multifaceted, intensive and culturally relevant interventions can support long-lasting improvements in the dietary intake of Latino youth.
- Although many of the above observations can be made in all children without regard to race or ethnicity, the findings carry greater weight among Latinos, and also African Americans, since these minority youth populations are disproportionately affected by obesity.
- Targeting nutritional disparities specifically among Latino youth provides opportunities to underprivileged children within this large ethnic group while also promoting cultural competence.



Areas for Future Research

Many factors can lead to overweight and obesity among Latino youth. To effectively address this problem, additional research is needed to better discern the links between nutrition, physical activity, overweight and obesity among Latino youth, including the influence of genes, metabolism, socioeconomic status, behaviors, the social and cultural environments, and government policies affecting the price and availability of foods. Such studies should address questions concerning:

- The impact of school food environments on Latino students' food choices and eating patterns.
- The amount and density of unhealthy food and beverage outlets within Latino communities, including those proximal to schools.
- The influence of both American acculturation and traditional Latino culture, particularly as it may vary by country of origin, on the eating behaviors of Latino youth.
- The effectiveness of government policy on improving food environments within racial/ethnic minority communities by making healthy foods more affordable and more available.
- The interactions between behaviors, environments and government policies, along with their combined influences on Latino youth's dietary and obesity patterns.
- The effectiveness of multifaceted interventions focused on healthy eating and physical activity, especially when adapted to be culturally relevant to Latinos.

Policy Implications

- Bringing healthy, affordable foods to all neighborhoods should be a priority within Latino communities since they are disproportionately affected by obesity. Local governments should consider zoning ordinances and positive financial incentives to improve food environments. Such efforts may include tax incentives for businesses to sell low-calorie, high-nutrient foods and beverages and/or grants and loan programs, small business development programs and tax incentives that encourage grocery stores to locate in underserved areas.
- Communities and city council should prioritize healthy foods and eliminate junk foods in and around schools, particularly those with large Latino populations.
- Public health messages and interventions focused on healthy food choices should be considered in order to reduce rates of obesity and related conditions in high-risk children.
- All interventions and public health messages need to be tailored to different groups within the Latino population based on cultural factors, socioeconomic resources, and if possible, communities' specific environmental factors.

ABOUT THE PROGRAM

Salud America! The RWJF Research Network to Prevent Obesity Among Latino Children is a national program of the Robert Wood Johnson Foundation. The program aims to unite and increase the number of Latino researchers engaged in research and interventions on childhood obesity among Latinos to seek environmental and policy solutions to the epidemic. The network is directed by the Institute for Health Promotion Research at The University of Texas Health Science Center at San Antonio.

For more information, visit <http://www.salud-america.org>.

ABOUT THIS BRIEF

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