

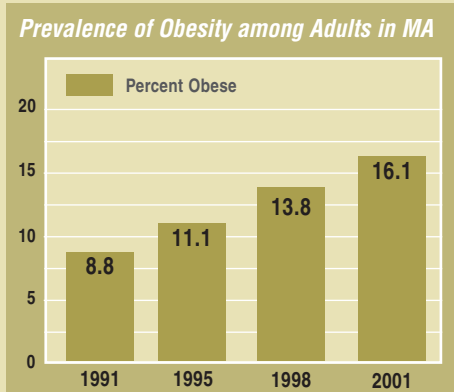
Project Bread

The Link between Hunger and Obesity

2004

Obesity is a serious public health problem that is on the rise in the United States. Approximately two-thirds of American adults aged 20 years and older are overweight.¹ Following the national trend, the prevalence of obesity among adults in Massachusetts nearly doubled from 1991 to 2001,² as shown below.

In addition to this increased obesity in adults, many more children and adolescents are obese today. The most recent National Health and Nutrition Examination Survey (NHANES) found that between the late 1970s and 2000, the rate of overweight adolescents tripled from 5.0 percent to 15.5 percent.³ Childhood obesity is of particular concern since it has been tied to a recent increase in type 2 diabetes and cardiovascular disease.^{4,5} This has led the American Academy of Pediatrics to call on doctors to actively prevent obesity through early identification and to advocate for “a healthful lifestyle for all children, including proper diet and adequate opportunity for regular physical activity.”⁶



Between 1991 and 2001, the percentage of adults considered obese has nearly doubled.

The dramatic increase in the prevalence of obesity in the past two decades changed the focus of research from genetic to environmental causes. Dietary changes, including increased consumption of fast food and carbonated beverages and lower consumption of fruits and vegetables, have been blamed for the surge in obesity.^{7,8,9} Increased time watching television and a more sedentary lifestyle also play a role.¹⁰ When combined, a diet high in calories (more energy consumed) and decreased physical activity (less energy expended) create an energy imbalance powerful enough to drive our society's obesity epidemic.



Limited financial resources make low-income families at double risk for hunger and obesity. These two lists illustrate the type of compromises low-income families must make, which result in a shopping cart filled with foods that are high in calories, sugar, and fat.

Low-Income Families at Risk for Both Hunger and Obesity

What is the connection between hunger and obesity? The same lack of financial resources that leads to hunger can also lead to obesity.¹¹ For example, research has determined that women who cannot afford adequate food are more likely to be obese than those who can.¹² This may seem counterintuitive, but the explanation is straightforward.

When a family does not have enough money to buy food, one of two things can happen: they may end up with a virtually empty pantry and experience the pain of hunger, or they may try to fend off hunger with readily available, inexpensive, high-calorie foods that have little or no nutritional value.

A number of circumstances in the lives of low-income families contribute to the rise in obesity as a response to their poverty.

- The most nutritious foods, such as fresh fruits and vegetables, are also some of the most expensive, causing low-income families to choose cheaper foods, which are also higher in sugar and fat^{13,14} (see below: “Comparing Two Shopping Lists”).
- Families in poverty often skip meals to stretch the household food budget, a habit that actually puts them at higher risk for obesity.^{15,16}
- Easy access to supermarkets has been shown to lead to healthier eating; however low-income neighborhoods have fewer supermarkets.¹⁷
- Children living in low-income communities lack safe places to exercise and are less likely than children from wealthier neighborhoods to participate in organized physical activities.¹⁸

Therefore, financial constraints can result in food shortages or limit a household's ability to maintain a healthy diet, or both. Hunger and obesity are closely related tragic outcomes when a family is forced to choose between rent and food.

Comparing Two Shopping Lists

Sample prices taken from the same Boston supermarket in September 2004.

Low-Cost Shopping List			Healthy Shopping List	
	Item	Cost	Item	Cost
Breakfast	Frozen Waffles (10)	\$ 1.19	Cereal (10 oz.)	\$ 2.69
	Syrup (12 fl.oz.)	\$ 1.89	Skim Milk (1 gallon)	\$ 2.79
	Fruit Punch (1 gallon)	\$ 2.78	Orange Juice (1 gallon)	\$ 5.32
Snack	Potato Chips (1 lb.)	\$ 2.46	All Natural Popcorn (1 lb.)	\$ 5.31
Lunch	Bologna (1 lb.)	\$ 2.18	Solid White Tuna (1 lb.)	\$ 3.44
	White Bread (1 lb.)	\$.68	Whole Wheat Bread (1 lb.)	\$ 1.73
Dinner	Pasta Sauce with Meat (1 lb.)	\$ 1.16	Chicken Breasts (1 lb.)	\$ 3.29
	Pasta (1 lb.)	\$.79	Broccoli (1 lb.)	\$ 1.19
Dessert	Ice Cream (1/2 gallon)	\$ 2.39	Strawberries (2 lbs.)	\$ 6.98
TOTAL		\$15.52		\$32.74

How Federal Nutrition Programs Can Help

The federal nutrition programs — designed to prevent hunger — may also provide an effective way to address the problem of obesity in this high-risk population. By offering increased buying power in the supermarket, programs such as food stamps and WIC (a nutrition program for parents and young children), can significantly improve a low-income family's diet. Researchers have found that when families receive food stamp and/or WIC benefits, their children have a greater intake of vital nutrients.^{19, 20} School breakfast programs similarly provide one-fourth of the Recommended Daily Allowance (RDA) of essential nutrients and help to improve the overall diet of children by ensuring that they do not miss the key morning meal.²¹ When school is not in session, the Summer Food Service Program provides sites where children can receive free breakfasts, lunches, and snacks, simultaneously turning empty parks and basketball courts into safe places to play and exercise.

Researchers have recently explored the relationship between participation in the federal nutrition programs and weight status in school-aged children.²² Among low-income girls who were also at risk for hunger, participation in the Food Stamp Program, School Breakfast, and School Lunch was found to lower the risk of being overweight. In fact, girls who participated in all three programs were 68 percent less likely to be overweight than peers who participated in none of these programs.

Along with encouraging children to take advantage of school meals, it is essential to communicate the message of healthy eating and exercise throughout the whole school environment. Most beverages and snacks sold in vending machines at schools have little or no nutritional value, but it is possible to replace junk food with healthier options and not lose money.²³ Children in low-income communities also need improved access to recreational facilities and after-school sports to ensure regular participation in physical activities.

Summary and Recommendations

The rising tide of obesity can be found in every demographic group in the United States. However, low-income individuals and families face greater obstacles to eating well and exercising — the keys to obesity prevention. The federal nutrition programs can function as a dual intervention for low-income households, addressing both hunger and obesity. A greater effort should be made to strengthen the nutritional benefits of these programs and improve access to them in low-income communities (see also Project Bread's *Status Report on Hunger in Massachusetts, 2004*).

Based on our research, Project Bread recommends the following steps to reduce the prevalence of obesity in low-income families:

- Train pediatric providers in neighborhood health centers to screen for both obesity and hunger and to help at-risk families gain access to federal nutrition programs.
- Ensure that school meals and vending machines meet the highest standards for nutritional quality to encourage healthier eating among students.
- Offer incentives to supermarkets to establish stores in low-income areas that currently lack access to affordable, healthy food.
- Increase the availability of fresh fruits and vegetables in low-income communities by bringing in farmers markets and enabling them to accept food stamps.
- Promote sports and activity programs in low-income communities and expand recreational opportunities for children at summer meal sites.



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