

# Food Frugality Challenge

## Summary Report

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## Executive Summary

For one week in Spring 2005, 21 men, women, and children in the Lehigh Valley participated in the Food Frugality Challenge. For this experiment, participants purchased all food eaten using the average food stamp allocation of 89 cents per meal. The purpose of the Food Frugality Challenge was to allow people who have never personally experienced poverty and the difficulties of food insecurity and hunger to have that opportunity.

### Key Findings of the Experiment

- The nutritional value of foods eaten decreased
- Food intake decreased in every food group
- The variety of foods eaten was diminished
- Most participants experienced physical, emotional, and/or social challenges
- Most participants expressed an increased awareness of hunger in our community

## Introduction

The Food Stamp Program provides funds for low-income people to purchase nutritious food at the grocery store using a debit card. Participants' monthly allocation is based on income, family size, and a number of other factors. In Pennsylvania, the minimum benefit for an individual is \$10/month; the maximum is \$149/month.<sup>i</sup> The average benefit for all participants in Pennsylvania is 89 cents per meal.<sup>ii</sup>

The U.S. Department of Agriculture has devised four meal plans based on purchasing ability: the Thrifty Food Plan, Low-Cost Plan, Moderate-Cost Plan, and Liberal Plan. The Thrifty Food Plan is the basis for food stamp allotments. This frugal plan costs as little as 84 cents per meal for a two year old child and as much as \$1.57 per meal for a 20-50 year old male.<sup>iii</sup> It also includes many less healthy choices such as white bread, white rice, noodles, vegetable oil, and lemonade. The plan requires that followers have many spices available including allspice, thyme, paprika, chili powder, and cumin. Thrifty Meal Plan meals are all prepared from scratch, which may be difficult for employed mothers and others who work all day. Finally, this meal plan is not appropriate for all cultures. Because the Dietary Guidelines for Americans were recently changed, the plan will have to be updated in order to meet the new guidelines.

The monthly food stamp allocation is meant to supplement food that participants can get from other sources, including cash from personal income, food pantries, and other government programs such as school meals. Many families who receive food stamps do not have additional money available to purchase food because their limited incomes have to cover the increasing costs of housing, childcare, and other essential expenses. When food stamps run out before the end of the month, and they often do, participants are at risk of experiencing hunger.

In the Lehigh Valley, more than 39,000 people use food stamps to purchase groceries.<sup>iv</sup> This is about 6% of all residents in the Lehigh Valley.<sup>v</sup> The number of people using food stamps in our community increased 65% between January 2000 and April 2004.<sup>vi</sup> This is not unusual; participation has been increasing in every state except Hawaii.<sup>vii</sup> About 25% of food stamp recipient households include at least one employed adult.<sup>viii</sup> Less than 20% of households are receiving TANF, also known as 'welfare.'<sup>ix</sup> The remaining 55% of recipients are elderly, disabled, or unemployed.

The Food Frugality Challenge provided an opportunity for interested individuals to try to manage using the average food stamp allocation for one week. The challenge demonstrated the difficulties of purchasing adequate amounts of nutritious food on a limited budget. It allowed the community-at-large to see a glimpse of the physical, emotional, and social challenges of poverty through the experiences of those who participated and the reporting of data.

## **Background**

Literature was reviewed to better understand the food choices made by actual low-income individuals and the social structures that limit those choices. Several relevant reports were found; three are included here.

Exploring Food Purchase Behavior of Low-Income Households: How Do They Economize?<sup>x</sup> listed several ways that low-income people economize their food purchases:

- Purchasing products that are on sale
- Purchasing generic or store brand foods
- Purchasing large packages for volume discounts
- Selecting a less expensive food within a product class
- Shopping at discount stores
- Purchasing and consuming less food
- Purchasing lower price (and possibly lower quality) foods

The report also acknowledges that low-income people may face a limited selection and higher prices due to the lack of supermarkets in poor neighborhoods.

Food Redlining: A Hidden Cause of Hunger<sup>xi</sup>, discusses the difficulties that people who live in low-income communities face when food shopping. The report defines food redlining as, “large-scale supermarkets abandoning lower-income communities for their more affluent counterparts, leaving entire communities little or no access to affordable, quality food.” These areas that lack a supermarket, usually in urban or rural areas, are often referred to as ‘food deserts.’ The report mentions a study completed by The Food Trust in Philadelphia, which found a correlation between lack of access to supermarkets and the prevalence of diet-related diseases, like diabetes and obesity. Other studies have linked hunger to the delayed brain development of children. “Food redlining forces low-income residents to spend more money, travel farther and accept lower quality. Without supermarkets, low-income residents must rely on convenience stores that don't sell fresh produce and that typically charge higher prices.”

The Availability and Cost of Healthier Food Items<sup>xii</sup> examined the cost and availability of food items based on the Thrifty Food Plan and a second list based on healthier choices, including low-fat meat, low-fat dairy, and whole grains. They found that the two week average cost for a family of four increased 19% for the healthier food basket. The cost was even higher in low-income neighborhoods. This demonstrates the difficulty of purchasing healthy foods with a limited budget, such as the average food stamp allocation.

## **Methodology**

Potential participants were recruited from Second Harvest Food Bank staff and board, member agencies, and local colleges. Although many more stated that they would participate, only 21 individuals reported

the results of the full experiment. Despite the small number of participants, several trends emerged from the data collected. The data were reviewed and analyzed by food bank staff, a dietetic intern, and a community health educator.

All participants attended a one-hour orientation where they learned about food stamps and the food frugality challenge. They were required to log all of the food they ate during a normal week, the food they ate using the food stamp budget, and their emotional, physical, and social changes. Participants were also asked a series of open-ended questions to evaluate the challenge and assess their new knowledge. A copy of the forms used by participants is attached. Paperwork was returned to Second Harvest Food Bank and tabulated with the assistance of a dietetic intern.

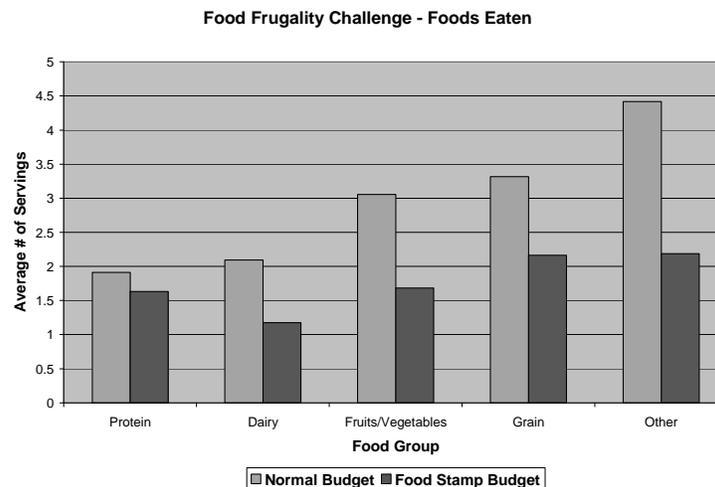
This challenge was modeled after other similar challenges. The University of Minnesota conducted an experiment in which a legislator fed her family using the Thrifty Food Plan. A similar challenge was recently issued to nutrition educators and others on the Community Food Security email listserve.

## **Results**

### Changes in Nutrition

Food diaries are notoriously inaccurate because when people record what they have eaten on paper they tend to underestimate. However, this does not diminish the potential value of what was discovered when analyzing participants' food diaries. The number of foods that each participant ate each day was recorded in five categories: protein, dairy, fruits and vegetables, grains, and other. This was recorded during a normal week and again during the challenge week. Intake decreased in each of the food categories during the challenge week. The charts below show the change in nutrition between the normal and challenge weeks for the 14 participants who completely filled out their food diaries.

	<b>Average Number of Items Eaten</b>				
	<b>Protein</b>	<b>Dairy</b>	<b>Fruits/Vegetables</b>	<b>Grain</b>	<b>Other</b>
<b>Normal Budget</b>	1.914	2.095	3.057	3.315	4.415
<b>Challenge Budget</b>	1.629	1.175	1.684	2.164	2.186
<b>Decrease</b>	-15%	-44%	-45%	-35%	-50%



Several participants noted that they were not able to purchase fresh fruits and vegetables during the challenge week. 33% ate Ramen Noodles, an inexpensive high fat, high sodium, high starch food. Many other inexpensive starchy foods were eaten during the challenge week, including white bread, white rice, and macaroni and cheese. Few used beans, an inexpensive viable source of fiber and protein. Many did eat peanut butter and canned tuna fish, lower cost sources of protein.

Overall, participants ate less food during the challenge week. 65% of participants skipped at least one meal during the challenge. Only 38% skipped a meal during a normal week. Participants skipped an average of 1.95 meals during the normal week and an average of 3 meals during the challenge week.

The variety of foods eaten also decreased. One individual who normally ate a different meal each evening ate the same meal each night during the challenge week. A similar trend was found among most participants. Several noted that this was one of the most difficult parts of the challenge. One participant noted, “being deprived of personal choice changes one’s attitude toward life.” Another said, “this sure takes the joy out of meals.” Lack of variety is troublesome because it makes it difficult to ingest an adequate range of vitamins and minerals.

Difficult choices had to be made among foods purchased. Several participants noted that they could not purchase a certain product they would normally use in order to purchase another product. One gave up a dozen eggs in order to purchase coffee. Another gave up milk in order to buy vegetables.

On a positive note, one participant gave up soda and opted for water instead.

### Physical, Emotional, and Social Outcomes

82% of participants reported at least one physical symptom of hunger attributed to the challenge diet. Participants experienced an average of 1.47 types of physical symptoms.

	<b>Fatigue</b>	<b>Headache</b>	<b>Stomach Ache</b>
% of participants who experienced this	41%	58%	35%
Average number of times experienced during challenge week	1.14	1.43	1.43

47% of participants reported at least one mental or emotional symptom of hunger attributed to the challenge diet. Participants experienced an average of 0.76 types of mental or emotional states.

	<b>Difficulty Concentrating</b>	<b>Depression</b>	<b>Anxiety</b>
% of participants who experienced this	29%	24%	24%
Average number of times experienced during challenge week	0.50	0.29	0.85

65% of participants reported at least one social change attributed to the challenge diet. Participants experienced an average of 1.06 types of social changes. One noted, “my circle of friends and family tend to gather around food...I never appreciated what a luxury it is.”

	<b>Could Not Go Out to Eat</b>	<b>Missed Other Social Activity</b>	<b>Poor School or Job Performance</b>
% of participants who experienced this	58%	35%	24%
Average number of times experienced during challenge week	1.36	0.57	0.57

A husband and wife who participated in the challenge noted that they argued about how to spend their money during the challenge week. One participant experienced insomnia during the challenge. Another noted that she felt, “deprived.”

### Coping Behaviors

29% of participants noted that they purchased generic brands for the challenge week. Two participants reported using multiple methods to save money, such as shoppers club cards, sales, and coupons. The use of herbs and spices, which are normally used to make food more palatable, decreased during the challenge week. Three participants noted that they were not able to snack, as they normally would. One participant, who was bored eating the same bowl of chili day after day, traded a meal with a friend. Some participants took advantage of freebies at work, such as coffee, chocolate, and samples of food products.

### “Cheating”

80% of participants reported that they cheated during the week. Some cheated by eating food out of their cupboards. 33% went out to eat at a restaurant. Three participants ate out more than once during the week. Two participants did the challenge week over a holiday and cheated in order to eat a celebratory meal with family. One participant cheated after three and half days because everyday he “became more tired and job performance was decreasing.”

### Changes in Attitude or Behavior

Many noted an increased sensitivity to the needs of food insecure and hungry people after participating in the challenge. Several participants also noted a new appreciation for the food access and choices they have on a normal basis. One simple stated, “I will be more thankful for what I have.” Some said that they would waste less food in the future.

Several participants noted that this experiment has reaffirmed the need for other food and nutrition programs, such as food pantries, WIC, and school meals. A few participants decided to eat healthier after having this opportunity to critically evaluate the foods that they eat.

A community college student who participated in the challenge said, “I am frightful of the time that I do go away for college and am not living under my parents’ roof anymore.” Yes, hunger can affect anyone.

### Limitations

Because this experiment was for only one week, it did not give participants a completely accurate account of what food insecurity feels like. One noted, “the fact that I can get off it in a week and cheat if I want to makes the situation a lot less stressful.” Another participant said that she would have shopped differently if doing this for a longer period of time by buying bulk to save money.

Food stamps are meant to be a supplementary program and participants are expected to use money from their income, and other programs for which they may be eligible, in order to obtain enough nutritious food. In this experiment, participants were not able to get food through other programs, like school meals or a food pantry. In addition, participants were asked to avoid accepting free food from friends, family, or coworkers, which might actually happen in real life.

All of the participants in this experiment purchased their food at grocery stores. Low-income people are likely to live in food deserts, areas without access to a supermarket. In food deserts, poor people have no choice but to purchase food at corner or convenience stores where prices are higher and the selection is smaller. Many poor people also lack transportation to supermarkets or enough available time to make the trip. Therefore, participants in this experiment had an advantage.

## **Recommendations**

As the participants in this experiment found, the average food stamps allocation is inadequate to purchase a variety of nutritious foods. Increased benefits would allow low-income people to purchase more healthy foods, such as fresh fruits and vegetables and whole grains. Many low-income people are prone to obesity because high starch, high fat foods tend to be inexpensive and because eating in cycles (eating a lot after being deprived) leads to weight gain. Increasing food stamp allocations will improve the health of participants by improving their ability to eat a nutritionally sound diet. Increased benefits will also stimulate local economies; every dollar in food stamp benefit results in \$1.84 in local economic activity.<sup>xiii</sup>

Outreach is needed to enroll eligible people in the Food Stamp Program. Many working people, senior citizens, and people leaving welfare are not aware that they can use food stamps. The program is highly underutilized; only about 64 - 73% of eligible people in Pennsylvania are enrolled in the program.<sup>xiv</sup> Access to other nutrition programs, such as school meals, WIC, and food pantries, must continue to be promoted.

This experiment also demonstrates the importance of nutrition education. Like those who participated in the challenge, many people who use food stamps are coping with limited food choices for the first time and do not know how to purchase or prepare healthier inexpensive foods. Others are overwhelmed with the need to prepare tasty, inexpensive meals with limited time. Guidance from nutrition educators can help food stamp recipients maximize the nutritional value of the foods they eat.

Food Stamps are vulnerable to cuts in the 2005-2006 federal budget. In addition, the House has proposed structural changes to the program as part of welfare reauthorization. Food Stamp participants, hunger advocates, nutrition educators, and other interested parties need to urge their federal legislators to maintain funding for the Food Stamp Program.

Finally, policies that prevent hunger are essential. As the root cause of hunger is poverty, legislation that enacts a living wage, promotes economic development, and enhances child care, transportation, and other public services should be supported to boost the self-sufficiency of low-income people.

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<sup>i</sup> United States Department of Agriculture (USDA)

<sup>ii</sup> Food Research and Action Center

<sup>iii</sup> U.S. Department of Agriculture

<sup>iv</sup> PA Department of Public Welfare, April 2004

<sup>v</sup> U.S. Census Bureau

<sup>vi</sup> PA Department of Public Welfare

<sup>vii</sup> Food Research and Action Center

<sup>viii</sup> Pennsylvania Hunger Action Center

<sup>ix</sup> PA Department of Public Welfare

<sup>x</sup> USDA Economic Research Service

<sup>xi</sup> Teaching Tolerance, Southern Poverty Law Center

<sup>xii</sup> University of California Agricultural Issues Center

<sup>xiii</sup> USDA Economic Research Service

<sup>xiv</sup> Food Research and Action Center State of the States 2004