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## **The ability of households in Southeast Louisiana eligible for the Supplemental Nutrition Assistance Program to meet the food recommendations of the 2010 Dietary Guidelines for Americans**

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The ability of households in Southeast Louisiana eligible for the Supplemental Nutrition Assistance Program to meet the food recommendations of the 2010 Dietary Guidelines for Americans

By

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## **ABSTRACT**

The Dietary Guidelines for Americans (DGA) are the national nutrition policy that provides science-based recommendations to encourage healthy Americans to consume a balanced diet and engage in physical activity. Meeting the food recommendations provided by previous editions of the DGA is challenging and has been shown to be difficult for Americans to meet, especially those individuals of low-income status. The ability of Americans to meet the current 2010 DGA recommendations is unknown; therefore, this study aimed to determine the ability of households in Southeast (SE) Louisiana eligible for Supplemental Nutrition Assistance Program (SNAP) benefits to meet the 2010 DGA. This was done by planning and determining the cost of a two-week low cost cycle menu for a reference family of three: a male and a female 40 years of age (y) and a girl 10 y that met the 2010 DGA. The menus were created from an available market basket. The maximum monthly SNAP benefit for a family of three is \$526 and the average monthly SNAP benefit for a family of three in Louisiana is approximately \$323. The average cost for the two-week cycle menus was approximately \$359/family; thus, for the reference family, the average cost of the two-week cycle menus/ month was \$780.50. The cost of the two-week menus exceeded the maximum SNAP benefit allotment for a family of three by \$254/month, and exceeded the average SNAP benefits allotment for a family of three in Louisiana by \$457/month. SNAP benefit recipients may not be able to follow the 2010 DGA recommendations due to insufficient financial resources to purchase the necessary food items.

# **CHAPTER 1**

## **INTRODUCTION**

The Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA) is dedicated to providing better access to food and more wholesome diets to children and low-income families (1). The FNS meets these goals through nutrition assistance programs such as the Supplemental Nutrition Assistance Program (SNAP) which has been described as the foundation of the USDA's nutrition assistance (1). The purpose of this entitlement program is to alleviate hunger and malnutrition by helping low-income households afford a more nutritious diet (1). In fiscal year (FY) 2010, the SNAP provided benefits worth \$64,704,466,071 to 18,618,363 households which included 40,301,666 individuals (2). In the same FY, Louisiana received \$1,285,916,247 in benefits for 353,495 households and 825,918 individuals (3-5). These benefits were available to households with a gross and net income below 130% and 100% of the poverty level, respectively (6). For example, a household of four with a net monthly income of \$1,154 qualified for a maximum SNAP allotment of \$321 per month (7). Benefits are awarded through Electronic Benefit Transfer (EBT) cards that allow money to be transferred from a federal account into a retailer's account to pay for goods purchased (8).

The SNAP addresses the issue of food insecurity, which is the absence of sufficient food in a consistent manner that may result in hunger (9). Food-insecure households are differentiated on the basis of severity in adults or adults and children (9). In 2009, 14.7% of American households were food insecure; this figure included 5.7% with very low food security (10). Between 2007 and 2009, 10% of households in Louisiana were food insecure and 3.3% had very low food security (11). Not having money to purchase food, food accessibility, and availability are among the main reasons for food insecurity and hunger among very low food secure

households (10, 12-14). These factors also play a role in the consumption of fruit and vegetables among low-income and food-insecure individuals. In 2003, the average price for all fruit and vegetables obtained from low-income neighborhoods was \$0.21 per serving; this varied somewhat among subgroups (12). To consume nutrient dense meals, low income households must assign a higher portion of their income to food when compared to higher income households (14). However, lower-income families spend fewer dollars in a month per person on food than higher-income families, which suggests that they may not have enough money to purchase nutrient dense foods (15). Lower-income households have also been shown to have higher home beverage purchases from sugar sweetened beverages while higher-income households have been shown to spend more money on fruit and vegetables (15).

Food insecurity is also associated with development of nutrition-related chronic diseases, including coronary heart disease, type 2 diabetes, and hypertension (16). The diets of low-income individuals are significantly lower in nutrient quality than those of higher socioeconomic status individuals (12, 17). Only 40% of Americans have average daily intakes of five or more half-cup servings of fruit and vegetables (18). Low-income individuals tend to substitute simple carbohydrates, including refined starches and added sugars, for fruit, vegetables, whole grains, and other healthy food options (12, 14, 16, 17). Consumption of energy from added sugars and refined starches is associated with low intake of protein; vitamins A, C, B6, B12, and D; iron; and potassium (19). Intake of protein and iron; dietary fiber; thiamin, riboflavin, niacin, folate, vitamins B6 and C; and calcium decreased as percent intake of added sugar increases in elderly African American women (20). Added sugar contributed to nutrient dilution at approximately 16% of energy from added sugar (20). In children, the



consumption of beverages with added sugar may be inversely related to the consumption of milk, vitamin D, and calcium, and diet quality (21).

The Dietary Guidelines for Americans (DGA) are the national nutrition policy that provide science-based recommendations to encourage healthy Americans 2 years of age (y) and older to achieve a healthy lifestyle by consuming a balanced diet and engaging in physical activity. Recommendations of the 2010 DGA emphasize fruit, vegetables, whole grains, and low fat dairy (22). The food recommendations of the 2010 DGA are that 2 cups of fruit, 2.5 cups of vegetables, 6 ounce (oz)-equivalent (oz-eq) of grains, 5.5 oz-eq of protein foods, and 3 cups of low-fat or fat-free dairy be consumed daily for a standard 2,000 kilocalorie (kcal) diet (22).

The 2010 DGA include recommendations on how to balance energy to manage weight and build healthy eating patterns. The 2010 DGA also provide information on what specific foods are important to reduce or increase to adhere to a balanced and healthy diet (22). The 2010 DGA also suggest reducing sodium intake to 1,500 mg among persons of any age who are African American or have hypertension, diabetes or chronic kidney disease and among those who are 51 y and older (22). Americans are advised to reduce the intake of saturated fatty acids, trans fatty acids, cholesterol, added sugars, refined grains, and alcohol because Americans tend to consume these food groups in excess compared to recommendations (22). Increasing physical activity while consuming a balanced diet, nutrition label reading tips, and food safety recommendations, are other important issues considered in the 2010 DGA (22). For the first time, the 2010 DGA introduced a section on Mediterranean-style eating patterns and placed an emphasis on vegetarian eating patterns (2).

The ability of EBT recipients to meet the food recommendations of the 2010 DGA is unknown. However, it has been demonstrated that meeting the food recommendations of the

2005 DGA is difficult for families totally reliant on SNAP benefits (23). Further, grocery stores located in low-income neighborhoods with a high prevalence of food insecure households have decreased availability of healthy food options as recommended by the 2010 DGA (24, 25). The purpose of this study was to determine the ability of households in Southeast (SE) Louisiana eligible for SNAP benefits to meet the food recommendations of the 2010 DGA.

## CHAPTER 2

### REVIEW OF THE LITERATURE

#### **The Dietary Guidelines for Americans**

In 1977, the *Dietary Goals for the United States* was established by the US Senate Select Committee on Nutrition and Human Needs (26). At the time, there was disagreement among professionals as to whether the goals were scientific; therefore, in 1979, the American Society for Clinical Nutrition created a panel to review the relationships between diet and health (27). The board found a strong correlation between diet quality and health outcomes and published the findings in the 1979 *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* (28). In 1980, the USDA and the United States Department of Health and Human Services (HHS) jointly reviewed the existing scientific evidence and translated the data for the American public in the first edition of the DGA titled *Nutrition and Your Health: Dietary Guidelines for Americans* (29). Under Section 301 of the National Nutrition Monitoring and Related Research Act of 1990 (Public Law 101-445, Title III, 7 U.S.C. 5301), the Secretaries of USDA and HHS must jointly review, update, and publish the DGA every five years. Starting with the 1985 edition of the DGA, a Dietary Guidelines Advisory Committee (DGAC) of nutrition and health professionals was selected by the USDA and HHS (22, 30).

The overall goal of the DGA is to improve the health of all Americans two years of age (y) and older, including those at risk of chronic disease (22). The information provided in the DGA is important for developing educational materials for the American public and to guide policymakers in the planning and implementing of nutrition-related programs (22). It is required by law (Public Law 101-445, Title III, 7 U.S.C. 5301) that federal agencies emphasize the DGA in federal nutrition, food, and health programs. Federal agencies within HHS that are required to

emphasize the DGA include the Centers for Disease Control and Prevention, Food and Drug Administration, National Institutes of Health, Office of Disease Prevention and Health, Administration on Aging, Administration for Children and Families, Health Resource and Services Administration, Indian Health Service, and the Office of Women's Health. Federal agencies within USDA that are required to emphasize the DGA are the Food and Nutrition Service, Food Safety and Inspection Service, Center for Nutrition Policy and Prevention, Agricultural Marketing Service, Agricultural Research Service, Economic Research Service, and the National Institute of Foods and Agriculture . The use of the DGA by these federal agencies is important to maintain uniformity of nutrition information provided to the American public by the US government.

The 2010 DGAC was the first to use the USDA's Nutrition Evidence Library (NEL) (30, 31). Through the USDA's NEL, all the scientific research considered by the committee was systematically reviewed and ranked to qualify the data available and decrease bias (30, 31). The research protocols, selection decisions, evidence summaries, and graded conclusion reports were published on the NEL website (32) for public access. The 2010 DGA also emphasized, for the first time, the poor health status of Americans by acknowledging that 64% of women and 72% of men are overweight or obese and by extending the DGA recommendations to individuals with chronic disease (22).

When compared with the 2005 DGA, the suggested amounts of weekly vegetable intake for a 2000 kcal diet changed in the 2010 DGA to 1.5 cups of dark green, 5.5 cups of red and orange, 1.5 cups of cooked and canned beans and peas, 5 cups of starchy, and 4 cups of other vegetables (22). Most Americans do not meet the overall recommendations for fruit and vegetables intake. In 2009, 32.8% of adults in the US consumed two or more servings of fruit

per day and 27.4% consumed three or more servings of vegetables daily (33). At the same time, only 32.2% and 13.2% of adolescents consumed two or more servings of fruit and three or more servings of vegetables daily, respectively (33). In Louisiana, 28.5% and 26.1% of adults consumed two or more servings of fruit and three or more servings of vegetables daily, respectively (33).

The 2010 DGA also urged the American public to increase physical activity and limit “screen time” (22). It is the first DGA to give recommendations on appropriate physical activity levels for different age groups (22). Children and adolescents (6-17 years) should engage in at least 60 minutes of physical activity daily and all adults (18-64 years) should participate in at least 150 minutes a week of moderate intensity physical activity (22, 34). Older adults (65 years and older) are advised to follow the guidelines for adults as long as they are able to do so (22, 34). In the US, 13.5% of individuals are physically inactive, 37.7% perform insufficient physical activity, and 24.1% participate in no leisure-time physical activity (35). In 2007, 61.4% of adults in Louisiana reported inadequate physical activity and the state ranked second for percentage of adults who do not participate in 30-60 minutes of physical activity on most days of the week (36). In 2010, less than 30% of children and youth in Louisiana participated in daily vigorous physical activity and 53% spent more than two hours a day watching television, playing video games, and using the computer for non-school reasons (37).

The 2010 DGA should be studied for affordability and barriers that might decrease compliance to the recommendations. Since the DGA require may require interpretation by health professionals or policy makers to develop nutrition education messages and consumer materials, since they may be difficult for the American public to understand (38-40).

MyPyramid was developed by the USDA to translate the information outlined in the DGA to the

general public (41). MyPyramid may also increase awareness of the DGA. A study investigated the awareness of federal dietary policy in persons 16 y and older in 2005/2006, and showed that only 49.2% of Americans in this age group had heard of the DGA (42).

### **The Supplemental Nutrition Assistance Program and Food Insecurity**

Initiatives for a Food Stamp Program (FSP) in the US began as early as 1939 when the Secretary of Agriculture and other professionals designed a program consisting of orange stamps to buy any food and blue stamps to buy surplus food (8). The first program helped approximately 20 million people at a total cost of \$262 million over four years (1939-1942) (6, 8). It was not until 1964 that President Johnson asked Congress to make the FSP permanent to strengthen the agricultural economy and improve the nutritional status of low income individuals (6, 8). In 1977, the Food Stamp Act of 1964 was reformed to target low income individuals and improve control and administration of the program (6, 8). Several other legislative changes have been made to the FSP since 1977. In 2008, the Farm Bill was enacted and the law changed the name of the FSP to SNAP and the name of the Food Stamp Act of 1977 to the Food and Nutrition Act of 2008 (8). The SNAP has been described as the foundation of the USDA's nutrition assistance (1). The SNAP is an entitlement program; therefore, eligibility guidelines are based on financial need only (6). In the FY 2010, the SNAP provided benefits worth \$64,704,466,071 to 18,618,363 households including 40,301,666 individuals (2). In the same FY, Louisiana received 1,285,916,247 in benefits for 353,495 households and 825,918 individuals (3-5).

The SNAP benefits are made available through EBT cards that allow the money to be transferred from a federal account into a retailer's account to pay for goods purchased (8). Benefits are available to households with a gross and net income below 130% and 100% of the

poverty level, respectively, and are also dependent on household size (6). For example, a household of four with a net income of \$1,154 would qualify for a maximum SNAP allotment of \$321 per month (7). SNAP benefits are designed to help households afford the USDA's Thrifty Food Plan (TFP) which reflects the minimal dietary recommendations and food prices in 2006. The TFP reflects the most nutritious diet at the lowest cost possible and can be used as the basis for the maximum SNAP allotments (43). The current TFP is based on the 2005 DGA and is not intended for the long-term use (43). The TFP is one of four USDA food plans, including the Low-Cost Plan, the Moderate-Cost Plan, and the Liberal Plan (43).

The SNAP addresses the issue of food insecurity or the absence of steady access to a sufficient and nutritious diet (9). The relationship between food insecurity and poverty is strong (44, 45). Not having enough money to purchase food is among the major reasons for food insecurity and hunger among very low food secure households (10). When food insecurity is present with hunger, it is called very low food security (9). Hunger is defined as "the painful or uneasy sensation that results from not having enough food" (46, 47). In 2007, 0.8% (323,000 households) of households with one or more children experienced very low food security (9). Food insecurity is also associated with the development of nutrition-related chronic diseases, including coronary heart disease, type 2 diabetes, and hypertension (16).

### **Diet Quality of Low-Income Individuals**

The diets of low-income individuals are more likely to be less nutritious than those of higher-income persons (14-18). In general, the more money an individual spends on food, the better the quality of the meal (48). Since low-income individuals spend fewer dollars on food than higher-income individuals, the foods they purchase tend to be of lesser quality and nutrition (48).

On average, low-income individuals also consume fewer meals than higher-income persons, which may lead to decreased energy intake and inadequate nutrient intake (44, 49). Breakfast is recognized as an important meal of the day particularly in women and children (50, 51). Individuals who skip breakfast do not compensate for nutrients later during the day (50). Associations between appropriate nutrient intake, lower Body Mass Index (BMI), and better food choices during the day and eating breakfast have been made (50, 51). Lunch and dinner meals are of particular importance for the health of lower-income older adults since they consume significantly fewer kilocalories (kcal) than higher-income elderly (49). However, low income elderly are less likely than high-income elderly to consume lunch and dinner meals which, puts them at higher risk for energy and nutrient deficiencies (49).

### **Barriers to a Healthy Diet**

Low-income individuals encounter a variety of barriers to following a healthy diet (12-14, 17, 52). Among low-income individuals, the predominant barrier is the cost of food (12-14, 52). Other barriers to eating healthy among low-income individuals are knowledge and attitudes about foods and health and access to healthy foods (53-58). Also, fresh fruit and vegetables are perishable, inconvenient to store and prepare, and as well as being costly (12, 54).

#### **Cost of Food**

Studies reporting the cost of meeting the 2010 DGA are not available. However, higher food costs are associated with purchasing more fruit and vegetables (12, 54) than when not purchasing more energy dense, nutrient poor foods. Fruit and vegetables are often perceived as very expensive and this perception may stop low-income individuals from purchasing them (12, 54, 59). Although some energy dense (ED) foods are nutrient rich, one way to reduce the cost of diets is by decreasing their nutrient content or making them more energy dense (ED) (48).



Energy dense foods provide an increased amount of energy and they are low cost (60).

Examples of ED foods are pastries and chips. Reasons associated with the low cost of ED foods include their long shelf life, resulting in less waste (60). In comparison with ED foods, nutrient dense (ND) foods are associated with increased diet costs (60). Examples of ND foods are fruit, vegetables, and whole grains.

### **Knowledge and Attitudes about Food and Health**

Many low-income individuals are not aware of the relationship between diet and chronic disease (53, 57, 58). With this knowledge gap low-income individuals may not change their diets to include healthy foods because they do not understand the reasons behind the recommendations (53). When compared to low-income individuals, high-income individuals understand better the relationship between diet and chronic disease (55). Additionally, there is a lack of awareness of food sources of nutrients, including vitamin A and folate, among low-income individuals (53). When low-income women residing in Baltimore City (n=32) and rural counties central Maryland (n=207) were asked about the advantages of eating fruit, they responded that they were protective against cancer and good for children, digestion, and pregnant women (54). When they were asked about the advantages of eating vegetables, they responded that they were filling and light; however, they discussed quick spoilage as one of the disadvantages (54).

### **Access to Healthy Food**

Low-income neighborhoods tend to have fewer supermarkets and the supermarkets offer a smaller variety of foods (61). A low-income neighborhood in Los Angeles offered a limited variety of fruit, vegetables, whole grains, and dairy when compared with wealthier areas in Los

Angeles (62). Foods available in urban and rural areas have been shown to be limited in variety and increased in, cost making it difficult to meet the 2010 DGA (63).

The purpose of this study was to design 2-week cycle menus that met the food recommendations of the 2010 DGA and compare the cost of these menus with the average and maximum SNAP benefits available to a Louisiana reference family of three.

## **CHAPTER 3**

### **MATERIALS AND METHODS**

#### **Overview**

The study compared average and maximum SNAP benefits available to a reference family of three in SE Louisiana with the cost of meeting the food recommendations for the 2010 DGA. This was done by planning and determining the cost of a two-week low-cost cycle menu that met the 2010 DGA. The menus were created from an available market basket (25) designed by Gillespie and O'Neil.

The average family size in Louisiana is 3.20 people (64); therefore, the reference household in this study was a family of three that included a male and female 40 y and a female 10 y. The maximum SNAP benefit that a family of three in the United States can obtain is \$526 (2) and the average SNAP benefit for a family of three in Louisiana is \$323.05 (Annrose Guarino personal communication to Alicia Rodriguez on April 21, 2010). These values were used to compare with the results of this study. It was assumed that: 1) the reference household was a family that had a net income low enough to receive the maximum SNAP benefits and 2) the family members accepted, were able to prepare, and consumed the foods and recipes used in the market basket.

#### **Menu Development**

To help develop the 2-week cycle menu, the MyPyramid interactive program was used (41). The MyPyramid recommendations are based on the 2005 DGA (41). The information on age, gender, and estimated amount of physical activity performed daily was entered into MyPyramid for each member of the reference family. The physical activity was estimated as minimal (36, 37); therefore, "less than 30 minutes" was entered into MyPyramid. The number of

daily kcals and number of servings of each food group for each member of the reference family was given by the program, as well as weekly recommendations for vegetable variety (Tables 1a-1b).

| <b>Table 1a: Breakdown of daily MyPyramid energy and food group recommendations for each member of the reference family</b> |                        |                      |              |                  |       |      |              |                  |                        |
|---|------------------------|----------------------|--------------|------------------|-------|------|--------------|------------------|------------------------|
|   | Total Energy           | Grain                | Whole Grains | Vegetables       | Fruit | Milk | Meat & Beans | Oils             | Discretionary Calories |
| Male 40 years   | 2200 <sup>1</sup> kcal | 7 oz eq <sup>2</sup> | 3.5 oz eq    | 3 c <sup>3</sup> | 2 c   | 3 c  | 6 oz eq      | 6 t <sup>4</sup> | 290 kcal               |
| Female 40 years   | 1800 kcal              | 6 oz eq              | 3 oz eq      | 2.5 c            | 1.5 c | 3 c  | 5 oz eq      | 6 t              | 195 kcal               |
| Female 10 years   | 1600 kcal              | 5 oz eq              | 3 oz eq      | 2 c              | 1.5 c | 3 c  | 5 oz eq      | 6 t              | 130 kcal               |
| <sup>1</sup> Kcal = Kilocalories; <sup>2</sup> oz eq = ounce equivalent; <sup>3</sup> c = cup; <sup>4</sup> t = teaspoon    |                        |                      |              |                  |       |      |              |                  |                        |

| <b>Table 1b: Breakdown of weekly MyPyramid vegetable recommendations for each member of the reference family</b> |                  |        |                  |         |       |
|--|------------------|--------|------------------|---------|-------|
|  | Dark Green       | Orange | Dry Beans & Peas | Starchy | Other |
| Male 40 years  | 3 c <sup>1</sup> | 2 c    | 3 c              | 6 c     | 7 c   |
| Female 40 years  | 3 c              | 2 c    | 3 c              | 3 c     | 6.5 c |
| Female 10 years  | 2 c              | 1.5 c  | 2.5 c            | 2.5 c   | 5.5 c |
| <sup>1</sup> c = cup   |                  |        |                  |         |       |

Two-week cycle menus were created and designed with foods commonly consumed in Louisiana; therefore, a culturally sensitive list of foods commonly eaten in SE Louisiana was

developed (65, 66; Table 2, Appendix A). Serving sizes for each menu item were stipulated for each family member to facilitate meeting the 2010 DGA food recommendations (Tables 2, 3, 4). Energy content of the menus was analyzed using the Exchange Lists for Meal Planning (67) to ensure that each family member was given the approximate number of kcals appropriate for their age, gender, and physical activity level. The number of servings for each food group was determined using serving size charts from the MyPyramid website (41).

As purchased (AP) prices were determined since they are indicative of what the consumer actually pays. As Purchased price is defined as the price of the raw food as it is available for purchase before trimming and cleaning the food (68). The Edible Portion (EP) price of a food was adjusted to account for any waste during preparation, such as after trimming or cleaning the food item (68). For example, a whole chicken that weighs 4 pounds may cost \$3, but 50% is waste (68); therefore, \$3 will actually only purchase 2 pounds of EP of chicken. In the case of fresh fruit, vegetables, and meats, the EP price is almost always higher than the AP price (69).

For the menus, only purchasable units of food were priced. For example, to have the 26 eggs required for these menus, three dozen eggs were purchased. The remaining 10 eggs could be used in the following weeks; therefore, the cost of the eggs was prorated. Items where small amounts were used, like baking soda or powder, table salt, and black pepper were not included in the cost of the cycle menus.

### **Pricing of the Market Basket**

To determine the average, food prices were calculated from a market basket of foods obtained previously. Prices were obtained from 60 full-service grocery stores located in SE Louisiana during the three-week time period from January 5, 2009 to January 24, 2009. Pricing

guidelines for each food item were provided to six data collectors; data collectors were trained prior to collecting the data to ensure consistency and reliability. The lowest priced food item was chosen for the specified package size provided in the collection sheet. Store specials, sale, item, and generic items were considered when choosing the lowest priced item available. When the specified size was not available, the price of a similar sized package was collected and if an item was not available it was marked as “N/A” on the collection sheet. A master spreadsheet was created to organize the data. Data were entered into the spreadsheet as price per unit, weight in ounces, and price per ounce for each food item in each grocery store. However, fresh produce and meat were calculated as price per pound and then converted to ounces by dividing the price per pound by 16 (ounces in a pound). The mean price per unit, mean weight in ounces, mean price per ounce, and mean price per 100 grams of each food item was calculated depending on the number of grocery stores that carried the specific food item.

The prices of the food items from the market basket (Table 5a-e) were added to calculate the final average cost for the two-week cycle menus. Then, the total monthly and weekly costs of the menus and the total daily cost per member of the reference family were calculated. Also, the total bi-weekly and weekly average and maximum SNAP benefits were calculated, as well as the total daily benefit available per person. This was done to compare the average and maximum SNAP benefits available to the reference family with the cost of meeting the food recommendations for the 2010 DGA.

**Table 2: Two-week cycle menus for a family of three consisting of a man and a woman both 40 years of age and a 10 years of age child**

| <b>Monday 1</b>                            | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
|--|------------|--------------|--------------|--------------|
| Whole wheat toast                          | 2 slices   | 2 slices     | 1 slice      | 5 slices     |
| Soft tub margarine spread                  | 2 t        | 2 t          | 2 t          | 6 t          |
| Yogurt parfait                             |            |              |              |              |
| * Vanilla yogurt, reduced fat <sup>1</sup> | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| * Toasted oat cereal                       | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| * Canned fruit salad                       | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| 100% orange juice                          | 4 oz       | 4 oz         | 4 oz         | 12 oz        |
|  |            |              |              |              |
| Sandwich                                   |            |              |              |              |
| * Whole wheat bread                        | 3 slices   | 2 slices     | 2 slices     | 7 slices     |
| * Chicken, sliced                          | 3 oz       | 2 oz         | 2 oz         | 7 oz         |
| * Processed cheese, sliced                 | 1.5 oz     | 1 oz         | 1 oz         | 3.5 oz       |
| * Romaine lettuce                          | 1 leaf     | 1 leaf       | 1 leaf       | 3 leaves     |
| * Mustard                                  | 1 T        | 2 t          | 2 t          | 7 t          |
| Green bean salad                           | 1 cup      | 1 cup        | 0.5 cup      | 2.5 cups     |
| Vinaigrette (1:1 canola oil: vinegar)      | 3 t        | 2 t          | 2 t          | 7 t          |
| <i>Peanut Butter Cookies</i> <sup>2</sup>  | 3          | 3            | 2            | 8            |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|  |            |              |              |              |
| Snack                                      |            |              |              |              |
| Popcorn                                    | 3 cups     | 3 cups       | 3 cups       | 9 cups       |
|  |            |              |              |              |
| <i>Chicken Vegetable Soup</i>              | 2.5 cups   | 2.5 cups     | 1.5 cups     | 7.5 cups     |
| Multigrain crackers                        | 7          | 7            | 7            | 21 crackers  |
| Romaine salad                              |            |              |              |              |
| * Romaine lettuce                          | 2 cups     | 2 cups       | 1 cups       | 5 cups       |
| * Mandarin oranges                         | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Vinaigrette dressing                     | 1 T        | 1 T          | 1 T          | 3 T          |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
| Baked apple with raisins (2T each)         | 1          | 1            | 1            | 3            |
|  |            |              |              |              |
| <b>Tuesday 1</b>                           | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Whole wheat toast                          | 2 slices   | 1 slice      | 1 slice      | 4 slices     |
| * Jelly                                    | 1 T        | 1 T          | 1 T          | 3 T          |
| * Soft tub margarine spread                | 2 t        | 2 t          | 2 t          | 6 t          |
| 100% orange juice                          | 4 oz       | 4 oz         | 4 oz         | 12 oz        |
| Toasted oat cereal                         | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |

|                                      |                   |                   |                  |                   |
|--------------------------------------|-------------------|-------------------|------------------|-------------------|
|                                      |                   |                   |                  |                   |
| Sandwich                             |                   |                   |                  |                   |
| * Whole wheat bread                  | 3 slices          | 2 slices          | 2 slices         | 7 slices          |
| * <i>Tuna Salad</i>                  | 0.75 cup          | 0.25 cup          | 0.25 cup         | 1.25 cups         |
| * Chopped celery                     |                   |                   |                  | 0.25 cups         |
| * Egg                                |                   |                   |                  | 1 egg             |
| * Mayonnaise, light                  |                   |                   |                  | 1 T               |
| Pasta salad, side                    |                   |                   |                  |                   |
| * Whole wheat pasta                  | 0.5 cup           | 0.5 cup           | 0.25 cup         | 1.25 cups         |
| * Tomatoes, diced                    | 0.5 cup           | 0.5 cup           | 0.25 cup         | 1.25 cups         |
| * Garbanzo beans                     | 0.75 cup          | 0.75 cup          | 0.5 cup          | 2 cups            |
| * Canola oil                         | 2 t               | 2 t               | 2 t              | 6 t               |
| Yogurt, low fat                      | 1 cup             | 1 cup             | 1 cup            | 3 cups            |
| Peaches, canned                      | 1 cup             | 0.5 cup           | 0.5 cup          | 2 cups            |
|                                      |                   |                   |                  |                   |
| <i>Chicken Quesadillas</i>           |                   |                   |                  |                   |
| * Flour tortillas                    | 2 flour tortillas | 2 flour tortillas | 1 flour tortilla | 5 flour tortillas |
| * Chicken left over from soup        | 2 oz              | 2oz               | 2 oz             | 6 oz              |
| * Processed cheese                   | 2 oz              | 2 oz              | 2 oz             | 6 oz              |
| * Canola oil                         | 2 t               | 2 t               | 2 t              | 6 t               |
| Tomato salsa                         | 0.25 cup          | 0.25 cup          | 0.25 cup         | 0.75 cup          |
| Corn and black bean salad            | 1 cup             | 1 cup             | 0.5 cup          | 2.5 cups          |
| * Black beans                        | 0.5 cup           | 0.5 cup           | 0.5 cup          | 1.5 cups          |
| * Corn                               | 0.5 cup           | 0.5 cup           | 0.5 cup          | 1.5 cups          |
| Banana, medium                       | 1                 | 0.5               | 0.5              | 2                 |
|                                      |                   |                   |                  |                   |
| <b>Wednesday 1</b>                   | <b>Man</b>        | <b>Woman</b>      | <b>Child</b>     | <b>Total</b>      |
| Oatmeal                              | 1 cup             | 1 cup             | 1 cup            | 3 cups            |
| Raisins                              | 2 T               | 2 T               | 2 T              | 6 T               |
| Whole wheat toast                    | 2 slices          | 2 slices          | 1 slice          | 5 slices          |
| Soft tub margarine                   | 2 t               | 2 t               | 2 t              | 6 t               |
| 1% Reduced fat milk                  | 8 oz              | 8 oz              | 8 oz             | 24 oz             |
| Peaches, canned                      | 1 cup             | 0.5 cup           | 0.5 cup          | 2 cups            |
|                                      |                   |                   |                  |                   |
| <i>Garden Stuffed Baked Potatoes</i> | 1 potato          | 1 potato          | 1 potato         | 3 potatoes        |
| * Potato                             | 1 potato          | 1 potato          | 1 potato         | 3 potatoes        |
| * Soft tub margarine spread          | 2 t               | 2 t               | 2 t              | 6 t               |
| * Onion, diced                       | 0.25 cup          | 0.25 cup          | 0.25 cup         | 0.75 cup          |
| * Broccoli                           | 0.25 cup          | 0.25 cup          | 0.25 cup         | 0.75 cup          |
| * Processed cheese                   | 2 oz              | 2 oz              | 2 oz             | 6 oz              |



|  |            |              |              |              |
|--|------------|--------------|--------------|--------------|
| Romaine salad                              |            |              |              |              |
| * Romaine lettuce                          | 2 cups     | 2 cups       | 1 cup        | 5 cups       |
| * Tomatoes, diced                          | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| * Vinaigrette (1:1 canola oil:<br>vinegar) | 1 T        | 1 T          | 1 T          | 3 T          |
| Multigrain crackers                        | 7          | 7            | 7            | 21 crackers  |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
| <i>Peanut Butter Cookies</i>               | 3          | 3            | 2            | 8            |
|  |            |              |              |              |
| Snack                                      |            |              |              |              |
| Banana                                     | 1          | 0.5          | 0.5          | 2            |
|  |            |              |              |              |
| Hamburger                                  |            |              |              |              |
| * Ground lean beef patty                   | 3 oz       | 3 oz         | 3 oz         | 9 oz         |
| * Whole wheat bun                          | 1          | 1            | 1            | 3            |
| * Processed cheese, sliced                 | 1 oz       | 1 oz         | 1 oz         | 3 oz         |
| * Mayonnaise, light                        | 1 t        | 1 t          | 1 t          | 3 t          |
| * Ketchup                                  | 1 t        | 1 t          | 1 t          | 3 t          |
| Corn, canned                               | 1.25 cups  | 0.5 cup      | 0.5 cup      | 2.25 cups    |
| <i>Garden Coleslaw</i>                     |            |              |              |              |
| * Cabbage                                  | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| * Carrots                                  | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| * Apple                                    | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
| Fruit cocktail, canned                     | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
|  |            |              |              |              |
| <b>Thursday 1</b>                          | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Grits                                      | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| Eggs, scrambled                            | 2          | 2            | 1            | 5            |
| Whole wheat toast                          | 1 slice    | 1 slice      | 1 slice      | 3 slices     |
| Soft tub margarine spread                  | 2 t        | 2 t          | 2 t          | 6 t          |
| 100% Orange juice                          | 4 oz       | 4 oz         | 4 oz         | 12 oz        |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|  |            |              |              |              |
| Tomato soup                                | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| Sandwich                                   |            |              |              |              |
| * Whole wheat bread                        | 3 slices   | 2 slices     | 2 slices     | 7 slices     |
| * Chicken, sliced (left over from<br>soup) | 3 oz       | 2 oz         | 2 oz         | 9 oz         |
| * Spinach                                  | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| * Mayonnaise, light                        | 3 t        | 2 t          | 2 t          | 7 t          |
| Carrot sticks                              | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |

|                                 |            |              |              |              |
|---------------------------------|------------|--------------|--------------|--------------|
| Celery sticks                   | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| 1% Reduced fat milk             | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|                                 |            |              |              |              |
| Snack                           |            |              |              |              |
| Yogurt, low fat                 | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| Canned peaches                  | 1 cup      | .5 cup       | .5 cup       | 2 cups       |
|                                 |            |              |              |              |
| <i>Oven Baked Fried Catfish</i> | 3 oz       | 3 oz         | 3 oz         | 9 oz         |
| Mixed vegetables                | 1 cup      | 1 cup        | 0.5 cup      | 2.5 cups     |
| Zucchini                        | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| Black-eyed peas                 | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| Cornbread (2 1/2 x 2 1/2)       | 2          | 2            | 1            | 5            |
| Soft tub margarine spread       | 2 t        | 2 t          | 2 t          | 6 t          |
| 1% Reduced fat milk             | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
| * Banana                        | 1          | 0.5          | 0.5          | 2            |
| * <i>Peanut Butter Cookies</i>  | 3          | 3            | 2            | 8            |
|                                 |            |              |              |              |
| <b>Friday 1</b>                 | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| <i>French Toast</i>             | 4 slices   | 2 slices     | 2 slices     | 8 slices     |
| Syrup                           | 2 T        | 1 T          | 1 T          | 4 T          |
| Canned pineapple                | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| Yogurt, low fat                 | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| 100% Orange juice               | 4 oz       | 4 oz         | 4 oz         | 12 oz        |
|                                 |            |              |              |              |
| Salad, main dish                |            |              |              |              |
| * Tuna                          | 3 oz       | 2 oz         | 2 oz         | 7 oz         |
| * Romaine lettuce               | 3 cups     | 2 cups       | 2 cups       | 7 cups       |
| * Spinach                       | 1.5 cups   | 0.5 cup      | 0.5 cup      | 2.5 cups     |
| * Tomatoes, diced               | 1.5 cups   | 0.5 cup      | 0.5 cup      | 2.5 cups     |
| * Corn                          | 0.75 cup   | 0.25 cup     | 0.25 cup     | 1.25 cups    |
| * Cucumbers                     | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Egg                           | 1          | 0.5          | 0.5          | 2            |
| * Canola oil                    | 1 T        | 1 T          | 1 T          | 3 T          |
| * Vinegar                       | 1 T        | 1 T          | 1 T          | 3 T          |
| Dinner roll, whole grain        | 2          | 2            | 2            | 6            |
| * Soft tub margarine spread     | 2 t        | 2 t          | 2 t          | 6 t          |
|                                 |            |              |              |              |
| Snack:                          |            |              |              |              |
| 1% reduced fat milk             | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
| Apple                           | 1          | 0.5          | 0.5          | 2            |
|                                 |            |              |              |              |

|   |            |              |              |              |
|---|------------|--------------|--------------|--------------|
| <i>Red Beans and Rice</i>                     |            |              |              |              |
| * <i>Red Beans</i>                            | 1.5 cups   | 1 cup        | 0.75 cup     | 3.25 cups    |
| * <i>Brown Rice, cooked</i>                   | 1 cup      | 1 cup        | 0.5 cup      | 2.5 cups     |
| Broccoli, frozen                              | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| Okra, canned                                  | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| Ice cream                                     | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Banana                                      | 1          | 0.5          | 0.5          | 2            |
|   |            |              |              |              |
| <b>Saturday 1</b>                             | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Whole wheat bread, toasted                    | 2 slices   | 2 slices     | 1 slice      | 5 slices     |
| Soft tub margarine spread                     | 2 t        | 2 t          | 2 t          | 6 t          |
| Jelly   | 2 T        | 1 T          | 1 T          | 4 T          |
| Apple   | 1          | 1            | 1            | 3            |
| Toasted oats cereal                           | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| 1% Reduced fat milk                           | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|   |            |              |              |              |
| <i>Vegetable Beef Soup</i>                    | 3 cups     | 1.5 cups     | 1.5 cups     | 6 cups       |
| * Beef stew meat                              | 4 oz       | 3 oz         | 3 oz         | 10 oz        |
| * Cabbage                                     | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Kidney beans                                | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Tomatoes, diced                             | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| * Potatoes                                    | 0.5 cup    | 0.25 cup     | 0.25 cup     | 1 cup        |
| Multigrain crackers                           | 7          | 7            | 7            | 21 crackers  |
| Soft tub margarine spread                     | 2 t        | 2 t          | 2 t          | 6 t          |
| Romaine salad                                 |            |              |              |              |
| * Romaine lettuce                             | 2 cups     | 2 cups       | 2 cups       | 5 cups       |
| * Green beans                                 | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Garbanzo beans                              | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| * Vinaigrette dressing                        | 1 T        | 1 T          | 1 T          | 3 T          |
| 1% Reduced fat milk                           | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
| Banana, medium                                | 1          | 0.5          | 0.5          | 2            |
|   |            |              |              |              |
| Pizza   | 3 slices   | 3 slices     | 2 slices     | 1 pizza      |
| * Mozzarella cheese                           | 3 oz       | 3 oz         | 2 oz         | 8 oz         |
| * Tomato sauce                                | 0.5 cup    | 0.5 cup      | 0.25 cup     | 1.25 cups    |
| * Onion, diced                                | 0.25 cup   | 0.25 cup     | 0.125 cup    | 0.5 cup      |
| * Corn  | 0.5 cup    | 0.25 cup     | 0.25 cup     | 1 cup        |
| Broccoli                                      | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| Romaine lettuce                               | 2 cups     | 2 cups       | 1 cup        | 5 cups       |
| Vinaigrette dressing (1 canola oil:1 vinegar) | 1 T        | 1 T          | 1 T          | 3 T          |

|                                      |            |              |              |              |
|--------------------------------------|------------|--------------|--------------|--------------|
| <i>Carrot and Apple Salad</i>        |            |              |              |              |
| * Carrot                             | 0.5 cup    | 0.25 cup     | 0.25 cup     | 1 cup        |
| * Apple                              | 0.5 cup    | 0.25 cup     | 0.25 cup     | 1 cup        |
| * Raisins                            | 1 T        | 1 T          | 1 T          | 3 T          |
| * Mayonnaise, light                  | 1 T        | 1 T          | 1 T          | 3 T          |
|                                      |            |              |              |              |
| <b>Sunday 1</b>                      | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Strata                               | 2 cups     | 2 cups       | 1 cup        | 5 cups       |
| Sautéed spiced ground turkey patties | 2 oz       | 2 oz         | 2 oz         | 6 oz         |
| Whole wheat bread, toasted           | 2 slices   | 2 slices     | 2 slices     | 6 slices     |
| Sautéed apples                       | 1          | 1            | 1            | 3            |
| 100% Orange juice                    | 4 oz       | 4 oz         | 4 oz         | 12 oz        |
|                                      |            |              |              |              |
|                                      |            |              |              |              |
| Tuna and White Bean Salad            | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| * Tuna                               | 3 oz       | 3 oz         | 3 oz         | 7 oz         |
| * White beans                        | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Canola oil                         | 1 T        | 1 T          | 1 T          | 3 T          |
| Multigrain crackers                  | 7          | 7            | 7            | 21           |
| Sliced tomatoes                      | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| Baked banana with brown sugar        | 1          | 0.5          | 0.5          | 2            |
| 1% Reduced fat milk                  | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|                                      |            |              |              |              |
| <i>Mama's Meat Loaf</i>              | 3 oz       | 3 oz         | 3 oz         | 9 oz         |
| <i>Potato Salad</i>                  | 1.5 cups   | 1 cup        | 0.5 cup      | 3 cups       |
| Mustard greens                       | 1 cup      | 1 cup        | 0.5 cup      | 2.5 cups     |
| Carrots                              | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| Whole wheat bread, toasted           | 1 slice    | 1 slice      | 1 slice      | 3 slices     |
| * Soft tub margarine spread          | 2 t        | 2 t          | 2 t          | 6 t          |
| Sliced peaches                       | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cup      |
|                                      |            |              |              |              |
| <i>Snack</i>                         |            |              |              |              |
| Cinnamon toast                       | 3          | 2            | 2            | 7            |
| 1% Reduced fat milk                  | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|                                      |            |              |              |              |
| <b>Monday 2</b>                      | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Eggs, scrambled                      | 2          | 1            | 1            | 4            |
| Whole wheat toast                    | 2 slices   | 2 slices     | 1 slice      | 5 slices     |
| Soft tub margarine spread            | 2 t        | 2 t          | 2 t          | 6 t          |
| Grapefruit                           | 1 whole    | half         | half         | 2 whole      |
| 1% Reduced fat milk                  | 8 oz       | 8 oz         | 8 oz         | 24 oz        |

|                                       |            |              |              |              |
|---------------------------------------|------------|--------------|--------------|--------------|
|                                       |            |              |              |              |
| <i>Vegetable Beef Soup (leftover)</i> | 3 cups     | 1.5 cups     | 1.5 cups     | 6 cups       |
| * Beef stew meat                      | 4 oz       | 3 oz         | 3 oz         | 10 oz        |
| * Cabbage                             | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Kidney beans                        | 0.5 cup    | 0.5 cup      | 0.5 cup      | 1.5 cups     |
| * Tomatoes, diced                     | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| * Potatoes                            | 0.5 cup    | 0.25 cup     | 0.25 cup     | 1 cup        |
| Multigrain crackers                   | 7          | 7            | 7            | 21 crackers  |
| Baked apples                          | 1          | 1            | 1            | 3            |
| Low fat yogurt                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|                                       |            |              |              |              |
| Spaghetti                             |            |              |              |              |
| * Tomato sauce                        | 0.75 cup   | 0.75 cup     | 0.75 cup     | 2.25 cups    |
| * Ground meat                         | 3 oz       | 3 oz         | 3 oz         | 9 oz         |
| * Whole wheat pasta                   | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| Garlic bread                          |            |              |              |              |
| * Whole wheat bread                   | 2 slices   | 1 slice      | 1 slice      | 4 slices     |
| * Soft tub margarine spread           | 2 t        | 2 t          | 2 t          | 6 t          |
| Turnip greens                         | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| Green bean salad                      | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| Corn                                  | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| Vinaigrette (1:1 canola oil: vinegar) | 3 t        | 2 t          | 2 t          | 7 t          |
| 1% Reduced fat milk                   | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|                                       |            |              |              |              |
| <b>Tuesday 2</b>                      | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Whole wheat toast                     | 2 slices   | 2 slices     | 1 slice      | 5 slices     |
| Soft tub margarine spread             | 2 t        | 2 t          | 2 t          | 6 t          |
| Yogurt parfait                        |            |              |              |              |
| * Vanilla yogurt, reduced fat         | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| * Toasted oat cereal                  | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| Peaches, canned                       | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| 100% Orange juice                     | 4 oz       | 4 oz         | 4 oz         | 12 oz        |
|                                       |            |              |              |              |
| Sandwich                              | 1.5        | 1            | 1            | 3.5          |
| * Whole wheat bread                   | 3 slices   | 2 slices     | 2 slices     | 7 slices     |
| * <i>Tuna Salad</i>                   | 0.75 cup   | 0.25 cup     | 0.25 cup     | 1.25 cups    |
| * Chopped celery                      |            |              |              | 0.25 cups    |
| * Egg                                 |            |              |              | 1 egg        |
| * Mayonnaise, light                   |            |              |              | 1 T          |
| Peaches, canned                       | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |
| 1% Reduced fat milk                   | 8 oz       | 8 oz         | 8 oz         | 24 oz        |

|  |            |              |              |              |
|--|------------|--------------|--------------|--------------|
|  |            |              |              |              |
| <i>Mama's Meat Loaf (leftover)</i>         | 3 oz       | 3 oz         | 3 oz         | 9 oz         |
| Roasted white potatoes                     | 1.5 cups   | 1 cup        | 1 cup        | 3.5 cups     |
| * Canola oil                               | 2 t        | 2 t          | 2 t          | 6 t          |
| <i>Garden Coleslaw with vinaigrette</i>    |            |              |              |              |
| * Cabbage                                  | 1 cup      | 1 cup        | 1 cup        | 3 cups       |
| * Carrots                                  | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| * Apple                                    | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| * Vinaigrette (1:1 canola oil:<br>vinegar) | 1 T        | 1 T          | 1 T          | 3 T          |
| Dinner roll, whole grain                   | 1          | 1            | 1            | 3            |
| * Soft tub margarine spread                | 2 t        | 2 t          | 2 t          | 6 t          |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
| Banana                                     | 1          | 1            | 1            | 3            |
|  |            |              |              |              |
| <b>Wednesday 2</b>                         | <b>Man</b> | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Grits                                      | 1 cup      | 1 cup        | 0.5 cup      | 2.5 cups     |
| * Soft tub margarine spread                | 2 t        | 2 t          | 2 t          | 6 t          |
| Eggs, scrambled                            | 2          | 1            | 1            | 4            |
| Apple                                      | 1          | 1            | 1            | 3            |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|  |            |              |              |              |
| <i>Vegetable Soup</i>                      | 1 1/2 cups | 1 1/2 cups   | 1 1/2 cups   | 4 1/2 cups   |
| Sandwich                                   | 1 1/2      | 1            | 1            | 4            |
| * Whole wheat bread                        | 3 slices   | 2 slices     | 2 slices     | 7 slices     |
| * Chicken, sliced                          | 3 oz       | 2 oz         | 2 oz         | 7 oz         |
| * Mayonnaise, light                        | 2 t        | 1 t          | 1 t          | 4 t          |
| * Ketchup                                  | 2 t        | 1 t          | 1 t          | 4 t          |
| 1% Reduced fat milk                        | 8 oz       | 8 oz         | 8 oz         | 24 oz        |
|  |            |              |              |              |
| Snack                                      |            |              |              |              |
| Banana                                     | 1          | 1            | 1            | 3            |
|  |            |              |              |              |
| <i>Cajun Jambalaya</i>                     | 2 cups     | 1.5 cups     | 1.5 cups     | 5 cups       |
| * Brown rice, cooked                       | 1.5 cups   | 1 cup        | 1 cup        | 3.5 cups     |
| * Turkey sausage                           | 2 oz       | 1 oz         | 1 oz         | 4 oz         |
| * Chicken                                  | 2 oz       | 1 oz         | 1 oz         | 4 oz         |
| * Onion                                    | 0.25 cup   | 0.25 cup     | 0.25 cup     | 0.75 cup     |
| Dinner roll                                | 1          | 1            | 1            | 3            |
| * Soft tub margarine spread                | 2 t        | 2 t          | 2 t          | 6 t          |
| Mustard greens                             | 1 cup      | 0.5 cup      | 0.5 cup      | 2 cups       |

|                               |             |              |              |              |
|-------------------------------|-------------|--------------|--------------|--------------|
| 1% Reduced fat milk           | 8 oz        | 8 oz         | 8 oz         | 24 oz        |
| Peaches, canned               | 1 cup       | 0.5 cup      | 0.5 cup      | 2 cups       |
|                               |             |              |              |              |
|                               |             |              |              |              |
| <b>Thursday 2</b>             | <b>Man</b>  | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Whole wheat toast             | 1 slice     | 1 slice      | 1 slice      | 3 slices     |
| * Jelly                       | 1 T         | 1 T          | 1 T          | 3 T          |
| * Soft tub margarine spread   | 2 t         | 2 t          | 2 t          | 6 t          |
| 100% Orange juice             | 4 oz        | 4 oz         | 4 oz         | 12 oz        |
| Toasted oat cereal            | 1 cup       | 1 cup        | 1 cup        | 3 cups       |
| 1% Reduced fat milk           | 8 oz        | 8 oz         | 8 oz         | 24 oz        |
| Banana, medium                | 1           | 1            | 1            | 3            |
|                               |             |              |              |              |
| Tomato soup                   | 1 cup       | 1 cup        | 1 cup        | 3 cups       |
| Sandwich                      | 2           | 1            | 1            | 4            |
| * Whole wheat bread           | 4 slices    | 2 slices     | 2 slices     | 8 slices     |
| * <i>Tuna Salad</i>           | 1 cup       | 0.5 cup      | 0.5 cup      | 2 cups       |
| * Cucumber                    | 0.5 cup     | 0.25 cup     | 0.25 cup     | 1 cup        |
| * Canola oil                  | 1 T         | 1 T          | 1 T          | 3 T          |
| 1% Reduced fat milk           | 8 oz        | 8 oz         | 8 oz         | 24 oz        |
|                               |             |              |              |              |
| Snack                         |             |              |              |              |
| * 1% Reduced fat milk         | 8 oz        | 8 oz         | 8 oz         | 24 oz        |
| * Oatmeal cookies             | 4 cookies   | 2 cookies    | 2 cookies    | 8 cookies    |
|                               |             |              |              |              |
| Quesadilla                    |             |              |              |              |
| * Black beans                 | 1 cup       | 1 cup        | 1 cup        | 3 cups       |
| * Corn                        | 2 cups      | 1 cup        | .5 cup       | 4 cups       |
| * Whole wheat tortillas       | 2 tortillas | 2 tortillas  | 1 tortilla   | 5 tortillas  |
| * Processed cheese            | 2 oz        | 2 oz         | 2 oz         | 6 oz         |
| * Salsa                       | 0.5 cup     | 0.5 cup      | 0.25 cups    | 1.25 cups    |
| * Romaine lettuce             | 1 cup       | 1 cup        | 0.5 cup      | 2.5 cups     |
| Peaches, canned               | 1 cup       | 0.5 cup      | 0.5 cup      | 2 cups       |
| <b>Friday 2</b>               | <b>Man</b>  | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Whole wheat toast             | 2 slices    | 2 slices     | 2 slices     | 6 slices     |
| Soft tub margarine spread     | 2 t         | 2 t          | 2 t          | 6 t          |
| Yogurt parfait                |             |              |              |              |
| * Vanilla yogurt, reduced fat | 1 cup       | 1 cup        | 1 cup        | 3 cups       |
| * Toasted oat cereal          | 1 cup       | 1 cup        | 1 cup        | 3 cups       |
| * Canned fruit salad          | 1 cup       | 0.5 cup      | 0.5 cup      | 2 cups       |
| 100% Orange juice             | 4 oz        | 4 oz         | 4 oz         | 12 oz        |

|  |             |              |              |              |
|--|-------------|--------------|--------------|--------------|
|  |             |              |              |              |
| Soft tacos                                       |             |              |              |              |
| * Soft taco tortilla                             | 2 tortillas | 2 tortillas  | 1 tortillas  | 5 tortillas  |
| * Chicken  | 3 oz        | 3 oz         | 3 oz         | 9 oz         |
| * Tomatoes, diced                                | 0.5 cup     | 0.5 cup      | 0.25 cup     | 1.25 cups    |
| * Onions, diced                                  | 0.5 cup     | 0.5 cup      | 0.25 cup     | 1.25 cups    |
| * Corn   | 1 cup       | 0.5 cup      | 0.25 cup     | 1.75 cups    |
| * Green peppers, diced                           | 0.5 cup     | 0.5 cup      | 0.25 cup     | 1.25 cups    |
| * Canola oil                                     | 1 T         | 1 T          | 1 T          | 3 T          |
| 1% Reduced fat milk                              | 8 oz        | 8 oz         | 8 oz         | 24 oz        |
| Apples   | 1           | 1            | 1            | 3            |
|  |             |              |              |              |
| <i>Red Beans and Rice</i>                        |             |              |              |              |
| * <i>Red Beans</i>                               | 1 cup       | 1 cup        | 0.75 cup     | 2.75 cups    |
| * <i>Brown Rice, cooked</i>                      | 1 cup       | 0.5 cup      | 0.5 cup      | 2 cups       |
| Romaine salad                                    |             |              |              |              |
| * Romaine lettuce                                | 2 cups      | 2 cups       | 1 cup        | 5 cups       |
| * Green beans                                    | 1 cup       | 1 cup        | 0.5 cup      | 2.5 cups     |
| * Onions, diced                                  | 0.5 cup     | 0.5 cup      | 0.25 cup     | 1.25 cups    |
| * Vinaigrette dressing (1:1 canola oil: vinegar) | 2 T         | 2 T          | 2 T          | 6 T          |
| 1% Reduced fat milk                              | 8 oz        | 8 oz         | 8 oz         | 24 oz        |
| Bananas  | 1           | 0.5          | 0.5          | 2            |
|  |             |              |              |              |
| <b>Saturday 2</b>                                | <b>Man</b>  | <b>Woman</b> | <b>Child</b> | <b>Total</b> |
| Omelet   |             |              |              |              |
| * Eggs   | 2           | 1            | 1            | 4            |
| * Onion  | 1 T         | 2 t          | 2 t          | 1.25 T       |
| * Cheese, processed                              | 2 oz        | 1 oz         | 1 oz         | 4 oz         |
| Whole wheat toast                                | 2 slices    | 2 slices     | 2 slices     | 6 slices     |
| Soft tub margarine spread                        | 2 t         | 2 t          | 2 t          | 6 t          |
| Toasted oat cereal                               | 1 cup       | 1 cup        | 1 cup        | 3 cups       |
| 1% Reduced fat milk                              | 8 oz        | 8 oz         | 8 oz         | 24 oz        |
| 100% Orange juice                                | 4 oz        | 4 oz         | 4 oz         | 12 oz        |
|  |             |              |              |              |
| <i>Vegetable Soup (leftover)</i>                 | 1 1/2 cups  | 1 1/2 cups   | 1 1/2 cups   | 4 1/2 cups   |
| Sandwich   | 1 1/2       | 1            | 1            | 3            |
| * Whole wheat bread                              | 3 slices    | 2 slices     | 2 slices     | 7 slices     |
| * Chicken, sliced                                | 2 oz        | 1 oz         | 1 oz         | 4 oz         |
| * Tomatoes                                       | 3 slices    | 2 slices     | 2 slices     | 7 slices     |
| * Spinach  | 1 cup       | 0.5 cup      | 0.5 cup      | 2 cups       |



|                                       |               |               |               |                |
|---------------------------------------|---------------|---------------|---------------|----------------|
| * Mayonnaise, light                   | 2 t           | 1 t           | 1 t           | 4 t            |
| Celery sticks                         | 0.5 cup       | 0.5 cup       | 0.5 cup       | 1.5 cups       |
| 1% Reduced fat milk                   | 8 oz          | 8 oz          | 8 oz          | 24 oz          |
|                                       |               |               |               |                |
| Snack                                 |               |               |               |                |
| Pears                                 | 1             | 1             | 1             | 3              |
| <i>Oatmeal Cookies</i>                | 4             | 2             | 2             | 6              |
|                                       |               |               |               |                |
| <i>Oven Fried Pork Chops</i>          | 1 pork chop   | 1 pork chop   | 1 pork chop   | 4 pork chops   |
| Sweet Potatoes                        | 1 cup         | 0.5 cup       | 0.5 cup       | 2 cups         |
| Zucchini, small                       | 1 cup         | 1 cup         | 0.5 cup       | 2.5 cups       |
| Dinner roll                           | 2             | 2             | 1             | 5              |
| Soft tub margarine spread             | 2 t           | 2 t           | 2 t           | 6 t            |
| Applesauce                            | 1 cup         | 0.5 cup       | 0.5 cup       | 2 cups         |
| 1% Reduced fat milk                   | 8 oz          | 8 oz          | 8 oz          | 24 oz          |
|                                       |               |               |               |                |
| <b>Sunday 2</b>                       | <b>Man</b>    | <b>Woman</b>  | <b>Child</b>  | <b>Total</b>   |
| <i>Banana Pancakes</i>                | 4 pancakes    | 3 pancakes    | 2 pancakes    | 9 pancakes     |
| Syrup, light                          | 3 T           | 2 T           | 1 T           | 6 T            |
| 100% Orange juice                     | 4 oz          | 4 oz          | 4 oz          | 12 oz          |
| 1% Reduced fat milk                   | 8 oz          | 8 oz          | 8 oz          | 24 oz          |
|                                       |               |               |               |                |
| Sandwich                              | 1 1/2         | 1             | 1             | 3              |
| * Whole wheat bread                   | 3 slices      | 2 slices      | 2 slices      | 7 slices       |
| * Chicken, sliced                     | 2 oz          | 2 oz          | 2 oz          | 6 oz           |
| * Processed cheese, sliced            | 1.5 oz        | 1 oz          | 1 oz          | 3.5 oz         |
| * Romaine lettuce                     | 1 leaf        | 1 leaf        | 1 leaf        | 3 leaves       |
| * Mustard                             | 1 T           | 2 t           | 2 t           | 7 t            |
| 3 bean salad                          | 1 cup         | 0.5 cup       | 0.5 cup       | 2 cups         |
| Pineapple, canned                     | 1 cup         | 1 cup         | 1 cup         | 3 cups         |
|                                       |               |               |               |                |
| Snack                                 |               |               |               |                |
| * <i>Oatmeal Cookies</i>              | 4             | 2             | 2             | 8              |
| * 1% Reduced fat milk                 | 8 oz          | 8 oz          | 8 oz          | 24 oz          |
|                                       |               |               |               |                |
| <i>Chicken and Vegetable Stir Fry</i> | 1 leg quarter | 1 leg quarter | 1 leg quarter | 3 leg quarters |
| Steamed brown rice                    | 1 cup         | 0.5 cup       | 0.5 cup       | 2 cups         |
| Broccoli, steamed                     | 1 cup         | 1 cup         | 0.5 cup       | 2.5 cups       |
| * Soft tub margarine spread           | 2 t           | 2 t           | 2 t           | 6 t            |
| <i>Carrot and Apple Salad</i>         | 1 cups        | 1 cup         | 1 cup         | 3 cups         |

|  |         |          |          |       |
|--|---------|----------|----------|-------|
| * Carrot   | 0.5 cup | 0.25 cup | 0.25 cup | 1 cup |
| * Apple  | 0.5 cup | 0.25 cup | 0.25 cup | 1 cup |
| * Raisins  | 1 T     | 1 T      | 1 T      | 3 T   |
| * Mayonnaise, light  | 1 T     | 1 T      | 1 T      | 3 T   |
| <sup>1</sup> Foods that are indented with an asterisk under a main food item title are foods that are used to make the main food item. |         |          |          |       |
| <sup>2</sup> Foods in italics indicate foods prepared from a recipe provided in Appendix A.  |         |          |          |       |

**Table 3: Comparison of weekly 2010 DGA recommendations and menu content for each member of the reference family**

|                                       |   |                                      |                                      | <u>Monday 1</u> |          |          | <u>Tuesday 1</u> |          |          | <u>Wednesday 1</u> |          |          | <u>Thursday 1</u> |          |          | <u>Friday 1</u> |          |          | <u>Saturday 1</u> |          |          | <u>Sunday 1</u> |          |          |
|---------------------------------------|---|--------------------------------------|--------------------------------------|-----------------|----------|----------|------------------|----------|----------|--------------------|----------|----------|-------------------|----------|----------|-----------------|----------|----------|-------------------|----------|----------|-----------------|----------|----------|
|                                       | <u>M</u> <sup>1</sup><br><u>40 y</u> <sup>4</sup> | <u>F</u> <sup>2</sup><br><u>40 y</u> | <u>G</u> <sup>3</sup><br><u>10 y</u> | <u>M</u>        | <u>F</u> | <u>G</u> | <u>M</u>         | <u>F</u> | <u>G</u> | <u>M</u>           | <u>F</u> | <u>G</u> | <u>M</u>          | <u>F</u> | <u>G</u> | <u>M</u>        | <u>F</u> | <u>G</u> | <u>M</u>          | <u>F</u> | <u>G</u> | <u>M</u>        | <u>F</u> | <u>G</u> |
| <u>Grains</u><br>(oz eq) <sup>5</sup> | 7.0   | 6.0                                  | 5.0                                  | 8.0             | 7.0      | 6.0      | 9.0              | 7.0      | 5.5      | 7.0                | 7.0      | 6.0      | 8.0               | 7.0      | 6.0      | 8.0             | 6.0      | 5.0      | 7.0               | 7.0      | 5.0      | 7.0             | 6.0      | 6.0      |
| <u>Whole Grains</u><br>(oz eq)        | 3.5   | 3.0                                  | 3.0                                  | 8.0             | 7.0      | 6.0      | 9.0              | 7.0      | 5.5      | 7.0                | 7.0      | 6.0      | 8.0               | 7.0      | 6.0      | 4.0             | 4.0      | 4.0      | 7.0               | 7.0      | 5.0      | 7.0             | 6.0      | 6.0      |
| <u>Vegetables</u><br>(c) <sup>6</sup> | 3.0   | 2.5                                  | 2.0                                  | 3.0             | 3.0      | 2.0      | 3.0              | 2.5      | 2.0      | 6.0                | 4.8      | 4.3      | 4.5               | 4.3      | 3.8      | 7.0             | 4.5      | 4.3      | 7.0               | 6.0      | 5.0      | 4.0             | 3.0      | 2.0      |
| <u>Fruit</u> (c)                      | 2.0   | 1.5                                  | 1.5                                  | 3.0             | 2.5      | 2.5      | 2.5              | 1.5      | 1.5      | 3.3                | 1.8      | 1.8      | 2.5               | 1.5      | 1.5      | 3.0             | 2.0      | 2.0      | 2.5               | 1.8      | 1.8      | 3.0             | 2.5      | 2.5      |
| <u>Dairy</u> (c)                      | 3.0   | 3.0                                  | 3.0                                  | 3.0             | 3.0      | 3.0      | 3.0              | 3.0      | 3.0      | 3.0                | 3.0      | 3.0      | 3.0               | 3.0      | 3.0      | 3.0             | 3.0      | 3.0      | 3.0               | 3.0      | 3.0      | 3.0             | 3.0      | 3.0      |
| <u>Meat &amp; Beans</u><br>(oz eq)    | 6.0   | 5.0                                  | 5.0                                  | 6.0             | 5.0      | 5.0      | 6.0              | 5.0      | 5.0      | 6.0                | 5.0      | 5.0      | 6.0               | 5.0      | 5.0      | 6.0             | 5.0      | 5.0      | 6.0               | 5.0      | 5.0      | 6.0             | 5.0      | 5.0      |
| <u>Oil</u> (t) <sup>7</sup>           | 6.0   | 6.0                                  | 6.0                                  | 6.0             | 6.0      | 6.0      | 6.0              | 6.0      | 6.0      | 6.0                | 6.0      | 6.0      | 6.0               | 6.0      | 6.0      | 6.0             | 6.0      | 6.0      | 6.0               | 6.0      | 6.0      | 6.0             | 6.0      | 6.0      |
|                                       |   |                                      |                                      | <u>Monday 2</u> |          |          | <u>Tuesday 2</u> |          |          | <u>Wednesday 2</u> |          |          | <u>Thursday 2</u> |          |          | <u>Friday 2</u> |          |          | <u>Saturday 2</u> |          |          | <u>Sunday 2</u> |          |          |
|                                       | <u>M</u><br><u>40 y</u>                           | <u>F</u><br><u>40 y</u>              | <u>G</u><br><u>10 y</u>              | <u>M</u>        | <u>F</u> | <u>G</u> | <u>M</u>         | <u>F</u> | <u>G</u> | <u>M</u>           | <u>F</u> | <u>G</u> | <u>M</u>          | <u>F</u> | <u>G</u> | <u>M</u>        | <u>F</u> | <u>G</u> | <u>M</u>          | <u>F</u> | <u>G</u> | <u>M</u>        | <u>F</u> | <u>G</u> |
| <u>Grains</u><br>(oz eq)              | 7.0   | 6.0                                  | 5.0                                  | 7.0             | 6.0      | 5.0      | 7.0              | 6.0      | 5.0      | 8.0                | 7.0      | 6.0      | 8.0               | 6.0      | 5.0      | 7.0             | 6.0      | 5.0      | 7.0               | 6.0      | 6.0      | 8.0             | 6.0      | 5.0      |
| <u>Whole Grains</u><br>(oz eq)        | 3.5   | 3.0                                  | 3.0                                  | 7.0             | 6.0      | 5.0      | 7.0              | 6.0      | 5.0      | 8.0                | 7.0      | 6.0      | 8.0               | 6.0      | 5.0      | 7.0             | 6.0      | 5.0      | 3.5               | 3.0      | 2.0      | 8.0             | 6.0      | 5.0      |
| <u>Vegetables</u><br>(c)              | 3.0   | 2.5                                  | 2.0                                  | 5.5             | 3.8      | 3.8      | 3.0              | 2.5      | 2.5      | 3.0                | 2.5      | 2.5      | 5.5               | 4.5      | 3.5      | 5.0             | 4.5      | 3.0      | 3.0               | 2.5      | 2.0      | 3.0             | 2.5      | 2.0      |
| <u>Fruit</u> (c)                      | 2.0   | 1.5                                  | 1.5                                  | 2.0             | 1.5      | 1.5      | 2.8              | 1.8      | 1.8      | 3.0                | 2.5      | 2.5      | 2.5               | 2.0      | 2.0      | 3.5             | 2.5      | 2.5      | 2.5               | 2.0      | 2.0      | 2.0             | 1.8      | 1.8      |
| <u>Dairy</u> (c)                      | 3.0   | 3.0                                  | 3.0                                  | 3.0             | 3.0      | 3.0      | 3.0              | 3.0      | 3.0      | 3.0                | 3.0      | 3.0      | 3.0               | 3.0      | 3.0      | 3.0             | 3.0      | 3.0      | 3.0               | 3.0      | 3.0      | 3.0             | 3.0      | 3.0      |
| <u>Meat &amp; Beans</u><br>(oz eq)    | 6.0   | 5.0                                  | 5.0                                  | 6.0             | 5.0      | 5.0      | 6.0              | 5.0      | 5.0      | 6.0                | 5.0      | 5.0      | 6.0               | 5.0      | 5.0      | 6.0             | 5.0      | 5.0      | 6.0               | 5.0      | 5.0      | 6.0             | 5.0      | 5.0      |
| <u>Oil</u> (t)                        | 6.0   | 6.0                                  | 6.0                                  | 6.0             | 6.0      | 6.0      | 6.0              | 6.0      | 6.0      | 6.0                | 6.0      | 6.0      | 6.0               | 6.0      | 6.0      | 6.0             | 6.0      | 6.0      | 6.0               | 6.0      | 6.0      | 6.0             | 6.0      | 6.0      |

<sup>1</sup>M = Male; <sup>2</sup>F = Female; <sup>3</sup>G = Girl; <sup>4</sup>y = years of age; <sup>5</sup>oz eq = ounce equivalent; <sup>6</sup>c = cup; <sup>7</sup>t = teaspoon

**Table 4: Comparison of specific weekly vegetables recommendations and menu content for each member of the reference family**

| <b><u>Week 1</u></b>                                |   |                               |                             |                    |                      |                    |
|---|---|-------------------------------|-----------------------------|--------------------|----------------------|--------------------|
|   | <b><u>Male</u><br/>40 y<sup>1</sup></b> | <b><u>Female</u><br/>40 y</b> | <b><u>Girl</u><br/>10 y</b> | <b><u>Male</u></b> | <b><u>Female</u></b> | <b><u>Girl</u></b> |
| Dark Green  | 3.00 c <sup>2</sup>                     | 3.00 c                        | 2.00 c                      | 10.00 c            | 7.75 c               | 5.75 c             |
| Orange/Red  | 2.00 c                                  | 2.00 c                        | 1.50 c                      | 5.25 c             | 4.50 c               | 4.00 c             |
| Dry Beans and Peas                                  | 3.00 c                                  | 3.00 c                        | 2.50 c                      | 3.50 c             | 3.00 c               | 2.50 c             |
| Starchy   | 6.00 c                                  | 3.00 c                        | 2.50 c                      | 6.00 c             | 3.75 c               | 3.25 c             |
| Other   | 7.00 c                                  | 6.50 c                        | 5.50 c                      | 7.00 c             | 6.50 c               | 5.50 c             |
| <b><u>Week 2</u></b>                                |   |                               |                             |                    |                      |                    |
|   | <b><u>Male</u><br/>40 y</b>             | <b><u>Female</u><br/>40 y</b> | <b><u>Girl</u><br/>10 y</b> | <b><u>Male</u></b> | <b><u>Female</u></b> | <b><u>Girl</u></b> |
| Dark Green  | 3.00 c <sup>2</sup>                     | 3.00 c                        | 2.00 c                      | 5.00 c             | 3.75 c               | 2.50 c             |
| Orange/Red  | 2.00 c                                  | 2.00 c                        | 1.50 c                      | 4.75 c             | 4.00 c               | 3.50 c             |
| Dry Beans and Peas                                  | 3.00 c                                  | 3.00 c                        | 2.50 c                      | 3.50 c             | 2.75 c               | 2.75 c             |
| Starchy   | 6.00 c                                  | 3.00 c                        | 2.50 c                      | 6.00 c             | 3.25 c               | 2.50 c             |
| Other   | 7.00 c                                  | 6.50 c                        | 5.50 c                      | 8.75 c             | 8.00 c               | 6.25 c             |
| <sup>1</sup> y = years of age; <sup>2</sup> c = cup |   |                               |                             |                    |                      |                    |

**Table 5a: As Purchased (AP) quantity, percentage yield, Edible Portion (EP) quantity, size, weight, and AP price of canned, fresh, and frozen fruit and vegetables included in the two-week cycle menus**

| Item                                | Quantity (AP) | Percentage Yield | Quantity (EP) | Sizes                       | Quantity to Purchase | Quantity used (oz) | Weight (gm) | Mean \$/100g | Price (\$) |
|-------------------------------------|---------------|------------------|---------------|-----------------------------|----------------------|--------------------|-------------|--------------|------------|
| Fruit and Vegetables                |               |                  |               |                             |                      |                    |             |              |            |
| Fresh:                              |               |                  |               |                             |                      |                    |             |              |            |
| Apples                              | 36 apples     | 75.00            | 27 units      | 2 apples; 16 oz             | 36 apples            | 288.00             | 8164.66     | 0.29         | 23.40      |
| Bananas                             | 29 bananas    | 65.00            | 19 units      | 3 bananas; 16 oz            | 29 bananas           | 154.67             | 4384.82     | 0.15         | 6.47       |
| Bell pepper, green                  | 2.5 c         | 82.00            | 2 c           | 3 bell peppers; 24 oz; 3 c  | 3 bell peppers       | 24.00              | 680.39      | 0.54         | 3.69       |
| Cabbage, green                      | 10 c          | 90.00            | 9 c           | 1 cabbage head; 32 oz; 10 c | 1 cabbage head       | 32.00              | 907.18      | 0.15         | 1.33       |
| Carrots, whole                      | 14 c          | 60.00            | 8.5 c         | 9 carrots; 16 oz; 4.5 c     | 28 carrots           | 49.78              | 1411.24     | 0.22         | 3.08       |
| Celery                              | 10 c          | 75.00            | 7.5 c         | 6 stalks; 16 oz; 3 c        | 20 stalks            | 53.33              | 1511.88     | 0.22         | 3.34       |
| Cucumbers                           | 3 c           | 85.00            | 2.5 c         | 2 cucumbers; 16 oz; 4 c     | 2 cucumbers          | 16.00              | 453.59      | 0.24         | 1.08       |
| Grapefruit                          | 4 grapefruit  | 50.00            | 2 units       | 1 grapefruit; 16 oz         | 4 grapefruit         | 64.00              | 1814.37     | 0.29         | 5.31       |
| Lettuce, romaine                    | 47.5 c        | 75.00            | 35.5 c        | 1 head; 16 oz; 5 c          | 10 heads             | 160.00             | 4535.92     | 0.46         | 20.68      |
| Mustard Greens                      | 6.5 c         | 70.00            | 4.5 c         | 1 bunch; 16 oz; 5 c         | 2 bunches            | 32.00              | 907.18      | 0.39         | 3.55       |
| Onions                              | 9 c           | 90.00            | 8.25 c        | 2 onions; 16 oz; 1 c        | 18 onions            | 144.00             | 4082.33     | 0.18         | 7.22       |
| Onions, green                       | 3.5 stalks    | 60.00            | 2 stalks      | 40 stalks; 16 oz            | 40 stalks            | 16.00              | 453.59      | 0.12         | 0.56       |
| Potatoes                            | 10 potatoes   | 80.00            | 8 units       | 1 potato; 16 oz             | 10 potatoes          | 160.00             | 4535.92     | 0.19         | 8.82       |
| Potatoes, sweet                     | 3.5 c         | 60.00            | 2 c           | 1 potato; 16 oz; 2 c        | 2 potatoes           | 32.00              | 907.18      | 0.22         | 2.03       |
| Tomatoes                            | 11 c          | 99.00            | 11 c          | 2 tomatoes; 16 oz; 1 cup    | 22 tomatoes          | 176.00             | 4989.52     | 0.35         | 17.68      |
| Turnip Greens                       | 2.5 c         | 80.00            | 2 c           | 1 head; 16 oz; 5 c          | 1 head               | 16.00              | 453.59      | 0.33         | 1.48       |
| Zucchini                            | 4.5 c         | 90.00            | 4 c           | 2 zucchinis; 16 oz; 1.5 c   | 6 zucchinis          | 48.00              | 1360.78     | 0.36         | 4.92       |
| Canned:                             |               |                  |               |                             |                      |                    |             |              | 0.00       |
| Applesauce, unsweetened             |               |                  | 2 c           | 1 jar; 24 oz; 2.5 c         | 1 jar (24 oz)        | 19.20              | 544.31      | 0.24         | 1.33       |
| Beans, black, canned                |               |                  | 4.5 c         | 1 can; 15 oz; 1.5 c         | 3 cans (46.5 oz)     | 45.00              | 1275.73     | 0.22         | 2.76       |
| Beans, garbanzo (chickpeas), canned |               |                  | 3.5 c         | 1 can; 15.5 oz; 1.75 c      | 2 cans (31 oz)       | 31.00              | 878.84      | 0.21         | 1.85       |
| Beans, kidney                       |               |                  | 10.25 c       | 1 can; 15.5 oz; 1.75 c      | 6 cans (93 oz)       | 90.83              | 2574.99     | 0.18         | 4.52       |
| Beans, white                        |               |                  | 2.25 c        | 1 can; 15.5 oz; 1.75 c      | 2 cans (31 oz)       | 19.93              | 565.01      | 0.21         | 1.19       |

| Item                         | Quantity (AP) | Percentage Yield | Quantity (EP)    | Sizes                  | Quantity to Purchase | Quantity used (oz) | Weight (gm) | Mean \$/100g | Price (\$) |
|------------------------------|---------------|------------------|------------------|------------------------|----------------------|--------------------|-------------|--------------|------------|
| Corn                         |               |                  | 15.25 c          | 1 can; 15.5 oz; 1.75 c | 9 cans (139.5 oz)    | 135.07             | 3829.17     | 0.29         | 11.27      |
| Fruit cocktail, lite syrup   |               |                  | 6 c              | 1 can; 15 oz; 1.75 c   | 4 cans (60 oz)       | 51.43              | 1458.02     | 0.34         | 4.93       |
| Mandarin Oranges, lite syrup |               |                  | 1.5 c            | 1 can; 15 oz; 2 c      | 1 can (15 oz)        | 11.25              | 318.93      | 0.29         | 0.93       |
| Peaches, lite syrup          |               |                  | 15.5 c           | 1 can; 15 oz; 1.75 c   | 9 cans (135 oz)      | 132.86             | 3766.52     | 0.30         | 11.44      |
| Pears, lite syrup            |               |                  | 3 c              | 1 can; 15 oz; 1.75 c   | 2 cans (20 oz)       | 25.71              | 728.87      | 0.32         | 2.31       |
| Peas, black-eyed             |               |                  | 1.5 c            | 1 can; 15.5 oz; 1.75 c | 1 can (15.5 oz)      | 13.29              | 376.77      | 0.19         | 0.71       |
| Pineapple, chunk, lite syrup |               |                  | 4.5 c            | 1 can; 20 oz; 2.5 c    | 2 cans (40 oz)       | 35.43              | 1004.42     | 0.25         | 2.47       |
| Raisins                      |               |                  | 20 T             | 1 box; 15 oz; 2.75 c   | 1 box (15 oz)        | 6.82               | 193.34      | 0.53         | 1.03       |
| Tomato Salsa                 |               |                  | 2 c              | 1 jar; 24 oz; 2.875 c  | 1 jar (24 oz)        | 16.70              | 473.44      | 0.39         | 1.83       |
| Tomato Sauce                 |               |                  | 3.5 c            | 1 can; 15 oz; 1.75 c   | 2 cans (30 oz)       | 30.00              | 850.49      | 0.19         | 1.63       |
| Tomato Soup                  |               |                  | 6 c              | 1 can; 26 oz; 3 c      | 2 cans (52 oz)       | 52.00              | 1474.18     | 0.29         | 4.28       |
| Tomatoes, diced              |               |                  | 2 c (14.5 oz)    | 1 can; 14.5 oz; 1.75 c | 2 cans (29 oz)       | 29.00              | 822.14      | 0.20         | 1.68       |
| Frozen:                      |               |                  |                  |                        |                      |                    |             |              |            |
| Broccoli, chopped            |               |                  | 7.25 cups        | 1 bag; 32 oz; 10 c     | 1 bag (32 oz)        | 23.20              | 657.71      | 0.35         | 2.29       |
| Green Beans                  |               |                  | 8.5 cups         | 1 bag; 12 oz; 4 c      | 3 bags (36 oz)       | 25.50              | 722.91      | 0.32         | 2.29       |
| Okra, cut                    |               |                  | 2 cups           | 1 bag; 12 oz; 6.75 c   | 1 bag (12 oz)        | 3.56               | 100.92      | 0.37         | 0.37       |
| Orange Juice, concentrate    |               |                  | 15 c (120 fl oz) | 1 can; 12 oz           | 3 cans (36 oz)       | 30.00              | 850.49      | 0.53         | 4.55       |
| Peas                         |               |                  | 2 cups           | 1 bag; 12 oz; 2.67 c   | 1 bag (12 oz)        | 9.00               | 255.15      | 0.35         | 0.90       |
| Spinach, chopped             |               |                  | 10 cups          | 1 bag; 16 oz; 5 c      | 2 bags (32 oz)       | 32.00              | 907.18      | 0.38         | 3.44       |

**Table 5b: As Purchased (AP) quantity, percentage yield, Edible Portion (EP) quantity, size, weight, and AP price of bread, cereals, and other grains included in the two-week cycle menus**

| Item                               | Quantity (AP) | Percentage Yield | Quantity (EP) | Sizes                           | Quantity to Purchase | Quantity used (oz) | Weight (gm) | Mean \$/100g | Price (\$) |
|------------------------------------|---------------|------------------|---------------|---------------------------------|----------------------|--------------------|-------------|--------------|------------|
| Bread, cereals, and other grains   |               |                  |               |                                 |                      |                    |             |              |            |
| Bread crumbs                       |               |                  | 6 c           | 1 box; 15 oz; 3.5 c             | 2 boxes (30 oz)      | 25.71              | 728.87      | 0.58         | 4.26       |
| Bread, white, enriched             |               |                  | 8 slices      | 1 loaf; 18 oz; 22 slices        | 1 loaf (18 oz)       | 18.00              | 510.29      | 0.21         | 1.07       |
| Bread, whole wheat                 |               |                  | 124 slices    | 1 loaf; 20 oz; 22 slices        | 6 loaves (120 oz)    | 120.00             | 3401.94     | 0.34         | 11.60      |
| Crackers, multigrain               |               |                  | 84 crackers   | 1 pkg; 16.5 oz; 165 crackers    | 1 pkg (16.5 oz)      | 16.50              | 467.77      | 0.67         | 3.12       |
| Grits                              |               |                  | 5.5 c cooked  | 1 pkg; 32 oz; 5 c uncooked      | 2 pkgs (64 oz)       | 52.80              | 1496.85     | 0.26         | 3.93       |
| Hamburger buns, enriched           |               |                  | 3 buns        | 1 pkg; 12 oz; 8 buns            | 1 pkg (12 oz)        | 12.00              | 340.19      | 0.65         | 2.20       |
| Oatmeal, old fashioned             |               |                  | 3 c           | 1 pkg; 18 oz; 6.5 c uncooked    | 1 pkg (18 oz)        | 4.15               | 117.65      | 0.31         | 0.37       |
| Pasta, spaghetti, whole wheat      |               |                  | 5.5 c cooked  | 1 pkg; 13.25 oz; 6.625 c cooked | 1 pkg (13.25 oz)     | 9.72               | 275.56      | 0.27         | 0.75       |
| Popcorn, microwave, unpopped       |               |                  | 9 c popped    | 1 pkg; 32 oz; 75 T unpopped     | 1 pkg (32 oz)        | 1.92               | 54.43       | 1.09         | 0.59       |
| Ready-to-eat cereal (toasted oats) |               |                  | 21 c          | 1 box; 15 oz; 15 c              | 2 boxes (10 oz)      | 21.00              | 595.34      | 0.98         | 5.81       |
| Rice, brown                        |               |                  | 10 c cooked   | 1 bag; 32 oz; 5.75 c uncooked   | 1 bag (32 oz)        | 18.55              | 525.88      | 0.26         | 1.35       |
| Rolls, dinner, whole wheat         |               |                  | 14 rolls      | 1 bag; 12 oz; 12 rolls          | 2 bags (24 oz)       | 24.00              | 680.39      | 0.66         | 4.50       |
| Tortillas, whole wheat             |               |                  | 15 tortillas  | 1 bag; 17.5 oz; 10 tortillas    | 2 bags (35 oz)       | 35.00              | 992.23      | 0.88         | 8.71       |

**Table 5c: As Purchased (AP) quantity, percentage yield, Edible Portion (EP) quantity, size, weight, and AP price of dairy products included in the two-week cycle menus**

| Item                              | Quantity (AP) | Percentage Yield | Quantity (EP) | Sizes                          | Quantity to Purchase | Quantity used (oz) | Weight (gm) | Mean \$/100g | Price (\$) |
|-----------------------------------|---------------|------------------|---------------|--------------------------------|----------------------|--------------------|-------------|--------------|------------|
| Dairy                             |               |                  |               |                                |                      |                    |             |              |            |
| Cheese, mozzarella                |               |                  | 8 oz          | 1 bar; 8 oz; 8 1-oz servings   | 1 bar (8 oz)         | 8.00               | 226.80      | 0.69         | 1.56       |
| Cheese, processed (Velveeta-type) |               |                  | 41 oz         | 1 bar; 16 oz; 16 1-oz servings | 3 bars (48 oz)       | 48.00              | 1360.78     | 0.71         | 9.69       |
| Eggs, large                       |               |                  | 26 eggs       | 1 pkg; 21.12 oz; 12 eggs       | 3 pkgs (63.36 oz)    | 57.49              | 1629.81     | 0.51         | 8.35       |
| Margarine, stick                  |               |                  | 1/3 c         | 1 pkg; 16 oz; 2 c              | 1 pkg (16 oz)        | 2.67               | 75.69       | 0.17         | 0.13       |
| Margarine, tube, 40% lite spread  |               |                  | 146 t         | 1 pkg; 45 oz; 90 T             | 1 pkg (45 oz)        | 24.34              | 690.03      | 0.22         | 1.49       |
| Milk, 1% low fat                  |               |                  | 736 oz        | 1 bottle; 128 oz; 16 c         | 6 bottles (768 oz)   | 768.00             | 21772.43    | 0.08         | 18.40      |
| Yogurt, low fat                   |               |                  | 168 oz        | 1 pkg; 32 oz; 4 c              | 6 pkgs (192 oz)      | 192.00             | 5443.11     | 0.33         | 18.02      |



**Table 5d: As Purchased (AP) quantity, percentage yield, Edible Portion (EP) quantity, size, weight, and AP price of meat and meat alternates included in the two-week cycle menus**

| Item                                    | Quantity (AP) | Percentage Yield | Quantity (EP) | Sizes                         | Quantity to Purchase    | Quantity used (oz) | Weight (gm) | Mean \$/100g | Price (\$) |
|---|---------------|------------------|---------------|-------------------------------|-------------------------|--------------------|-------------|--------------|------------|
| Meat and Meat Alternates                |               |                  |               |                               |                         |                    |             |              |            |
| Beef, ground, 15% fat                   | 90 oz         | 40.00            | 36 oz         | 1 pkg; 32 oz; 8 4-oz servings | 3 pkgs (96 oz)          | 90.00              | 2551.46     | 0.79         | 20.16      |
| Beef, stew meat                         | 36.5 oz       | 55.00            | 20 oz         | 1 pkg; 24 oz; 6 4-oz servings | 2 pkgs (48 oz)          | 36.50              | 1034.76     | 0.84         | 8.66       |
| Catfish, frozen                         |               |                  | 9 oz          | 1 pkg; 32 oz; 8 4-oz servings | 1 pkg (32 oz)           | 9.00               | 255.15      | 1.06         | 2.71       |
| Chicken, whole                          | 4 (4 lbs ea)  | 50.00            | 2 (4 lb ea)   | 1 chicken; 4 lb               | 4 chickens (16 lb)      | 256.00             | 7257.48     | 0.18         | 12.86      |
| Pork, chops                             | 10 pork chops | 40.00            | 4.00          | 10 pork chops; 2.85 lb        | 10 chops (2.85 lb)      | 45.60              | 1292.74     | 0.61         | 7.94       |
| Sausage, smoked turkey                  |               |                  | 4 oz          | 1 pkg=6 links; 13.5 oz        | 1 pkg=6 links (13.5 oz) | 4.00               | 113.40      | 0.91         | 1.03       |
| Tuna, chunk-style, water packet, canned |               |                  | 35 oz         | 1 can; 4 oz                   | 9 cans (36 oz)          | 36.00              | 1020.58     | 0.60         | 6.15       |
| Turkey, ground                          | 15 oz         | 40.00            | 6 oz          | 1 pkg; 16 oz; 4 4-oz servings | 1 pkg (16 oz)           | 16.00              | 453.59      | 0.79         | 3.56       |

**Table 5e: As Purchased (AP) quantity, percentage yield, Edible Portion (EP) quantity, size, weight, and AP price of baking and other food items included in the two-week cycle menus**

| Item                         | Quantity (AP) | Percentage Yield | Quantity (EP) | Sizes                 | Quantity to Purchase | Quantity used (oz) | Weight (gm) | Mean \$/100g | Price (\$) |
|------------------------------|---------------|------------------|---------------|-----------------------|----------------------|--------------------|-------------|--------------|------------|
| Baking                       |               |                  |               |                       |                      |                    |             |              |            |
| Cornbread mix                |               |                  | 8.5 oz        | 1 pkg; 8.5 oz; 1.5 c  | 1 pkg (8.5 oz)       | 8.50               | 240.97      | 0.22         | 0.53       |
| Flour, enriched, all purpose |               |                  | 2 cups        | 1 pkg; 32 oz; 7.5 c   | 1 pkg (32 oz)        | 8.53               | 241.82      | 0.14         | 0.33       |
| Shortening                   |               |                  | 1/3 cup       | 1 pkg; 16 oz; 38 T    | 1 pkg (16 oz)        | 2.25               | 63.79       | 0.22         | 0.14       |
| Oil, canola                  |               |                  | 92 t          | 1 bottle; 48 oz; 96 T | 1 bottle (96 T)      | 15.33              | 434.60      | 0.28         | 1.20       |
| Sugar, light brown           |               |                  | 1.25 cups     | 1 bag; 16 oz; 113 t   | 1 bag (16 oz)        | 8.50               | 240.97      | 0.13         | 0.32       |
| Sugar, white                 |               |                  | 2/3 cup       | 1 bag; 32 oz; 227 t   | 1 bag (32 oz)        | 4.51               | 127.86      | 0.12         | 0.15       |
| Other Food Items             |               |                  |               |                       |                      |                    |             |              |            |
| Jelly                        |               |                  | 10 T          | 1 jar; 10 oz; 15 T    | 1 jar (10 oz)        | 6.67               | 189.09      | 0.21         | 0.39       |
| Pancake syrup, lite          |               |                  | 10 T          | 1 bottle; 24 oz; 48 T | 1 bottle (24 oz)     | 5.00               | 141.75      | 0.33         | 0.47       |
| Peanut butter, creamy        |               |                  | 2/3 cup       | 1 bottle; 18 oz; 28 T | 1 bottle (18 oz)     | 6.86               | 194.48      | 0.41         | 0.79       |
| Mayonnaise, reduced fat      |               |                  | 9 T           | 1 bottle; 15 oz; 30 T | 1 bottle (15 oz)     | 4.50               | 127.57      | 0.41         | 0.52       |
| Mustard, yellow              |               |                  | 14 t          | 1 bottle; 9 oz; 51 t  | 1 bottle (9 oz)      | 2.47               | 70.02       | 0.29         | 0.20       |
| Vinegar                      |               |                  | 12 T          | 1 bottle; 16 oz; 31 T | 1 bottle (16 oz)     | 6.19               | 175.48      | 0.19         | 0.34       |

## CHAPTER 4

### RESULTS

#### **Cost Comparison of Two-Week Menus with Supplemental Nutrition Assistance Program**

Table 6 shows the comparison of the cost of the menus with maximum SNAP benefits and average SNAP benefits (Louisiana). The final average cost for the two-week cycle menus was \$358.97, or an average of \$179.49 a week or \$8.55/ day per member of the reference family. For a family of three, the average cost of the two-week cycle menus per month was \$780.50. The cost of the two-week menus exceeded the maximum SNAP benefit allotment for a family of three by \$254.50 per month, and exceeded the average SNAP benefits allotment for a family of three by \$457.45 per month. This data shows that SNAP benefit recipients may not be able to follow the 2010 DGA recommendations due to insufficient financial resources to purchase the necessary food items.

**Table 6: Comparison of maximum and average SNAP benefits with the cost of the two-week menus for a reference family of three**

|                         | <b>Cost of Menus (\$)</b> | <b>Maximum SNAP Benefits (\$)</b> | <b>Average SNAP Benefits (\$)</b> |
|-------------------------|---------------------------|-----------------------------------|-----------------------------------|
| <b>Daily per person</b> | 8.55                      | 5.76                              | 3.54                              |
| <b>Weekly</b>           | 179.49                    | 120.96                            | 74.29                             |
| <b>Bi-weekly</b>        | 358.97                    | 241.92                            | 148.58                            |
| <b>Monthly</b>          | 780.50                    | 526.00                            | 323.05                            |
| <b>Difference/month</b> |                           | -254.50                           | -457.45                           |

## **CHAPTER 5**

### **DISCUSSION**

Two-week cycle menus that used foods common to SE Louisiana (Table 2) were developed to meet the food recommendations for the 2010 DGA (22). The cost of these menus was compared to the maximum and average SNAP benefits available to a reference family of three in SE Louisiana. The cost of the menus exceeded the maximum and average SNAP benefit allotments for the reference family. This study confirms and extends the study of Stewart (23) that demonstrated that meeting the 2005 DGA could be difficult for families completely reliant on SNAP benefits.

After the dietary requirements were calculated, the menus were planned. In a study that interviewed welfare-dependent and working low-income women in Louisiana in 2000/2001, it was found that the majority of the women had poor diets, which emphasized fats, starches, and large quantities of food (70). Also, the diets of the participants were dependent on fast foods and included few fruit and vegetables and few dairy products; thus, the menus did not comply with the food recommendations (70) of the 2010 DGA (22). As a result, the two-week cycle menus from this study could not be developed following the dietary patterns common to low-income individuals from Louisiana. Instead, they were designed to include foods common to SE Louisiana, such as Cajun, Creole, soul, and spicy foods. Foods such as red beans and rice, Cajun jambalaya, catfish, and grits were included (71). The menus were modified from those of Stewart using the results from the focus group discussions (FGD) of Mullenix (23, 65). Stewart developed low cost two-week cycle menus meant to appeal to residents in SE Louisiana, and that met the food recommendations of the 2005 DGA (23). These menus included foods such as beans and rice, Cajun jambalaya, and Cajun chicken. Mullenix conducted focus group

discussions (FGD) in low-income individuals in SE Louisiana to determine the acceptability of the menus (65). Information from the FGD was considered in developing the two-week cycle menus for this study. For example, the ham and black-eyed peas soup with collard greens, the chili and rice, and the pot roast were not used in the present study since an overwhelming number of participants stated they would not eat these foods (65). Whole chickens were used instead of chicken leg quarters and pizza was added to the menu (65). Some suggestions could not be taken into consideration because of the cost. For example, salmon, shrimp, and crawfish, were not added to the menus, instead frozen catfish and canned tuna were lower cost and, therefore, were used as replacements for these food choices (65). Shrimp and crawfish might be options for some low-income families, however, if they were to catch them themselves, rather than buy the foods.

Specific weekly recommendations for types and amounts of vegetables also had to be considered when developing the two-week cycle menus. Although earlier editions of the DGA suggested consuming a variety of fruit and vegetables, the 2005 DGA was the first to include specific weekly recommendations for types and amounts of vegetables (72). The principle of inter-group variety was also used in the 2010 DGA. The 2005 DGAC reviewed evidence that consumption of vegetables may be associated with reduced risk of stroke, certain cancers, and type 2 diabetes mellitus (73). Vegetables provide nutrients, including folate, potassium, and carotenoids and other phytochemicals, as well as fiber, that have been associated with disease prevention (73). As a result, planning menus and recipes that included a variety of vegetables was necessary to meet the level of intake and variety set by the 2010 DGA. Increasing the variety of vegetables, however, also increased the cost of the market basket (74). When a market basket inclusive of only five of the most commonly consumed vegetables was compared to a

market basket including 10 vegetables, the low variety basket was 4.3% less expensive than the high variety basket (74). Since low income has been associated with lower intake of fruit and vegetables (17, 75, 76-78), there is concern that varying the types of vegetables consumed would increase the cost of the market basket and impede low-income individuals from meeting the vegetable recommendations. Fruit and vegetables are also perceived as being very expensive which may impede low-income individuals from purchasing them (12, 54). One study found that to be able to follow the 2005 DGA, low-income families would have to allocate 43% to 70% of their income budget to fruit and vegetables alone, even though canned or frozen fruit and vegetables were chosen whenever possible (12).

Adults and adolescents consume few servings of fruit and vegetables (33). Fruit and vegetables are perishable, and may be inconvenient to store and prepare, and costly, especially when purchased out of season (12, 54). When low-income individuals were asked about the disadvantages of eating vegetables, they discussed “quick spoilage” as one of them (54).

Meeting the 2010 DGA recommendations for fruit and vegetables is not the only dietary concern for low-income individuals. Their diets have also been found to be significantly lower in diet quality than those individuals of higher-income status (12, 17, 79). Energy-dense diets which are nutrient-poor are consumed more frequently by low-income individuals than by individuals of higher socioeconomic status (17). The consumption of fish, whole grains, lean meats, low-fat dairy products, fruit, and vegetables is higher among individuals of higher-income when compared to persons of lower-income (17). Low-income individuals may substitute simple carbohydrates for fruit, vegetables, whole grains, and other healthy food options (12, 14, 16, 17). Despite this preference for simple carbohydrates, the two-week cycle menus developed

for this study had to include fruit, vegetables, whole grains, and other healthy foods to be able to meet the 2010 DGA requirements.

Availability, as well as cost, may be two factors stopping low-income individuals from consuming a healthier diet (12, 17, 25). Even though the 2006 TFP report showed that it is possible to eat a nutritious diet that includes a variety of vegetables at the maximum SNAP allotment (43), other studies have found different results (12, 14, 25). When market basket surveys were conducted in 25 stores varied by income, smaller grocery stores in low-income neighborhoods had limited access to whole-grain products, low-fat cheeses, and ground meat with less than 10% fat (25). A “healthier” market basket was \$36 more expensive than the average TFP market basket due to higher costs of whole grains, lean beef, and skinless poultry (25). To consume ND meals, low-income households must assign a higher portion of their income to food when compared to higher-income households (14). In a study for which foods were purchased following a dinner plate recommendation from the ERS and the USDA, the per-person cost of the dinner was \$4.17/person/day for a reference family of four which exceeded the maximum SNAP benefit by 80% (14).

Menu costs could have been lowered by changing some of the menu items to more of the less expensive food options such as eggs and peanut butter. However, this could have caused a reduction in diet quality since there is a positive relationship between diet quality and amount of money spent on food (48). For example, eggs are an inexpensive source of protein (80), but they the current recommendations limit egg consumption to one egg/day (22). Even though egg yolks are high in cholesterol, one egg/day has been shown not to affect serum cholesterol levels (81), which is the major concern about including eggs in the diet. Meat could have also been reduced or replaced with peanut butter or beans to lower the cost of menus; however, meat provides

nutrients such as heme iron and vitamin B12, which are important for health but are limited in plant foods (82). Vegetarian diets can be healthful, and can meet all dietary recommendations, provided foods are fortified with nutrients like vitamin B12 if a person is consuming a true vegetarian diet. However, designing healthful vegetarian diets requires some nutrition knowledge, which low income people may not have (53-58). Omitting meat from the menus may have also lowered the acceptability of the menus. Mullenix and coworkers found that, some participants in the FGD stated that the menus needed to have more meat (65). The 2010 DGA limits protein foods to 5.5 oz/day and meat, fish, poultry, and eggs to 24 oz/week or approximately 3.5 oz/day for a 2000 kcal diet (22). The present menus included this amount of lean meat, fish, and poultry with no more than one egg per day.

Menu costs could also have been decreased by increasing the amount of food preparation, such as making homemade bread and pasta. SNAP recipients, however, may not have the time to devote to these practices and labor costs should be included when pricing the menus (83, 84). Once labor cost was included, the TFP is not very low cost (83). The TFP only considers food expenditures and does not include labor cost, which may affect the cost of the market basket (83). Other ways to reduce the cost of the menus, such as using powdered milk rather than fluid milk could have been used; however, consumer acceptability was unlikely. It should also be taken into consideration that SNAP benefits are affected if children participate in the National School Lunch Program (NSLP) or School Breakfast Program (SBP). This would reduce the cost of the menus since five breakfasts and lunches would be deducted from the food expenses of the week. However, participating in the NSLP and SBP would also reduce the SNAP allotment the family receives. Lastly, statistical methods, such as quadratic modeling, could be used to reduce the cost of the menus.



It is also important to take into account the considerable skill, nutrition knowledge, and time that are necessary to plan menus (53, 57, 58, 83, 85, 86), especially with low-income individuals. Attitude and knowledge barriers, as well as lack of affordable resources and public transportation may contribute to low-income individuals' lack of healthy eating (86). Without adequate nutrition knowledge, it is less likely that low-income individuals will plan and shop for healthy menus (53, 57, 58, 83, 85, 86). Therefore, educational programs such as SNAP-Education (SNAP-Ed) and the Expanded Food and Nutrition Education Program (EFNEP) have been developed to provide low-income individuals with information about nutrition and the skill set necessary to plan and shop for healthy menus. SNAP-Ed is a federal and state program that develops nutrition education curriculums for individuals eligible for SNAP benefits (87). The overarching goal of this program is to increase the likelihood that people eligible for SNAP benefits will make healthy food choices at a low cost (87). This goal is met through educational programs and marketing campaigns delivered indirectly through the distribution of handouts and videos and directly through one-on-one interactive learning opportunities (87). The EFNEP is a program that also assists low-income individuals in gaining the necessary knowledge and skills to achieve highly nutritional diets and well-being for themselves and for their family (88). The educational lessons range from 10 to 12 and they are delivered by paraprofessionals or peer educators and volunteers over several months (88). The EFNEP uses an experiential learning process in which participants not only learn about nutrition, but they also experience increased self-worth (88). Individuals that graduate from the program have been shown to increase fruit and vegetables consumption by approximately 1.4 servings per day. Also, 83% improved meal planning and grocery shopping practices, 88% improved nutrition practices, and 92% reported following more closely the recommendations of MyPyramid (89).

### **Limitations of this Study**

The results of this study cannot be generalized to all families in the US since the 2010 DGA food requirements were determined for a reference family which may not be representative of a typical family receiving SNAP benefits. Additionally, the pricing of the market basket was done in SE Louisiana; therefore, the prices used in the study may not apply to other regions of the US. However, the methodology used in this study can be applied to other research studies analyzing families of different sizes and compositions.

Another limitation of this study was that pricing was done only in the month of January, which affects the price of fruit and vegetables if they are not purchased when in season. The menus were designed to meet the food recommendations only and the energy content was determined using the Exchange Lists for Meal Planning, which provides only an estimate. Future studies should examine the nutrient content of the menus to also ensure that nutrient recommendations set by the Dietary Reference Intakes are met. Although suggestions from previous studies were included in planning the menus (23, 65, 71), they may not be appropriate in other regions of the US and the food choices may have been biased toward the likes or dislikes of the researchers. Therefore, it is important to perform test tastings of these menus and recipes to choose suitable menus for a specific region in the country. If culturally sensitive menus could be developed for a specific region, the acceptability of the 2010 DGA may increase.

### **Conclusion and Future Directions**

Meeting the food recommendations provided by previous editions of the DGA is challenging and has been shown to be difficult for Americans to meet, especially low-income individuals. The recommendations for vegetables, fruit, low-fat dairy, and whole grains may be especially difficult to meet. This study found that SNAP benefits alone are not sufficient for

SNAP recipients in SE Louisiana to meet the 2010 DGA. In addition, the nutrition and menu planning knowledge deficit among low-income individuals may make meeting the 2010 DGA more difficult.

This study is one of the first to address the ability of SNAP benefits recipients to meet the 2010 DGA. Therefore, studies with similar methodologies should be conducted in different geographic areas within the United States to determine the ability of SNAP benefits recipients to meet the 2010 DGA.

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## APPENDIX A: RECIPES

### **Peanut Butter Cookies**

Makes 24 servings

Modified from Allrecipes.com

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#### Ingredients:

- 1 cup unsalted butter
- 1 cup crunchy peanut butter
- 1 cup white sugar
- 1 cup packed brown sugar
- 2 eggs
- 2 1/2 cups all-purpose flour
- 1 teaspoon baking powder
- 1/2 teaspoon salt
- 1 1/2 teaspoons baking soda

#### Preparation:

1. Cream together butter, peanut butter and sugars. Beat in eggs.
2. In a separate bowl, sift together flour, baking powder, baking soda, and salt. Stir into batter. Put batter in refrigerator for 1 hour.
3. Roll into 1 inch balls and put on baking sheets. Flatten each ball with a fork, making a criss-cross pattern. Bake in a preheated 375 degrees F oven for about 10 minutes or until cookies begin to brown. Do not over-bake.

### **Chicken Vegetable Soup**

Makes 8 servings

Modified from Allrecipes.com

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#### Ingredients:

- 1 boneless skinless chicken breasts, cut into 1 inch pieces
- 1 cup chopped onion
- 2 cloves garlic, minced
- 2 tablespoons margarine
- 1 (10 ounce) package frozen diced carrots
- 4 cups tomato-vegetable juice cocktail
- 4 cups water
- 1 1/2 cups farfalle pasta
- 1 tablespoon Italian seasoning
- 1 (10 ounce) package frozen chopped spinach

#### Preparation:

1. In a large saucepan over medium high heat, combine the chicken, onion, garlic and butter or margarine. Sauté for about 5 minutes or until the onions are tender. Add the carrots, tomato vegetable juice, water, macaroni and seasoning.
2. Bring to a boil, and then reduce heat to low. Cover and simmer for about 20 minutes. Add the spinach and cook 5 more minutes. Serve hot with the crackers.

### **Tuna Salad**

Makes 4 servings

Modified from Allrecipes.com

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#### **Ingredients:**

- 3 eggs
- 2 (6 ounce) cans tuna, drained and flaked
- 3 tablespoons reduced fat mayonnaise
- 2 stalks celery, chopped
- 2 tablespoons sweet pickle relish
- 1 pinch ground black pepper

#### **Preparation:**

1. Place eggs in a saucepan and cover with cold water. Bring water to a boil and immediately remove from heat. Cover and let eggs stand in hot water for 10 to 12 minutes. Remove from hot water, cool, peel and chop.
2. In a medium bowl, mix together tuna and mayonnaise. Mix in egg, celery, relish, and black pepper.

### **Chicken Quesadillas**

Makes 5 servings

Modified from Allrecipes.com

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#### **Ingredients:**

- 5 (12 inch) flour tortilla
- 2 cup processed cheese, chopped
- 1 15oz can whole kernel corn, drained and rinsed
- 1 diced tomato
- 3 chopped green onion
- 2 chicken leg quarters, skinned, cooked, & chopped

#### **Preparation:**

1. Place a large skillet over medium heat. Spray with cooking spray. Place the tortilla in the skillet allow it to heat for 1 minute.
2. Beginning at the center of the tortilla, evenly spread the cheese until half tortilla's surface is covered. Top the cheese with corn, tomatoes, green onion and chicken. Fold the tortilla in half. When the cheese is completely melted, carefully slide the tortilla from the pan onto a cutting board. Slice into 4 wedges and serve warm.

### **Garden Stuffed Baked Potatoes**

Makes 3 servings

Modified from Allrecipes.com

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#### **Ingredients:**

- 3 large potatoes
- 2 tablespoons lite margarine spread
- 1 small onion, chopped

- 1/2 cup fat-free ranch salad dressing
- 1 16oz package chopped frozen broccoli, thawed and drained
- 1 tablespoon canola oil
- Salt and pepper to taste

Preparation:

1. Preheat oven to 425°F.
2. Pierce the skin of the potatoes with a fork. Microwave pierced potatoes on HIGH for 12 minutes. Place partially baked potatoes in the preheated oven and bake for 15 minutes.
3. Slice off potato tops, scoop out the bulk of the interior of the potato being careful to leave the potato skins intact. In a medium bowl, mash the removed potato interior.
4. Heat a small skillet over medium heat, stir in lite margarine spread. Sauté onions in the skillet until tender, about 5 minutes.
5. Combine onions, ranch dressing, and broccoli with the mashed potato. Brush the outside of the potato skins with oil. Spoon potato mixture into the skins. Arrange stuffed potatoes on a cookie sheet.
6. Bake potatoes for 15 minutes in the preheated oven, or until heated through. Season with salt and pepper.

### **Garden Coleslaw**

Makes 6 servings

Modified from Cookinglight.com

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Ingredients:

- 1/2 cup Italian dressing
- 1 tablespoon sugar
- 1/2 teaspoon salt
- Juice of 1 lemon
- 6 cups shredded cabbage
- 2 cups shredded carrots
- 2 cups apple
- Salt and pepper to taste

Preparation:

1. In a mixing bowl, combine first 4 ingredients. Stir until blended. Add cabbage, carrots, and apple. Season with salt and pepper. Toss, cover, and refrigerate.

### **Oven Fried Catfish**

Makes 3 servings

Modified from Allrecipes.com

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Ingredients:

- 9 oz. pound catfish fillets
- 1/4 cup yellow cornmeal
- 1/2 teaspoon paprika
- 1/2 teaspoon dried thyme
- 1/2 teaspoon salt
- 1/4 teaspoon celery seed

- 1/4 teaspoon onion powder
- 1/4 teaspoon garlic powder
- 1/4 teaspoon ground black pepper
- 1/4 cup skim milk
- cooking spray

**Preparation:**

1. Preheat the oven to 425 degrees F (220 degrees C). Line a baking sheet with aluminum foil and coat with cooking spray.
2. In a shallow dish, stir together the cornmeal, paprika, thyme, salt, celery seed, onion powder, garlic powder, and pepper. Dip the catfish fillets in milk, then place them into the cornmeal mixture and coat liberally; place on the greased baking sheet. Coat the tops of the fillets with cooking spray until wet.
3. Bake for 15 minutes in the preheated oven, or until fish is easily flaked with a fork.

### **French Toast**

Makes 8 servings

Modified from Cookinglight.com

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**Ingredients:**

- 1 cup 1% milk
- 2 eggs
- 2 tablespoons sugar
- 1/2 teaspoon ground cinnamon
- 1/2 teaspoon vanilla extract
- 2 large egg whites
- 8 slices whole-grain bread
- Cooking spray
- 1 teaspoon lite margarine spread, divided

**Preparation:**

1. Combine milk and next 5 ingredients (through egg whites) in a medium bowl, stirring well with a whisk. Pour milk mixture into shallow dish.
2. Working with 1 bread slice at a time, place bread slice into milk mixture, turning to coat both sides. Let bread stand in milk mixture 2 to 3 minutes. Remove bread slice from milk mixture. Repeat with remaining slices.
3. Heat a large nonstick skillet over medium heat. Coat pan with cooking spray. Melt 1/2 teaspoon lite margarine spread in pan; swirl to coat bottom of pan. Add 3 soaked bread slices; cook 2 minutes on each side or until lightly browned. Repeat procedure with cooking spray, remaining lite margarine spread, and remaining coated bread slices.

### **Family Style Red Beans and Rice**

Makes 5 servings

Modified from Delmonte.com

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**Ingredients:**

- 2 cans (15.5 oz. each) stewed tomatoes, undrained
- 2 cans (15.5 oz. each) kidney beans, drained and rinsed

- 2 cups brown rice, uncooked
- 3 ½ cups water
- 2 tbsp. chili powder

Preparation:

1. Stir all ingredients together in 2 qt. heavy bottomed saucepan; bring to boil.
2. Cover and reduce heat; simmer 15 minutes.
3. Let stand, covered, 5 minutes; uncover and stir before serving.

### **Vegetable Beef Soup**

Makes 12 servings

Modified from Betterbudgeting.com

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Ingredients:

- 2 pounds cubed beef stew meat
- 1 can of corn, drained and rinsed
- 1 can of green beans, drained and rinsed
- 1 can of kidney beans, drained and rinsed
- 1 can of diced tomatoes, undrained
- Salt and pepper

Preparation:

1. Fill a large 4-5 qt. pot half way with water. Add stew meat. Bring to a boil. Reduce heat to low, cover and cook for 2 hours.
2. Add drained and rinsed corn, green beans, and kidney beans. Add entire can of tomatoes. Cook until everything is heated through, about 30 minutes. Season with salt and pepper.

### **Carrot and Apple Salad**

Makes 6 servings

Modified from Cdc.gov

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Ingredients:

- 1 cup shredded carrot
- 4 apples, cored and diced
- 1 tablespoon lemon juice
- 1/2 cup raisins
- 1/3 cup low-fat mayonnaise

Preparation:

1. Combine all ingredients. Chill thoroughly.

### **Mama's Meat Loaf**

Makes 6 servings

Modified from Cookinglight.com

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Ingredients:

- 1 small onion, chopped
- 1 green bell pepper, chopped
- 1 teaspoon pepper

- ¾ teaspoon salt
- 2 garlic cloves, minced
- 1 egg, lightly beaten
- 1 slice wheat bread, torn into small pieces
- 1 ½ pounds ground beef
- Cooking spray
- 1/3 cup ketchup

**Preparation:**

1. Preheat oven to 350°.
2. Combine first 7 ingredients in a large bowl, tossing to moisten bread. Crumble meat over onion mixture, and stir just until blended. Pack mixture into a 9 x 5-inch loaf pan coated with cooking spray. Spread ketchup over top of loaf.
3. Bake at 350° for 1 hour. Let loaf stand in pan 10 minutes.
4. Remove meat loaf from pan; cut loaf into 6 slices.

**Potato Salad**

Makes 4 servings

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**Ingredients:**

- 1 medium potatoes
- 4T Fat Free Italian Dressing
- 1/4 cup celery, chopped
- 1/4 cup onions, chopped

**Preparation:**

1. Boil Potatoes, and then cut up.
2. Combine all ingredients in a large bowl and mix thoroughly.

**Vegetable Soup**

Makes 9 servings

Modified from Allrecipes.com

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**Ingredients:**

- 1 pound ground beef
- 1 cup chopped onion
- 1 cup chopped celery
- 1 cup chopped carrots
- 2 cloves garlic, minced
- 1 (14.5 ounce) can peeled and diced tomatoes
- 1 (15 ounce) can tomato sauce
- 2 (19 ounce) cans kidney beans, drained and rinsed
- 2 cups water
- 5 teaspoons beef bouillon granules
- 1 tablespoon dried parsley
- 1/2 teaspoon dried oregano
- 1/2 teaspoon dried basil
- 2 cups chopped cabbage



- 1 (15.25 ounce) can whole kernel corn
- 1 (15 ounce) can green beans
- 1 cup macaroni

**Preparation:**

1. Place ground beef in a large soup pot. Cook over medium heat until evenly browned. Drain excess fat. Stir in onion, celery, carrots, garlic, chopped tomatoes, tomato sauce, beans, water and bouillon. Season with parsley, oregano and basil. Simmer for 20 minutes.
2. Stir in cabbage, corn, green beans and pasta. Bring to a boil, and then reduce heat. Simmer until vegetables are tender and pasta is al dente. Add more water if needed.

### **Cajun Jambalaya**

Makes 4 servings

Modified from Allrecipes.com

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**Ingredients:**

- 2 teaspoons canola oil
- 8 ounces turkey sausage, diced
- 2 chicken leg quarters, skinned, deboned, and chopped
- 1 onion, diced
- 1 green bell pepper, diced
- 1/2 cup diced celery
- 2 tablespoons chopped garlic
- 1/4 teaspoon cayenne pepper
- 1/2 teaspoon onion powder
- salt and ground black pepper to taste
- 2 cups uncooked brown rice
- 4 cups water

**Preparation:**

1. Heat oil in a large pot over medium high heat. Sauté chicken and sausage until lightly browned, about 5 minutes.
2. Stir in onion, bell pepper, celery and garlic. Season with cayenne, onion powder, salt and pepper. Cook 5 minutes, or until onion is tender and translucent.
3. Add rice and stir in water. Bring to a boil, then reduce heat, cover, and simmer 20 minutes, or until rice is tender.

### **Oatmeal Raisin Cookies**

Makes 16 cookies

Modified from Allrecipes.com

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**Ingredients:**

- 1/4 cup lite margarine spread, softened
- 1/4 cup white sugar
- 1/4 cup packed light brown sugar
- 1 eggs
- 1/3 teaspoon vanilla extract

- 1/2 cups all-purpose flour
- 1/3 teaspoon baking soda
- 1/4 teaspoon ground cinnamon
- 1/6 teaspoon salt
- 1 cups rolled oats
- 1/3 cup raisins

**Preparation:**

1. Preheat oven to 375°F.
2. In large bowl, cream together lite margarine spread, sugar, and brown sugar until smooth. Beat in the eggs and vanilla until fluffy. Stir together flour, baking soda, cinnamon, and salt. Gradually beat into lite margarine spread mixture. Stir in oats and raisins. Drop teaspoonful onto ungreased cookie sheets.
3. Bake 8 to 10 minutes in the preheated oven, or until golden brown. Cool slightly; remove from sheet to wire rack. Cool completely.

### **Oven Fried Pork Chops**

Makes 4 servings

Modified from Allrecipes.com

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**Ingredients:**

- 4 thick cut pork chops, fat trimmed
- 2 tablespoons lite margarine spread,
- melted
- 1 egg, beaten
- 2 tablespoons 1% milk
- 1/4 teaspoon black pepper
- 1 cup bread crumbs

**Preparation:**

1. Preheat oven to 425°F.
2. Pour lite margarine spread into a 9x13 inch baking pan.
3. Stir together egg, milk and pepper. Dip pork chops in egg mixture, coat with bread crumbs and place in pan.
4. Bake in preheated oven for 10 minutes. Turn chops and bake for another 10 minutes, or until no pink remains in the meat and juices run clear.

### **Banana Pancakes**

Makes 12 pancakes

Modified from Allrecipes.com

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**Ingredients:**

- 3/4 cup all-purpose flour
- 3/4 tablespoon white sugar
- 1 1/2 teaspoons baking powder
- 1/4 teaspoon salt
- 1 egg, beaten
- 1/4 cup 1% milk

- 1 1/2 tablespoons canola oil
- 1 1/2 ripe bananas, mashed

Preparation:

1. Combine flour, sugar, baking powder and salt. In a separate bowl, mix together egg, milk, oil and bananas.
2. Stir flour mixture into banana mixture; batter will be slightly lumpy.
3. Heat a griddle or frying pan sprayed with cooking spray over medium high heat. Pour or scoop the batter onto the griddle, using approximately 1/4 cup for each pancake. Cook until pancakes are golden brown on both sides; serve hot.

### **Chicken and Vegetable Stir-Fry**

Makes 3 servings

Modified from Mealtime.org

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Ingredients:

- 1/3 cup water
- 2 teaspoon cornstarch
- 2 tablespoons reduced-sodium soy sauce
- 2 tablespoons canola oil
- 1 small onion, sliced
- 2 celery stalks, sliced
- 1 carrot, sliced
- 1 green bell pepper, sliced
- 3 chicken leg quarters, skinned, cooked, and chopped
- 2 green onions, roots trimmed, sliced

Preparation:

1. Combine the water, cornstarch and soy sauce in a bowl; set aside.
2. Place a large pan over a high heat. Add the oil and heat until smoking. Add the onions, mushrooms, celery, carrots and pepper. Stir-fry for 2 to 3 minutes or until the vegetables are barely tender. Add the chicken and stir-fry another minute to heat through.
3. Add the soy sauce mixture and stir until the sauce is simmering. Cover and cook for 30 seconds. Serve immediately; sprinkle each serving with green onion, if desired.

### **Chicken Alfredo with Vegetables**

Makes 5 servings

Modified from Recipestoday.com

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- 12 ounces fettuccine
- 4 ounces reduced-fat cream cheese
- 2 tablespoons lite margarine spread
- 1/2 cup 1% milk
- 1/2 teaspoon garlic powder
- Salt and pepper to taste
- 4 chicken leg quarters, skinned, cooked, and chopped
- 1 16oz package frozen chopped broccoli, thawed and drained
- 2 small zucchini, cut into strips

- 1/2 cup chopped green bell pepper
- 16 oz. frozen green peas

Preparation:

1. Cook fettuccine according to package directions. Do not overcook. Drain.
2. While the pasta cooks, melt the cream cheese and lite margarine spread in a skillet until smooth. Stir in the milk, garlic powder, salt, and pepper. Cook about 3 minutes or until slightly thickened, stirring constantly. Add the chicken, broccoli, zucchini, red pepper and mushrooms. Cook about 5 minutes, or until vegetables are crisp and tender.
3. To serve, pour sauce over fettuccine.