

IMPLEMENTING GROUP NUTRITION EDUCATION IN OGDEN, KANSAS

by

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Abstract

Kansas State Research and Extension receives federal funding to provide nutrition education programs for limited resource families. One such program is the Expanded Food and Nutrition Education Program (EFNEP) which targets main food providers in limited-resource households in order to assist in positive changes in diet and health behaviors of family units for improved “nutritional well-being”.

Traditionally, EFNEP delivers ten to twelve lessons in a series, but funding and time burdens could be attenuated with fewer lessons if similar outcomes were observed in health behavior changes.

Two, four-week adult sessions were held at the Ogden Community Center. Classes met once a week. 24-hour diet recall and behavioral checklists were completed by participants at entry and exit in both sessions. For the first session, a one-month follow up recall and checklist were completed via mail.

Evaluation of entry, exit, and session one follow-up data suggest that minimal to no behavioral change is apparent after the four-week session, but positive behavior changes (such as an increase in vegetable intake) was observed when reviewing follow up data. This suggests that four weekly classes are insufficient for immediate behavior change, but may contribute to behavior changes in the future. These results can be used as preliminary support for further observance of the potential short and long-term health behavior outcomes that can come from offering abbreviated EFNEP programs.

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Chapter 1 - Introduction

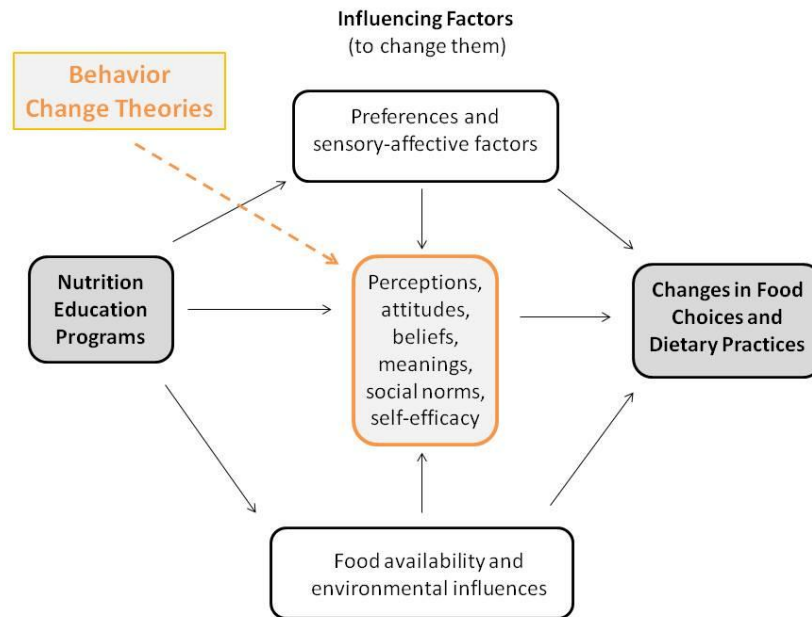
Role of Nutrition Education in Behavior Change

Nutrition education is defined as “any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food and nutrition related behaviors conducive to health and well-being and delivered through multiple venues, involving activities at the individual, institutional, community, and policy levels” (Contento, 2011). The purpose of nutrition education is to illicit positive health behavior changes by impacting multiple determinants of behavior at various areas of life and levels of society.

Contento discusses three main views of nutrition education. The first approaches nutrition education as the sole function of providing knowledge without the promotion of healthful choices. This view is regarded to be inadequate to yield positive health behavior changes. Nutrition education can also be viewed as a method of environmental change in order to create an environment that “motivates, supports and reinforces” healthy behaviors (Contento, 2011). Lastly, there is the approach that nutrition education serves to facilitate the “adoption and maintenance” of positive health behavior changes which is the intention of nutrition education. Successful “educational interventions” need to address constructs of common behavior change theories discussed below (Contento, 2011)

Models and Theories of Change - Where Does Nutrition Education Fit?

Figure 1.1 The Process of Nutrition Education, modified



(Base illustration Contento, 2011)

Figure 1.1 depicts nutrition education as a component in behavior change by targeting individual, social and environmental factors that determine health behaviors. Behavior change theories each focus on specific constructs involved in the process of behavior development; each important and likely all integrated into the realistic picture of what behavior change may look like. Below are descriptions of major theories and models of the health behavior change process.

Health Belief Model

Description: People's behaviors are influenced by personal beliefs and the interaction of perceptions relating to personal health and well-being.

Key Constructs: Demographic and sociopsychological variables (age, race, personality, socioeconomic status, etc.) form personal perceptions of severity, susceptibility, and threat (influenced by cues to action) to a negative health outcome, as well as, impacting perceived benefits and barriers and self-efficacy towards making a health behavior change. Effective nutrition education would include methods to create high perceived threat, severity and susceptibility to a negative health outcome paired with

high perceived benefit and self-efficacy with low perceived barriers to a behavior change in order to maximize the likelihood of adopting a positive behavior change (Contento, 2011).

Transtheoretical Model (Stages of Change)

Description: Views behavior change on a continuum, with defined stages of behavior change. Emphasizes “educational intervention” that is tailored to identified current stage of change process.

Key Constructs: Two phases which include the motivational phase which includes *precontemplation* and *contemplation* stages. In these stages, action is considered or decided upon. The second phase, the action phase, includes the stages of *decision*, *action* and *maintenance*. If a positive health behavior change is sustained, then the person is considered to be perpetually in the maintenance phase (Contento, 2011).

Social Cognitive Theory

Description: A dynamic and reciprocal interaction with personal, behavioral, and environmental factors dictate behaviors and behavior changes.

Key Constructs: Personal factors include expectations or beliefs about outcomes, barriers, self-efficacy to overcome those barriers, personal goals, and present reinforcements and/or consequences. Behavioral factors include nutrition-related knowledge and skill development and the ability to self-regulate one’s own behavior. Social cognitive appreciates the reciprocity between self and environment, attributing behaviors to both the environment’s impact on the individual and the impact the individual has on his/her environment (Contento, 2011).

Theory of Planned Behavior

Description: Behaviors are more likely to happen if a person plans or intends on carrying out that behavior.

Key Constructs: Intentions are formed through personal attitudes, beliefs, perceived norms, self-identity, and their perceived control over a behavior (Contento, 2011).

The Precaution Adoption Process Model

Description: Process reminiscent of the stages of change model where there is an adoption of a new precautionary behavior through formation of perceptions, attitudes, skill sets, resources and support.

Key Constructs: Progression from a stage of unawareness (Stage 1) of an important health issue to aware but unengaged (Stage 2) to a point of decision (Stage 3) to adopt (Stages 5-7) or not adopt (Stage 4) a behavior by utilizing mediators (perceptions, attitudes, definition of norms, etc.) (Contento, 2011).

Clearly, lasting behavior change is multi-factorial. Nutrition education is not exclusively the distribution of information, but the promotion and support of positive behaviors at every level ranging from the individual level in skill development and resource utilization, to the community creating social support, as well as, environmental and policy changes.

EFNEP Background

The Expanded Food and Nutrition Education Program (EFNEP) supported by the National Institute for Food and Agriculture (NIFA) [formally named the Cooperative State Research, Education, and Extension Service (CSREES)], administers nutrition education curriculum to limited resource populations. EFNEP specifically targets heads of households or those who are the main food providers for the household in order to assist in positive changes in diet and health behaviors of family units for improved “nutritional well-being” (United States Department of Agriculture, National Institute of Food and Agriculture, 2009). A distinguishing characteristic of EFNEP are that participant recruitment and class instruction are responsibilities of trained paraprofessionals who are also members of the community in which the program is being implemented. Through a peer-educated, hands on learning approach, EFNEP focuses on skill development and improving a participant’s ability to chose, purchase and prepare foods for healthful meals, manage a budget and maximize existing resources (United States Department of Agriculture, National Institute of Food and Agriculture, 2009). Kansas EFNEP currently holds programming in nine Kansas counties (Procter, 2011).

Evaluation of EFNEP Outcomes

Participants of Kansas EFNEP are 56% more likely to thaw foods safely; 71% used food labels more often when making food choices; 87% showed improvement in one or more areas of food resource management; 95% improved in one or more nutrition practices; 43% increased physical activity; and 47% of program families increased the number of meals eaten together as a family (Procter, 2011). Greenwell, et al assessed EFNEP data collected in two New York counties reported positive outcomes of increased nutrition knowledge and improved food and nutrition practices at graduation with sustained benefits present after the completion of the program per follow up data analysis (Greenwell Arnold & Sobal, 2000).

An economic study conducted in New York concluded that behavior changes resulting from participating in EFNEP will likely reduce future health care costs, by improving long-term health (Dollahite, Kenkel, & Thompson, 2008). Another study estimates a \$10.64 savings in health care costs and an average savings of \$2.48 on food for every \$1 spent on EFNEP, demonstrating the dramatic economic impact positive behavior changes subsequent to EFNEP participation can have (Rajgopal, Cox, Lambur, & Lewis, 2002).

Why Ogden?

Ogden, Kansas is a small town en route from Manhattan, Kansas to Fort Riley North Base. This Riley County township is comprised of approximately 2,500 people with the highest family poverty rate county-wide according to 2010 U.S. Census data (United States Census Bureau, 2010). In recent years, lack of funding and budget cuts (e.g. discontinued Head Start program) have reduced resources available in Ogden leaving community members to head to larger, neighboring communities to receive the same benefits. Kansas State Research and Extension (KSRE) has been looking for avenues to further extend their presence in Ogden. This, in combination with shunted resources and increasingly marginalized identity are reasons a nutrition education program may address potential needs of the community. In Table 1.1 below, you will see the highest percentage of households earn income below the established poverty line which for a family of four would be \$23,050 in earnings annually (U.S. Department of Health and Human Services, 2012).

Table 1.1 Income and SNAP Participation Comparison of State, County, and Neighboring Communities

| | Kansas | Riley County | Ogden | Leonardville | Riley | Junction City | Manhattan |
|--------------------------------|-----------|--------------|--------|--------------|--------|---------------|-----------|
| Population | 2,809,329 | 69,035 | 2,449 | 397 | 1,303 | 20,742 | 50,606 |
| Families Below Poverty | 8.4% | 11.3% | 12.2% | 9.7% | 2.4% | 8.6% | 10.1% |
| Mean Income (past 12 months) | 64,944 | 52,196 | 46,690 | 37,924 | 58,503 | 50,624 | 50,453 |
| Median Income (past 12 months) | 49,424 | 39,257 | 39,611 | 36,624 | 57,109 | 44,058 | 36,630 |
| Participation in SNAP | 7.2% | 4.0% | 5.1% | 5.5% | 3.9% | 7.1% | 4.1% |

(United States Census Bureau, 2010)

Report Overview

This report serves as a detailed description of the required capstone project completed as a part of the field experience fulfillment in accordance with degree requirements. This report will provide background for the project, discussion of program curriculums (with educator-developed and supplemental materials included in appendices), methods of program promotion and recruitment of participants, program evaluation and outcomes, project relevance to public health, and concluding with the student's reflection.

Chapter 2 - Project Overview

Abbreviated EFNEP Format

Traditionally, EFNEP curriculum spans from ten to twelve weekly sessions (United States Department of Agriculture, National Institute of Food and Agriculture, 2009). EFNEP is regarded as the ‘gold standard’ of Extension in community nutrition education that integrates small class sizes with peer instruction that facilitates conversation and learning. This project was designed to test the delivery of the EFNEP curriculum in a shorter format to see if similar outcomes were observed in health behavior changes as compared to curriculum delivery using the original EFNEP session length. This could help prevent drop out of participants and use limited funding more efficiently.

Kids Program Overview

Initially, the idea for developing and offering a kid’s nutrition program in Ogden was to serve as a method of promotion for the adult nutrition program. It was the intention to conduct the kids program before the adult classes, but due to conflicts with summer school enrollment, the kids program took place the month in between the two EFNEP adult sessions. The kids program was held for two weeks, falling between the end of summer school and the beginning of the regular school year. It was open to all school aged children ranging from kindergarten through middle school.

Budget

This project was designed to apply the EFNEP class format and curriculum in four, weekly classes which were held over the month of July and a second session again in September for a total of two, four-lesson sessions. A grant proposal was submitted and approved for a total allowable budget for both adult sessions and the kids program of \$500.

Chapter 3 - Adult Program Description

EFNEP Class Delivery Format

Classes were lead by the student educator and held at the Ogden Community Center. Class enrollment was at no cost to the participants. Each class was guided by “EFNEP’s Families – Eating Smart and Moving More” scripts and handouts. Supplemental materials (included in program description below) were also used in support of EFNEP learning objectives. Instead of following a PowerPoint lecture format, participant guides were developed for each class adapted from information in supplied PowerPoint slides and were included in the handout packet given to each participant. This was done in to maintain a casual learning environment and to have the ability to hold classes without the need of on-site technical equipment.

Each class integrated a “Move More” break and the preparation of a recipe that relates to the lesson topic. Those who completed the session received a “Cooking with EFNEP” cookbook. Below are descriptions of materials and activities included in each class.

Session One

Participant enrollment for July was four people. Classes were held Thursdays from 10-11:30am.

Class One: Introduction of EFNEP and “Fix It Safe” Lesson

In this class, the background, definition and purpose of EFNEP was discussed with the participants using the theme of “Eat Right and Move More”. The participants sampled a pre-prepared “Easy Fruit Salad” while time was spent completing required enrollment paperwork, as well as, entry 24-hour food recalls using food models as visual cues of portion sizes and the “EFNEP Eating Right” Survey (Appendix B). A list of all the EFNEP modules (21 in total) was also provided to each participant to be used as a “voting ballot” of sorts to determine class interest in certain topics and served as a preliminary needs assessment in order to tailor subsequent lesson topics.

The “Fix It Safe” lesson was conducted, utilizing the student-adapted participant guide and supplied supporting materials. Objectives for this lesson included participants having the

ability to “identify simple food safety practices at home or away (Clean, Separate, Cook, Chill - Fight BAC! Rules), identify safe, age-appropriate foods for children, and identify strategies to keep children safe in the kitchen” (“Fix It Safe” lesson plan). Participants then prepared the recipe for “Mini Meatloaves” to illustrate lesson concepts.

Class Two: Meal Planning

The student educator taught the “Know What’s for Dinner” lesson covering methods to plan, shop, prepare, and eat well-balanced meals with their families. Objectives for this lesson included participants will “create a family favorites list to help with meal planning, plan one week dinner menu, and develop a grocery list for the planned menu” (“Know What’s For Dinner” lesson plan). The participant guide and lesson handouts included tips for healthy meal planning, recipe ideas (including recipes that addressed specific participant needs such as references for heart healthy recipes for a participant with high cholesterol). The class made “Chicken and Broccoli Quiche” as an example for a good make-ahead and freeze recipe or a way to use leftovers from a previous meal.

Class Three: MyPlate

In this lesson, the student instructor discussed MyPlate which included what types of foods belong in each food group and recommended amounts of each group to be eaten daily. Objectives for this lesson included participants will “make smart food choices to build a healthy plate and state how healthy food choices and physical activity work together to help maintain a healthy weight” (“MyPlate” lesson plan). To augment this teachable moment, output of the participant’s 24-hour recall and behavioral survey from class one were distributed in order to allow participants to see opportunities for personal improvement in their own diet and health behaviors. “Beef Stir-Fry” was the recipe that accompanied the lesson.

Class Four: Nutrition Label Reading

The participant guide and supporting materials for the fourth and final class of the first session focused on nutrition labeling. Lesson objectives for the “Shop For Value, Check the Facts” lesson included having the ability to “identify information found on food labels, use the food label to identify whole-grain products, and use labels to choose low-fat and low-sodium foods” (“Shop for Value” lesson plan). The discussion, participant guide, and supplemental materials included information on serving sizes, nutrients that we want to increase, nutrients we want to limit, the meaning behind “percent daily value”, and quick tips and rules of thumb for

making smart choices quick and convenient when shopping. Participants then prepared “Easy Lasagna” and compared the nutrition facts of store-bought lasagna with the homemade version. Also, participants completed exit 24-hour recalls (again with the aid of food models to serve as visual cues for portion sizes) and the exit “EFNEP Eating Right” survey.

Session Two

Participant enrollment for September was three people. Classes were held Wednesdays from 6-7:30pm.

Classes One and Two of the second session covered the same material as the first session. (Class One: Introduction of EFNEP and “Fix It Safe” Lesson; Class Two: “Know What’s for Dinner”). It is recommended to start each EFNEP Session with the “Fix It Safe” lesson because it serves as a food-safety foundation for all subsequent modules since each lesson incorporates a recipe to prepare. The subject for Class Two (meal planning) of the second session was determined by the “ballots” of what the participants were most interested in learning about. The recipe resource list from Class Two was modified to address specific needs of participants by including recipe resources for diabetes and low sodium recipes needed for one participant following a strict 1,500 mg per day sodium restriction. Classes three and four varied from the first session in efforts to tailor the program; basing the lesson plans on participant’s interests and needs.

Class Three: “Fix It Fast” Lesson

This lesson utilized the participant guide and supplemental resources that supplied tips for making at-home meals quickly and illustrated how participants can save time and money, as well as eating healthier by cooking at home versus eating out. Objectives for this lesson included participant’s ability to “demonstrate one new skill in meal preparation, understand the importance of planning in being able to fix quick, healthy meals; and identify at least two ways they can make quick, healthy meals for their family” (“Fix It Fast” lesson plan). The recipe that served as application to the lesson objectives was “Beefy Skillet Dinner”.

Class Four: Portions and Calorie Needs

The final class utilized the participant guide and supporting materials in discussing proper portion sizes, portion distortion, average calorie needs and the impacts of how seemingly small food choices can affect body weight. Lesson objectives included participant’s ability to

“describe the difference between portion size and serving size and describe how eating appropriate serving sizes supports a healthy weight” (“Smart Size Your Portions and Right Size You” lesson plan). Participants then prepared “Chicken Quesadillas” and “Fresh-Made Salsa” as an opportunity for hands-on application to lesson messages. As with the first session, participants completed exit 24-hour recalls (again with the aid of food models to serve as visual cues for portion sizes) and the exit behavioral survey (Appendix B). In addition, the participant’s also completed a qualitative response evaluation of the courses and instructor.

Chapter 4 - Kids Program Description

Kids Class Delivery Format

One hour kids classes were held daily for two weeks (with the exception of Election Day when the facility was unavailable) at the Ogden Community Center. Elementary and middle school aged children were invited to participate. The curriculum was developed and lead by the student educator. Each class incorporated nutrition information on a selected topic, fifteen minute physical activity “breaks” both for promotion of a healthy lifestyle and for a change of pace, and preparation of a healthy recipe. Class enrollment was at no cost to the participant and enrollment varied from two to eight kids with a mean attendance of five. Below are descriptions of activities and materials included in each class.

Curriculum

Class One: Eat the Rainbow

Class one emphasized the importance of eating a variety of colors that are found in fruits and vegetables. The kids identified fruits and vegetables for each color of the rainbow through worksheets (“Rainbow of Foods” and matching color with food handout), a balloon activity where kids blow up one balloon for each color of the rainbow, write one fruit and one vegetable that corresponds with the color, and then keep all balloons in the air without touching the ground. Lastly, kids participated in making individual fruit pizzas.

Class Two: Grains

In Class two, kids learned the different types of grains through observing and touching different grains and discussing what a whole grain is (Parts of a Whole Grain Seed handout) and the health benefits of whole grains. The kids also participated in a Grain circuit training activity where different grain stations were set up in the gym and the kids ran to each station and participated in assigned activity (“Wheat”/Start, “Rice”/run around three chairs three times, “Oats”/bounce basketball ten times, “Corn”/jump up and down five times). The class then made homemade granola bars.

Class Three: Fruits

In this class kids learned about different fruits and discussed some of their favorite fruits. The class read “Eating the Alphabet” by Lois Ehlert and taking on the challenge of assigning a different fruit or vegetable to each letter of the alphabet. The class activities also included making artwork with stamps made out of apples and oranges, playing “Apple, Apple, Orange” (Duck, Duck, Goose), and preparing “Apple Smiles”.

Class Four: Dairy

Class four focused on different types of dairy, the farm to table connection (From Farm to Food to You handout), and what nutrients dairy foods provide. Kids made “Cheesy Rafts” and a “Beach Time Yogurt Snack” and spent some time playing outdoors.

Class Five: Vegetables

During this class, it was the aim of the instructor to introduce a variety of vegetables for the kids to taste test. The kids were asked to close their eyes and taste samples of green beans, cauliflower, yellow peppers, carrots, radishes and to rate them with a thumbs up, thumbs sideways, or thumbs down to grade their preference. Other activities included a fruit and vegetable word search, drawing “My Favorite Salad”, playing basketball outside (kids request), and making “Veggie Pizzas”.

Class Six: Proteins

The class was started by preparing “Easy Baked Beef, Bean and Corn Quesadillas”. The student educator then talked about different types of protein foods and the important role of protein in our bodies. Kids then identified foods that belong in the protein group when the educator yelled out a food and the kids had to flex their muscles if the food was a protein food. Lastly, the kids freeze danced to music.

Class Seven: Healthy Snacks/Serving Sizes

This class focused on types of foods that can make for healthy snacks by participating in crafting their own healthy snack bags by gluing pictures or their favorite healthy snacks on lunch sacks. The kids learned about portions by preparing “Carrot, Cream Cheese and Raisin Bites” in pairs where they shared their end product because each roll up counted as two servings. The kids made a take-home snack of trail mix that used increasingly smaller serving spoons for foods that were higher in fat and sugar. The kids also spent time playing follow the leader involving activities such as skipping, running, jumping jacks and doing the grapevine.

Class Eight: Limiting Fat and Sugar

Class eight discussed the importance of choosing foods with lower amounts of fats and sugar. Sugar and fat visual aids were prepared by choosing a select number of snack foods and representing the sugar and fat content of each food with sugar cube and shortening equivalents, respectively. Kids guessed the fat and sugar content of the foods by predicting how many sugar cubes and tablespoons of shortening equal the amounts of sugar and fat in each food item. As the physical activity piece, the kids participated in a relay race by using food models at one end of the gym to “build their plate” at the far end of the gym. The kids then made “Fruit Kebabs with Fluffy Fruit Dip” and were sent home with a list of “Go Slow Whoa” foods).

Class Nine: MyPlate

In the last class of the session, kids used food models to assign different types of foods to the correct section of a large MyPlate poster serving as a culminating exercise, played “Food Group Tag” with hula hoop “food groups” that were used as five second “safe zones”, and reviewed a MyPlate Balance Food and Fun handout. The class made marshmallow treats as an end-of-session treat/“sometimes” food and each child received a certificate of completion and temporary tattoos that promoted healthy lifestyle behaviors.

Chapter 5 - Program Promotion

Methods of Promotion and Recruitment

Periodic lists of newly enrolled participants in Riley County Women, Infants and Children (WIC) were accessible due to an agreement between KSRE and Riley County WIC. The WIC target audience is included in EFNEP's target population because it is a limited-resource population (eligibility for WIC household income has to be at or less than 185% poverty level) and WIC participants are typically the main household food providers (Food and Nutrition Services, 2012). Promotional flyers were mailed (approximately 120 mailed flyers per session) to the WIC participants approximately 3-4 weeks before the start of each EFNEP session. Flyers were also distributed to the Ogden Community Center (as well as uploaded to the community center website) and the Family and Nutrition Services office. Each mailing was followed by a phone call inviting participants to come to the classes.

In addition to these promotional methods, additional modes of promotion for the second adult session included a newsletter spot in the Ogden Sun on the topic of meal planning, and distribution of flyers at the Ogden post office and local businesses. Also, since the kids program was held the month in between the two adult sessions, promotional stickers were given to participating kids, as well as an invite to the adult classes on the bottom of each feedback form for parents of children who participated in the kids classes. Promotion flyers were also included in the handout packets for students at Ogden Elementary.

A promotional flyer for the kids program was distributed in and around Ogden since it was the aim of the educator to recruit adults from the Ogden community for the adult program. Other methods of promotion included free samples of fruit salad at the city pool and a display placed in the community center after class with the recipe and any leftover samples from the day.

Evaluation of Methods

Overall, face-to-face contact and word of mouth were the most effective methods of promotion. When reaching out to a new community, mail-outs with follow up phone calls is likely one of the best ways to promote a new program, although my recruitment rate was one participant out of approximately 150 phone calls.

Barriers

Of those that gave a reason for non-participation, the most common reasons were that the classes conflicted with their work schedule or other extracurricular activities or there was a lack of transportation to classes. There is also a social barrier of being from a different community that likely contributed to non-participation. In the traditional EFNEP setting, this barrier is better addressed with the use of peer educators that typically belong to the same community as the class participants.

Chapter 6 - Results and Feedback

Methods of Evaluation

Adult Program

Methods of outcome evaluation for the two adult sessions included using responses from the “Client’s 24-Hour Diet Recall” and the “EFNEP Eating Right Survey”. For the first adult session held in July 2012, the 24-hour food recall and behavioral checklist were administered during the first class (entry), the last class (exit) and then mailed out one month after the last class for participants to fill out and return (follow-up). Data for the second adult session held in September 2012, were collected via similar methods, but due to timing of this report, one month follow-up data is available in Appendix A.

Collected data were analyzed using the EFNEP County Reporting System Version 5.03. (Side note: This version uses MyPyramid guidelines which is the reason for variation in semantics such as “Meat and Beans” versus “Protein” and “Milk” versus “Dairy”, etc.)

The use of a Likert response-style (e.g. 0-5 scale) behavioral checklist used with low-income women, such as the “EFNEP Eating Right Survey”, has shown to be a valid measure of specific question items about diet to predict actual behaviors (Murphy, Kaiser, Townsend, & Allen, 2001).

Although other methods of dietary intake evaluation have shown to yield greater accuracy and validity in predicting actual intake than the twenty-four hour recall method, a percentage of the introduced bias can be attributed to underreporting of both portions and food items that are commonly viewed as nutritionally inferior (Karvetti & Knuts, 1985). But, it has been shown that twenty-four hour food recalls conducted as a group (as is the method with EFNEP), may mitigate underreporting because they subjects tend to feel “less scrutinized than during an individual interview and are therefore more truthful” (Scott, Reed, Kubena, & McIntosh, 2007). To reduce the opportunity for administrator bias, EFNEP conducts twenty-four hour recall procedural training to all paraprofessionals. In the case of this project, confusing food descriptions and portion sizes, as well as the inability to locate the exact foods in the CRS 5

database, may have contributed to inaccuracies. In addition, the follow-up recall was done by mail rather than in person, which may have been harder for the participants to complete.

Kids Program

A four-item, dichotomous response feedback form with the opportunity for parent/adult comments was created as a tool for outcome assessment. The feedback form was distributed during the second-to-last class session for parents and/or guardians to complete and return. It was meant to be a quick and easy for parents or guardians to complete that would provide an idea of the potential impact the program had on the kids' at-home behaviors.

Adult Program Outcomes

Program outcomes are organized by overall background data, overall recall data collected from entry, exit (and follow-up for session one), pre and post changes in recall data of each session, and pre and post behavior changes seen in each session.

Table 6.1 Participant Demographics (*n* = 7)

| | |
|-----------------------|--|
| Age | 14% age 19 14% ages 20-29 29% ages 30-39 29% ages 40-49 14% ages 50-59 |
| Gender | 100% Female 0% Male |
| Ethnicity | 72% White 14% African American 14% Mixed Race |
| Education | 29% completed Grade 12/GED 71% completed some college |
| Household Income | 29% at or below 50% poverty 71% Not Specified |
| Assistance enrollment | 14% WIC 14% SNAP 72% Non-enrollment |

As shown, program participants were all female with the majority Caucasian and falling within the ages of 30-49.

Table 6.2 24-hour Recall Data By Individual

| | Point of Assessment | Kcals/d ay | Fruit (cups) | Vegetable (cups) | Grains (oz equivalents) | Meats and Beans (oz equivalents) | Milk (cups) |
|--------------------|------------------------|---------------|-----------------|---------------------|----------------------------|-------------------------------------|----------------|
| <u>Session One</u> | | | | | | | |
| Participant 1 | Entry | 3663 | 2.0 | 0.6 | 13.2 | 11.9 | 2.9 |
| | Exit | 2508 | 2.0 | 0.5 | 10.7 | 10.6 | 1.8 |
| | Follow-up | 2856 | 0.0 | 2.2 | 9.1 | 8.5 | 2.7 |
| Participant 2 | Entry | 2642 | 0.4 | 0.5 | 9.2 | 4.0 | 4.0 |
| | Exit | 1903 | 0.0 | 0.2 | 6.4 | 5.3 | 1.7 |
| | Follow-up | 2107 | 0.8 | 1.1 | 4.6 | 5.6 | 5.4 |
| Participant 3 | Entry | 2239 | 0.2 | 1.2 | 8.6 | 5.0 | 0.5 |
| | Exit | 985 | 0.0 | 0.1 | 6.4 | 0.9 | 0.1 |
| | Follow-up | 1326 | 0.0 | 2.6 | 3.3 | 5.0 | 1.4 |
| Participant 4 | Entry | 2117 | 1.1 | 0.6 | 10.6 | 4.1 | 0.0 |
| | Exit | 1545 | 0.2 | 0.8 | 6.8 | 5.0 | 0.5 |
| | Follow-up | 2337 | 1.9 | 1.0 | 2.0 | 7.5 | 5.2 |
| <u>Session Two</u> | | | | | | | |
| Participant 5 | Entry | 2339 | 0.2 | 2.4 | 11.3 | 7.3 | 3.6 |
| | Exit | 1778 | 0.2 | 1.7 | 6.1 | 7.9 | 1.5 |
| Participant 6 | Entry | 897 | 0.0 | 0.0 | 4.3 | 3.7 | 0.0 |
| | Exit | 872 | 0.0 | 0.1 | 4.7 | 6.0 | 0.7 |
| Participant 7 | Entry | 1833 | 0.0 | 0.5 | 6.7 | 7.6 | 2.1 |
| | Exit | 1445 | 0.0 | 0.2 | 6.6 | 5.3 | 0.7 |

Table 6.3 Session One Dietary Trends: Pre, Post, and Follow-up

| Variable | Mean \pm StD | | |
|--------------------|--------------------|--------------------|--------------------|
| | Entry | Exit | Follow-up |
| Total Kcal | 2665.3 \pm 608.1 | 1735.5 \pm 553.3 | 2156.4 \pm 551.0 |
| Grains (oz) | 10.4 \pm 1.8 | 7.6 \pm 1.8 | 4.8 \pm 2.7 |
| Fruits (cups) | 0.9 \pm 0.7 | 0.6 \pm 0.8 | 0.7 \pm 0.8 |
| Vegetables (cups) | 0.7 \pm 0.3 | 0.4 \pm 0.3 | 1.7 \pm 0.7 |
| Milk (cups) | 1.9 \pm 1.7 | 1.0 \pm 0.7 | 3.7 \pm 1.7 |
| Meats & Beans (oz) | 6.3 \pm 3.3 | 5.5 \pm 3.4 | 6.7 \pm 1.4 |

Table 6.3 illustrates the comparison between entry food consumption data with exit food consumption data, grains and meats and beans were the only food groups where the trend supported improved consumption (amount closer to daily recommendations) at the exit recall. Fruit, vegetable, and milk consumption was further from recommendations at exit. The large standard deviations allow for overlap in the ranges where the majority of the participant's food intake amounts fall from entry to exit, with the exception of vegetable intake. This makes it difficult to draw strong distinctions in dietary consumption from entry to exit. Trends of improvement in all food groups, with the exception of fruit consumption, were seen at the point of the one-month follow-up.

Figure 6.1 illustrates changes in grain consumption for session one. Entry grain intake was the inverse of exit grain intake where at exit, the majority of participants were within the recommended grain intake whereas at entry, the majority of participants were exceeding recommended amounts of grains. CRS 5.03 output also included the "percent positive change" value. This value looks at the individual level, showing what percentage of participants had an intake of a certain food group nearer the recommended amount for age, sex, and level of physical activity when compared from entry to follow-up. The percent positive change regarding grain consumption was 100% of participants.

Fig 6.2 illustrates changes in fruit consumption for session one. Overall, fruit consumption decreased from entry to exit and did not change from exit to follow-up one month later. The percent with a positive change from entry to follow-up was 50%, meaning on the individual

level, half of the participants increased the amount of fruit they were eating at follow-up as compared to the amount they were eating at entry.

Fig 6.3 illustrates changes in vegetable consumption for session one. Vegetable consumption increased overall when comparing entry to follow-up recall data. This change was not exhibited at exit, in fact vegetable intakes decreased at exit when compared to entry. All participants reported the same or increase in vegetable consumption from exit data. The increase in vegetable consumption was not apparent until one month after the last class, with the percent positive change from entry to follow-up at 100%.

Fig 6.4 illustrates changes in milk/dairy consumption for session one. Overall dairy intake increased from entry to follow-up. 75% had a positive change in milk/dairy consumption from entry to follow-up.

Fig 6.5 illustrates changes in meat and bean/protein consumption for session one. A majority of participants met recommended meat and bean/protein intake at entry. At follow up, participants either sustained their meat and bean intake or increased it. Half (50%) of the participants elicited a positive change regarding meat and bean consumption from entry to follow-up.

Figure 6.1 Session One Participant Percent Changes in Grain Consumption

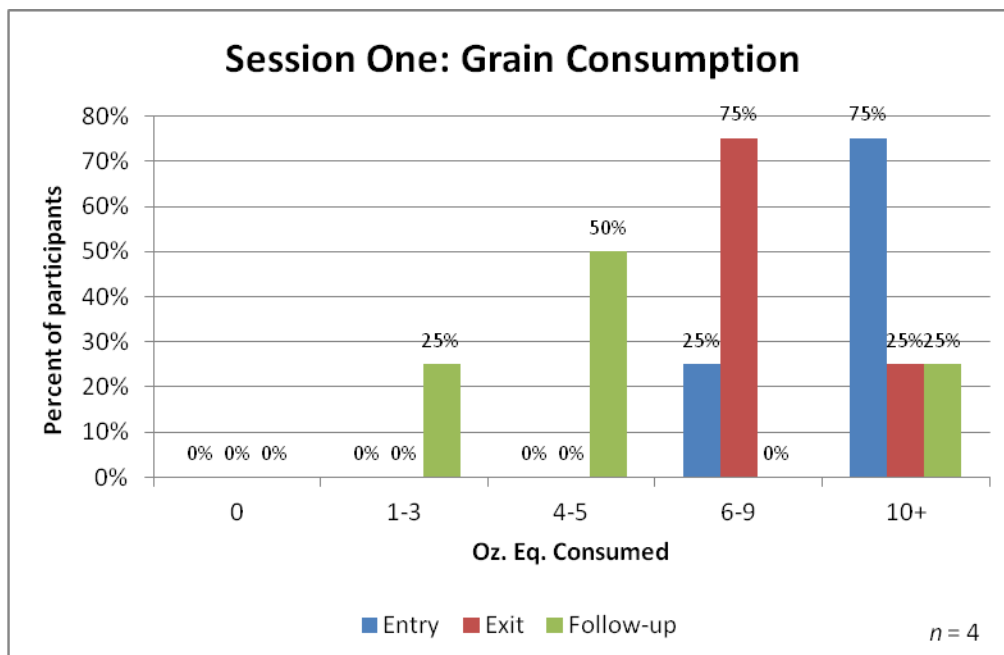


Figure 6.2 Session One Participant Percent Changes in Fruit Consumption

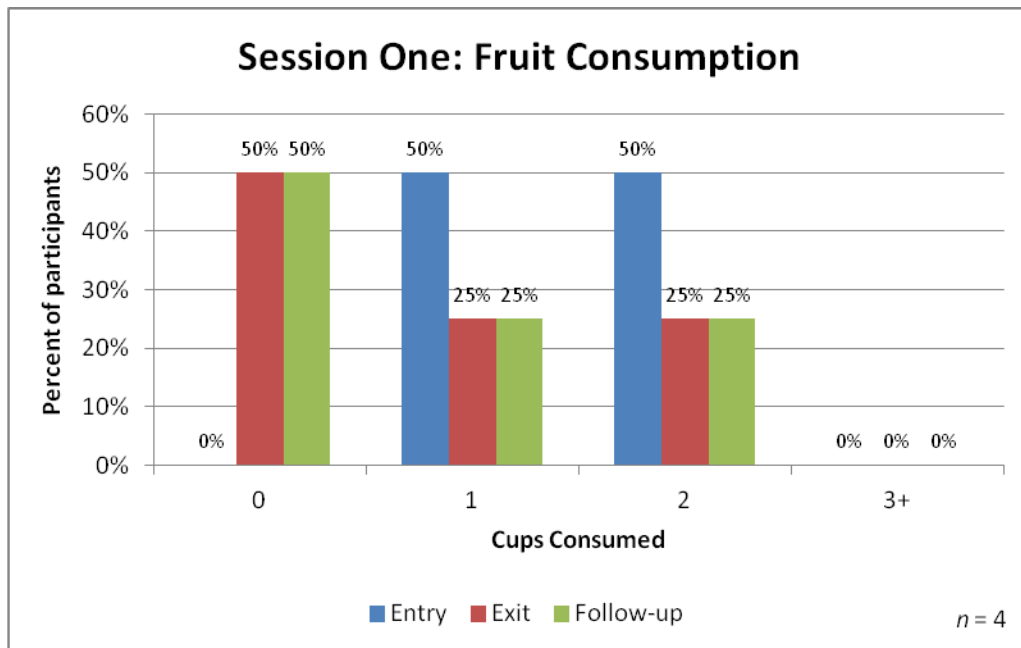


Figure 6.3 Session One Participant Percent Changes in Vegetable Consumption

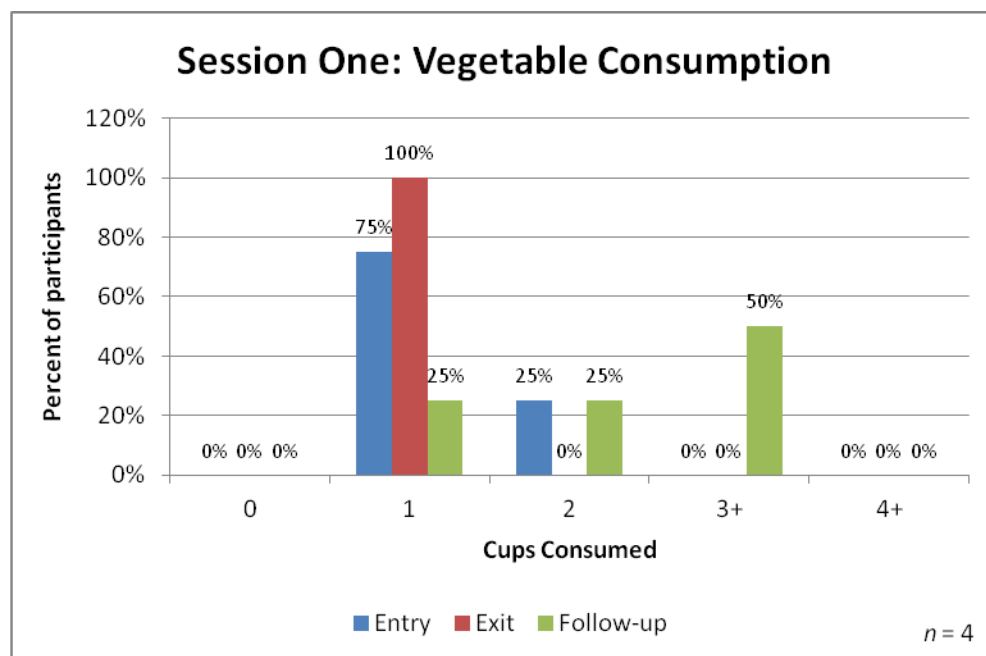


Figure 6.4 Session One Participant Percent Changes in Milk Consumption

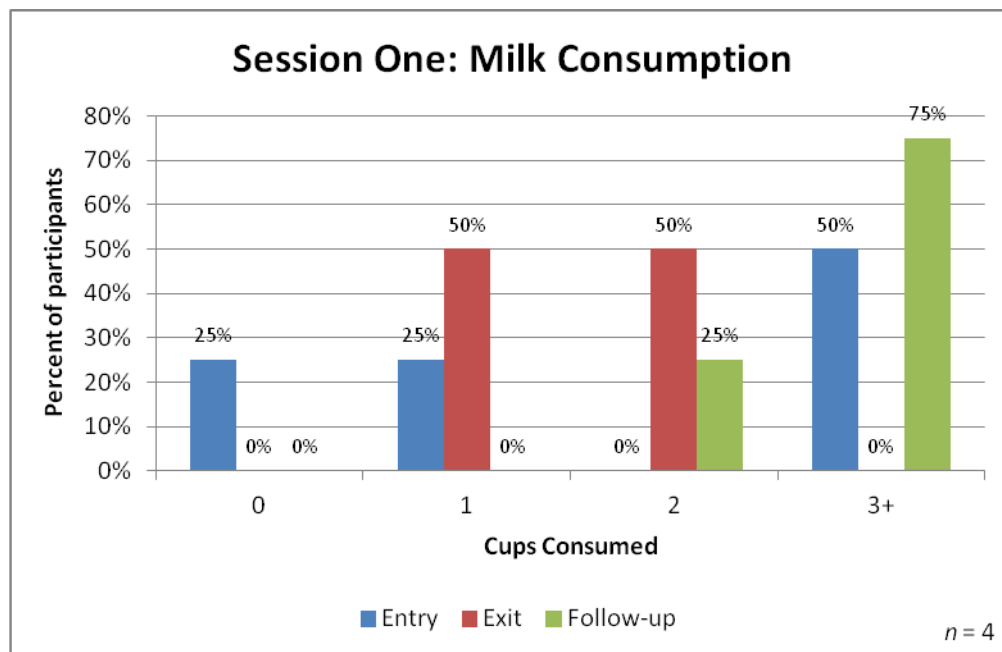
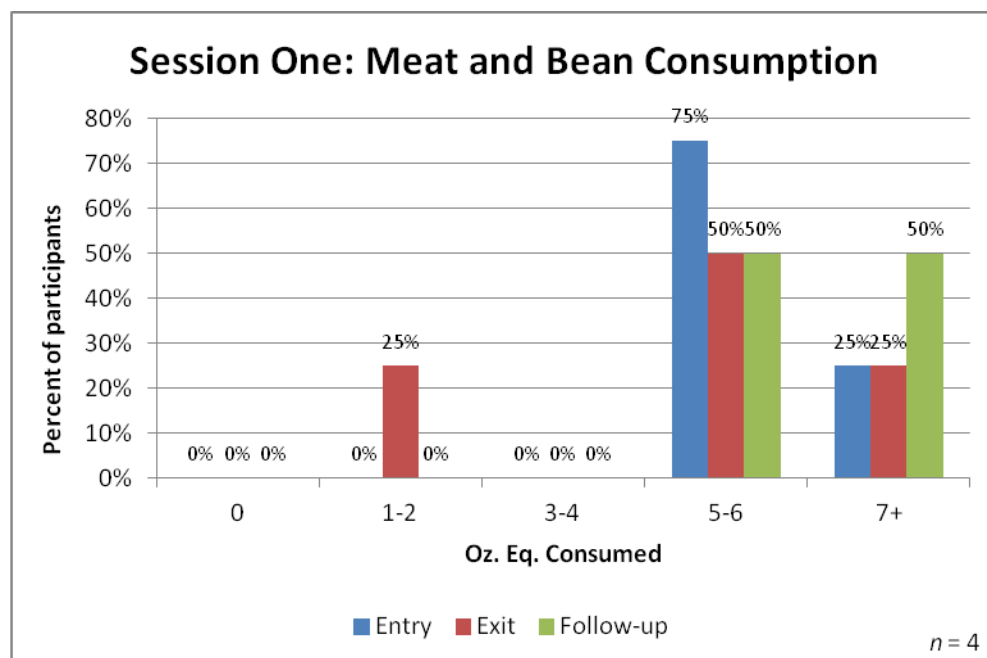


Figure 6.5 Session One Participant Percent Changes in Meat and Bean Consumption



Responses from the “EFNEP Eating Right” Survey for session one are summarized in the table below. Improvements from exit to follow-up were seen in price comparisons when shopping, thinking about healthy food choices when deciding what to feed the family, using

“Nutrition Facts” when making food choices, and following recommended practices for thawing foods.

Table 6.4 Session One Behavioral Survey Changes From Entry, Exit, and Follow-up

| | <u>Entry versus exit survey responses</u> | <u>Entry versus follow-up survey responses</u> |
|------------------------------------|---|--|
| Food Resource Management Practices | 50% more often planned meals in advance | Same as entry versus exit survey response |
| | No participant compared prices more often when shopping | 25% compared prices more often when shopping |
| | 75% less often ran out of food before the end of the month | 67% less often ran out of food before the end of the month |
| | 25% more often used a list for grocery shopping | Same as entry versus exit survey response |
| Nutrition Practices | 50% more often planned meals in advance | Same as entry versus exit survey response |
| | 50% more often thought about healthy food choices when deciding what to feed their family | 100% more often thought about healthy food choices when deciding what to feed their family |
| | 25% more often prepared foods without adding salt | Same as entry versus exit survey response |
| | 25% more often used the “Nutrition Facts” on food labels to make food choices | 50% more often used the “Nutrition Facts” on food labels to make food choices |
| | No participant reported that their children ate breakfast more often | Same as entry versus exit survey response |
| Food Safety Practices | 25% more often followed recommended practices of not letting meat and dairy stay at room temperature for more than 2 hours | Same as entry versus exit survey response |
| | 50% more often followed recommended practices of not thawing foods at room temperature (25% always followed recommended practice) | 100% more often followed recommended practices of not thawing foods at room temperature (25% always followed recommended practice) |

Table 6.5 shows us, when comparing entry food consumption data with exit food consumption data for session two, similarly to session one, grains and meats and beans were the only food groups where the trend supported improved consumption amount at the exit recall. Fruit, vegetable, and milk consumption were the same or further from recommendations at exit, as it was also with session one. Again with larger standard deviation values, large distinctions between food consumption at entry and exit prove difficult.

Table 6.5 Session Two Dietary Trends: Pre and Post

| Variable | Mean \pm StD | |
|--------------------|--------------------|--------------------|
| | Entry | Exit |
| Total Kcal | 1689.6 \pm 597.3 | 1365.3 \pm 374.2 |
| Grains (oz) | 7.4 \pm 2.9 | 5.8 \pm 0.8 |
| Fruits (cups) | 0.1 \pm 0.1 | 0.1 \pm 0.1 |
| Vegetables (cups) | 1.0 \pm 1.0 | 0.7 \pm 0.7 |
| Milk (cups) | 1.9 \pm 1.5 | 1.0 \pm 0.4 |
| Meats & Beans (oz) | 6.2 \pm 1.8 | 6.4 \pm 1.1 |

Figure 6.6 illustrates an increase in the percentage of participants who are consuming grains nearer the recommended amounts (also observed in session one outcomes) when compared to entry data. 66.7% of participants showed positive change at exit.

Figure 6.7 illustrates no overall changes in fruit consumption from entry to exit although 66.7% of the class had a positive change in their individual fruit consumption behaviors.

Figure 6.8 illustrates increased variance of vegetable consumption from entry where vegetable intake ranged from 1-2 cups daily to 0-3+ cups daily at exit. The percent with positive change at exit was 66.7%.

Figure 6.9 illustrates the opposite trend as with vegetable consumption where at entry the participants consumed 0-3+ cups of milk/dairy and 1-2 cups of milk/dairy at exit in where fewer participants met daily dairy recommendations at exit than they did at entry. The percentage of positive change from entry to exit regarding dairy intake was 33.3%.

Lastly, Figure 6.10 illustrates a larger majority of participants meeting instead of exceeding meat and bean/protein recommendations when comparing entry to exit data. 33.3% of participants had a positive change at exit.

Figure 6.6 Session Two Participant Percent Changes in Grain Consumption

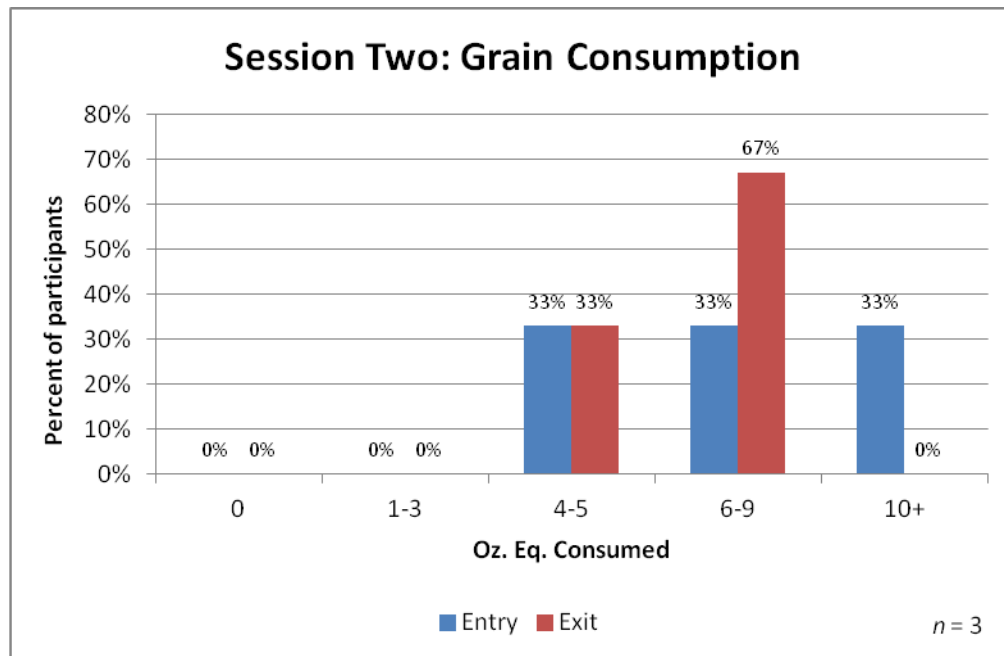


Figure 6.7 Session Two Participant Percent Changes in Fruit Consumption

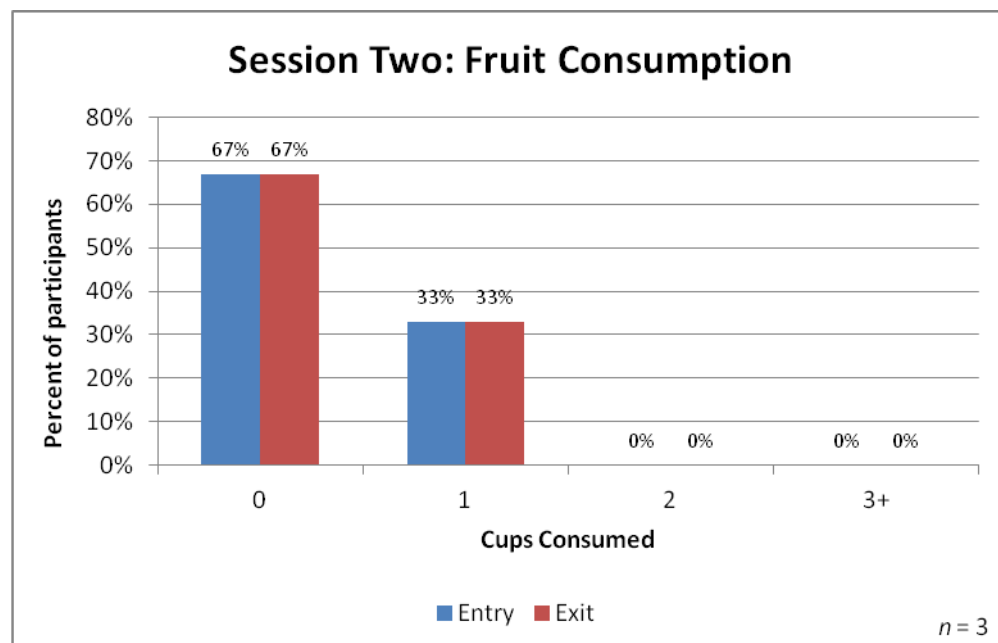


Figure 6.8 Session Two Participant Percent Changes in Vegetable Consumption

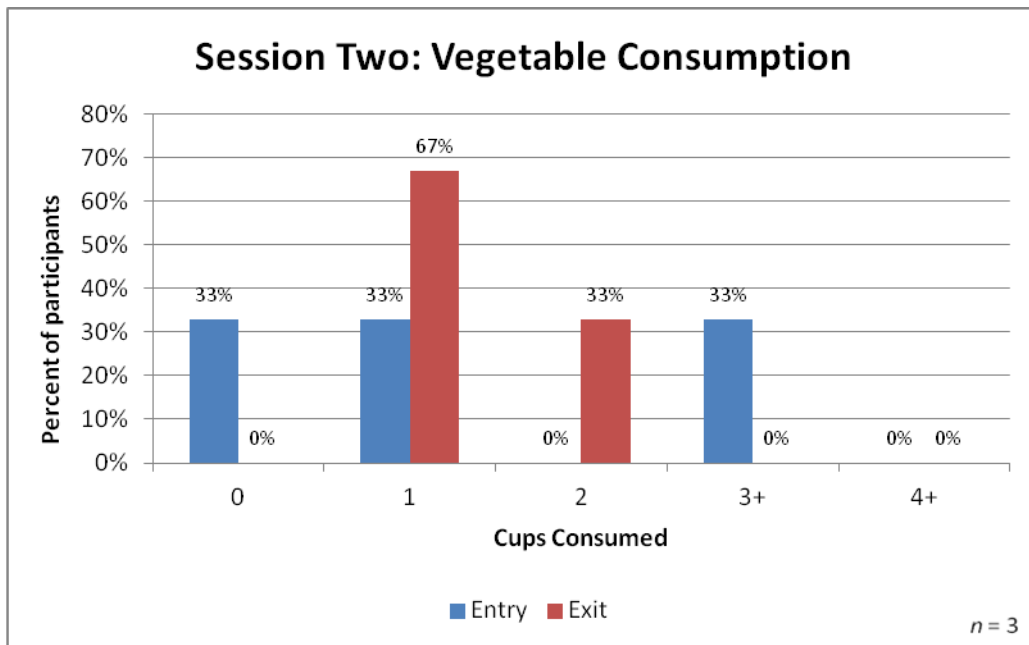


Figure 6.9 Session Two Participant Percent Changes in Milk Consumption

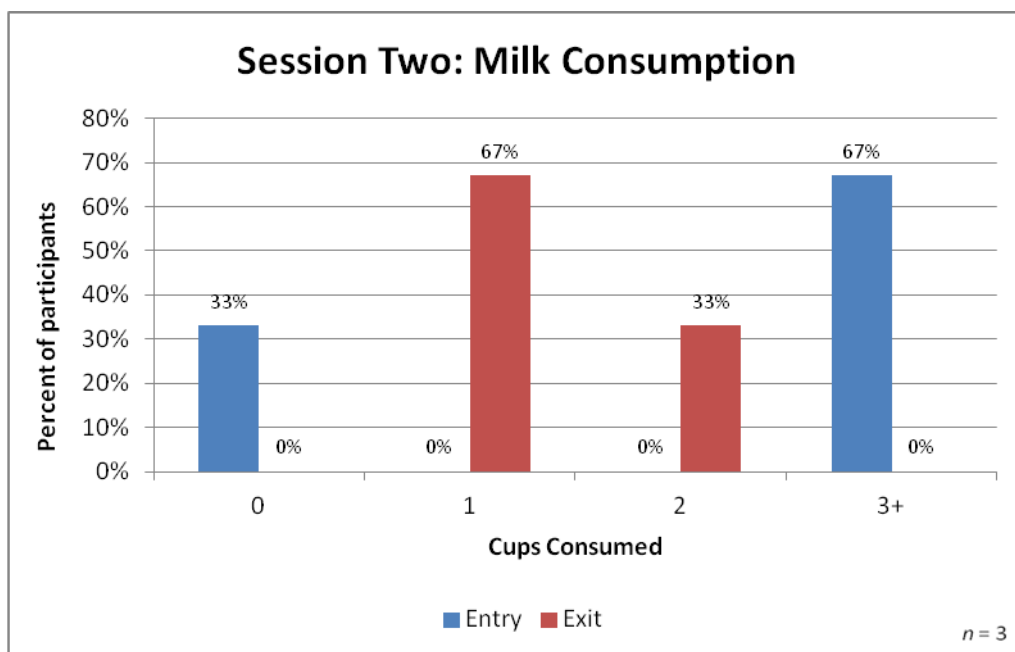


Figure 6.10 Session Two Participant Percent Changes in Meat and Bean Consumption

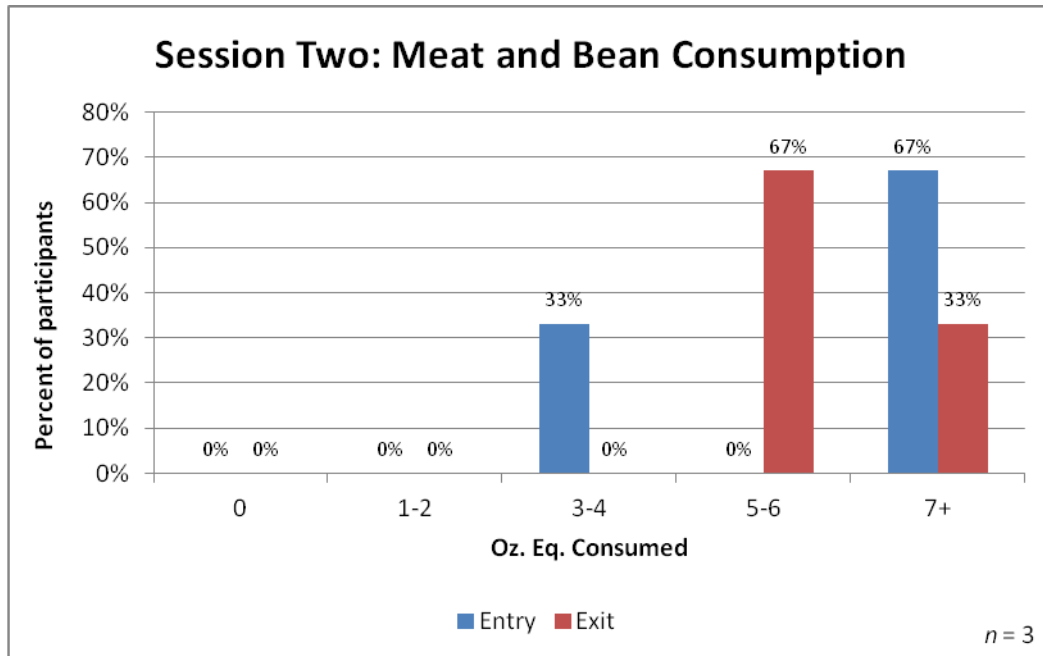


Table 6.6 compares diet recall data from both sessions. Positive change (a change in intake closer to the recommended amount) based on mean intake is the overall positive change detailed below. At exit, both sessions showed the same trend in overall positive change, with overall improvement seen only in grain consumption. At follow-up for session one, improvement in grain consumption was sustained, while improvement in vegetable and milk consumption was also observed.

Table 6.6 Comparison of Overall Positive Change for Sessions One and Two

| | Session One | Session Two | Session One | Session Two |
|---------------------|--|--|---|---|
| <u>Mean Intake</u> | Overall Positive Change Entry V. Exit | Overall Positive Change Entry V. Exit | Overall Positive Change Entry V. F/U | Overall Positive Change Entry V. F/U |
| Grains (oz.) | Yes | Yes | Yes | Data not available |
| Fruits (cups) | No | No | No | |
| Vegetables (cups) | No | No | Yes | |
| Milk (cups) | No | No | Yes | |
| Meats & Beans (oz.) | Met recommendation | Met recommendation | Met recommendation | |

Responses from the “EFNEP Eating Right” Survey for session two are summarized in the table below. When compared to entry and exit data from session one, session two showed greater improvement in preparing foods without adding salt, using the “Nutrition Facts” when making food choices and, more often following recommended thawing practices for frozen food.

Table 6.7 Session Two Behavioral Checklist Changes from Entry and Exit

| Food Resource Management Practices | <u>Entry versus exit survey responses</u> |
|------------------------------------|---|
| | No participant more often planned meals in advance |
| | No participant compared prices more often when shopping |
| | 33% less often ran out of food before the end of the month |
| | No participant more often used a list for grocery shopping |
| Nutrition Practices | No participant more often planned meals in advance |
| | 33% more often thought about healthy food choices when deciding what to feed their family |
| | 67% more often prepared foods without adding salt |
| | 67% more often used the “Nutrition Facts” on food labels to make food choices |
| | No participant reported that their children ate breakfast more often |
| Food Safety Practices | No participant more often followed recommended practices of not letting meat and dairy stay at room temperature for more than 2 hours |
| | 67% more often followed recommended practices of not thawing foods at room temperature |

Discussion

This was a small and short study of abbreviated EFNEP curriculum delivery, so these results serve as pilot data for further observance of behavioral outcomes that may come from this type of program format. Overall, when reviewing adult session outcomes, convincing data of desired dietary outcomes were absent at exit (at the fourth class). This is attributed primarily to the shorter time frame in which curriculum was delivered, which was two to three times shorter in duration than traditional EFNEP curriculum. This was done in efforts to observe any nutritional and behavioral outcomes that may result by minimizing attrition, as well as, time commitment and program resources.

When comparing entry and exit recall data for sessions one and two, grain consumption were similar in both sessions in that at exit, the majority of participants were meeting daily recommended amounts of grains. Meat and bean/protein consumption at exit in session two were comparable to the changes seen at follow-up for session one.

No change in overall fruit intake was observed from entry to exit in session two, but exit fruit intake for session one decreased, with no change observed between exit and follow-up. One

reason for this is that entry fruit consumption for session one was higher than that of session two which increases the likelihood of observing an improvement in fruit consumption in session two and a reduction or minimal improvement in fruit consumption in session one. Although an improvement in fruit intake was not observed in session two, the reduction of fruit intake for session one was observed.

Similar changes in dietary intake of vegetables and milk/dairy were observed at exit. The positive change in vegetable and milk/dairy consumption (in this case, an increase in intake) was not observed until one month after the last class for session one. It is a possibility that a four-class session is not long enough to observe dietary behavior changes, but changes are seen after course completion without active class participation, such as was the case with vegetable and milk/dairy intake. It is the hope that positive dietary behavior changes could also be observed in session two post follow-up data analysis.

In regards to the behavioral survey pre and post data, session one showed the most improvement from entry to exit, furthermore ten of the eleven positive health behaviors were sustained or improved upon at follow-up compared to exit data; fortifying the potential for continued behavior change improvement after participation in classes has ended. Session two showed greater improvement in three of eleven health behaviors at exit (abstain from use of added salt when cooking, read nutrition labels more often, and following recommended procedure for thawing frozen foods). The likely reason session two showed greater improvement in limiting salt use and reading nutrition labels is due to participants following modified diets for preexisting diseases and require those practices for proper disease management.

Lastly, behavior improvements that seemed consistent between the two sessions at exit were likely those that were related to reoccurring messages that were integrated into multiple lessons (food safety, meal planning, healthy meal ideas, etc.) where participants were repeatedly hearing and discussing those topics.

Kids Program Feedback

Table 6.8 Responses to Adult Feedback Form (*n* = 6)

| Questionnaire Item | Response | |
|---|---|--|
| Has your child told you they enjoy coming to the classes? | 100% answered “Yes” 0% answered “No” | |
| Has your child spoken about the classes at home or outside of class? | 100% answered “Yes” 0% answered “No” | |
| Has he or she asked for different foods at home? If so, what types of foods? | 67% answered “Yes” 33% answered “No” | Of those that answered “Yes”: 25% responded vegetables 25% responded meat and dairy 50% responded fruit |
| Have you notice any changes in his or her nutrition knowledge or eating habits? If so, what have you noticed? | 100% answered “Yes” 0% answered “No” | 33% Try different foods 33% Eating the rainbow 17% Eating more fruit 17% Eating more vegetables |

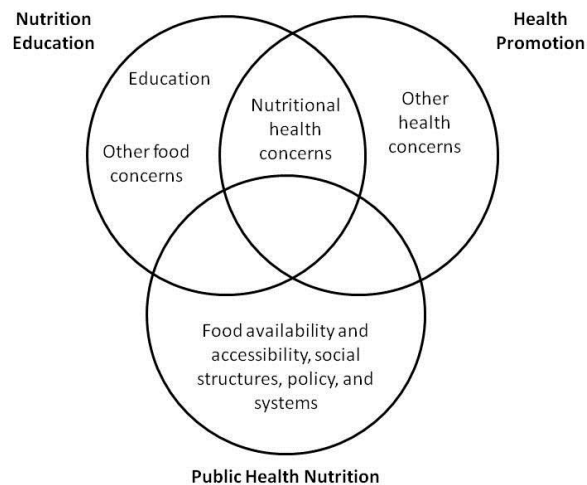
The feedback form was created in order to get a general idea of program impact, if any. Since this was only distributed as a post-evaluation no strong conclusions can be made, but it looks as though all of the participants liked the classes and there was a general trend of positive eating behaviors in a majority of participants.

Chapter 7 - Application to Public Health

Public health is “the practice of preventing disease and promoting good health within groups of people, from small communities to entire countries” (American Public Health Association, 2012). EFNEP impacts individuals and small groups which in turn potentially has an impact on communities to assist in “fostering collective efficacy and capacity building” which results in empowerment to make necessary changes for disease prevention and health promoting behaviors (Contento, 2011). This program’s objectives are shared by national public health objectives to increase fruit, vegetable, and whole grain intake, and to reduce intake of saturated fats, sugar, and sodium in the diet of Americans (Healthy People 2020, 2012).

The relationship between nutrition education and public health can also be illustrated in this way.

Figure 7.1 Roles of Nutrition Education, Public Health Nutrition, and Health Promotion



(Contento, 2011)

Fig 7.1 depicts a Venn diagram showing the inclusion of nutrition education’s role in public health issues such as food availability and accessibility, overall social structure and policy.

The foundational purpose of this project was to provide nutrition education to a group of individuals belonging to the same or neighboring communities. The focus may have been on the dissemination of nutrition information, but the experience as a whole encompassed a host of

different food issues such as food safety and food accessibility and affordability, as well as the promotion of healthier food and diet behaviors. This project also lays groundwork for further observance of potential health behavior outcomes that may result in improved health of a community from abbreviated EFNEP programs, which is becoming increasingly more important as federal dollars are harder to come by and funding is reduced or stagnant.

Chapter 8 - Reflection

Looking back on this experience as a whole, one of the greatest challenges I faced was promoting the programs in a way that would make community members want to participate. In the beginning it sounded like a simple feat; get the program information out there and people will want to come. This was not the case. Although I made efforts to promote the program in a variety of ways and settings, since this was the first time group nutrition education has been offered in Ogden, the lack of familiarity and knowledge of the program contributed to a low participation rate. Continued offerings of EFNEP curriculum and nutrition programming in Ogden is planned and it is my hope that I have left a positive impression and will serve as an advantage to my successor.

If I had it all over to do again, I would have started promoting the programs further in advance and possibly conducted a demo or question station at the community center in attempt to more fully describe what EFNEP was. I also would have given more thought to the evaluation methods used for the kids program by conducting both a pre and post evaluation. Also, in item 4 on the feedback tool, I would separate it into two questions in order to assess knowledge and behavior changes independently. Furthermore, the kids vegetable tasting activity during Class Five has limited success. The goal was to expand their vegetable familiarity, but instead I think I just grossed them out. If I was to do it again, I would accompany the raw vegetables with a lower-fat dressing for dipping or incorporate the vegetables in a dish for the kids to taste.

Successful tactics I would use again, would be the translation of the Power Point presentation-style to the participant guide handouts. I received positive feedback such as it made the participants feel like they were not in strict, structured classroom, but rather a discussion/conversation within a gathering of community members. I always tried to put myself in the role of a discussion facilitator versus an instructor. This allowed for open-ended questions, participant discussion, receiving information about what common practices are occurring in homes, identification of barriers or specific situations in order to offer helpful tools and resources, and it allowed for me to learn from the participants. I also found success in integrating skills and practice with hands-on activities and recipes for both the adults and the kids where it broke up the routine and pace of classes and it was enjoyable for participants.

Future efforts for group nutrition programs in Ogden for both adults and kids are planned in hopes attendance and interest will grow. This experience can also be used as a stepping stone for further observance of the potential short and long-term health behavior outcomes that can come from offering abbreviated EFNEP programs.

Chapter 9 - Future Research

Future avenues that could be explored within the abbreviated EFNEP paradigm include expansion in the number of people and a variety of communities where this type of format can be implemented. This program looked at four-week duration, whereas future studies could look at longer periods of time. It might also be worthwhile to observe differences between tailoring the lesson modules to meet needs/interests of each group (as done with this project) versus perhaps testing which modules show the greatest behavioral change impact and including only those in the shortened program curriculum. Alternative outcome evaluation techniques could also be utilized, for example arranging it so that participants can create a photo diary of their food intake versus using the 24 hour recall method to track trends and changes in eating behaviors. Ultimately, it would be integral to show that the types of behavior changes observed lead to the overarching goal of positive health outcomes.

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Appendix A - Session Two Follow-up Data

At follow-up for session two, the overall positive change observed at exit was not sustained. Furthermore, no improvement was seen in vegetable consumption at follow-up as it was in session one. Improvement in mean dairy consumption was seen in session two at follow-up as it was in session one at follow-up. Session two follow-up data were based on only two respondents of the three participants.

Table 9.1 Session Two Dietary Trends: Pre, Post, and Follow-up

| | Mean \pm StD | | |
|--------------------|--------------------|--------------------|------------|
| Variable | Entry | Exit | Follow-up* |
| Total Kcal | 1689.6 \pm 597.3 | 1365.3 \pm 374.2 | 1930.2 |
| Grains (oz) | 7.4 \pm 2.9 | 5.8 \pm 0.8 | 7.8 |
| Fruits (cups) | 0.1 \pm 0.1 | 0.1 \pm 0.1 | 0.0 |
| Vegetables (cups) | 1.0 \pm 1.0 | 0.7 \pm 0.7 | 0.2 |
| Milk (cups) | 1.9 \pm 1.5 | 1.0 \pm 0.4 | 1.7 |
| Meats & Beans (oz) | 6.2 \pm 1.8 | 6.4 \pm 1.1 | 5.6 |

* only 2 of 3 responded to follow-up mail-out; StD not calculated due to $n=2$

All food resource management and food safety practice behavior changes present at exit were sustained or improved upon at follow-up. Taking into consideration that the follow-up data are based on two of three participants, nutrition practice behavior changes for session two did not support sustained or improved changes at follow-up.

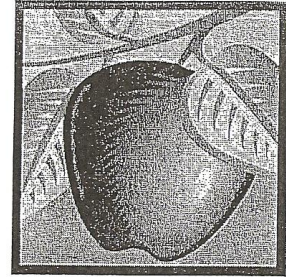
Table 9.2 Session Two Behavioral Survey Changes From Entry, Exit, and Follow-up

| | <u>Entry versus exit survey responses</u> | <u>Entry versus follow-up survey responses*</u> |
|------------------------------------|---|--|
| Food Resource Management Practices | No participant more often planned meals in advance | Same as entry versus exit survey response |
| | No participant compared prices more often when shopping | Same as entry versus exit survey response |
| | 33% less often ran out of food before the end of the month | 50% less often ran out of food before the end of the month |
| | No participant more often used a list for grocery shopping | Same as entry versus exit survey response |
| Nutrition Practices | No participant more often planned meals in advance | Same as entry versus exit survey response |
| | 33% more often thought about healthy food choices when deciding what to feed their family | No participant more often thought about healthy food choices when deciding what to feed their family |
| | 67% more often prepared foods without adding salt | 50% more often prepared foods without adding salt |
| | 67% more often used the “Nutrition Facts” on food labels to make food choices | 50% more often used the “Nutrition Facts” on food labels to make food choices |
| | No participant reported that their children ate breakfast more often | Same as entry versus exit survey response |
| Food Safety Practices | No participant more often followed recommended practices of not letting meat and dairy stay at room temperature for more than 2 hours | Same as entry versus exit survey response |
| | 67% more often followed recommended practices of not thawing foods at room temperature | 100% more often followed recommended practices of not thawing foods at room temperature |

* only 2 of 3 responded to follow-up mail-out

EFNEP Eating Right Survey

| |
|-------------|
| Name: _____ |
| Date: _____ |



This is a survey about ways you plan and fix foods for your family. As you read each question, think about the recent past. This is not a test! There are not any wrong answers.

| For these questions, think about how you usually do things. Please put a check in the box that best answers each question. | Not Applicable 0 | Do Not Do 1 | Seldom 2 | Sometimes 3 | Most of the Time 4 | Almost Always 5 |
|--|---------------------|----------------|-------------|----------------|-----------------------|--------------------|
| 1. How often do you plan meals ahead of time? | | | | | | |
| 2. How often do you compare prices before you buy food? | | | | | | |
| 3. How often do you run out of food before the end of the month? | | | | | | |
| 4. How often do you shop with a grocery list? | | | | | | |
| 5. This question is about meat and dairy foods. How often do you let these foods sit out for more than two hours? | | | | | | |
| 6. How often do you thaw frozen foods at room temperature? | | | | | | |
| 7. When deciding what to feed your family, how often do you think about healthy food choices? | | | | | | |
| 8. How often have you prepared foods without adding salt? | | | | | | |
| 9. How often do you use the "Nutrition Facts" on the food label to make food choices? | | | | | | |
| 10. How often do your children eat something in the morning within two hours of waking up? | | | | | | |
| 11. How often do you eat meals or snacks with one or more family members? | | | | | | |

| | |
|--|---|
| For Office Use Only: Extension Staff Member: _____ Client ID #: _____ | Check Type of Recall: <input type="checkbox"/> Entry <input type="checkbox"/> Exit |
|--|---|

Kids Program

Adult Feedback
Kids Cooking/Nutrition classes
Ogden Community Center

- | | | |
|--|-----|----|
| 1) Has your child told you they enjoy coming to the classes? | YES | NO |
| 2) Has your child spoke about the classes at home or outside of class? | YES | NO |
| 3) Has he or she asked for some different foods at home? | YES | NO |

If so, what types of foods?

- | | | |
|---|-----|----|
| 4) Have you noticed any changes in his or her nutrition knowledge or eating habits? | YES | NO |
|---|-----|----|

If so, what have you noticed?

Any additional comments?

------(cut below this line - return top portion and keep invitation)-----



K-STATE
Research and Extension

YOU'RE INVITED!

Wednesdays in September (5th, 12th, 19th, 26th)
(Come and join us even if you didn't make it to the first class!)
6pm, Ogden Community Center

Cook and eat new recipes such as stir-fry, quiche, pasta bakes, etc...

Get easy meal ideas, feel good about the foods you and your family eat and much more!

Call (785) 537-0351 to sign up or just come on by for this FREE program. Hope to see you there!

Appendix C - Adult Participant Guides

Session One – Class One



CLEAN

Hand washing

- 50% of all reported cases of foodborne illness can be attributed to not washing our hands correctly or often enough
- Rub and rinse hands for at least 20 seconds
- Before, during, and after handling food

Kitchen surfaces

- Use clean dish cloths, very warm water and soap to clean dirt you can see
- Use sanitizer to kill germs



SEPERATE

- Use separate cutting boards
- Use separate utensils
- Use separate plates for raw and cooked foods

What can happen when foods are stored and prepared like this?



COOK

(Mini Meatloaf Recipe on separate handout)

Practice safe habits:

- Check internal temperature with a thermometer (ground beef should be at least 160°F)
- Avoid cross contamination by keeping raw meats and produce separate

FRESH-MADE SALSA

Makes 2 cups

Ingredients

- 1/2 medium yellow onion, finely chopped
- 1 green bell pepper, finely chopped
- 2 tablespoons cilantro, chopped
- 1 tablespoon lime juice, or juice from half a lime
- 1 (14.5-ounce) can diced unsalted tomatoes, drained, liquid reserved
- 1/2 teaspoon cumin

Tip: Add a can of unsalted black beans and a can of unsalted corn kernels for extra vegetables.

Directions

1. Rinse and cut onion, pepper, cilantro, and lime.
2. Combine above ingredients in a bowl.
3. Add some reserved tomato liquid to thin salsa if desired.
4. Cover and refrigerate 30 minutes to 24 hours to allow flavors to blend.

Nutrition Information Per Tablespoon
 Calories 5, Total Fat 0g, Saturated Fat 0g, Protein 0g, Total Carbohydrate 1g, Dietary Fiber 0g, Sodium 30 mg.
 Excellent source of Vitamin C.

Fix It Safe, pg. 2



CHILL



- Keep cold foods cold and hot foods hot
- Foods may be okay past "sell by" or "use by" dates IF...
 - Properly stored
 - Intact packaging
 - No odors, mold or other signs of spoilage

Session One – Class Two



Tips for Meal Planning:

- Create a family favorites list
- Make time to plan
- Look for new ideas
- Keep it simple
- Make a shopping list based on your menu for the week
 - Check what you have
 - List what you need
 - Include the basics
 - Peanut butter, cereal, rice or pasta, bread, fruits and vegetables, milk, eggs








Other things to think about:

- Beverages
- Healthy cooking techniques



Session One – Class Three



Eating Smart
Throughout the
Lifecycle: MyPlate

FRUITS
Goal: 2 cups/day

1 cup =

- 1 fist-size piece of fresh fruit
- 1 cup of fruit pieces – fresh, canned, or frozen
- ½ cup of dried fruit
- 8 ounces of 100% fruit juice

✓ EAT THE RAINBOW!


DAIRY
Goal: 3 cups/day

1 cup =

- 8 ounces (1 cup) milk or yogurt
- 1/3 cup shredded cheese
- 1½ ounces natural cheese
- 2 ounces processed cheese
- 1/4 cup tofu

✓ CHOOSE LOW FAT OR FAT FREE PRODUCTS

✓ Non-milk calcium sources



VEGETABLES
Goal: 2 ½ cups/day

1 cup =

- 1 measured cup of cooked vegetables
- 1 measured cup of raw vegetables

Exception: 2 cups raw leafy greens = 1 cup of vegetables

✓ EAT THE RAINBOW!

GRAINS
Goal: 6 oz/day

1-ounce =

- 1 slice bread, ½ bun
- ½ cup cooked pasta, rice, oatmeal, grits
- 1 cup dry cereal
- 5-7 crackers

✓ MAKE HALF YOUR GRAINS WHOLE

➤ Whole wheat, whole oats, popcorn, brown rice

PROTEIN
Goal: 5 ½ oz/day

1 ounce =

- ¼ cup cooked dry beans or peas
- 1 egg
- 1 Tablespoon peanut butter
- ½ ounce nuts or seeds
- 1 ounce meat, poultry or fish

✓ CHOOSE LEAN MEAT

✓ Non-meat protein sources


➤ Soybeans, tofu, bean or veggie burgers, eggs, nuts and seeds

MOVE MORE
30 minutes/day for adults
60 minutes/day for kids


Let's look at what Crystal ate today...

EATING SMART THROUGHOUT THE LIFECYCLE

Did Crystal meet her Eat Smart and Move More goals?





| Breakfast | Lunch | Snack | Dinner |
|---|---|-----------------------------------|--|
| 1 cup coffee 2 scrambled eggs 1 cup grits | PB&J sandwich 15 tiny twist pretzels 1 can (12-oz) cola | 1 large apple 7 round crackers | 1 cup rice 5 slices turkey 2 Tablespoons gravy 1 small dinner roll ½ cup green beans 1 glass (12-oz) sweet tea ½ cup chocolate ice cream |



AM: 10-minute brisk walk to bus stop

PM: 10-minute brisk walk from bus stop to home

| | | |
|----------------------------|-----|----|
| Meet goal for grains? | Yes | No |
| Meet goal for vegetables? | Yes | No |
| Meet goal for fruits? | Yes | No |
| Meet goal for dairy? | Yes | No |
| Meet goal for protein? | Yes | No |
| Meet goal for moving more? | Yes | No |

EATING SMART THROUGHOUT THE LIFECYCLE

Make Crystal's Day an Eat Smart Day

Breakfast

1 cup coffee
2 scrambled eggs
1 cup grits

Lunch

PB&J sandwich
15 tiny twist pretzels
1 can (12-oz) cola

Snack

1 large apple
7 round crackers

Dinner

1 cup rice
5 slices turkey
2 Tablespoons gravy
1 small dinner roll
½ cup green beans
1 glass (12-oz) sweet tea
½ cup chocolate ice cream

Breakfast

1 cup coffee
2 scrambled eggs
½ cup grits
1 large banana
1 cup skim milk

Lunch

PB&J sandwich
8 oz. low-fat yogurt
1 cup carrot sticks
1 T fat-free ranch dressing
12-oz water

Snack

1 large apple
5 whole-wheat
crackers

Dinner

½ cup brown rice
3 slices turkey
1 whole-wheat roll
1 cup green beans
12-oz. unsweetened tea
1 cup fat-free frozen
yogurt

MyPlate



What **one change** will you make with how you and your family Eat Smart or Move More according to MyPlate?

What will make this hard for you and your family?

How will you overcome this?

Session One – Class Four



Eating Smart at Home: Shop for Value, Check the Facts

EATING SMART AT HOME

| Nutrition Facts | |
|---|-----------------------|
| Serving Size 1 cup (228g) Servings Per Container 2 | |
| Amount Per Serving | % Daily Value* |
| Calories 250 | Calories from Fat 110 |
| Total Fat 12 g | 18% |
| Saturated Fat 3g | 19% |
| Trans Fat 3g | 19% |
| Cholesterol 30mg | 10% |
| Sodium 470mg | 20% |
| Potassium 0mg | 0% |
| Total Carbohydrate 31g | 10% |
| Dietary Fiber 0g | 0% |
| Sugars 3g | |
| Protein 5g | |
| Vitamin A | 4% |

Serving Size
Servings Per
Container

Shop for Value, Check the Facts



EATING SMART AT HOME

| Nutrition Facts | |
|---|----------------------|
| Serving Size 1/4 cup (44g) Servings Per Container about 10 | |
| Amount Per Serving | % Daily Value* |
| Calories 190 | Calories from Fat 25 |
| Total Fat 3g | 4% |
| Saturated Fat 0.5g | 3% |
| Trans Fat 0g | |
| Polyunsaturated Fat 1g | |
| Monounsaturated Fat 1g | |
| Cholesterol 0mg | 0% |
| Sodium 230mg | 9% |
| Potassium 170mg | 5% |
| Total Carbohydrate 30g | 13% |

3/4 cup
cereal

1 1/2
cups
cereal

2 cups
cereal

Shop for Value, Check the Facts



EATING SMART AT HOME

| Nutrition Facts | |
|---|----------------|
| Serving Size 1 cup (228g) Servings Per Container 2 | |
| Amount Per Serving | % Daily Value* |
| Calories 250 | |
| Total Fat 12 g | 18% |
| Saturated Fat 3g | 19% |
| Trans Fat 3g | 19% |
| Cholesterol 30mg | 10% |
| Sodium 470mg | 20% |
| Potassium 0mg | 0% |
| Total Carbohydrate 31g | 10% |
| Dietary Fiber 0g | 0% |
| Sugars 3g | |
| Protein 5g | |
| Vitamin A | 4% |

Calories

Shop for Value, Check the Facts



EATING SMART AT HOME

| Nutrition Facts | |
|---|-----------------------|
| Serving Size 1 cup (228g) Servings Per Container 2 | |
| Amount Per Serving | % Daily Value* |
| Calories 250 | Calories from Fat 110 |
| Total Fat 12 g | 18% |
| Saturated Fat 3g | 19% |
| Trans Fat 3g | 19% |
| Cholesterol 30mg | 10% |
| Sodium 470mg | 20% |
| Potassium 0mg | 0% |
| Total Carbohydrate 31g | 10% |
| Dietary Fiber 0g | 0% |
| Sugars 3g | |
| Protein 5g | |
| Vitamin A | 4% |

Limit These Nutrients

Get Enough Fiber

Shop for Value, Check the Facts



EATING SMART AT HOME

| Nutrition Facts | |
|---|-----------------------|
| Serving Size 1 cup (228g) Servings Per Container 2 | |
| Amount Per Serving | % Daily Value* |
| Calories 250 | Calories from Fat 110 |
| Total Fat 12 g | 18% |
| Saturated Fat 3g | 19% |
| Trans Fat 3g | 19% |
| Cholesterol 30mg | 10% |
| Sodium 470mg | 20% |
| Potassium 0mg | 0% |
| Total Carbohydrate 31g | 10% |
| Dietary Fiber 0g | 0% |
| Sugars 3g | |
| Protein 5g | |
| Vitamin A | 4% |

Check Carbohydrates

Shop for Value, Check the Facts



EATING SMART AT HOME

| Nutrition Facts | |
|---|-----------------------|
| Serving Size 1 cup (228g) Servings Per Container 2 | |
| Amount Per Serving | % Daily Value* |
| Calories 250 | Calories from Fat 110 |
| Total Fat 12 g | 18% |
| Saturated Fat 3g | 19% |
| Trans Fat 3g | 19% |
| Cholesterol 30mg | 10% |
| Sodium 470mg | 20% |
| Potassium 0mg | 0% |
| Total Carbohydrate 31g | 10% |
| Dietary Fiber 0g | 0% |
| Sugars 3g | |
| Protein 5g | |
| Vitamin A | 4% |
| Vitamin C | 2% |
| Fiber | 20% |
| Iron | 4% |

% Daily Value

Shop for Value, Check the Facts



EATING SMART AT HOME

Nutrition Facts

Serving Size 1 cup (220g)
Servings Per Container 2

| Amount Per Serving | | |
|---------------------------|-------|-----------------------|
| Calories | 250 | Calories from Fat 110 |
| % Daily Values* | | |
| Total Fat | 12 g | 24% |
| Saturated Fat | 5g | 10% |
| Trans Fat | 0g | |
| Cholesterol | 30mg | 10% |
| Sodium | 470mg | 20% |
| Potassium | 0mg | 0% |
| Total Carbohydrate | 21g | 10% |
| Dietary Fiber | 0g | 0% |
| Sugars | 0g | |
| Protein | 5g | |
| Vitamin A | | 4% |
| Vitamin C | | 2% |
| Calcium | | 20% |
| Iron | | 4% |

Get Enough of These Nutrients →

Shop for Value, Check the Facts

EATING SMART AT HOME

Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

| | Calories | 2,000 | 2,500 |
|--------------------|-----------|---------|---------|
| Total Fat | Less than | 40g | 50g |
| Sat Fat | Less than | 20g | 30g |
| Cholesterol | Less than | 300mg | 300mg |
| Sodium | Less than | 2,400mg | 2,400mg |
| Total Carbohydrate | Less than | 300g | 375g |
| Dietary Fiber | 25g | 30g | |

Footnote ←

Shop for Value, Check the Facts

EATING SMART AT HOME

The food label can help us identify food allergens.

INGREDIENTS: WHOLE GRAIN WHEAT, SUGAR, CALCIUM CARBONATE, CORN STARCH, SALT, LACTULOSE, DISTILLED MONOLACTONE, VITAMIN B6, VITAMIN B12, VITAMIN E, VITAMIN K, VITAMIN C, VITAMIN D, VITAMIN F, VITAMIN G, VITAMIN H, VITAMIN I, VITAMIN J, VITAMIN K, VITAMIN L, VITAMIN M, VITAMIN N, VITAMIN O, VITAMIN P, VITAMIN Q, VITAMIN R, VITAMIN S, VITAMIN T, VITAMIN U, VITAMIN V, VITAMIN W, VITAMIN X, VITAMIN Y, VITAMIN Z, VITAMIN AA, VITAMIN AB, VITAMIN AC, VITAMIN AD, VITAMIN AE, VITAMIN AF, VITAMIN AG, VITAMIN AH, VITAMIN AI, VITAMIN AJ, VITAMIN AK, VITAMIN AL, VITAMIN AM, VITAMIN AN, VITAMIN AO, VITAMIN AP, VITAMIN AQ, VITAMIN AR, VITAMIN AS, VITAMIN AT, VITAMIN AU, VITAMIN AV, VITAMIN AW, VITAMIN AX, VITAMIN AY, VITAMIN AZ, VITAMIN BA, VITAMIN BB, VITAMIN BC, VITAMIN BD, VITAMIN BE, VITAMIN BF, VITAMIN BG, VITAMIN BH, VITAMIN BI, VITAMIN BJ, VITAMIN BK, VITAMIN BL, VITAMIN BM, VITAMIN BN, VITAMIN BO, VITAMIN BP, VITAMIN BQ, VITAMIN BR, VITAMIN BS, VITAMIN BT, VITAMIN BU, VITAMIN BV, VITAMIN BW, VITAMIN BX, VITAMIN BY, VITAMIN BZ, VITAMIN CA, VITAMIN CB, VITAMIN CC, VITAMIN CD, VITAMIN CE, VITAMIN CF, VITAMIN CG, VITAMIN CH, VITAMIN CI, VITAMIN CJ, VITAMIN CK, VITAMIN CL, VITAMIN CM, VITAMIN CN, VITAMIN CO, VITAMIN CP, VITAMIN CQ, VITAMIN CR, VITAMIN CS, VITAMIN CT, VITAMIN CU, VITAMIN CV, VITAMIN CW, VITAMIN CX, VITAMIN CY, VITAMIN CZ, VITAMIN DA, VITAMIN DB, VITAMIN DC, VITAMIN DD, VITAMIN DE, VITAMIN DF, VITAMIN DG, VITAMIN DH, VITAMIN DI, VITAMIN DJ, VITAMIN DK, VITAMIN DL, VITAMIN DM, VITAMIN DN, VITAMIN DO, VITAMIN DP, VITAMIN DQ, VITAMIN DR, VITAMIN DS, VITAMIN DT, VITAMIN DU, VITAMIN DV, VITAMIN DW, VITAMIN DX, VITAMIN DY, VITAMIN DZ, VITAMIN EA, VITAMIN EB, VITAMIN EC, VITAMIN ED, VITAMIN EE, VITAMIN EF, VITAMIN EG, VITAMIN EH, VITAMIN EI, VITAMIN EJ, VITAMIN EK, VITAMIN EL, VITAMIN EM, VITAMIN EN, VITAMIN EO, VITAMIN EP, VITAMIN EQ, VITAMIN ER, VITAMIN ES, VITAMIN ET, VITAMIN EU, VITAMIN EV, VITAMIN EW, VITAMIN EX, VITAMIN EY, VITAMIN EZ, VITAMIN FA, VITAMIN FB, VITAMIN FC, VITAMIN FD, VITAMIN FE, VITAMIN FF, VITAMIN FG, VITAMIN FH, VITAMIN FI, VITAMIN FJ, VITAMIN FK, VITAMIN FL, VITAMIN FM, VITAMIN FN, VITAMIN FO, VITAMIN FP, VITAMIN FQ, VITAMIN FR, VITAMIN FS, VITAMIN FT, VITAMIN FU, VITAMIN FV, VITAMIN FW, VITAMIN FX, VITAMIN FY, VITAMIN FZ, VITAMIN GA, VITAMIN GB, VITAMIN GC, VITAMIN GD, VITAMIN GE, VITAMIN GF, VITAMIN GG, VITAMIN GH, VITAMIN GI, VITAMIN GJ, VITAMIN GK, VITAMIN GL, VITAMIN GM, VITAMIN GN, VITAMIN GO, VITAMIN GP, VITAMIN GQ, VITAMIN GR, VITAMIN GS, VITAMIN GT, VITAMIN GU, VITAMIN GV, VITAMIN GW, VITAMIN GX, VITAMIN GY, VITAMIN GZ, VITAMIN HA, VITAMIN HB, VITAMIN HC, VITAMIN HD, VITAMIN HE, VITAMIN HF, VITAMIN HG, VITAMIN HH, VITAMIN HI, VITAMIN HJ, VITAMIN HK, VITAMIN HL, VITAMIN HM, VITAMIN HN, VITAMIN HO, VITAMIN HP, VITAMIN HQ, VITAMIN HR, VITAMIN HS, VITAMIN HT, VITAMIN HU, VITAMIN HV, VITAMIN HW, VITAMIN HX, VITAMIN HY, VITAMIN HZ, VITAMIN IA, VITAMIN IB, VITAMIN IC, VITAMIN ID, VITAMIN IE, VITAMIN IF, VITAMIN IG, VITAMIN IH, VITAMIN IJ, VITAMIN IK, VITAMIN IL, VITAMIN IM, VITAMIN IN, VITAMIN IO, VITAMIN IP, VITAMIN IQ, VITAMIN IR, VITAMIN IS, VITAMIN IT, VITAMIN IU, VITAMIN IV, VITAMIN IW, VITAMIN IX, VITAMIN IY, VITAMIN IZ, VITAMIN JA, VITAMIN JB, VITAMIN JC, VITAMIN JD, VITAMIN JE, VITAMIN JF, VITAMIN JG, VITAMIN JH, VITAMIN JI, VITAMIN JJ, VITAMIN JK, VITAMIN JL, VITAMIN JM, VITAMIN JN, VITAMIN JO, VITAMIN JP, VITAMIN JQ, VITAMIN JR, VITAMIN JS, VITAMIN JT, VITAMIN JU, VITAMIN JV, VITAMIN JW, VITAMIN JX, VITAMIN JY, VITAMIN JZ, VITAMIN KA, VITAMIN KB, VITAMIN KC, VITAMIN KD, VITAMIN KE, VITAMIN KF, VITAMIN KG, VITAMIN KH, VITAMIN KI, VITAMIN KJ, VITAMIN KK, VITAMIN KL, VITAMIN KM, VITAMIN KN, VITAMIN KO, VITAMIN KP, VITAMIN KQ, VITAMIN KR, VITAMIN KS, VITAMIN KT, VITAMIN KU, VITAMIN KV, VITAMIN KW, VITAMIN KX, VITAMIN KY, VITAMIN KZ, VITAMIN LA, VITAMIN LB, VITAMIN LC, VITAMIN LD, VITAMIN LE, VITAMIN LF, VITAMIN LG, VITAMIN LH, VITAMIN LI, VITAMIN LJ, VITAMIN LK, VITAMIN LL, VITAMIN LM, VITAMIN LN, VITAMIN LO, VITAMIN LP, VITAMIN LQ, VITAMIN LR, VITAMIN LS, VITAMIN LT, VITAMIN LU, VITAMIN LV, VITAMIN LW, VITAMIN LX, VITAMIN LY, VITAMIN LZ, VITAMIN MA, VITAMIN MB, VITAMIN MC, VITAMIN MD, VITAMIN ME, VITAMIN MF, VITAMIN MG, VITAMIN MH, VITAMIN MI, VITAMIN MJ, VITAMIN MK, VITAMIN ML, VITAMIN MM, VITAMIN MN, VITAMIN MO, VITAMIN MP, VITAMIN MQ, VITAMIN MR, VITAMIN MS, VITAMIN MT, VITAMIN MU, VITAMIN MV, VITAMIN MW, VITAMIN MX, VITAMIN MY, VITAMIN MZ, VITAMIN NA, VITAMIN NB, VITAMIN NC, VITAMIN ND, VITAMIN NE, VITAMIN NF, VITAMIN NG, VITAMIN NH, VITAMIN NI, VITAMIN NJ, VITAMIN NK, VITAMIN NL, VITAMIN NM, VITAMIN NO, VITAMIN NP, VITAMIN NQ, VITAMIN NR, VITAMIN NS, VITAMIN NT, VITAMIN NU, VITAMIN NV, VITAMIN NW, VITAMIN NX, VITAMIN NY, VITAMIN NZ, VITAMIN OA, VITAMIN OB, VITAMIN OC, VITAMIN OD, VITAMIN OE, VITAMIN OF, VITAMIN OG, VITAMIN OH, VITAMIN OI, VITAMIN OJ, VITAMIN OK, VITAMIN OL, VITAMIN OM, VITAMIN ON, VITAMIN OO, VITAMIN OP, VITAMIN OQ, VITAMIN OR, VITAMIN OS, VITAMIN OT, VITAMIN OU, VITAMIN OV, VITAMIN OW, VITAMIN OX, VITAMIN OY, VITAMIN OZ, VITAMIN PA, VITAMIN PB, VITAMIN PC, VITAMIN PD, VITAMIN PE, VITAMIN PF, VITAMIN PG, VITAMIN PH, VITAMIN PI, VITAMIN PJ, VITAMIN PK, VITAMIN PL, VITAMIN PM, VITAMIN PN, VITAMIN PO, VITAMIN PP, VITAMIN PQ, VITAMIN PR, VITAMIN PS, VITAMIN PT, VITAMIN PU, VITAMIN PV, VITAMIN PW, VITAMIN PX, VITAMIN PY, VITAMIN PZ, VITAMIN QA, VITAMIN QB, VITAMIN QC, VITAMIN QD, VITAMIN QE, VITAMIN QF, VITAMIN QG, VITAMIN QH, VITAMIN QI, VITAMIN QJ, VITAMIN QK, VITAMIN QL, VITAMIN QM, VITAMIN QN, VITAMIN QO, VITAMIN QP, VITAMIN QQ, VITAMIN QR, VITAMIN QS, VITAMIN QT, VITAMIN QU, VITAMIN QV, VITAMIN QW, VITAMIN QX, VITAMIN QY, VITAMIN QZ, VITAMIN RA, VITAMIN RB, VITAMIN RC, VITAMIN RD, VITAMIN RE, VITAMIN RF, VITAMIN RG, VITAMIN RH, VITAMIN RI, VITAMIN RJ, VITAMIN RK, VITAMIN RL, VITAMIN RM, VITAMIN RN, VITAMIN RO, VITAMIN RP, VITAMIN RQ, VITAMIN RR, VITAMIN RS, VITAMIN RT, VITAMIN RU, VITAMIN RV, VITAMIN RW, VITAMIN RX, VITAMIN RY, VITAMIN RZ, VITAMIN SA, VITAMIN SB, VITAMIN SC, VITAMIN SD, VITAMIN SE, VITAMIN SF, VITAMIN SG, VITAMIN SH, VITAMIN SI, VITAMIN SJ, VITAMIN SK, VITAMIN SL, VITAMIN SM, VITAMIN SN, VITAMIN SO, VITAMIN SP, VITAMIN SQ, VITAMIN SR, VITAMIN SS, VITAMIN ST, VITAMIN SU, VITAMIN SV, VITAMIN SW, VITAMIN SX, VITAMIN SY, VITAMIN SZ, VITAMIN TA, VITAMIN TB, VITAMIN TC, VITAMIN TD, VITAMIN TE, VITAMIN TF, VITAMIN TG, VITAMIN TH, VITAMIN TI, VITAMIN TJ, VITAMIN TK, VITAMIN TL, VITAMIN TM, VITAMIN TN, VITAMIN TO, VITAMIN TP, VITAMIN TQ, VITAMIN TR, VITAMIN TS, VITAMIN TT, VITAMIN TU, VITAMIN TV, VITAMIN TW, VITAMIN TX, VITAMIN TY, VITAMIN TZ, VITAMIN UA, VITAMIN UB, VITAMIN UC, VITAMIN UD, VITAMIN UE, VITAMIN UF, VITAMIN UG, VITAMIN UH, VITAMIN UI, VITAMIN UJ, VITAMIN UK, VITAMIN UL, VITAMIN UM, VITAMIN UN, VITAMIN UO, VITAMIN UP, VITAMIN UQ, VITAMIN UR, VITAMIN US, VITAMIN UT, VITAMIN UY, VITAMIN UZ, VITAMIN VA, VITAMIN VB, VITAMIN VC, VITAMIN VD, VITAMIN VE, VITAMIN VF, VITAMIN VG, VITAMIN VH, VITAMIN VI, VITAMIN VJ, VITAMIN VK, VITAMIN VL, VITAMIN VM, VITAMIN VN, VITAMIN VO, VITAMIN VP, VITAMIN VQ, VITAMIN VR, VITAMIN VS, VITAMIN VT, VITAMIN VU, VITAMIN VV, VITAMIN VW, VITAMIN VX, VITAMIN VY, VITAMIN VZ, VITAMIN WA, VITAMIN WB, VITAMIN WC, VITAMIN WD, VITAMIN WE, VITAMIN WF, VITAMIN WG, VITAMIN WH, VITAMIN WI, VITAMIN WJ, VITAMIN WK, VITAMIN WL, VITAMIN WM, VITAMIN WN, VITAMIN WO, VITAMIN WP, VITAMIN WQ, VITAMIN WR, VITAMIN WS, VITAMIN WT, VITAMIN WU, VITAMIN WV, VITAMIN WW, VITAMIN WX, VITAMIN WY, VITAMIN WZ, VITAMIN XA, VITAMIN XB, VITAMIN XC, VITAMIN XD, VITAMIN XE, VITAMIN XF, VITAMIN XG, VITAMIN XH, VITAMIN XI, VITAMIN XJ, VITAMIN XK, VITAMIN XL, VITAMIN XM, VITAMIN XN, VITAMIN XO, VITAMIN XP, VITAMIN XQ, VITAMIN XR, VITAMIN XS, VITAMIN XT, VITAMIN XU, VITAMIN XV, VITAMIN XW, VITAMIN XX, VITAMIN XY, VITAMIN XZ, VITAMIN YA, VITAMIN YB, VITAMIN YC, VITAMIN YD, VITAMIN YE, VITAMIN YF, VITAMIN YG, VITAMIN YH, VITAMIN YI, VITAMIN YJ, VITAMIN YK, VITAMIN YL, VITAMIN YM, VITAMIN YN, VITAMIN YO, VITAMIN YP, VITAMIN YQ, VITAMIN YR, VITAMIN YS, VITAMIN YT, VITAMIN YU, VITAMIN YV, VITAMIN YW, VITAMIN YX, VITAMIN YY, VITAMIN YZ, VITAMIN ZA, VITAMIN ZB, VITAMIN ZC, VITAMIN ZD, VITAMIN ZE, VITAMIN ZF, VITAMIN ZG, VITAMIN ZH, VITAMIN ZI, VITAMIN ZJ, VITAMIN ZK, VITAMIN ZL, VITAMIN ZM, VITAMIN ZN, VITAMIN ZO, VITAMIN ZP, VITAMIN ZQ, VITAMIN ZR, VITAMIN ZS, VITAMIN ZT, VITAMIN ZU, VITAMIN ZV, VITAMIN ZW, VITAMIN ZX, VITAMIN ZY, VITAMIN ZZ.

Shop for Value, Check the Facts

Nutrition Fact Comparisons (see handouts)

Crackers and Nuts:

What is the serving size of each product?

How many calories are in a serving of each product?

How many calories are in a **WHOLE CONTAINER** of each product?

Which product is lower in fat?

Chips:

Which kind of chips has fewer calories?

Which kind of chips has less fat?

Which kind of chips has less sodium?

Session Two – Class Three



Eating Smart at Home:
Fix It Fast, Eat At Home

When you eat at home you...
Eat **healthy**
Save **time**
Save **money**

EATING SMART AT HOME

At-home Meal



Take-out Meal



Fix It Fast, Eat at Home



The Facts:

| | Take Out | At Home |
|-----------|--------------------------|-----------------------|
| Time | 30 minutes | 40 minutes |
| Cost | \$4.50/person | \$2.50/person |
| Nutrition | 49 g of fat 1,100 cal | 17g of fat 568 cal |

TIPS for QUICK & HEALTHY Meals

- Stick to your plan
- Prep for the week:
 - wash and cut up fruits and veggies
 - portion and freeze meats

- Cook once – Eat twice
- Choose no salt added veggies (frozen or no sodium canned) and no sugar added fruits

- Involve the kids
 - make salad, wash and peel veggies, set the table, pour beverages

- Thaw meat by...
- refrigerate the night before
 - microwave before using
 - soak in cold water
 - grill frozen

- Try quick meat alternatives that are quick to prepare and typically cheaper
 - Peanut butter, tuna, beans, tofu, etc.

Quick-Cooking Methods:

- Slow Cooker meals
- Stir Fry
- One dish meal

Meal Ideas:

- Breakfast for dinner
- Sandwich night
- _____
- _____
- _____
- _____

At mealtime:

- Practice portion control
- More fruits and veggies
- Teach family about healthy eating

Cleaning up is **EVERYONE'S** job!

Session Two – Class Four



Eating Smart at Home: Smart Size Your Portions and Right-Size You

EATING SMART AT HOME

Portion Distortion

Burger King



1954
2.8 ounces
202 calories

Today
4.3 ounces
310 calories

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

Portion Distortion

McDonald's



1955
2.4 ounces
210 calories

Today
5.4 ounces
500 calories

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

Portion Distortion

Movie Popcorn



1950s
3 cups
174 calories

Today
21 cups (buttered)
1700 calories

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

Portion Distortion



400 calories

150 calories

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

Portion Distortion

Coca-Cola



1916
6 fluid ounces
79 calories

Today
16 fluid ounces
194 calories

Smart-size Your Portions and Right-size You



What's the difference between a portion and a serving size?

EATING SMART AT HOME

What Is a Normal Portion?



One slice of bread is one serving or one ounce.

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

What Is a Normal Portion?



A "bowl" of pasta may be a lot more than one serving.

Smart-size Your Portions and Right-size You



Do these look like your normal portions?

How do you think serving smaller portions of meat would be good for your health and the health of the family?

EATING SMART AT HOME

What Is a Normal Portion?



Your fist is about the size of one cup or one medium piece of fruit.

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

What Is a Normal Portion?



Smart-size Your Portions and Right-size You



What do you think when you see the size of a normal portion?

EATING SMART AT HOME

How Much Food Do I Need?

- ✓ Gender
- ✓ Size
- ✓ Activity Level

Most women need between 1,800 and 2,200 calories per day.

Smart-size Your Portions and Right-size You

EATING SMART AT HOME

How Much Food is 2,000 Calories?

| Breakfast | Lunch | Snack | Dinner |
|--------------|-----------|-------|--------|
| | | | |
| Grains | 6 ounces | | |
| Vegetables | 2½ cups | | |
| Fruit | 2 cups | | |
| Milk | 3 cups | | |
| Meat & Beans | 5½ ounces | | |

Smart-size Your Portions and Right-size You

What if we added...

Bigger bowl of cereal

More meat, cheese, and high fat spreads

Soda instead of water

Think about your own daily eating habits. Where are you getting extra calories?

Breakfast:

-

Lunch:

-

Dinner:

-

Snacks:

-

TIPS

EATING SMART AT HOME

What Does Your Plate Look Like?



- ✓ ½ Fruits and vegetables
- ✓ ¼ Grains (choose whole grains often)
- ✓ ¼ Lean meat, poultry, fish or beans

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

How Do I Know How Many Calories Are in Foods and Drinks?

- ✓ Read the nutrition label.
- ✓ Ask for nutrition information at restaurants.

| Nutrition Facts | |
|------------------------|--|
| Amount Per Serving | |
| Calories 100 | |
| Total Fat 10g | |
| Saturated Fat 5g | |
| Trans Fat 0g | |
| Cholesterol 100g | |
| Sodium 100g | |
| Total Carbohydrate 10g | |
| Dietary Fiber 0g | |
| Protein 10g | |

Smart-size Your Portions and Right-size You



EATING SMART AT HOME

Help Children Recognize Smart Portions



- ✓ Serve smaller portions at home.
- ✓ Encourage children to eat slowly and enjoy their food.
- ✓ Help children order smaller portions when eating out.
- ✓ Be a good role model and smart size your portions.

Smart-size Your Portions and Right-size You



What one change will you make to smart size your portions?

What will make this hard for you and your family?

How will you overcome this?


Appendix D - Kids Program Materials













Class One

Figure D.1 Matching Color and Foods Activity Worksheet

Matching Color and Foods Activity Worksheet

Did you know that fruits and vegetables come in many colors? Color your plate with your favorite colors!
Draw a line and match the color with the right foods.



| | | |
|---|--------|---|
|  | Green |  |
|  | White |  |
|  | Yellow |  |
|  | Purple |  |
|  | Orange |  |
| | Blue |  |
| | Red |  |

Visit www.ChefSolus.com for free kids' nutrition games, interactive word puzzles, [color my plate sheets](#) and fun healthy food activities! Copyright © Nourish Interactive, All Rights Reserved

Figure D.2 Rainbow of Foods coloring sheet

Exploring Healthy Foods • STUDENT PAGE 21

Rainbow of Foods

Fruits and vegetables grow in many colors. One way to be healthy is to eat fresh fruits and vegetables every day.

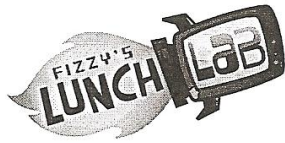
► Color the rainbow.

| blue-purple | green | yellow | orange | red |
|--------------|-------------|------------|------------|--------------|
| blueberries | lettuce | grapefruit | oranges | tomatoes |
| red cabbage | peas | yellow | sweet | strawberries |
| eggplant | spinach | tomatoes | potatoes | red bell |
| purple beans | broccoli | bananas | winter | peppers |
| plums | green beans | sweet corn | squash | cranberries |
| grapes | kale | lemons | carrots | red beets |
| | swiss chard | yellow | apricots | |
| | avocados | watermelon | mangoes | |
| | | | pumpkin | |
| | | | cantaloupe | |

This page was inspired by 5 A Day The Color Way
<http://www.5aday.org>

Cooking with Kids K-1

Figure D.3 Parts of a Whole Grain Seed

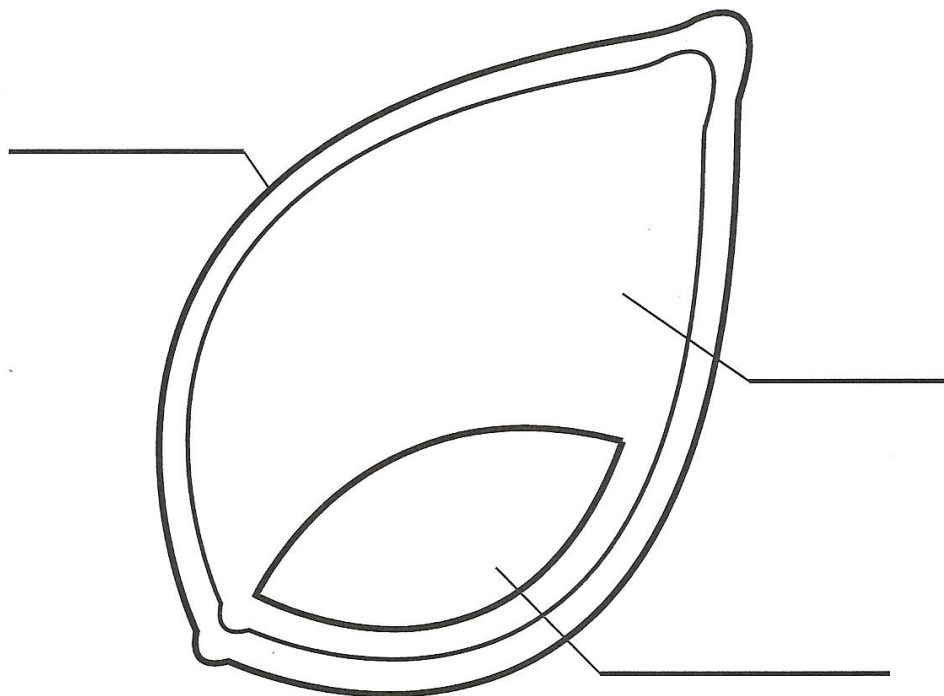


Teacher Lesson Plan & Activities

Theme: Whole Grains

Parts of a Whole Grain Seed

(Also known as a kernel of corn, wheat, rice, oats, barley, rye, etc.)



Whole grains contain many healthy things, especially fiber! Since most of the healthy things are found in the germ and bran, foods made with the entire kernel can play an important role in having good health!

Which parts of the kernel are the fiber?

_____ and _____



<http://pbskids.org/lunchlab>

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Figure D.4 From Farm to Food to You coloring sheet

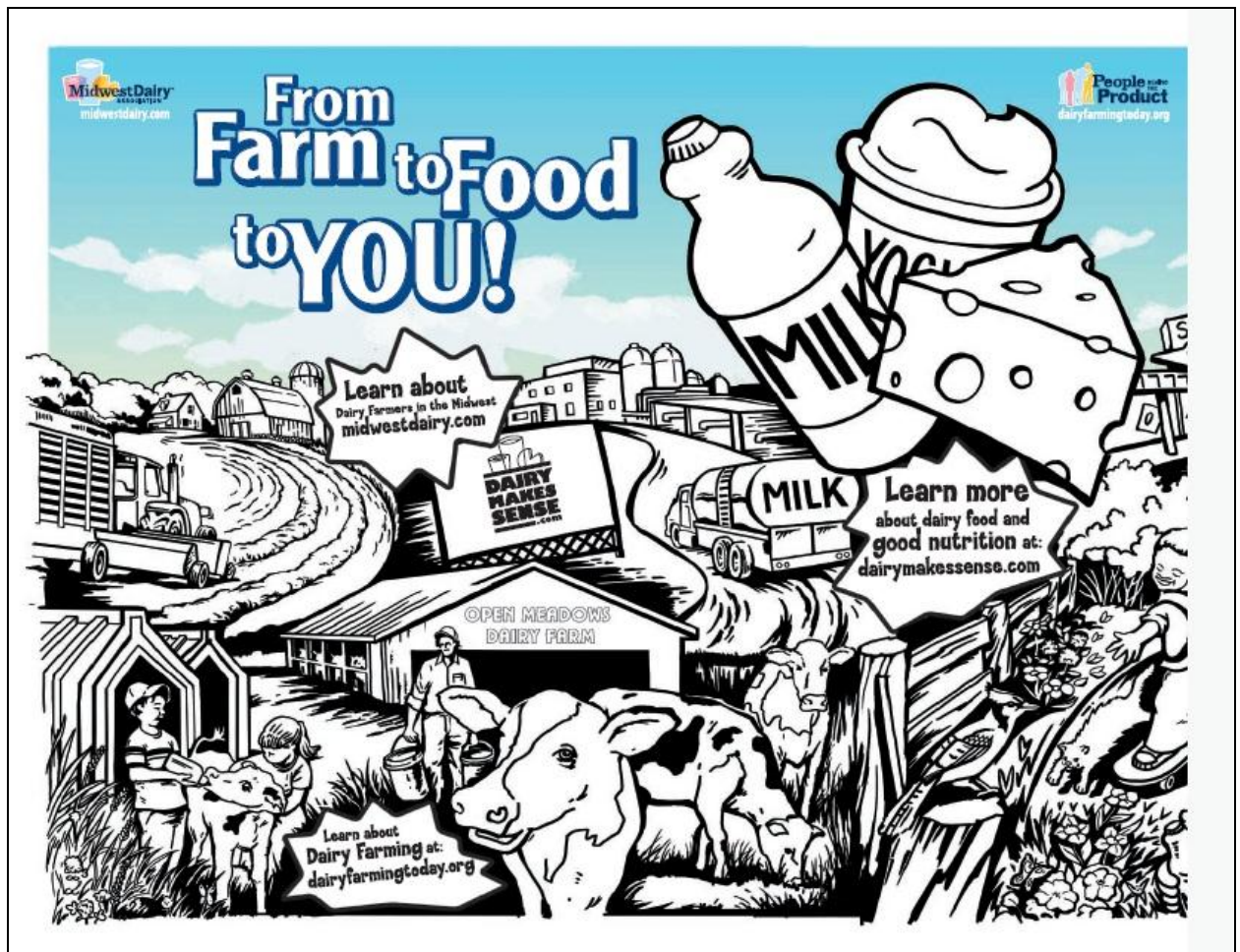


Figure D.5 Have Fun with Fruits and Vegetables word search

Have Fun With Fruits and Vegetables

Find the hidden fruits and vegetables in the puzzle. Words can read up, down or across, from left to right or right to left.

Find:

- Apple
- Banana
- Broccoli
- Carrots
- Celery
- Eggplant
- Grapes
- Kiwi
- Orange
- Papaya
- Pear
- Peas
- Squash
- Yams

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| B | F | S | E | A | Y | A | P | A | P |
| R | C | Q | L | S | R | P | E | A | R |
| O | H | U | P | B | A | N | A | N | A |
| C | P | A | P | Y | R | E | L | E | C |
| C | S | S | A | Y | A | M | S | T | E |
| O | A | H | E | G | N | A | R | O | K |
| L | E | C | A | R | R | O | T | S | I |
| I | P | G | R | A | P | E | S | K | W |
| B | E | G | G | P | L | A | N | T | I |

Answers on page 36

Fruit and Vegetable Goals

Name a fruit you would like to try:

How will you eat this fruit?
(On cereal, as a snack, for dessert, with dinner or on pancakes.)

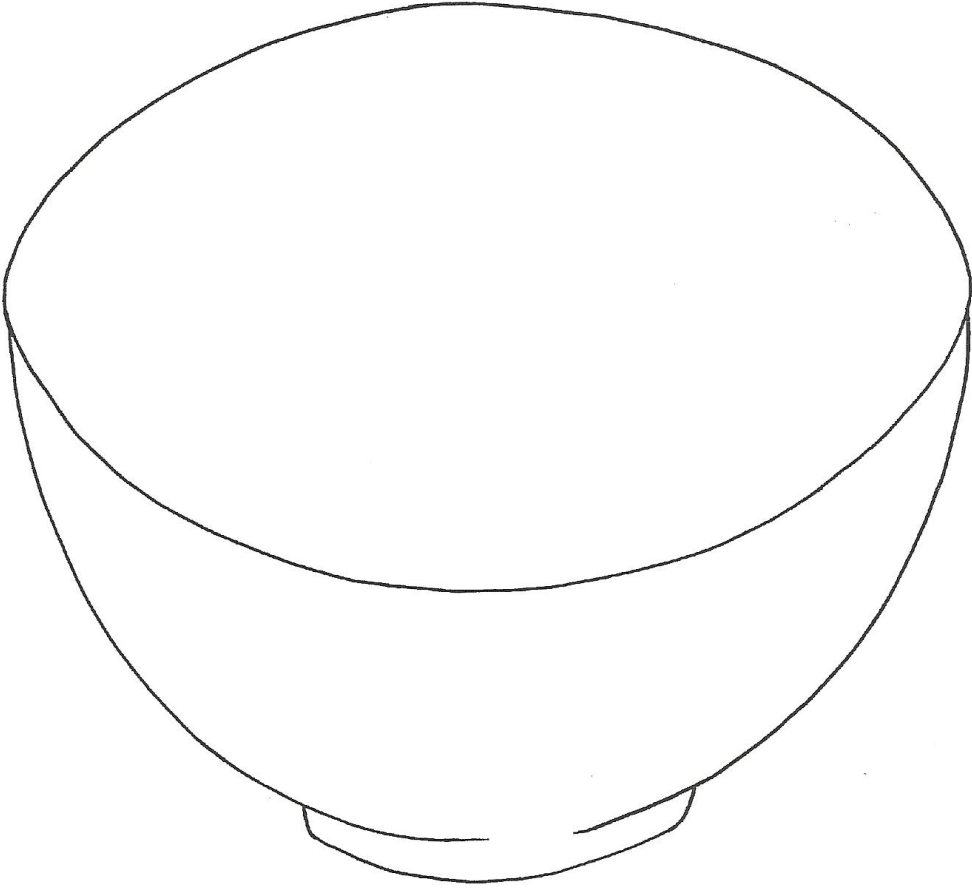
Name a vegetable you would like to try:

How will you eat this vegetable? (As a snack, with dip, or for lunch.)

Figure D.6 My Favorite Salad coloring sheet

Salad Tasting • STUDENT PAGE 159

My Favorite Salad



➤ Draw your favorite salad in this bowl. Then write the recipe for your salad.

Cooking with Kids 4-6

Figure D.7 King Henry's Meat Group

LITTLE D'S
NUTRITION
 EXPEDITION 9

Name _____

KING HENRY'S MEAT GROUP

ACTIVITY 3

peanuts

pork chop

tuna

turkey

almonds

shrimp

hamburger

ham

kidney beans

peanut butter

| Foods that come from an animal: | Foods that come from a plant: |
|---------------------------------|-------------------------------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |
| 5. _____ | |
| 6. _____ | |

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Figure D.8 UR What U Eat Go, Slow, Whoa handout

| UR What U Eat | | | |
|---|----|------|------|
| <p>Food supplies the nutrients needed to fuel your body so you can perform your best. Go, Slow, Whoa is a simple way to recognize foods that are the smartest choices.</p> <ul style="list-style-type: none"> • "Go" Foods: Eat almost anytime (Most often) — they are lowest in fat, added sugar, and calories • "Slow" Foods: Eat sometimes (Less often) — they are higher in fat, added sugar, and/or calories • "Whoa" Foods: Eat once in a while (Least often) — they are very high in fat and/or added sugar, and are much higher in calories | | | |
| Food Groups | GO | SLOW | WHOA |
| Fruits Whole fruits (fresh, frozen, canned, dried) are smart choices. You need 2 cups of fruit a day. 1 cup is about the size of a baseball. | | | |
| Vegetables Adding fat (butter, oils, and sauces) to vegetables turns them from Go foods to Slow or Whoa foods. You need 2 1/2 cups of vegetables a day. Dark green and orange vegetables are smart choices. | | | |
| Grains Try to make at least half of your servings whole grain choices and low in sugar. An ounce of a grain product is 1 slice of bread, 1 cup of dry cereal, or 1/2 cup of cooked rice or pasta. You need about 6 ounces a day. | | | |
| Milk Milk products are high in vitamins and minerals. Fat-free and low-fat milk and milk products are smart choices. About 3 cups are needed each day; 1 cup of milk, 1 cup of yogurt or 1 1/2 ounces of natural cheese count as 1 cup. | | | |
| Meats & Beans Eating 5 1/2 oz. a day will give you the protein, vitamins and minerals you need. Limit meats with added fat. Smart choices include beans (1/4 cup cooked), nuts (1/2 oz.) and lean meats (1 oz.) baked or broiled. | | | |

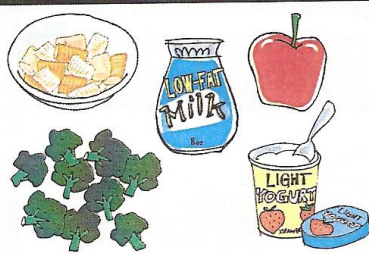


The amounts of foods recommended per food group are based on a 2,000-calorie diet, the approximate number of calories for most active boys and girls ages 9-13. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion.

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U.S. Department of Health & Human Services.





Sweets and Snacks

The foods below are snack-type foods. The "Slow" and "Whoa" foods are higher in fat, added sugar, and/or calories and need to be limited so you do not eat more calories than your body needs. Remember, if you eat sweets and snacks, eat small amounts.

| GO | SLOW | WHOA |
|---|--|---|
|  <p>For "Go" snacks, select foods from the "Go" column in the food groups section.</p> |  |  |

Combining Food Groups

Foods we eat are usually a mixture of ingredients from the different food groups. A food can turn from a "Go" into a "Whoa" based on the ingredients used. The examples below contain ingredients from the milk products, grains, vegetables and meat groups – some "Go," some "Slow," and some "Whoa." Foods served in restaurants often use "Whoa" ingredients.

| Combined Foods | GO | SLOW | WHOA |
|----------------|--|--|---|
| Pizza |  <p>English muffin pizza with low-fat cheese (using ½ English muffin)</p> |  <p>Regular or classic veggie pizza: 1 slice from a medium pizza</p> |  <p>Deep dish pepperoni pizza: 1 slice from a medium pizza</p> |
| Pasta |  <p>Pasta with tomato sauce and vegetables – 1 cup</p> |  <p>Macaroni and cheese – 1 cup</p> |  <p>Pasta with sausage – 1 cup</p> |

Move More

To keep at a healthy weight, energy in (foods you eat) must balance with energy out (how much you move). Try to get 60 minutes of physical activity every day. Move more, take the stairs, play ball, bike, swim, walk, and find active games you enjoy. Have fun!

For more information, visit the *We Can!* Web site at <http://wecan.nhlbi.nih.gov>. *We Can!* is a national education program promoting healthy weight for children from the National Institutes of Health.

The GO, SLOW, WHOA concept adapted from CATCH®: Coordinated Approach to Child Health, 4th Grade Curriculum, copyright © 2002 by The Regents of the University of California and FlagHouse, Inc. CATCH is a registered trademark of The Regents of the University of California, and licensed by FlagHouse, Inc.

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Figure D.9 Build a Great Plate coloring sheet



Build a Great Plate

Eat well.
Be active.

A great plate includes choices from each food group. Make MyPlate all your own by drawing your favorite healthy foods on the section of the plate where they belong.

Make half your plate fruits...

...and vegetables.

FRUITS & VEGETABLES

- Serve fruits and vegetables at meals and snack time. Choose fresh, frozen, canned or dried, and go easy on 100% fruit juice.
- Make fruit and vegetables fun! Help kids make kabobs, salads, and smoothies.
- Kids love to dip their foods. Try flavored yogurt as a dip for fruits and hummus for vegetables.

DAIRY

- Choose low-fat or fat-free dairy products, such as milk, yogurt, or cheese.
- Butter, cream cheese, and cream are not part of the dairy group because they are high in saturated fat and low in calcium.
- Low-fat cheese sticks and yogurt are easy to pack when kids are on the go.

GRAINS

- Check the ingredients list on food packages to find whole-grain foods.
- Set a good example for kids by serving and eating whole grains every day with meals or snacks.
- Whole grains can be healthy snacks. Try popcorn made with little or no added salt or butter, 100% whole wheat crackers or dried whole-grain cereal.

PROTEIN

- Protein foods include meat, poultry, seafood, eggs, beans, peas, soy products, nuts and seeds.
- Keep meat and poultry portions small and lean.
- Bake, broil or grill protein foods instead of frying.

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Learning ZoneXpress™

Make at least half your grains whole

Choose a variety of protein-rich foods

Have fun.

Get your calcium-rich foods

Appendix E - Promotional Flyers

Figure E.1 Mail out Flyer for Adult Classes



Figure E.2 Flyer for Kids Program

