

Goal:

The goal of the Volunteers of America Greater Los Angeles is to improve eating habits by increasing the consumption of fruits and vegetables of children participating in the Head Start Program at Maud Booth Family Center.

Objectives:

1. To encourage and promote a higher consumption of fruits and vegetables and a lower intake of high caloric foods in children participating in the program.
2. To increase parents awareness about the importance of eating at least 5 servings of fruits and vegetables every day for their child's health.
3. To promote and educate parents to be a healthy role model for their children.

Significance and Background:

According to USDA, fruits and vegetables are important sources of minerals, vitamins, phytonutrients, and anti oxidants including potassium, dietary fiber, folate (folic acid), vitamin A, vitamin E, and vitamin C. Vitamin A keeps eyes and skin healthy and helps to protect against infections. Vitamin E helps protect vitamin A and essential fatty acids from cell oxidation. Vitamin C is important for growth and repair of all body tissues, helps heal cuts and wounds, and keeps teeth and gums healthy. Folate (folic acid) helps the body form red blood cells. Diets high in fruit and vegetables have been associated with multiple health benefits including a reduced risk of obesity, cardiovascular disease, stroke, diabetes, and certain cancers, such as mouth, stomach, and colon-rectum cancer. Also eating fruits and vegetables rich in potassium as part of an overall healthy diet may reduce the risk of developing kidney stones and may help to decrease bone loss.

Despite of the recommendation of the World Health Organization to eat at least five servings of fruit and vegetables (approximately 400 g) per day, most people specially children consume very low amount of these groups (Cooke, et al., 2003).

Growing evidence that shows the strong relationship between poor diet in childhood and prevalence of serious health problems in their older age, such as diabetes, obesity and cardiovascular disease highlights the importance of enhancing the diet in childhood.

In addition, many eating behaviors are initiated in childhood, track over the childhood years and persist into adulthood in which case starting from a better position could provide life-long benefits.

Considering that the most influential aspect of a young child's environment is likely the family and the food-related behaviors of parents – mothers in particular – early intervention should reap the maximum health benefit even through the families. The powerful influence of maternal eating behavior may even begin during pregnancy, according to recent research which suggests that flavors in the mother's diet are transmitted to the baby through the amniotic fluid and later through breast milk. Breast-fed babies' early experience with a range of flavors that are absent from infant formula milk may facilitate the acceptance of a wider variety of foods at the weaning stage. Parents can further influence their young children's eating habits by controlling where meals are eaten and with whom. Companionship at mealtimes has been shown to increase children's intake of the basic food groups and regular 'family dinners' are associated with healthier dietary patterns including more fruit and vegetables in 9–14-year-olds.

While aspects of the family environment might be important, characteristics of the individual child itself may also influence their behavior. Humans seem to have a predisposition to reject new foods in favor of familiar ones (termed 'food neophobia' by Rozin⁴²). Neophobia appears to reach a peak in early childhood (age 2–3 years) and tail off thereafter. Some children appear to be more responsive to food than others, manifested as greater interest in and enjoyment of food. On this basis one might expect higher levels of consumption of fruits and vegetables among children who have a more positive reaction to foods overall. Studies suggest that the determinants of fruit and vegetable intake in children may include demographic and familial factors and character of children themselves.

Considering the plenty of affordable food in the United States, it is notable that consumption of fruits and vegetables is generally low, which is associated with higher rates of cancer in many sites, including the colon, prostate, lung, esophagus, stomach, bladder, and pancreas. Five servings a day of fruits and vegetables are recommended as a minimum for adults and children more than 2 years old. While only 32% of adults consume the recommended level. Likewise, children and adolescents consume fewer than 5 servings a day. One study showed that among children 6 to 1 years of age, only 16% ate 5 or more servings a day. Moreover, French fries constituted nearly 25% of all of the vegetables consumed by young people. Low percentages of fruits and vegetables are even more evident in low socioeconomic groups, in which cancer incidence among adults is higher. Increasing fruit and vegetable consumption is an important health behavior. Parental and other psychosocial influences on children's fruit and vegetable consumption are poorly understood. American Academy of pediatric advises offering a colorful variety of fruits and vegetables each day. However, One-half of the recommended daily servings of fruit can be provided in the form of fruit juice. One 4-ounce glass of 100 percent fruit juice equals one fruit serving for children two to three years of age, and one 6-ounce glass of 100 percent fruit juice equals one fruit serving for children older than three years (2001).

Methodology:

This is a 5 week program with two main components which are classroom activities and family involvement. The main purpose of the program is to change eating behavior of participants by promoting a higher intake of fruits and vegetables. In order to achieve the program's goal, the two components are based on nutrition education for both parents and children. Family involvement is essential to the program success, because research has shown that parents are their children most important healthy role model. The program will deliver high quality nutrition education to promote healthy dietary habits in participants and families. The nutrition education classes are strongly focus on encouraging a higher intake of fruits and vegetables which includes enjoyable, developmentally appropriate, culturally relevant, and participatory activities such as contests, cooking classes and taste testing.

Objective # 1

To accomplish our first objective the 5 week program is design to deliver five nutrition educational lessons or learning activities specially designed for kids. The activities will be presented every Monday and each class will be one hour long. During each week one new fruit and vegetable will be introduced at the beginning of the class. Children will have the opportunity of touching and tasting the item introduced. Because motivating children to increase intake of fruits and vegetables is a priority for our program, we will ask them which fruits and vegetables they want to study in the program to give priority to those produce items that participants are

willing to taste. However, we will also expose children to other fruits and vegetables because we want to encourage variety in their daily diet. We will have an appropriate decorated box where students can put their suggestions.

One week before the program, they will receive a brochure with pictures and they will circle the fruits and vegetables that they like.

Each lesson will provide participants with an hour of fun activities, games and snacks that stressed the importance of eating fruits and vegetables. Lessons will contain an introduction, the development of the class and a conclusion that will reinforce what participants learned during the class. Classes will end with games such as “My Fruits and Veggies Hopscotch”, “Fruit and Veggie Walk”, “Know what fruit am I”, “Know what vegetable am I”. The educators will make learning about Fruits and Veggies fun while reinforcing principles applicable to their own foods and nutrition program.

Objective 1	To encourage and promote a higher consumption of fruits and vegetables and a lower intake of high caloric foods in children participating in the program
Activity Week 1	Lesson 1: Fruits and Veggies the tasty way to start a day Introduced fruit and vegetable of the week. Benefits of them, related to the age of participants (use of visual aid with the fruit and veggie of the week) The power of breakfast in school performance Educational Game: Fruits and Veggies Hopscotch Snack of the day
Activity Week 2	Lesson 2: Colorful Snacks Introduced fruit and vegetable of the week. Benefits of them, related to the age of participants. (use of visual aid with the fruit and veggie of the week) Identify healthy and unhealthy snacks. Address variety of Colors Educational game: My rainbow Snack of the day
Activity Week 3	Lesson 3: 5 A Day The Tasty Way Introduced fruit and vegetable of the week. Benefits of them, related to the age of participants. (use of visual aid with the fruit and veggie of the week) Identify what is the meaning of 5 a day. Educational game: Fruits and Veggie Walk Snack of the day
Activity Week 4	Lesson 4: My Pyramid Rocks Introduced fruit and vegetable of the week. Benefits of them, related to the age of participants. (use of visual aid with the fruit and veggie of the week) Explain every group of the pyramid, emphasizing in fruits and vegetables group. Educational game: Know what fruit and veggie am I Snack of the day

Activity Week 5	<p>Lesson 5: Fruits and Veggies for a healthy me</p> <p>Introduced fruit and vegetable of the week. Benefits of them, related to the age of participants. (use of visual aid with the fruit and veggie of the week)</p> <p>Integrate the 4 previous lesson to reinforce what Participants have learned.</p> <p>Activity: Color and circle me</p> <p>Snack of the day</p>
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Objective # 2

The program is designed to provide 4 nutrition education lessons for parents. The lessons will teach parents about the importance of having fruits and vegetables in a daily basis. They will learn the recommendations of fruits and veggies based on the 2005 Dietary Guidelines for Americans. Classes will emphasize to eat different colored fruits and vegetables each day, including orange, dark green, red, purple, blue, white and yellow. In addition, the lessons will provide parents with healthy recipes that they can serve at home to their kids. Thus, cooking demonstrations will be a strong component in these classes. After each lesson or activity we will give parents written handouts, and in the final week a cook book containing recipes from parents will be given to them. Our main purpose to comply with our second objective is to provide parents with healthy, easy to prepare, cultural sensitive, and cost effective recipes. As a result, parents will offer their kids more dishes containing fruits and vegetables.

Objective 2	To increase parents awareness about the importance of eating at least 5 servings of fruits and vegetables every day for their child's health.
Lesson Week 1	<p>Lesson 1: Serving Up Fruits and Vegetables everyday</p> <p>Recommendations or servings per day following the 2005 Dietary Guidelines (according to age groups)</p> <p>Benefits of consuming fruits and vegetables</p> <p>Role of fruits and vegetables in the prevention of Chronic diseases.</p>
Lesson Week 2	<p>Lesson 2 Canned and Frozen Fruits and Vegetables</p> <p>Stress the importance of fresh produce, but recognizing canned and frozen fruits and vegetables as great contributions in healthy diets.</p> <p>Importance of variety of colored fruits and veggies.</p> <p>Thinking of the rainbow for a nutritious diet.</p>
Lesson Week 3	<p>Cooking Demonstration (interactive with parents participation)</p> <p>Preparation of healthy snacks</p>
Lesson Week 4	<p>Cooking Demonstration (interactive with parents participation)</p> <p>Fruits and Vegetables at home prepared meals.</p>

Objective # 3

During the last week of the program, parents and kids will assist together to the last lecture. We will start with a 30 minute lecture where parents are provided with tips to become role model, and one hour of a cooking demonstration where parents will prepare a healthy snack with their children. Then, we will host a cooking contest where three families could win prizes. After the contest everybody will seat together and enjoy the prepared dishes. The objective of this activity is to integrate the family as a whole to promote a higher intake of fruits and vegetables in children through the positive impact that parents can have in their children's live. Furthermore, this activity will teach parents the need for monitoring their own behavior so that their children acquire healthy attitudes towards eating.

Objective 3	To promote and educate parents to be a healthy role model for their children.
Activity Week 5	Lesson: 10 tips to become a healthy role model Importance of parents as role model for their children Cooking Demonstration: Healthy Snacks Cooking Contest Eating healthy as a family Closure of program

Setting:

The primary test sight will be the Head Start location in North Hollywood, California. Head Start is a national program whose mission is to support the development of children in early childhood through educational, health, nutritional and social support. In addition to the personal factors relating to the children, significant importance is also placed on the involvement of the families of the children enrolled in the program. This collaboration provides the parents the necessary education to help them raise their children in a nurturing environment by supporting the needs of the entire family.¹

For the current project, Head Start will be able to provide a classroom and also accessibility to a kitchen, which will support the need of supplying the necessary facilities to prepare the fruits and vegetables for the cooking demonstrations. The present staff will provide assistance with the children and parents as needed throughout the project. All writing materials will also be utilized for the classroom. We also will be able to use Head Start's copy machines for reproduction of some of educational and support materials as needed.

Collaborations:

In collaboration with the Farmers Markets in North Hollywood and Toluca Lake we achieved a significant discount in providing the fruits and vegetables necessary for the project. Fedex Kinko's Burbank will provide discounts on color printing and posters. Vallarta Supermarket will be providing shuttle service for parents or guardians without transportation. In

¹ http://www.acf.hhs.gov/opa/fact_sheets/headstart_factsheet.html

addition, Ralph's Grocery Store will be donating a portion of the food needed for the cooking demonstration.

Leidys, Project Co-Director, received her doctoral degree in Cuba, where she had extensive training in medicine. She is now working on her Master's Degree in Nutrition at California State University, Northridge. She will be responsible for the overall direction of the project and will work with the staff of Head Start

Soheyla Seyfhashemi, Project Co-Director, received her Bachelor's Degree in Nutrition in Iran, where she did post-graduate work as a dietician. She is now working on her Master's Degree in Nutrition at California State University, Northridge. She will be preparing educational material and will oversee the application of the nutritional education of the children and parents.

Mary Rodriguez, Project Co-Director, is a trained nurse who has worked in the medical field for a number of years. She is now working on her Bachelor's Degree in Nutrition at California State University, Northridge. She will be performing the evaluation of the health impact of this project on the children

Eva Star, Project Co-Director, is an experienced accountant and is now pursuing her Bachelor's degree in Nutrition at California State University, Northridge. She will be coordinating the collaborative relationships with farmers markets and other business in the area to make this project a success.

Budget:

DIRECT COSTS

A. Salaries, Wages, and Fringe Benefits

a. Head Start Staff

i. Special Education Teacher	\$ 300.00
ii. Head Start Teacher	\$ 210.00
iii. Teacher's Assistant	\$ 200.00

b. Other Personnel

i. Janitor	\$ 50.00
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c. Fringe Benefits	\$ 140.00
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Total Salaries, Wages, and Fringe Benefits:	<u>\$ 900.00</u>
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B. Equipment

a. Specialized Project Equipment	\$ 200.00
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Total Equipment:	<u>\$ 200.00</u>
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C. Material and Supplies

a. Copies	\$ 560.00
b. Fruits	\$ 560.00
c. Vegetables	\$ 560.00
d. Misc. Food	\$ 560.00

e. Computer	\$ 560.00	
Total Materials and Supplies:		<u>\$2,800.00</u>
D. Outside Services		
a. Translator	\$ 150.00	
Total Outside Services:		<u>\$ 150.00</u>
E. Travel		
a. Co-Director Travel Allowance	\$ 449.00	
Total Travel:		<u>\$ 449.00</u>
TOTAL DIRECT COSTS:		<u>\$4,499.00</u>
INDIRECT COSTS		
A. Misc. Indirect Costs	\$ 501.00	
Total Misc. Indirect Costs:		<u>\$ 501.00</u>
TOTAL INDIRECT COSTS:		<u>\$ 501.00</u>
TOTAL COSTS:		<u><u>\$5,000.00</u></u>

Salaries

The Head Start Staff will provide the necessary assistance to help the children in our project. In addition, the special education teacher will support us in providing the appropriate material for children with special needs so their learning can be optimized. The teaching staff's assistance will be needed for 5 hours in the classroom setting and also in preparing for the activities, or a total of 11 hours with an average pay of \$21.50 per hour.

The translator is needed to help translate the educational materials into Spanish which will be going home to parents or used in the classroom. After obtaining a quotation for our written materials, the best price we received was \$150 for up to 2,000 words of translation.

Material and Supplies

The biggest portion of the cost goes directly to the educational aspect of the project which will involve 20 children, 20 parents, 3 Head Start teachers, and the 4 Co-Directors of the project. Even though we negotiated a substantial savings in the production of the educational materials, the total price still will be \$850 for the 5 week project. This includes advertising of the event in the form of posters and colored brochures. Also required are different paper assortments for the children's and parents' educational materials, which will need to be purchased. The balance of the grant money will be used to buy fruits and vegetables from the farmers markets and other necessary foods from Ralph's Grocery Store which is needed for the children and adults. The food elements will be an important educational portion of the project where the children and parents will be exposed to different foods and different cooking methods.

Travel expenses

The Co-Directors' travel expense is based on the Standard IRS mileage rate for 2009 of 55 cents per mile.² The trip from CSUN to the Head Start facility is a 34 mile roundtrip for each of the four Co-Directors of the project.³ This adds up to \$18.70 per person. Each of the Co-Directors will travel a total of 6 times to the Head Start facility for a total of \$449.00. This will be the only form of payment the Co-Director of this project receive.

Indirect Expense

Administratives costs, facility use charges, and insurance costs which occur on the project will need to be reimbursed to Head Start.

² <http://www.irs.gov/newsroom/article/0,,id=200505,00.html>

³ <http://maps.google.com/maps>