

# Native American Childhood Obesity Prevention Project

(Follow-up “Nutrition and Physical Activity Class” in the “Of Professional Interest” Section of cnesinc.org)

## 1 Background

The Families Mentoring Families Childhood Obesity Prevention Project (FMFCOPP) was a joint effort of the Community Nutrition Education Services Inc (CNES) and the United American Indian Involvement, Inc. (UAI, Inc). Both organizations are located within Los Angeles County, California. The joint efforts occurred over the 3 year period of 2007-2009.

The United American Indian Involvement, Inc. (UAI) established in 1974 is a private, non profit organization offering a wide array of health and human services to American Indians and Alaskan Natives living throughout Los Angeles County. Services include access to primary health and dental care, case management, health education, alcohol and substance abuse counseling and prevention, behavioral health and youth programs.

The collaborator for this Nutrition and Fitness Program was the Community Nutrition Education Services, Incorporated (CNESINC) established in 2006. This project met 1 of the CNESINC's goal of promoting healthy nutrition and obesity prevention through community based collaborative research.

## 2 Introduction

The FMFCOPP sought to improve the dietary habits and physical activity of 20 families (including the extended family members) with children between the ages of 4-11 years during a 1 year timeframe. The overall goal was to decrease body weight by 1 pound per month in those children and adults in the family who were in the overweight/ obese categories relevant to body mass index (BMI). Each family was asked to achieve 2 of 3 self-determined exercise goals and to achieve 2 of 3 self-determined food-related goals.

Over a 4 week period, families attended the “Healthy Food Choices and Fun Fitness for You Family” Saturday class sessions. The goal of the educational sessions was to assist families in improving the physical exercise and healthy food choices for all family members. The families began to plan menus/and food shopping lists for breakfast, lunch, dinner and snacks. This effort was guided by the food examples presented for ‘tasting’ in the classes; by reading food labels; the use of nutrition education materials; and by sharing experiences with other families. The physical activity sessions began very slowly. The first week included 5 minutes of exercise but by the 4th sessions, the families were actively exercising for at least 30 minutes by jumping rope to music, dancing ,using hula hoops, and playing games such as ‘hokey pokey’. Each family was provided a gift certificate to be redeemed at a local grocery store.

### 3 Case Examples

Three case scenarios involving children and their families following a 4 session nutrition and physical activity series of classes are presented. Even though we were unable to complete each component of the follow-up, the information provided does provide some insights for future planning and program development. The family names were self selected by the participants.

Each of the 3 case examples provided focus on:

1. Nutrition and Physical activity Goals
2. Anthropometric Profile of Family Members
3. Healthy Habits Quiz (initial and follow-up as available).
4. Summary of follow-up Clinical Notes by the UAII Registered Dietitian.

#### 3.1 Case 1. The Fry Bread Family

1. **Goals:**

**Physical activity:** Take family to park about 2 hours 1 day a week.

**Nutrition:** Drink 1% milk.

2. **Anthropometric profile of family members**

The height and weight information indicated that the adults and the targeted client \* were within the obese weight category. The BMI of the Adult female and the targeted client decreased over a 10 month period. The BMI of the adult males remained fairly stable over the same time frame.

Family Members	Body Mass Index (1/31/10)	Body Mass Index (8/28/10)
Adult Male	30.7	31
Adult Female	29	26
Male (age 12y 3mo.)	36 14.8	31.8 15.2
Female (age 22 $\frac{1}{2}$ mo.)		

Table 1: Body Mass Index. BMI.The Fry Bread Family

3. The initial “Healthy Habits” Quiz for the Fry Bread Family (initial) indicated a total score of 12 or lower (“This guide should be very helpful as you try to help children eat healthy foods and participate in physical activities.”) In comparison, the follow-up Quiz indicated improvement with movement from the lowest category to the middle category of “Healthy Habits” tool.

Table 2: HEALTHY HABITS QUIZ. The Fry Bread Family

DO YOU AND YOUR FAMILY...	YES	NO	SOMETIMES
1. Have regularly scheduled mealtimes at home?		×	
2. Eat meals together at least once a day?	×		
3. Plan snacks?		×	
4. Give the right amount of food to meet each family members nutritional needs including young children?		×	
5. Eat three meals everyday?			×
6. Try to make meal time fun for all of the family?			×
7. Make everyone eat everything on their plate?			×
8. Make meals last more than 15 minutes?		×	
9. Eat all meals at the kitchen table?			×
10. Food is not used to punish or reward family members.		×	
11. Enjoy physical activity together once or twice a week?			×
	YES	2 Points	
	Sometimes	1 Point	
	NO	0 Points	

If your total score is:

- 20-22                      Your family is on the right track.  
Use this guide for additional healthy eating and physical activity ideas.
- 13-19                     Your family is doing well, but could work on areas where you answered “no” / “sometimes.”
- 12 or lower (this category) This guide should be very helpful as you try to help children eat healthy foods and participate in physical activities.

<sup>1</sup>Adapted from 2003, American Dietetic Association

The follow-up “Healthy Habits” Quiz for the Fry Bread Family indicated a total score of 13-19 (Your family is doing well, but could work on areas where you answered “no”/“sometimes.”)

Table 3: HEALTHY HABITS QUIZ

DO YOU AND YOUR FAMILY...	YES	NO	SOMETIMES
1. Have regularly scheduled mealtimes at home?			×
2. Eat meals together at least once a day?	×		
3. Plan snacks?	×		
4. Give the right amount of food to meet each family members nutritional needs including young children?	×		
5. Eat three meals everyday?	×		
6. Try to make meal time fun for all of the family?	×		
7. Make everyone eat everything on their plate?			×
8. Make meals last more than 15 minutes?			×
9. Eat all meals at the kitchen table?	×		
10. Food is not used to punish or reward family members.		×	
11. Enjoy physical activity together once or twice a week?			×
	YES	2 Points	
	Sometimes	1 Point	
	NO	0 Points	

If your total score is:

- 20-22                      Your family is on the right track.  
Use this guide for additional healthy eating and physical activity ideas.
- 13-19                      Your family is doing well, but could work on areas where you answered “no”/ “sometimes.”
- 12 or lower (this category)    This guide should be very helpful as you try to help children eat healthy foods and participate in physical activities.

<sup>1</sup>Adapted from 2003, American Dietetic Association

#### 4. **Clinical Notes:**

The following information was excerpted from the clinical notes of the Registered Dietitian for UAII, Inc. as follow-up to determine progress with nutrition and physical activity goals. The timeline covers the period of February-August, 2010. The notes indicated that the successful weight loss was nurtured in an environment outside of the Los Angeles family setting. The client and his family attended the class sessions during 2009.

##### **February 2010: Met with client and father**

*Nutrition:* Dad reported child ate breakfast and lunch at school. Dinner was eaten at home. It included mostly beans, rice, and some type of meat, hamburger helper. Client likes only corn, some soda; eats fresh fruits daily. He drinks water, sugar free drinks and some sweetened tea.

*Physical activity:* Parent reported that the child spends about 3-4 hours on computer. He walks to and from school sometimes. The only regular physical activity is in PE class at school, about 1 hour. The father just got the client a new bike and plans to take him riding at least one day on weekends.

##### **March 2010: Met with the entire family**

*Nutrition:* Client sometimes skips lunch at school to play with fiends. There were no changes in diet.

*Physical activity:* Client still playing football in PE at school. He has been walking to and from school daily as agreed. Parents would like client to try exercising with weights, has equipment, but client is not interested. Client wants to bike ride. Many years ago, he joined the marathon bike riding event.

##### **June 2010: Discussion with Mother of client and client by telephone.**

Client stayed with an aunt and 20 year old cousin for the summer in San Francisco.

*Nutrition:* Eating more vegetables, broccoli, carrots and now likes salad the most, before he only ate corn. Eats oatmeal, or cold cereal without sugar with skim milk for breakfast; peanut butter sandwich for lunch and a banana; dinner, spaghetti w/meat and salad; snacks; yogurt, raw carrots. drinks water or sugar free drinks.

*Physical activity:* Exercise-uses the treadmill, walking and running outside 5x week.

##### **Early August 2010: Discussion with client by telephone**

*Nutrition:* Eating oatmeal, healthy peanut butter and bread, broccoli, tomatoes.

*Physical activity:* Client states he runs a mile daily. Stated: I feel good, more active, and pants fit better.

##### **Aug 28, 2010- Discussion with entire family**

Client had been out of town for 4 months. He stated that he feels good about losing so much weight, wants to continue to eat healthy and keep up with physical activity: run, walk and bike riding

End case scenario 1

### 3.2 Case Scenario 2. The Grape Family

1. **Goals:**

**Physical activity:** Walk everyday and exercise

**Nutrition:** 1. Eat more fruits and vegetables; 2. No soda; 3. Eat healthy non fast

2. **Anthropometric profile of family member**

The height and weight information indicated that the adult and the targeted client \* were within the obese weight category. The targeted client increased from 32-35 BMI during the 5 month period. The adult females BMI increased from 50-51.

Family Members	BMI (1/26/08)	BMI (6/19/08)
Adult Female	50	51
Male, age 10	32	35
Female, age 9	18.8	18.7

Table 4: Body Mass Index. BMI. The Grape Family

3. The initial “Healthy Habit” Quiz’s total score of 13-19 indicated (“Your family is doing well, but could work on areas where you answered “no”/ “sometimes.”) This family did not complete the follow-up quiz.

Table 5: HEALTHY HABITS QUIZ. The Grape Family

DO YOU AND YOUR FAMILY...	YES	NO	SOMETIMES
1. Have regularly scheduled mealtimes at home?			×
2. Eat meals together at least once a day?	×		
3. Plan snacks?			×
4. Give the right amount of food to meet each family members nutritional needs including young children?			×
5. Eat three meals everyday?	×		
6. Try to make meal time fun for all of the family?	×		
7. Make everyone eat everything on their plate?	×		
8. Make meals last more than 15 minutes?			×
9. Eat all meals at the kitchen table?	×		
10. Food is not used to punish or reward family members.		×	
11. Enjoy physical activity together once or twice a week?			×
	YES	2 Points	
	Sometimes	1 Point	
	NO	0 Points	

<sup>1</sup>Adapted from 2003, American Dietetic Association

If your total score is:

- |                             |   |
|-----------------------------|---|
| 20-22                       | Your family is on the right track. Use this guide for additional healthy eating and physical activity ideas.            |
| 13-19                       | Your family is doing well, but could work on areas where you answered “no” / “sometimes.”                               |
| 12 or lower (this category) | This guide should be very helpful as you try to help children eat healthy foods and participate in physical activities. |

#### 4. Clinical Notes:

The following information was excerpted from the Clinical notes of the Registered Dietitian for UAII, Inc. as follow-up to determine progress with nutrition and physical activity goals. The timeline covered 1 follow-up session. The entire context is presented. The client and his family attended the class sessions during 2008.

#### **June 19, 2008 Meeting with Mother and client**

- The client had gained 20 lbs and grew 1inch in the past 5 months since the last nutrition and fitness workshop.
- Clients mom stated that the client had a fractured ankle, fell out of a tree and has had limited mobility for 1.5 months, just started to be on his feet more now.
- Nutrition: Mom states that she tries to offer some water, but still buys regular and diet soda, but client prefers regular soda and other sugar added drinks. Eats more fruits and vegetables and takes out the fat when eating meat and skin off the chicken.
- Physical activity: Usually physically active, played soccer before ankle injury.

#### **Mutual Agreement between RD, client and mother**

- Encourage to continue to work on the goals set during the workshop:
- Eat more fruits and vegetables
- No sodas
- Walk everyday and exercise
- Eat healthy Foods and none fast foods
- Client and family will focus more on cutting back on sugary drinks. The Registered Dietitian showed client the amount of sugar in different drinks
- Clients mom agreed to take client for walk daily and to use a pedometer.

End of scenario 2

### 3.3 Case Scenario 3. The Watermelon Family

1. **Goals:**

**Physical activity:** Walk 20 minutes; hula hoop, hokey poky dancing.

**Nutrition:** 1) Achieve better eating; 2) Know what to eat; watch the table salt-rinse the canned vegetables with water; eat less. 3) Eat vegetables, broccoli, spinach, and peanut butter .

2. **Anthropometric profile of family member**

The height and weight of the adult male was very close to the obese weight category. There was a decrease in the BMIs for all family members including the targeted client.

Family Members	Body Mass Index (4/4/07)	Body Mass Index (7/7/07)
Adult Female/grandparent	25.5	24.8
Male/grandparent	29.0	28.8
Female	16.3	16.0

Table 6: Body Mass Index. BMI. The Watermelon Family

3. The initial “Healthy Habits” Quiz’s total score of 20-22 indicated (“Your family is on the right track. Use this guide for additional healthy eating and physical activity ideas.”). There was no follow-up Quiz.

Table 7: HEALTHY HABITS QUIZ. The Watermelon Family

DO YOU AND YOUR FAMILY...	YES	NO	SOMETIMES
1. Have regularly scheduled mealtimes at home?	×		
2. Eat meals together at least once a day?	×		
3. Plan snacks?	×		
4. Give the right amount of food to meet each family members nutritional needs including young children?	×		
5. Eat three meals everyday?			×
6. Try to make meal time fun for all of the family?	×		
7. Make everyone eat everything on their plate?			×
8. Make meals last more than 15 minutes?	×		
9. Eat all meals at the kitchen table?	×		
10. Food is not used to punish or reward family members.	×		
11. Enjoy physical activity together once or twice a week?	×		
	YES	2 Points	
	Sometimes	1 Point	
	NO	0 Points	

If your total score is:

- |                             |   |
|-----------------------------|---|
| 20-22                       | Your family is on the right track.<br>Use this guide for additional healthy eating and physical activity ideas.         |
| 13-19                       | Your family is doing well, but could work on areas where you answered “no” / “sometimes.”                               |
| 12 or lower (this category) | This guide should be very helpful as you try to help children eat healthy foods and participate in physical activities. |

#### 4. **Clinical Notes:**

The following information was excerpted from the Clinical notes of the Registered Dietitian for UAII, Inc. as follow up to determine progress with nutrition and physical activity goals. The timeline covers the period of 2 follow-up sessions. The client and her family attended the class sessions during 2007.

##### **June 11, 2007: Meeting with entire family**

- Since class, the mother is offering more fruits and vegetables, but child only likes a few-corn, broccoli . More vegetables are being incorporated into meals.
- Child likes and eats a lot of fruits
- During school vacation, eats 3 meals plus snacks
- Child is active, likes to play with hoola hoop
- The registered Dietitian praised the family for making increased lifestyle changes.

##### **July 31, 2007: Meeting with entire family**

- Client ( child) remained active
- Takes swimming lessons daily.
- Family does not eat outside of home as much
- Registered Dietitian praised family for continuing to make positive lifestyle changes by keeping physically active, eat out less often and increasing vegetables and fruit in diet.

End of Scenario 3

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<sup>1</sup>Adapted from 2003, American Dietetic Association

## 4 Discussion

Reports from the National Health and Nutrition Examination Survey (NHANES) for 2003-2004 indicated that 17% of US children and adolescents were overweight, and 32.2% of adults were obese[2]. NHANES (2003-2004) data indicated that Native Americans, along with African American and Hispanic Americans have the highest obesity prevalence[2]. In a 2004 American Dietetic Association (ADA) position paper entitled “Dietary Guidance for Healthy Children Ages 2-11 years”, it was noted that the number of children who are overweight has more than doubled among 2-5 years (10.4%) and more than tripled among 6-11 year-old children (15.3%) which has major health consequences[3]. The ADA position is that children ages 2 to 11 years should achieve optimal physical and cognitive development, attain a healthy weight, enjoy food, and reduced the risk of chronic disease. Obesity prevention for children is best approached in the family setting. Parents can influence childrens dietary habits in at least 5 areas: availability and accessibility of foods; meal structure; adult food modeling; food socialization practices and food related parenting style.

We have highlighted three different scenarios involving family members within the obese category range. Two of the 3 families did show improved body mass indexes over a 3 to 8 month time frame. The following is a summary of knowledge and behavioral changes. There appeared to have been changes in both the knowledge and behavior of the families discussed.

Nutrition		Physical Activity	
Knowledge	Behavior	Knowledge	Behavior
Fruits and vegetables are an important part of food intake	Eating cereal without adding sugar	Identification of high intensity activities, bicycling, dancing, walking for 20 minutes	Intensity of exercise running outside 5 times per week
Water and no sugar drinks should be included in food intake	Eating fresh fruit daily	Identify the importance of duration of exercise i.e. walking 20 minutes	Walking every day
	Drinking water or sugar free beverages	Identify strength building exercise-lifting weight	Running 1 mile per day
	Healthy snacks including yogurt		Participated together as a family in physical exercise
	Increasing the frequency and variety of vegetables		
	Eating outside of the home less often		
	Rinsing canned vegetables to reduce the salt content		

Both the follow-up of families and obtaining the requested documentation were challenging. The families proved to be a challenge in our tracking efforts primarily because they were very mobile. The families tended to move between the urban Los Angeles area and the homes of extended family members in other USA Western cities and states.

## 5 Authors

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## References

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