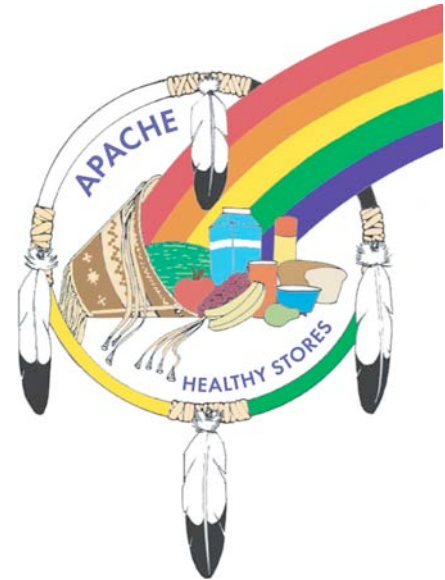


# Apache Healthy Stores:

## Results of the Main Trial and Future Directions

### Summary

The Apache Healthy Stores program was developed to improve the diets of community members and thereby reduce the risk for obesity and diabetes among Apache people. From June 2003 – June 2004, the program promoted healthy eating in grocery and convenience stores through shelf labels, flyers, posters, and cooking demonstrations in the White Mountain and San Carlos Apache reservations. We worked with store managers to put healthier foods in the stores, and with community members to develop the messages to promote the healthy foods.



In the next year, we surveyed people who shopped in the stores where we worked, and did a survey to determine whether the program made a difference. The program showed success in increasing the purchase and consumption of many healthy foods. Based on our findings (presented below), we received a grant from the USDA to bring the program back and to explore ways to keep it going. To plan our next steps, at the end of October 2005, we held a workshop with other people in the community working to prevent diabetes. From the workshop, we decided to expand the program beyond stores to schools and community events, and to explore forming a Diabetes Prevention Coalition.

### The Apache Healthy Stores Program (June 2003 – June 2004)

The Apache Healthy Stores program was introduced into food stores on the White Mountain and San Carlos reservations in six phases. Each phase promoted different healthier foods and cooking methods. Flyers, posters, shelf labels, and cooking demonstrations were placed in stores so that messages about eating healthy could be delivered directly to the person buying food for the family. Messages on the radio and cartoons in local papers helped spread awareness of the program and support the materials in the stores.

### Phase 1: Eating Healthy Snacks

We promoted lower fat snack options including baked chips and pretzels. Flyers showed that healthier choices had less fat and fewer calories.

**Food labels are a rainbow of information!**

LESS THAN 3 GRAMS OF FAT IS A LOW FAT FOOD

Nutrition Facts	
Serving Size 1 oz. (About 17 pretzels)	
Servings per Container About 15	
Amount Per Serving	
Calories 110	Calories from Fat 10
<b>% Daily Value</b>	
Total Fat 1g	2%
Sodium 580 mg	24%
Total carbohydrate 23g	8%
Dietary Fiber 1g	3%
Sugars less than 1g	
Vitamin A 0%	Vitamin C 0%
Calcium 0%	Iron 10%

\*Percent Daily Values are based on a 2,000 calorie diet.

APACHE HEALTHY STORES  
Helping you reach healthy goals.

**Baked vs. Regular Chips**

Nutrition Facts	
Serving Size 1 oz. (11 chips)	
Servings per Container About 14	
Amount Per Serving	
110 CALORIES	140 CALORIES
1.5 GRAMS OF FAT	7 GRAMS OF FAT
<b>% Daily Value</b>	
Saturated Fat 0g	0%
Cholesterol 0 mg	0%
Sodium 150 mg	6%
Total carbohydrate 23g	8%
Dietary Fiber 1g	3%
Sugars 0g	0%
Protein 1g	2%

SERVING SIZE = 11 chips

### Phase 2: Start the Day with a Healthy Breakfast

Cooking demonstrations and taste tests in stores let people try lower sugar, higher fiber cereals, and encouraged people to eat breakfast every day



**A HEALTHY BREAKFAST**

**GIVES YOU ENERGY!**

### Phase 3: Cooking with & Eating Less Fat

Cartoons in local papers and as flyers in stores illustrated the messages of each phase, in this case, draining and rinsing ground meat to reduce fat.

Apache Healthy Stores  
**Eat Right, Be Strong, Live Long**

Have I showed you how to rinse ground meat?

Why should I rinse, Mom?

It gets out a lot of extra fat.

Tastes great!

Not greasy!

**DRAIN & RINSE GROUND MEAT**

EAT WELL, STAY STRONG, LIVE LONG!

**Why use cooking spray?**

1. Adds no fat, calories, or salt!
2. Makes clean up easy!
3. Tastes great!



#### Phase 4: Making Healthy Dinners

Shelf labels were posted under the promoted foods items. In this phase, we encouraged people to buy pork and beans instead of beef chili.



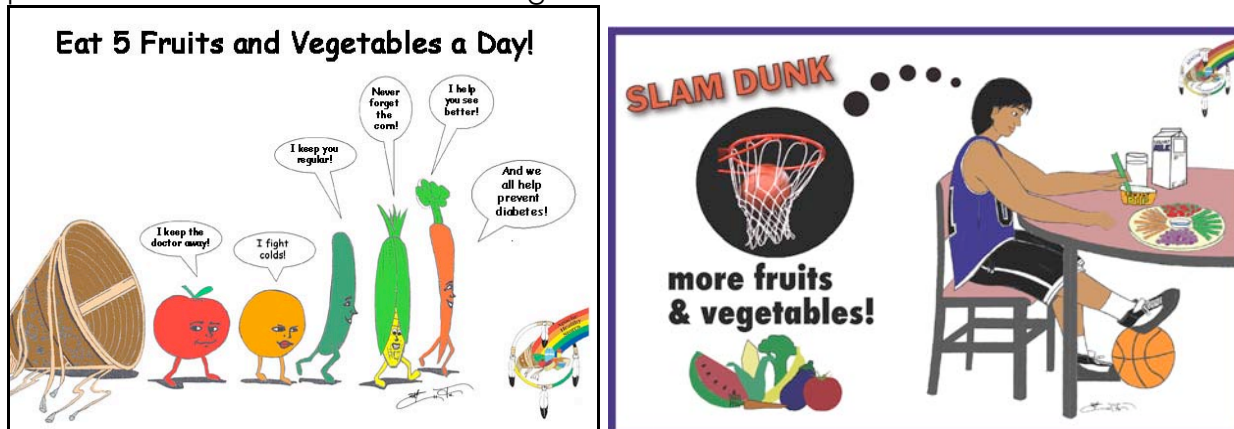
#### Phase 5: Drinking Healthy Beverages

People were encouraged to drink diet instead of regular soda or to choose water. Taste tests of lower fat milks were offered in stores.



#### Phase 6: Shop Wisely and Eat 5 Fruits & Vegetables a Day!

Flyers suggested that people shop with a list to plan to buy healthy items, and that they purchase and eat more fruits and vegetables.

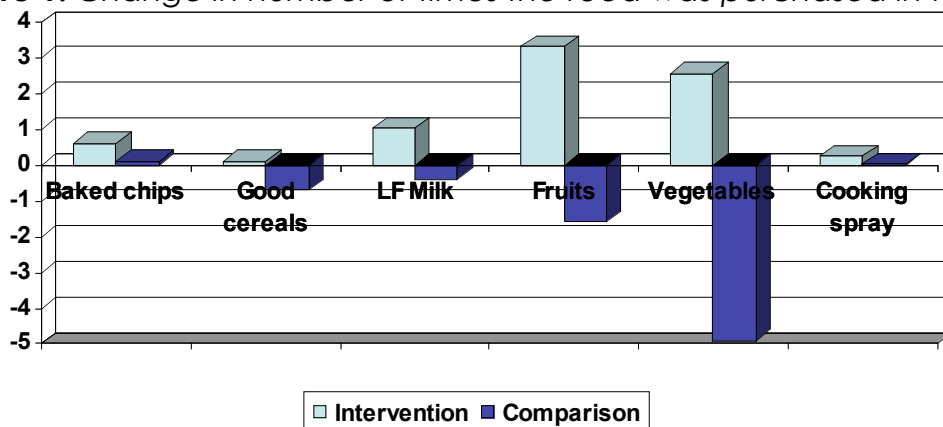


## Results of the Healthy Stores Program

The following data come from 176 respondents that we surveyed both before and after the program took place. Half of the respondents were from areas on the two reservations whose stores received the program (intervention), and half were not (comparison). Looking at these surveys, the trends that we see emerging give us reason to believe that the program was successful in promoting the purchase and consumption of healthier foods.

The surveys were given by locally hired and trained data collectors, and they were developed specifically for use with the Apache population. The surveys measured what kinds of foods people were buying and eating, their knowledge and attitudes about healthy foods, their ability to read shelf labels, and their exposure to the program. Households located close to the stores that had the program were compared to households in outlying Apache communities so that we could be more confident that any differences we measured were because of this program and not some other reason.

**Figure 1:** Change in number of times the food was purchased in the last 30 days.



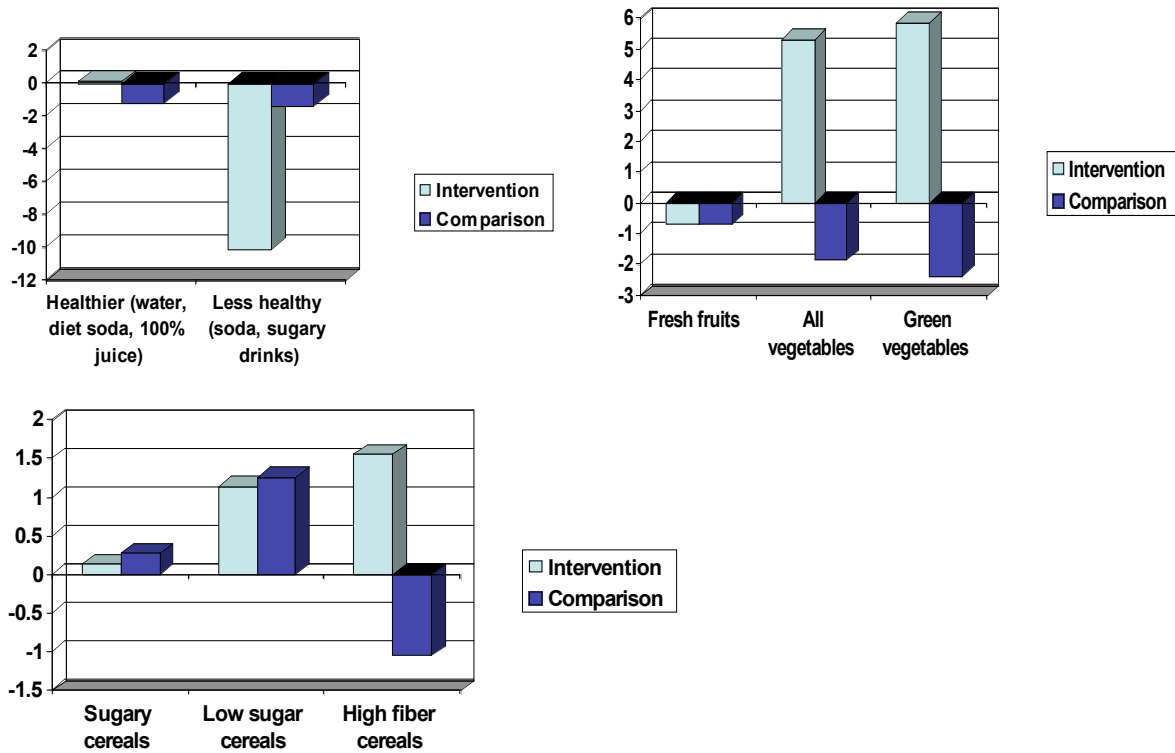
On average, purchasing of healthy foods appeared to increase after the program. In particular, fruits and vegetables were purchased more frequently after the program in households located near the program stores (intervention areas). Though the other differences were small, the trends are all in the direction that we would hope.

In addition to the data we collected on purchasing, Bashas allowed us to view their unit sales data from before and after the program. Using Navajo stores as a comparison, we see that sales of healthy foods (other than low-fat milk) increased more in the Apache stores than in the Navajo stores.

**Table 1:** Bashas Unit Sales Data

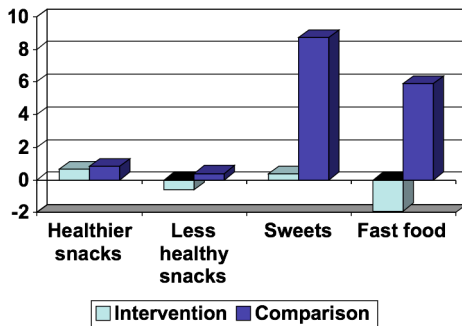
Food	Apache stores	Navajo stores
Cooking spray	+349%	+197%
Pretzels	+137%	+69%
High fiber cereals	+8%	-1%
Low-fat milk	+103%	+176%

**Figure 2:** Change in number of times food was consumed in the last thirty days.



The program appears to have been particularly successful in increasing the consumption of vegetables, high fiber cereals, and in decreasing the consumption of less healthy drinks.

**Figure 3:** Change in number of times food was consumed in the last thirty days.



While we would have hoped that the intervention group would have significantly decreased their consumption of less healthy snacks and fast foods, the surveys suggest that they stayed about the same. Interestingly, the people from the comparison group who did not have the program, increased their consumption of these less healthy foods over the year of the program, which may indicate that in general people are eating less healthy, and perhaps the program helped keep the intervention group's diets from getting worse.

## Sustaining the Program

Our results suggest that the program may have been effective in improving diet in Apache households; however, for these changes to have a meaningful impact on obesity or diabetes, these changes will need to continue over time. When the program was created, our goals were to see whether it would work and to figure out how to best go about doing it. Now our goal is to figure out how to get the program to continue so that it does not simply go away when the funding runs out.

## Community Workshop

Our first step towards figuring out how to make the program sustainable was to host a workshop with other people from the community working on similar issues to try to better understand how this project fits in with current efforts in the community. This workshop took place in October 2005 in Whiteriver. Additional workshops are planned for San Carlos.

## Recommendations from the Workshop

- Raise awareness of the Apache Healthy Stores program.
- Expand the program to all communities on both reservations (this takes away the comparison group but allows for broader community support).
- Work with the community presidents to develop support for the program through communities.
- Cooperate with other local organizations on community events, programs in schools and in sharing materials.
- Explore the formation of a Diabetes Prevention Coalition to better coordinate activities and to collaborate effectively.
- Work directly with Bashas to explore how Apache Healthy Stores activities could be incorporated into existing routines.
- Change program name to Apache Healthy Foods to represent wider goals.

## Contact Us

Please let us know if you have questions or would like more information about the program. As we continue our work, we will release updates from time to time about the progress we have made. You can also view updates about the program at [www.healthystores.org](http://www.healthystores.org).

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