

# ROAD TO A HEALTHY ALABAMA | *Annual Report*

ALABAMA EXTENSION

AT AUBURN UNIVERSITY

## BODY QUEST IN SCHOOLS

An innovative childhood obesity prevention initiative empowers youth and parents to make healthier choices.

## SOCIAL MARKETING

A creative and memorable billboard campaign helps increase appeal for fruits and vegetables.

## PSE EFFORTS IN THIS ISSUE

- Community health initiatives
- Improvements to state and local food and physical activity environments
- Change fostered by 90% of NEP educators



## FOREWORD

The magnitude of accomplishments facilitated by Alabama SNAP-Ed, or NEP, through Auburn University in fiscal year 2016 is phenomenal. Within the past two years, every county served by Auburn Extension NEP has developed “pockets” of powerful progress toward healthier communities and residents made possible by combining evidence-based education and policy, systems and environmental (PSE) strategies. These “pockets” of positive change will expand, and Alabama will emerge as a healthier culture.

One major factor allowing for this rapid movement and shift in culture in Alabama is the comprehensive infrastructure of the Alabama Cooperative Extension System at Auburn University as well as Alabama A&M University. Alabama Extension is uniquely positioned to fulfill NEP requirements because it has the only statewide delivery model in Alabama equipped to provide evidence-based education to citizens in every county, including underserved rural and urban residents. Extension has employees in all 67 Alabama counties; 80 percent are rural counties.

Extension professionals, including 32 NEP Extension educators, are embedded citizens in even the farthest-reaching communities. Due to their unique presence, NEP educators can network throughout the various communities and touch the hardest-to-reach populations. Given that rural locations have greater obesity rates than urban areas, NEP through Auburn University is a direct link to prevent obesity in underserved communities of limited resource individuals.

As a result of the uniqueness of Alabama Extension’s far-reaching opportunities to touch all four corners of Alabama through NEP, our state will not look the same in three years.

**OUR  
STATE  
WILL  
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THREE  
YEARS**

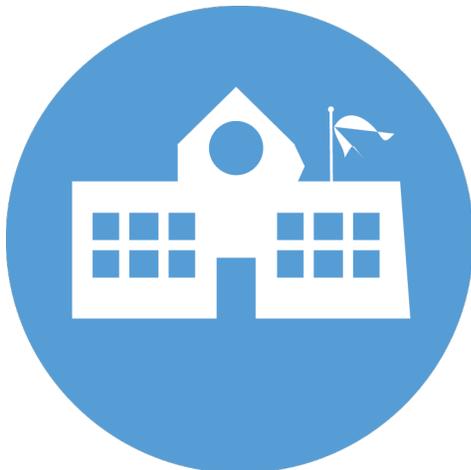
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## SNAP-Ed EFNEP CDC

A Community Partnership in Alabama to Prevent and Reduce Obesity through Policy, Systems, and Environmental Changes

### Alabama Cooperative Extension System Auburn University

Alabama has 14 counties with 40 percent or more adult obesity. A synergistic partnership has been developed with three grants: (1) Supplemental Nutrition Assistance Program-Education, (2) Expanded Food and Nutrition Education Program, and (3) Centers for Disease Control and Prevention. Through the CDC, first-time funding was available for improving food retail and built environments using evidence-based strategies. In addition to providing education, SNAP-Ed and EFNEP implemented and evaluated policy, systems, and environmental changes with an emphasis on limited-resource communities.

SNAP-Ed, EFNEP, and CDC each have separate federal mandates for PSE activities. By coming together and pooling resources, the three groups have improved healthy food access in grocery stores, convenience stores, farmers markets, food banks, community/school gardens, vending machines, and concession stands. Physical activity access has been improved in city parks, school playgrounds, walking trails, bike lanes, and community fitness areas.

### Partnering to Increase Access to Healthy Food and Physical Activity

# Road to



**STEP 1** Build a Community Coalition

**STEP 2** Conduct a Needs Assessment

**STEP 3** Implement Extension Education and Obesity Prevention Strategies: Food Retail and Physical Activity

**STEP 4**

Food and Nutrition Service recommends that Implementing Agencies engage in collaborative opportunities with CDC-funded obesity prevention grant programs. Auburn University SNAP-Ed was one of six Land Grant Universities to receive the first-time CDC three-year grant to Reduce Obesity in High Obesity Areas. The goal is to conduct intervention strategies to increase healthy food access and physical activity by making policy, systems and environmental (PSE) changes.

# a Healthy Lifestyle



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Evaluate and Sustain



This material was funded by USDA's Supplemental Nutrition Assistance Program - SNAP, which provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. USDA is an equal opportunity provider and employer. To find out more, contact a county food assistance office or a county Extension office.

[www.aces.edu/nep](http://www.aces.edu/nep)

The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) is an equal opportunity educator and employer. Everyone is welcome! FCS-2177

[www.aces.edu](http://www.aces.edu)

## FARMERS MARKETS

- ▶ Provide food demonstrations at Headland Farmers Market

## GARDENS

- ▶ Initiate and sustain a series of raised bed gardens at Eufaula Elementary School, Sanford Boys and Girls Club and Chattahoochee Courts Boys and Girls Club

## VENDING MACHINES

- ▶ Provide TA to increase access and appeal of healthy foods in vending machines at Keystone, a poultry plant in Bakerhill, by facilitating adoption of the *Good Choice* initiative, a partnership between the Alabama Department of Public Health and Alabama Extension, to promote healthier items through the use of point-of-decision prompts



## FAITH COMMUNITIES

- ▶ Provide TA to increase access to healthy snacks and resources to educate youth about healthy beverages at a community-wide Vacation Bible School

## FOOD PANTRIES

- ▶ Provide resources to educate families about preparation of foods provided by emergency food assistance sites

## GROCERY STORES

- ▶ Provide TA to increase appeal of healthy foods at Food Fare, a grocery store in Pickens County, by facilitating adoption of the *Good Choice* initiative



A clear road for positive PSE changes in Alabama was created when the CDC grant propelled 14 high-obese counties into the fast lane. Partnerships with SNAP-Ed and EFNEP, cornerstone Extension programs, also were key in boosting success in these high-obese counties.

SNAP-Ed educators in the 14 high-obese counties have made great strides in assessing and reaching the target audience through adopting, implementing, evaluating and sustaining evidence-based strategies. Evidence-based strategies that increase availability and appeal of healthy food and physical activity, supplemented with direct education, is the long-term route for ensuring a road to a healthy lifestyle for all Alabamians.

ENSURING A ROAD TO A HEALTHY LIFESTYLE

## FARMERS MARKETS

- ▶ Provide food demonstrations and facilitate vendor acceptance of SNAP benefits and senior farmers market nutrition program vouchers at farmers markets in Bullock and Macon Counties

## GARDENS

- ▶ Initiate and sustain a network of five high-yielding community gardens in Bullock and Macon Counties
- ▶ Initiate and sustain a network of two row-based gardens at DC Wolfe Elementary School and George Washington Carver Elementary School

## GROCERY STORES

- ▶ Provide TA to increase access and appeal of healthy foods at five grocery stores by facilitating adoption of the *Good Choice* initiative



**DOMINGUEZ HURRY,  
BULLOCK & MACON COUNTIES**

## GARDENS

- ▶ Initiate and sustain a series of raised bed gardens at every elementary school in Lowndes County
- ▶ Provide resources to educate individuals about healthy eating and gardening across multiple age groups (preschoolers and parents at Head Start, elementary youth and middle school students)

## TRAILS

- ▶ Collaborate with the county parks and recreation department to determine feasibility of mile marker signage at county walking trails



**DEMETRIUS SCOTT,  
LOWNDES COUNTY**

**LISA MCCULLOUGH,  
BIBB COUNTY**



## GARDENS

- ▶ Provide food demonstrations and support initiation and maintenance of a demonstration garden at the Bibb County Farmers Market

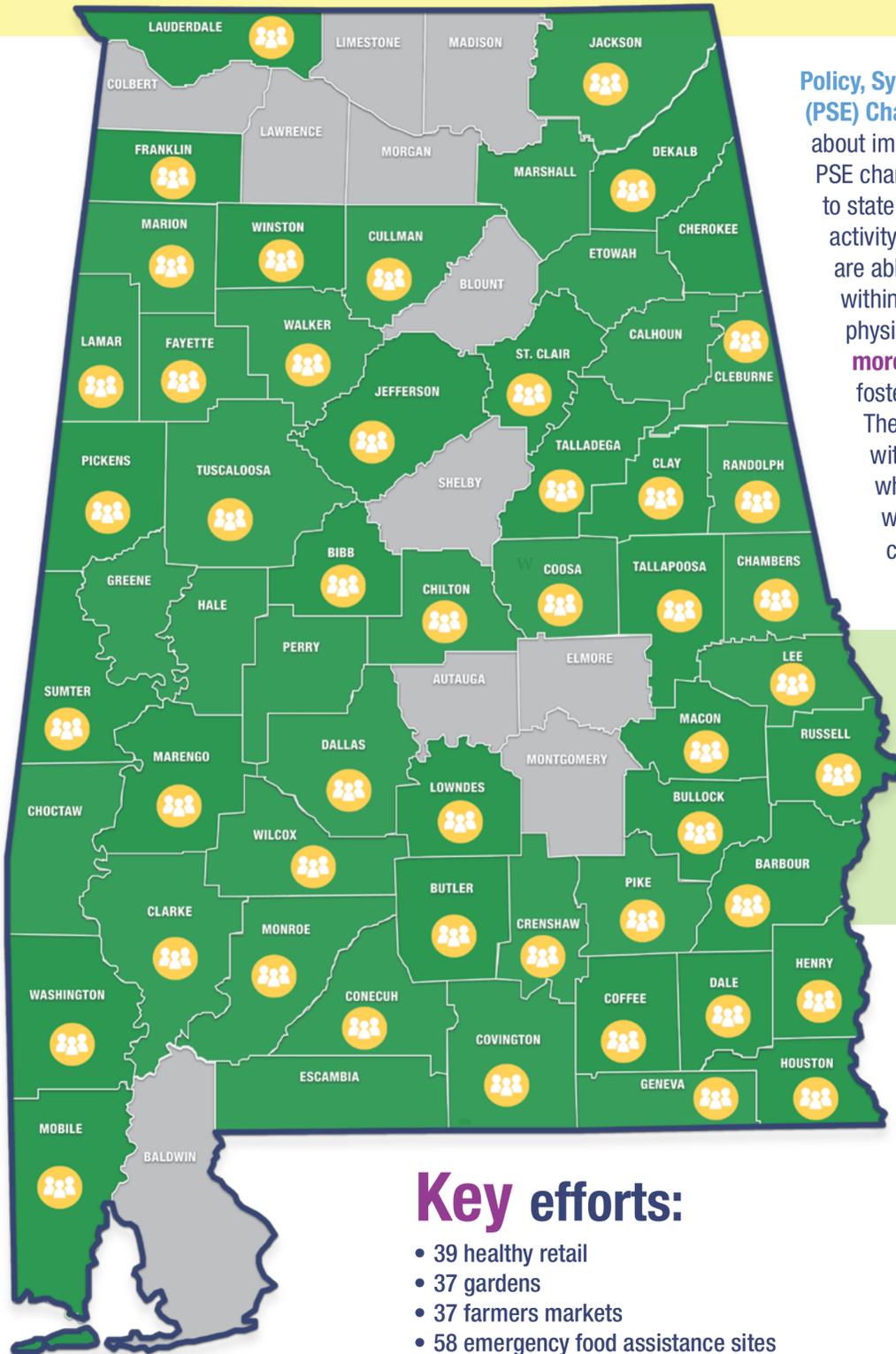
## GROCERY STORES

- ▶ Provide TA to increase access and appeal of healthy foods at Sav-Mor grocery store by facilitating adoption of the *Good Choice* initiative to promote healthier items through development of a healthy checkout lane

## TRAILS

- ▶ Leverage partnerships to enhance three county walking trails by installing lights, exercise equipment and benches

# PSE EFFORTS IN ALABAMA



**Policy, Systems and Environmental (PSE) Change** is a new way of thinking about improving health in the community. PSE changes facilitate improvements to state and local food and physical activity environments where people are able to make healthy food choices within a limited budget and choose physically active lifestyles. In FY16, **more than 90%** of NEP educators fostered at least **one PSE** change. The volume of PSE changes along with the diversity of settings in which these changes occurred will ensure Alabama residents can live well.



**47** counties  
**174** efforts

## Key efforts:

- 39 healthy retail
- 37 gardens
- 37 farmers markets
- 58 emergency food assistance sites
- 3 faith communities

The ultimate goal is to improve the quality of life of the SNAP-Ed population by reducing and preventing obesity. This requires a culture shift and long-term commitment.

\*NEP at Auburn University is not currently available in the following counties: Autauga, Baldwin, Blount, Colbert, Elmore, Lawrence, Limestone, Madison, Montgomery, Morgan and Shelby.

# POLICY, SYSTEMS AND ENVIRONMENTAL CHANGES



Nutrition and other Extension educators work with community partners to make healthy food and physical activity more accessible and appealing. NEP made great strides in FY16 shifting policies, systems and environments in various settings serving low-income individuals eligible to receive SNAP benefits, including healthier retail, edible gardens, farmers markets, emergency food assistance sites and faith communities.

A consistent approach to engage appropriate partners, assess current environments, plan activities to achieve desired outcomes, implement activities, evaluate outcomes, celebrate successes and sustain changes has been adopted by NEP educators.

## LAUDERDALE COUNTY HIGHLIGHT

While most counties in Alabama have adopted at least one PSE effort, many have assembled multi-component PSE efforts in various settings to shift the culture of health in Alabama.

Meagan Taylor, NEP educator in Lauderdale County, partners with organizations in various settings to facilitate multi-component PSE changes to make it easier to live healthy in Lauderdale County.



More optimal placement of **healthy vending options** as well as point-of-purchase prompts for healthy options are central goals of a new partnership with the YMCA of the Shoals. This complements an already long-standing partnership with the YMCA of the Shoals summer meal program where Meagan leads healthy eating and physical activity direct education activities for summer meal program participants.



Increasing SNAP acceptance at the local **farmers market** was a priority of Meagan in her quest to ensure all residents had access to fresh, healthy foods. Signage to increase awareness of vendors accepting SNAP and food demonstrations to increase the appeal of healthy foods were other PSE efforts Meagan implemented at the local farmers market.



Not only were environmental changes to increase access and appeal of healthy foods fostered through a partnership with The Help Center, an **emergency food assistance site** in Lauderdale County, but Meagan also facilitated a systems change. Now, fresh fruits and vegetables are consistently available for food pantry patrons. Meagan supports this fresh produce initiative with surplus produce from the



**Lauderdale County Extension Community Garden**. She recently established a gleaning project in surrounding communities to allow even greater produce availability at the food pantry. To increase appeal of the healthy foods at the food pantry, Meagan conducts weekly food demonstrations using food available at the pantry. She demonstrates healthy, easy ways to prepare the foods.

Implementing multi-component PSE changes in various settings in Lauderdale County will ensure residents in northwest Alabama understand the importance of healthy eating and physical activity and have access to opportunities to adopt these healthy habits.



Healthier retail initiatives prompting environmental and promotional changes increased availability and appeal of healthy foods in **19 Alabama counties**.



Environmental changes involving edible gardens increased availability and appeal of healthy foods in **23 Alabama counties**.



Policy, systems and promotional changes at farmers markets increased availability and appeal of healthy foods in **30 Alabama counties**.



Promotional changes at emergency food assistance sites increased appeal of healthy foods in **28 Alabama counties**.



Changes in menus for snacks and beverages increased availability of healthy foods at **3 Vacation Bible School programs**.



**Emergency Food Assistance Sites:** Recipe cards alongside inclusion of fresh produce make living healthy easier for those accessing food at emergency food assistance sites in Lauderdale County.

# HEALTHIER RETAIL



NEP educators facilitated adoption of **39 healthier retail** initiatives in **19 Alabama counties** reaching more than **20,000 residents each day**.

Environmental and promotional changes were adopted by partnering with local champions at grocery stores, convenience stores, organizations maintaining vending machines, concession areas and school environments.

Environmental changes included improvements in product placement to increase appeal of healthy foods. Promotional changes included point-of-purchase prompts encouraging purchase of products meeting the Alabama Department of Public Health *Good Choice* criteria.



**Healthier Retail:** Increased availability of healthy snacks and point-of-purchase prompts are making the good choice the easy choice in convenience stores in Marengo County.

Marengo County NEP educator, Tammy Glass, partnered with an owner of **4 local convenience stores** to increase access and appeal of healthy food in Marengo County. More than **2,500 residents** shop at these stores each day. Tammy Glass completed *Good Choice* assessments at each of these stores and found limited items meeting the *Good Choice* criteria. Packaged snack products were added to the inventory and moved to a high traffic area in the stores. Signs, stickers and educational information were placed at the point-of-purchase. Similar strategies were used for bottled water in the cooler area. Additional changes near the checkout included a cooler wrapped in the *Good Choice* logo holding fresh, cut fruit and other healthy chilled items and a three-tiered basket featuring *Good Choice* snack items. Positive feedback from the store owner and consumers allows for continued success in these stores and many others throughout Alabama.

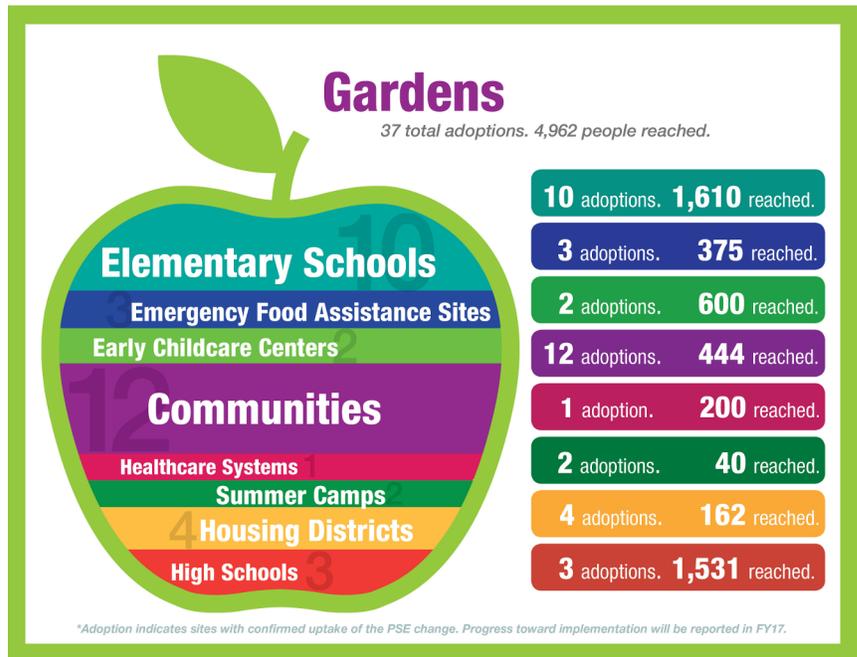
## MARENGO COUNTY HIGHLIGHT



NEP educators facilitated adoption of **37 raised bed or row edible garden** initiatives in **23 Alabama counties** providing access to healthy foods for almost **5,000 residents**. Environmental changes were adopted by partnering with local champions in communities, housing districts for limited resource families and seniors, emergency food assistance sites, healthcare systems, summer camps, early childcare centers, elementary schools and high schools. These changes included establishing new gardens, reinvigorating current gardens and maintaining existing garden efforts. Produce was distributed across multiple avenues, including provision to residents or volunteers, preparation for individuals served by the setting and donation to emergency food assistance sites.

## MACON COUNTY HIGHLIGHT

Macon County NEP educator, Dominguez Hurry, partnered with George Washington Carver (GWC) Elementary School, Alabama Agricultural Development Authority and the State of Alabama Department of Agriculture and Industries to increase availability and appeal of healthy food at a school garden in Macon County. GWC Elementary School has an enrollment of 468, with 100% of students receiving free lunch from the School Lunch Program. More than 100 third grade students at GWC Elementary School planted, tended, harvested and enjoyed **500 pounds of strawberries** from their school garden in Spring 2016, which would equal almost \$1,500 if these strawberries had been purchased from a grocery store. Students spent an hour a week working in the garden and learning about plasticulture, a horticultural practice that reduces water loss, insects and weeds. Dominguez Hurry provided nutrition education for an additional 45 minutes per week using the obesity prevention curriculum, Body Quest. Third graders shared their harvest with other classes, families and friends.



**Gardens:** Third grade students at George Washington Carver Elementary School in Macon County, planted, tended, harvested and enjoyed 500 pounds of strawberries from their school garden.

# FARMERS MARKETS



NEP educators facilitated adoption of **37 farmers market** initiatives in **30 Alabama counties** reaching more than **5,000 residents each week**. Policy, systems and promotional changes were adopted by partnering with local champions. Policy changes included addition of locations, adaptation to locations

and improvements in days and hours of operation to increase access of healthy foods. Systems changes entailed implementing trainings to support vendor acceptance of SNAP benefits, which resulted in expansion of the number of vendors accepting SNAP at farmers markets. A promotional change included installation of signage to increase awareness of the addition of vendors accepting SNAP benefits. Other promotional changes included food demonstrations and family-friendly education materials to increase awareness of preparation and uses of fresh produce.

Chambers County NEP educator, Angie Woods, partnered with Alabama Extension leaders, the Chambers County Community Coalition sponsored by ALProHealth and many organizations in the county to launch the LaFayette Farmers Market in FY16. The Saturday morning market was established using the expertise of the Farmers Market Authority. Another key partner, the Chambers County Recreation Board, provided a shady, accessible, visible space to host the Market. Grant funding purchased canopies and tables for the Market, while the Chambers County Cattleman's Association volunteered to store these materials. Angie Woods implemented food demonstrations, family-friendly recipes and other educational materials as promotional activities for the market. Future priorities include increasing SNAP acceptance at the farmers market.

## CHAMBERS COUNTY HIGHLIGHT



**Farmers Markets** (above): Signage to increase awareness of vendors accepting SNAP benefits was a key promotional change at the Lauderdale County Farmers Market in FY16.

**Farmers Markets** (right): Chambers County launches the LaFayette Farmers Market in FY16 with support from many partnering organizations.



## EMERGENCY FOOD ASSISTANCE SITES

### Emergency Food Assistance Sites

58 total adoptions. 12,260 people reached.



22 adoptions. 1,790 reached.

30 adoptions. 10,150 reached.

2 adoptions. 100 reached.

1 adoption. 20 reached.

3 adoptions. 560 reached.

\*Adoption indicates sites with confirmed uptake of the PSE change. Progress toward implementation will be reported in FY17.



There is no greater immediate need than hunger. NEP educators recognize this,

especially in high-need, high-poverty counties. To fulfill this immediate need with access to healthy foods, NEP educators facilitated adoption of

**58 emergency food assistance site** initiatives in **28 Alabama counties** reaching more than **12,000 residents**. NEP educators provided strategic focus in this particular setting to ensure immediate needs of the population were met.

Promotional changes were

adopted by partnering with local champions providing emergency food assistance through food pantries, soup kitchens, emergency backpacks, summer feeding and after school feeding. Promotional changes included point-of-distribution prompts, such as food demonstrations and family-friendly educational materials and recipes, to increase awareness of preparation and uses of healthy items provided at emergency food assistance sites.

## HOUSTON COUNTY HIGHLIGHT

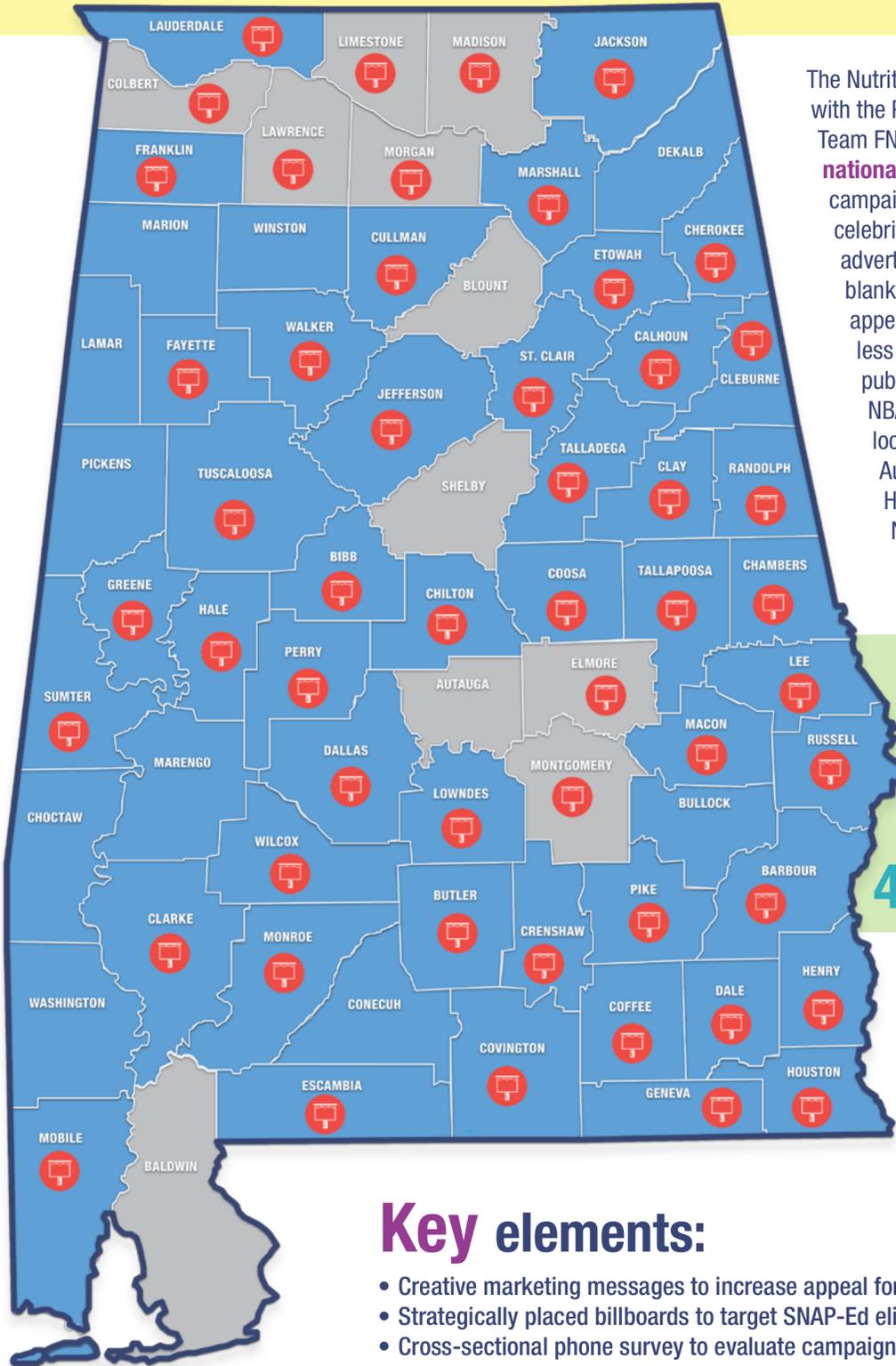
Trina Walker, Houston and Dale Counties NEP educator, partners with the Wiregrass Area United Way Food Bank to increase access and appeal of healthy foods in Houston, Henry, Dale, Coffee, Geneva and Barbour counties. More than **1,620 residents** in this six county area receive emergency food provisions from the Food Bank. Trina Walker was an invited speaker to the annual volunteer's banquet, a mandatory meeting for agencies partnering with the Food Bank. Trina Walker introduced resources she provides at the Food Bank as well as the potential support she can provide agencies partnering with the Food Bank to the **400 representatives** attending the banquet. This presentation led to multiple partnerships extending both the Food Bank and NEP's influence in Houston County. Wiregrass Resource Conservation and Development will soon partner with the Food Bank to supply fresh produce from their gardens. Mary Hill Family Service Center will soon offer fresh produce as a consistent component of the senior brown bag program. Systems and environmental changes will ensure fresh fruits and vegetables are accessible and appealing to Food Bank patrons in the Wiregrass area.



**Emergency Food Assistance Sites:** Trina Walker, Houston and Dale Counties NEP educator, partners with Wiregrass Area United Way Food Bank to increase access and appeal of fresh produce for more than 1,620 residents in the six county area.

# BILLBOARDS STATEWIDE

FY  
16



The Nutrition Education Program collaborated with the Partnership for a Healthier America's Team FNV (Fruits & Veggies) to bring a **nationally recognized** social marketing campaign to Alabama. Billboards featuring celebrity spokespersons and witty advertisements for fruits and vegetables blanketed the state in an effort to create appeal for produce, in the same way less healthy foods are marketed to the public. Billboards featured Steph Curry, NBA's 2015 Most Valuable Player and local favorite, Cam Newton, former Auburn University quarterback, 2010 Heisman Trophy winner and 2016 NFL Most Valuable Player.



**53** counties  
**73** billboards  
**47M** impressions

Billboards were strategically placed near Body Quest and other SNAP-Ed eligible schools to ensure the messages reached parents and children in low-income and rural communities across the state.

## Key elements:

- Creative marketing messages to increase appeal for fruits and vegetables
- Strategically placed billboards to target SNAP-Ed eligible Alabamians
- Cross-sectional phone survey to evaluate campaign reach and effectiveness

\*NEP at Auburn University is not currently available in the following counties: Autauga, Baldwin, Blount, Colbert, Elmore, Lawrence, Limestone, Madison, Montgomery, Morgan and Shelby.

# The Washington Times

Healthy eating campaign features Cam Newton on billboards.

By ASSOCIATED PRESS



Coming to a billboard near you: Cam Newton, fruits and vegetables  
-AL.com

Billboards featuring one of Auburn's most famous faces are popping up across the state as part of a campaign to encourage healthy eating.  
-Daily Reporter

Cam says: Eat your fruits and veggies. New healthy eating campaign features NFL quarterback, former Tiger.  
-Opelika- Auburn News

NFL MVP Cam Newton promotes fruit and veggies in Alabama campaign.  
-Akron Beacon Journal

NFL MVP Cam Newton and NEP say "Eat More Fruits and Vegetables"  
-Alabama News

Alabama SNAP-Ed's three implementing agencies (Auburn University NEP, Alabama A&M University UNEP and Alabama Department of Public Health) and the Partnership for a Healthier America's Team FNV (Fruits & Veggies) partnered in a pilot project to reach all corners of the state with positive messages about fruits and vegetables. The campaign ran for 12 weeks, from January to March of 2016. For the first 6 weeks, billboards featured Steph Curry, NBA's 2015 Most Valuable Player and Golden State Warriors' point guard. The last 6 weeks, billboards featured local favorite, Cam Newton, former Auburn University quarterback, 2010 Heisman Trophy winner and 2016 NFL Most Valuable Player. Both celebrities are partners of Team FNV, which works to increase appeal for fruits and vegetables through creative marketing techniques.

The campaign included **73 billboards** placed in **53 counties**; 79% of which are classified as rural. Billboards generated approximately **47,198,556 impressions, or views**, during the 12-week campaign. Such a unique, widespread campaign generated great excitement across the state and garnered attention in local and national media. Nutrition Education Program state leaders were interviewed for both print and television news and the stories were shared rapidly by at least 45 other news sources nationwide. Public interest in the campaign was made evident on social media, where stories featured on The Alabama Cooperative Extension System Facebook page reached **10,858 people**.

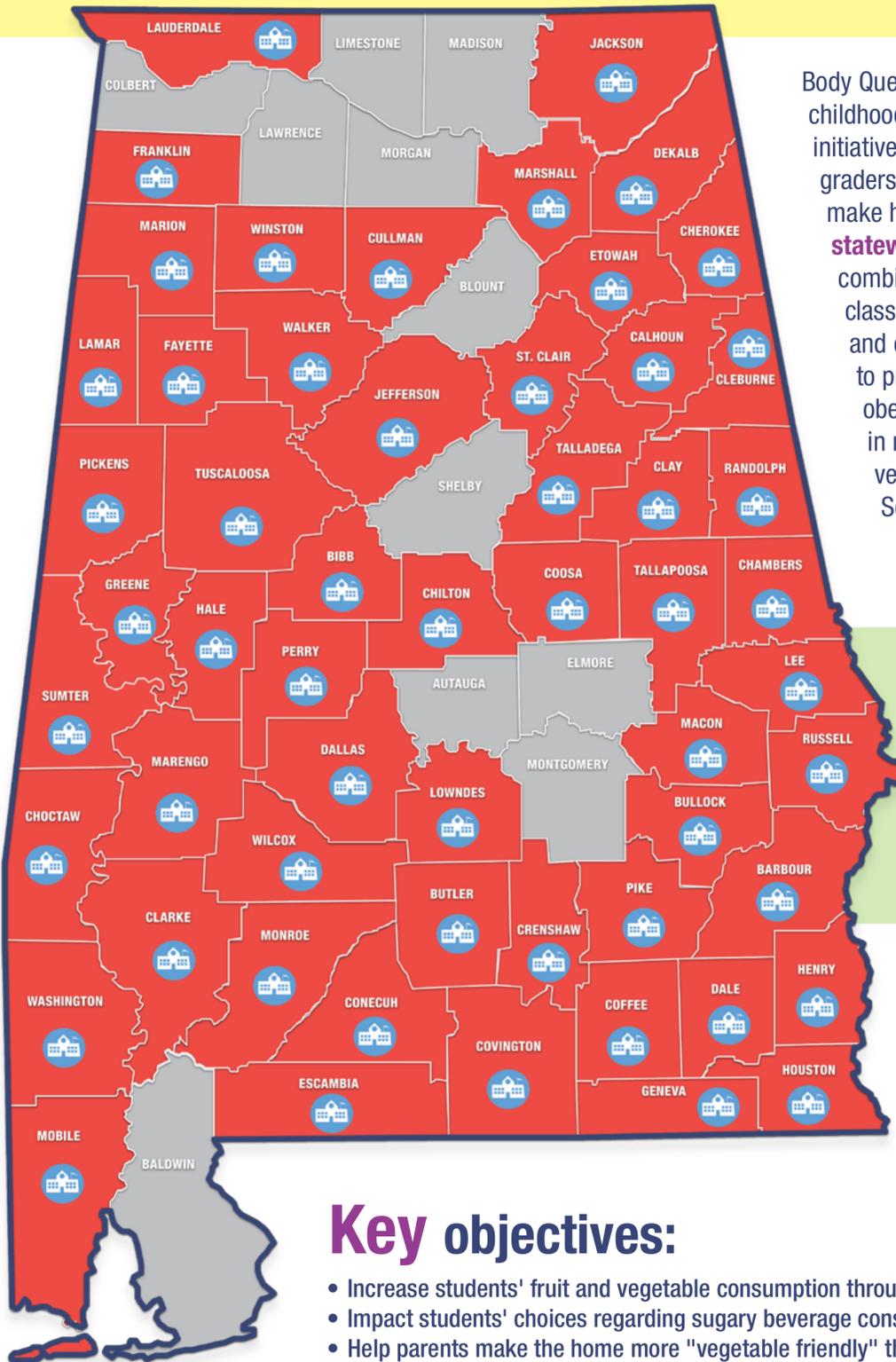
A cross-sectional phone survey was conducted with adults (n = 962) living in communities where billboards were posted. Of these individuals, 1 in 3 people recalled seeing a billboard.



For both messages, 1 in 3 people who recalled seeing a billboard reported that they ate more fruits and vegetables since seeing a billboard. Furthermore, 77.6% of those who recalled seeing a billboard reported that they were seriously considering eating more fruits and vegetables in the future. This campaign is part of a comprehensive effort to change local and statewide policies, systems and environments to make healthy eating more desirable and attainable.

# BODY QUEST IN SCHOOLS

FY  
16



Body Quest is an innovative childhood **obesity prevention** initiative that empowers third graders and their parents to make healthier choices. This **statewide effort** employs a combination of theory-driven classroom instruction, technology and evidence-based approaches to prevent and reduce childhood obesity. Third graders are energized in new ways to eat fruits and vegetables offered through the School Lunch Program.



**56** counties  
**112** schools  
**352** classes

Momentum continues into the home environment through simple, fun and action-oriented parent participation, setting Body Quest apart as an exemplary multi-level intervention.

## Key objectives:

- Increase students' fruit and vegetable consumption through the School Lunch Program
- Impact students' choices regarding sugary beverage consumption and physical activity
- Help parents make the home more "vegetable friendly" through recipe preparation
- Motivate parents to make positive changes through text message reminders

\*NEP at Auburn University is not currently available in the following counties: Autauga, Baldwin, Blount, Colbert, Elmore, Lawrence, Limestone, Madison, Montgomery, Morgan and Shelby.

## BODY QUEST MAKES A DIFFERENCE

Year after year, thousands of third graders across Alabama take charge of their health while participating in NEP's flagship obesity prevention initiative, Body Quest (BQ). This innovative and effective youth initiative brings technology and healthy snacks into low-income schools as part of a 15-week intervention that empowers youth to make better food and drink choices and be more physically active.

The curriculum consists of a battery of interactive, colorful and

anime-style materials including seven nutrition iPad apps that allow youth to be reached and energized in new ways.

All materials are based on the Experiential Learning Theory, behaviorally-focused and developmentally appropriate. [www.BodyQuest.aces.edu](http://www.BodyQuest.aces.edu)

During the 2015-2016 school year, 32 Extension nutrition educators provided 15 weekly, 45-minute BQ classes to third graders (n = 5,581) in SNAP-Ed eligible schools with more than 50% of students receiving free and reduced lunch. During intervention with treatment students (n = 3,105), educator-led lessons were alternated with iPad app reinforcement lessons. Vegetable tastings were an integral piece of each BQ class, offering repeated exposure to raw versions of vegetables offered through the School Lunch Program (SLP).

Control students (n = 2,476) participated in all assessments, but received delayed intervention after the treatment period ended.

In FY16, evaluation of BQ included two validated measures of behavior change. The What's for Lunch (W4L) assessment measured primarily vegetable consumption defined as students' self-reports of eating the portion of each food provided by SLP for five consecutive days. The iChallenge assessment measured multiple childhood obesity prevention predicting factors related to nutrition and physical activity. Data were analyzed using t-tests and chi-square tests.

Results show significant differences among treatment students from pre- to post-assessment and compared to control students in the following obesity prevention predictors:

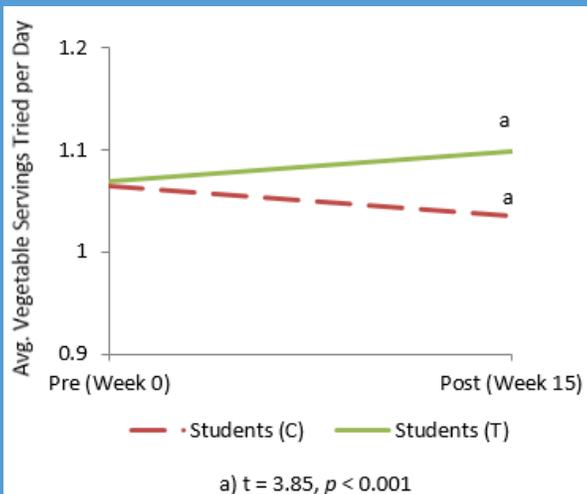
1. EATING MORE FRUITS AND VEGETABLES
2. DRINKING FEWER SUGARY BEVERAGES
3. MOVING MORE
4. LESS TV TIME



Body Quest third graders at Lola Roberts Elementary School in St. Clair County learn how to make healthy snacks with Fiberlicious, one of six BQ Warriors.

# BODY QUEST: FOOD OF THE WARRIOR

**TABLE 1: SCHOOL LUNCH PROGRAM: VEGETABLE CONSUMPTION OF BODY QUEST STUDENTS AT PRE- AND POST-ASSESSMENT**

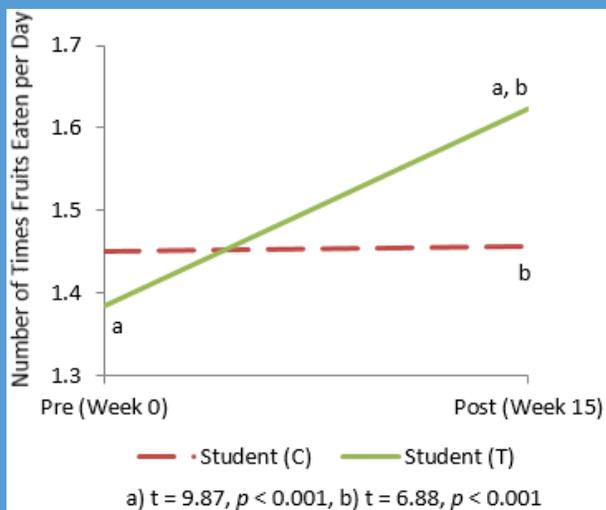


At the end of BQ, W4L data in Table 1 show treatment students consumed more vegetables offered through SLP than control students ( $t = 3.85, p < 0.001$ ). Notably, for the second year in a row, control students ate less of the offered vegetables at the end of 15 weeks with no BQ intervention. Findings support that BQ is not only beneficial, but necessary, to motivate students to continue to eat vegetables offered through SLP.

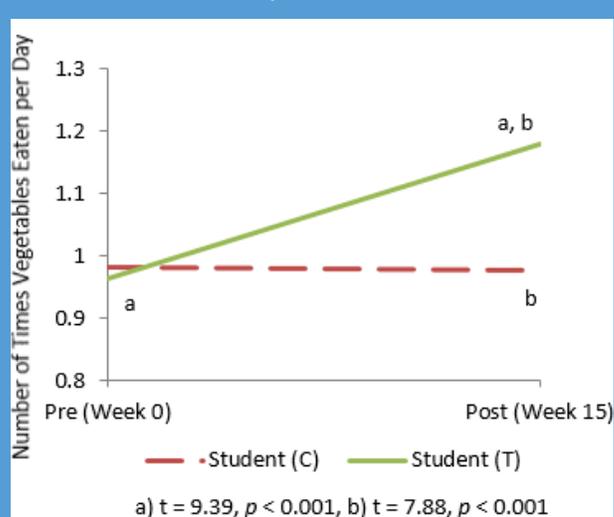
**BODY QUEST STUDENTS EAT FRUITS AND VEGETABLES**

The iChallenge measured student reports of daily fruit and vegetable intake, not just those consumed through SLP. At the end of BQ, treatment students reported significant increases in the number of times fruits (Table 2) and vegetables (Table 3) were eaten each day compared to before BQ (fruits:  $t = 9.87, p < 0.001$ ; vegetables:  $t = 9.39, p < 0.001$ ) and compared to control students (fruits:  $t = 6.88, p < 0.001$ ; vegetables:  $t = 7.88, p < 0.001$ ).

**TABLE 2: DAILY FRUIT INTAKES OF BODY QUEST STUDENTS**



**TABLE 3: DAILY VEGETABLE INTAKES OF BODY QUEST STUDENTS**



## ASA RESULT OF BODY QUEST

third graders made positive behavior changes in four identified obesity prevention predictors:

- (1) **increased fruit and vegetable consumption,**
- (2) **decreased sugary beverage consumption,**
- (3) **increased physical activity,** and (4) **decreased television time.**

These findings support current recommendations for obesity prevention and document the continued success of BQ as an effective childhood obesity prevention initiative.

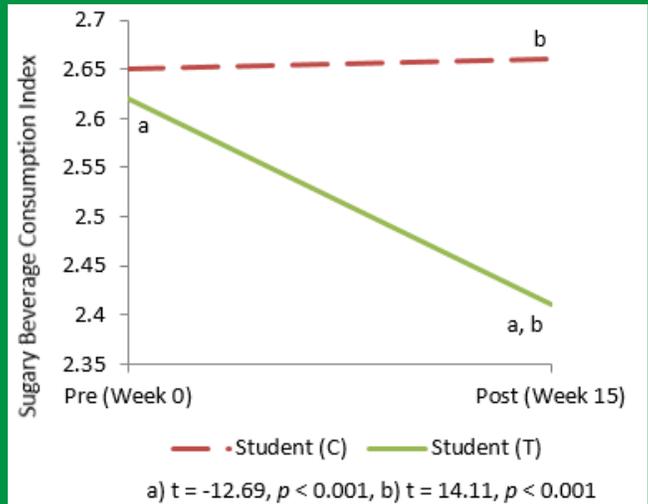
# BODY QUEST: FOOD OF THE WARRIOR

**BODY QUEST STUDENTS DRINK FEWER SUGARY BEVERAGES**

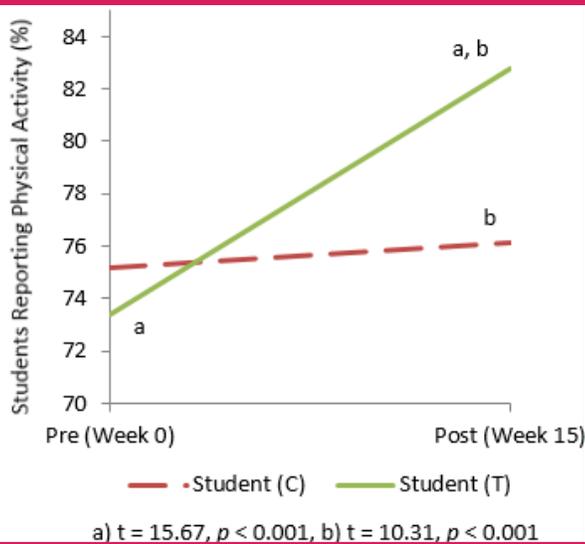
At the end of BQ, treatment students consumed fewer sugary beverages like soda, sports drinks, fruit-flavored drinks and sweet tea. As illustrated in Table 4, treatment students reported a significant decrease in consumption of sugary beverages from pre- to

post-assessment ( $t = -12.69, p < 0.001$ ). In addition, sugary beverage consumption was significantly lower in treatment students at post assessment compared to control students ( $t = 14.11, p < 0.001$ ).

**TABLE 4: SUGARY BEVERAGE CONSUMPTION OF BODY QUEST STUDENTS**



**TABLE 5: PHYSICAL ACTIVITY INDEX OF BODY QUEST STUDENTS**



At the end of BQ, the percentage of treatment students reporting participation in general physical activity, activities or sports that increased their heart rates and being active with their families significantly increased compared to before BQ ( $t = 15.67, p < 0.001$ ) and compared to control students ( $t = 10.31, p < 0.001$ ).

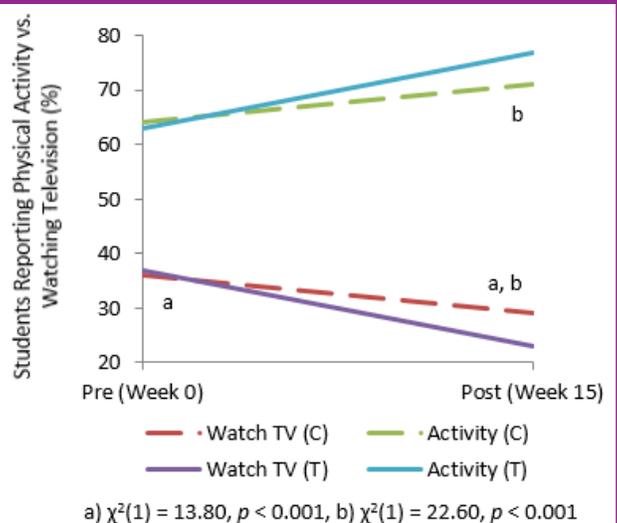
**BODY QUEST STUDENTS ARE PHYSICALLY ACTIVE**

**BODY QUEST STUDENTS CHOOSE PHYSICAL ACTIVITY OVER WATCHING TELEVISION AFTER SCHOOL**

At the end of BQ, treatment students chose to walk, run or play sports rather than watch television after school. Table 6 illustrates that for treatment students, television watching decreased at a significantly greater rate than for control students ( $\chi^2(1) = 13.80, p < 0.001$ ). At the end of BQ, more

treatment students were physically active after school and fewer treatment students watched television after school compared to control students ( $\chi^2(1) = 22.60, p < 0.001$ ).

**TABLE 6: AFTER-SCHOOL ACTIVITY OF BODY QUEST STUDENTS: PHYSICAL ACTIVITY VS. WATCHING TELEVISION**



# BODY QUEST MILESTONES

SONDRA PARMER, PROGRAM COORDINATOR,  
NUTRITION EDUCATION PROGRAM

"Our data show that kids eat **MORE** fruits and vegetables as a result of BQ. In addition, actions recommended in other current research, such as parental modeling, taste testing and discussion, are all included in BQ. Looks like we have a stellar program in Alabama!"

**MARSHA LEE, THIRD GRADE TEACHER  
AT LYEFFION JR. HIGH SCHOOL,  
CONECUH COUNTY**

"My students are constantly talking about BQ. Each week, I have them journal their experiences. The children always write about the meals they prepare with their families. A program like this is **essential and fun!**"

**CHASITY LITTLE, NEP EDUCATOR,  
JACKSON & DEKALB COUNTIES**

"One of the teachers in my BQ classes told me the third graders in her class **REQUESTED** spinach and ranch dressing for a snack at a school party."

Since parents are the gatekeepers of good nutrition in the home, shopping behaviors have a major impact on availability of healthy foods for children.

At the end of BQ, treatment parents reported increases in healthy shopping behaviors compared to before BQ.

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The effectiveness of BQ is not limited to the classroom. Parents of BQ students (n = 5,440) participated as "recipe testers" to improve the home environment by modeling healthy behaviors and making the home more "vegetable friendly."

During the BQ treatment period with students, treatment parents (n = 2,890) simultaneously received a series of 6 inexpensive, easy-to-prepare vegetable recipes to test with their children at home. Parents also received educational materials such as BQ Family Discussion Prompts for tips on talking about health with their children and BQ Family Activity Calendars for tracking family physical activity. Control parents (n = 2,550) participated in assessments, but received delayed intervention after the treatment period ended.

Written pre- and post-assessments were sent home to parents and collected by NEP educators at school. Assessments measured national SNAP-Ed evaluation indicators in three major areas important to obesity prevention and improving the home environment:

- (1) Food Resource Management,
- (2) Healthy Eating and
- (3) Physical Activity.

**BODY QUEST  
PARENTS SHOP  
SMART FOR  
HEALTHY FOODS**

**BODY QUEST  
REACHES  
PARENTS TOO!**

## BQ SHOPPING BEHAVIORS

**80% INCREASED MEAL PLANNING**

**80% INCREASED SHOPPING WITH  
A GROCERY LIST**

**80% INCREASED COMPARING PRICES  
BEFORE BUYING FOOD**

**29% INCREASED BUYING FOODS  
WITH LESS SALT**

**26% INCREASED BUYING  
LOW-FAT DAIRY PRODUCTS**

**23% INCREASED BUYING FOODS  
WITH LESS SUGAR**

## BODY QUEST: FOOD OF THE WARRIOR

### BODY QUEST PARENTS MAKE HEALTHY FOOD CHOICES

Body Quest parents were asked about daily fruit and vegetable intake and snacking habits. At the end of BQ, treatment parents reported a significant increase in daily vegetable intake compared to before BQ ( $t = 5.88, p < 0.001$ ). In addition, BQ parents model healthy snacking behaviors for their children by choosing fruits and vegetables. At the end of BQ, treatment parents reported significant increases in eating fruits and vegetables as snacks compared to before BQ ( $t = 3.48, p < 0.001$ ) and compared to control parents ( $t = 4.32, p < 0.001$ ).

Body Quest parents understand the importance of spending time with their children engaging in physical activity. At the end of BQ, treatment parents reported a significant increase in family physical activity compared to before BQ ( $\chi^2(1) = 21.504, p < 0.001$ ).

### BODY QUEST PARENTS ARE PHYSICALLY ACTIVE

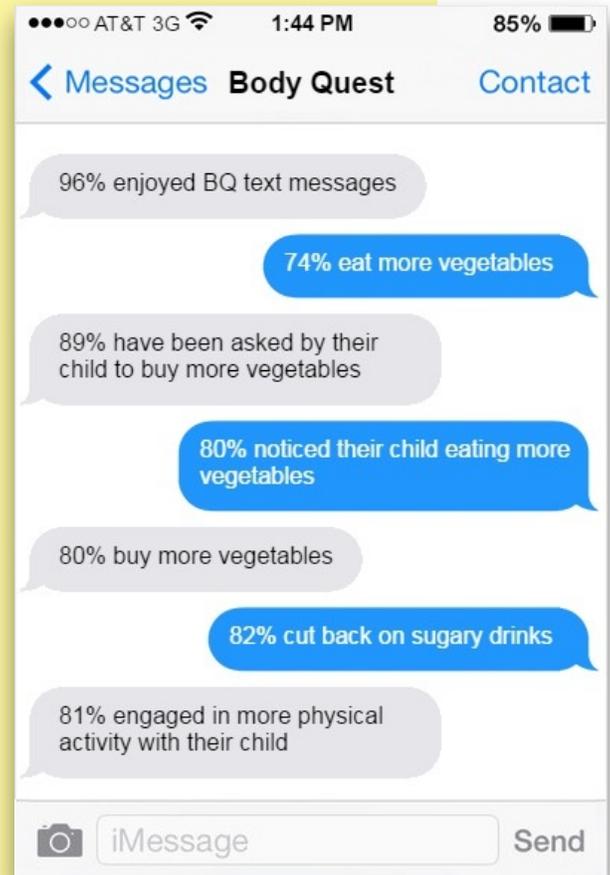
## TEXT MESSAGING ENGAGED PARENTS TO MAKE A CHANGE

A texting initiative kept parents motivated to make the recipes and to make positive changes in personal eating, shopping and physical activity practices. Text messages were sent to parents' cell phones 3 times each week with nutrition information, tips and action prompts. Texting has proven to be a successful method of reaching parents with limited resources because it overcomes typical barriers (time, transportation, and motivation) that parents face with nutrition programs by using technology that is already integrated into daily life. In a post-survey texting poll, treatment parents were asked to text responses to a series of questions. Over 53% of parents participated in the poll.

Parents could voluntarily opt out of the texting portion of BQ at any time, but 80% chose to continue receiving texts for the entire course of the study. Even three months after the final survey question was sent, 59% of parents chose to continue receiving text messages. Many parents texted positive feedback throughout BQ. Here is a favorite:

**"SINCE RECEIVING THE TEXT MESSAGES, I'VE LOST TWENTY POUNDS! BODY QUEST HAS TRULY TOUCHED ME."**

Research consistently shows the difficulty of reaching parents with nutrition education and obesity prevention messages and impacting the home environment. Parents, particularly those with limited resources, have many barriers to participating in and benefiting from school-based interventions. The success of the BQ parent initiative can be attributed, at least in part, to the success of the text messaging education.



# NUTRITION EDUCATION PROGRAM ACCOMPLISHMENTS FY 2016

## REFEREED JOURNAL ARTICLES

- ▶ Struempfer B, Parmer SM, Funderburk KM. 2016. Use of blended learning to improve nutrition knowledge in third graders. *Journal of Nutrition Education and Behavior*: 48: 510-512.
- ▶ Parmer SM, Struempfer B, Griffin JB, Funderburk KM. 2015. Impact of Body Quest: Food of the Warrior on key indicators for childhood obesity prevention. *Austin Journal of Pediatrics*: 2: 1019-1025.

## MAJOR HONORS AND AWARDS

- ▶ National Extension Association of Family and Consumer Sciences, National 2<sup>nd</sup> Place, Southern Region 1<sup>st</sup> Place and Alabama Affiliate 1<sup>st</sup> Place, Florence Hall Award, *Body Quest Parent Initiative: Preventing Childhood Obesity through Effective Extension Parent Nutrition Education*, 2016.
- ▶ National Extension Association of Family and Consumer Sciences, Southern Region 3<sup>rd</sup> Place, Alabama Affiliate 1<sup>st</sup> Place, Community Partnership Award, *The Alabama Healthy Retail Initiative*, 2016.

## GRANT PROPOSAL FUNDED

- ▶ SNAP-Ed Nutrition Education Program. U.S. Department of Agriculture, Food and Nutrition Service. \$5,318,458. Project period October 2016-September 2017.

## NATIONAL RECOGNITION

- ▶ Tripp S, Helwig R, Simkins J (2016). Alabama: Body Quest. Page 36. *SNAP-Ed FY2015: Supplemental nutrition assistance program education through the land-grant university system*. Report prepared by TEconomy Partners, LLC.
- ▶ Heiser C. (2016). National Health Outreach Conference. *Success stories and lessons learned from the CDC's partnership with land grant university Extension services to reduce obesity in high risk areas*.
- ▶ Center for Wellness and Nutrition, Public Health Institute. (2016). *Southeast learning community success stories*: Report prepared for Centers for Disease Control and Prevention, Cooperative Agreement Number 6NU38OT000203-04-05.

## NATIONAL PRESENTATIONS

- ▶ National Extension Association of Family and Consumer Sciences. Presentation: *Text messaging technology as a mode of delivery for nutrition interventions*.
- ▶ National Extension Association of Family and Consumer Sciences. Poster: *SNAP-Ed, EFNEP and CDC: A community partnership in Alabama to prevent obesity through policy, systems and environmental changes*.

## MEET THE AUBURN UNIVERSITY NUTRITION EDUCATION PROGRAM TEAM

Aisha Martin, St. Clair

Angie Woods, Randolph and Chambers

Annette Casteel, Winston and Franklin

Bernadine Ransom-McCaskill, Mobile

Carolyn Rothschild, Monroe and Wilcox

Chasity Little, Jackson and DeKalb

Cheri Huff, Tuscaloosa

Debbie Beverly, Conecuh and Covington

Demetrius Scott, Butler and Lowndes

Desiree Hutcherson-Bates, Jefferson

Dominguez Hurry, Bullock and Macon

Emma Thornton, Cullman and Marshall

Emily Hines, Marion and Walker

Erin Reznicek, Pickens and Sumter

Gina White, Washington and Clarke

Gladys Blythe, Dallas and Perry

Helen Melton, Hale and Greene

Kathleen Sharp, Mobile

Jenna Mayfield, Lamar and Fayette

Lisa McCullough, Chilton and Bibb

Lisa Wood, Pike and Crenshaw

Mary Shewmaker, Cherokee and Cleburne

Meagan Taylor, Lauderdale

Meaghan Robertson, Clay and Talladega

Meaghanne Thompson, Calhoun

Sheila Dorriety, Geneva and Coffee

Sue Pemberton, Tallapoosa and Coosa

Tammy Glass, Marengo and Choctaw

Tawnya Kirkland, Henry and Barbour

Trina Walker, Houston and Dale

Velma Dowdell, Lee and Russell

Verina Barrs, Etowah

### AS A NEP EDUCATOR, SUCCESSSES COME IN MANY DIFFERENT WAYS.

A young person can talk about how much

they enjoy nutrition classes. Parents may share testimonials that children are insisting the family eats a certain vegetable instead of chips. However, some successes are so long term that the impact is beyond our generation. But any successes, however small or large, are the ones that bring about the culture change that NEP is striving to achieve.



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## NUTRITION EDUCATION PROGRAM

This material was funded by USDA's Supplemental Nutrition Assistance Program - SNAP. SNAP provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. USDA is an equal opportunity provider and employer. To find out more, contact a county food assistance office or a county Extension office.

The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) is an equal opportunity educator and employer. Everyone is welcome!



[www.BodyQuest.aces.edu](http://www.BodyQuest.aces.edu)  
Alabama Extension - Auburn University  
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