

BOY SCOUTS SUMMER CAMP

Healthy Initiatives

Spring – Summer 2016



PennState
PRO Wellness



BOY SCOUTS OF AMERICA®



THE PROBLEM

In 1910, when Boy Scouts of America was established, any concern about a child's weight would have been related to being too small. Unfortunately, in today's society, the childhood obesity epidemic presents a different set of concerns about the health of Boy Scouts. Rates of obesity have more than tripled in the last 30 years. Today, one in three children is overweight or obese, threatening to shorten the life expectancy of our youngest generation due to associated health risks such as high blood pressure, high cholesterol, cancer, diabetes and asthma. The American Heart Association reports that childhood obesity is now the number one concern of parents, topping both drug abuse and smoking. Not only is the obesity epidemic an international healthcare priority, it is a matter of national security, with 27% of young adults ages 17-24 too overweight or out-of-shape to join the military.²



% OF MALE AND FEMALE YOUTH SCREENED OVERWEIGHT OR OBESE
UNITED STATES, 2009-2011

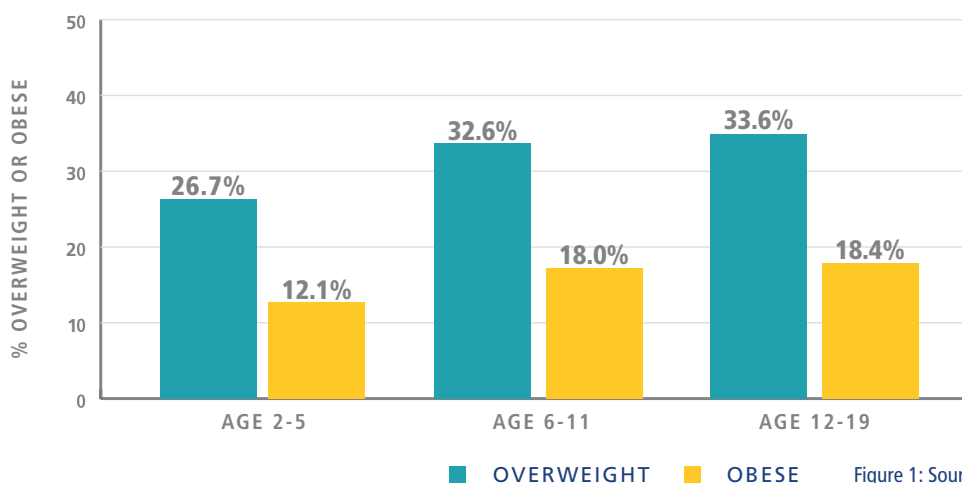


Figure 1: Source: NHANES, 2009-2010

BOY SCOUTS OF AMERICA: THE ROLE OF CAMP



More than half of our nation's youth participate in out-of-school organizations, creating a vastly under-utilized opportunity for evaluation of obesity prevention programming. As the 35th president of Boy Scouts of America, Dr. Robert Gates recognizes the risk obesity has for Boy Scouts. He appointed Jeannie Donlevy Arnold to be the organization's leader in developing programs and resources to cultivate healthier scouts. Penn State PRO Wellness (PRO Wellness), with their history of proven obesity interventions for children, was selected to partner with Ms. Arnold and the Boy Scouts of America on this initiative.

Boy Scouts of America is committed to providing a summer program that comprehensively addresses the important elements of healthy youth development. It is also well-known that troops rank quality of food as a high priority during their decision-making process

of which camp to attend. However, many of the menu items and selections offered in the Trading Post, (a camp "convenience store,") are missing nutrient dense foods, making it unlikely that Scouts are consuming a healthy diet. For example, the Trading Post is stocked with candy, chips, soda, ice cream and other snacks that scouts could purchase at any time during the day. Further, meal menus typically consist of carb-heavy, kid-friendly food options, which lack sufficient protein and other important nutrients necessary to fuel busy scouts.

The daily camp schedule includes time for outdoor learning, badge activities, meals and rest time. While many of the activities occur in an outdoor setting, depending on the Scout's schedule for the day, they may not get enough physical activity. Not having enough physical activity (60 minutes per day is recommended) can have negative effects on attention, appetite and sleep patterns.

2.4 million youth are enrolled with Boy Scouts of America
APPROXIMATELY

A photograph of two young boys, one with blonde hair and one with brown hair, both smiling and looking towards the camera. They are positioned in front of a red tent, with their hands resting on a pile of dry grass in the foreground. The boy on the left is wearing a teal t-shirt, and the boy on the right is wearing a light blue t-shirt. The background is a soft-focus outdoor setting.

JEANNIE DONLEVY ARNOLD

Jeannie Donlevy Arnold, the first female on the national Boy Scouts Advisory Board, was appointed to Chair of the Boy Scouts of America's Presidential Task Force to Address Childhood Obesity in 2015.

Arnold's professional background and investment in Boy Scouts make her the perfect candidate for the position. Originally a nurse by profession, she became chief operating officer of Ephrata Community Hospital and later served as senior vice president at the Good Samaritan Hospital in Lebanon, Pennsylvania for patient care services. As a philanthropist, she focuses her efforts on enhancing wellness and reversing the childhood obesity epidemic.



OPERATION REVAMP CAMP



After considering the structure of the camp schedule and reviewing opportunities for better nutrition, PRO Wellness devised a plan to introduce changes to the camp environment by providing scouts with healthier food options and opportunities for increased physical activity. The Boy Scouts summer camp initiative took place within the Pennsylvania Dutch Council, which encompasses Lancaster and Lebanon counties in Pennsylvania. Each year, these particular summer camps impact over 2,000 Boy Scouts, troop leaders and camp counselors. Several planning meetings with the PA Dutch Council executive, Matthew Adams, resulted in identifying Camp Bashore and Camp Mack as the locations for a physical activity and nutrition intervention. This intervention included environment-based changes during a four-week period in the summer of 2016.

Frequent meetings were held with Matthew Adams, camp program directors, Trading Post managers and food service staff, to ensure PRO Wellness was knowledgeable about camp priorities and schedules. Reciprocally, these meetings allowed sharing of planned health interventions and “buy-in” from camp staff.

PRO Wellness’s registered dietitian created modified camp menus and approved all dining hall meal plans in collaboration with camp staff. This ensured a joint approach toward implementing healthy initiatives. Because summer camp revenue is such an important component of a council’s operating budget, any proposed change was weighed carefully against the effect it would have on the overall camp experience. The goal was to maintain food acceptance and costs while improving nutritional quality and to determine the scouts’ threshold of tolerance to these changes.

In order to increase physical activity opportunities, PRO Wellness first considered the existing camp schedule. Approximately six hours per day (excluding meals and sleep time) at summer camp is dedicated to sedentary badges and siesta periods, which allows for at least five additional hours of activity. In addition to improving nutrient consumption and introducing physical activity options for sedentary time, the intervention needed to include engagement with camp staff, counselors and scouts themselves.

A brief training with all camp counselors and staff occurred prior to the first week of camp in order to introduce the plan for the summer, to highlight the importance and utility of activity breaks and to gain support and address any concerns.



Pedometer Step Up Challenge

In order to encourage and motivate scouts, staff and troop leaders to increase physical activity, pedometers were distributed at the beginning of each week. Troop averages were reported daily. The daily winning troop won priority placement in the meal line and received their meal first for the entire day.

“Pedometers were a great incentive, it had the scouts competing with each other ... I think there was a lot of great comradery around it.”



27%

OF 17-24 YEAR OLDS
ARE OVERWEIGHT

Not only is the obesity epidemic an international healthcare priority, it is a matter of national security, with 27% of young adults ages 17-24 too overweight or out-of-shape to join the military.²



“When there’s a ratio of four sodas to one Powerade®, that’s a problem.”

OPERATION REVAMP CAMP



A brief overview of modifications made, week by week, can be found below:

WEEK 1

The first week of camp was designated for observations. PRO Wellness observed the current camp landscape with regard to nutrition and physical activity.

Pedometers were distributed each week for the Step Up Challenge, to motivate and facilitate competition between troops.

Dining hall observations were made Tuesdays at breakfast, lunch and dinner, and Fridays during breakfast and lunch. Plate waste was recorded by weighing plate scraps. Data was collected to monitor physical activity and the Trading Post during siesta time.



WEEK 2

Trading Post offered significant opportunity for introducing healthier options at camp. PRO Wellness recognized that slushies were the most popular item at the Trading Post, so as a healthier alternative to slushies, made-to-order fruit smoothies were added to the menu. In addition, PRO Wellness encouraged camp staff and troop leaders to lead physical activity breaks during badge sessions if scouts appeared to be losing interest in the lesson, as this has been shown to improve attention and memory retention. These breaks included a walk/hike, stretching and brain teasers.

Trading Post Modifications:

Additions: Made-to-order smoothies, carbonated waters, Powerade®, coconut water, cupped fruit.

New and healthy items were priced lower than the unhealthy alternatives, still yielding a profit.

Physical Activity:

The PRO Wellness team trained camp staff to increase scouts’ physical activity by incorporating brain breaks. These breaks helped recenter scouts’ concentration when they began to lose focus during badge sessions.

Pedometers were distributed each week for the Step Up Challenge, to motivate and facilitate competition between troops.

"Get rid of some of the ice cream. There's a lot of ice cream in there.
What's not in there are frozen fruit bars, things like that."

POST INTERVENTION TROOP LEADER SUGGESTION FOR TRADING POST



OPERATION REVAMP CAMP



WEEK 3

Nutritional changes were originally designed to remove all unhealthy options from the Trading Post. However, camp staff began to voice concerns that scouts would be upset over these changes and that revenue would decrease. Instead, more healthy options were added to the inventory.

PlayFit, a collection of popular games, was highlighted in the daily newsletter to encourage scouts, staff and troop leaders to engage in physical activity during siesta time.

Trading Post Modifications:

Additions: Baked chips, smart popcorn, trail mix, sunflower seeds and smaller lean ice cream portions

Healthy foods were advertised to scouts in the dining hall and Trading Post.

Trading Post Physical Activity:

PlayFit active games and kits were introduced and encouraged with a "Game of the Day" in the daily newsletter.

Pedometers were distributed each week for the Step Up Challenge, to motivate and facilitate competition between troops.

WEEK 4

We made significant changes to the dining hall in week four. Healthful changes helped nudge better decisions as scouts were reminded of what foods truly fuel their bodies as opposed to foods that make them feel artificially nourished. Principles of food psychology were incorporated into Trading Post

initiatives, as healthier options were brought to eye level and sugary and salty snacks were pushed to the corners or relocated to the back of the store. Scouts were encouraged to continue PlayFit games during down time. Staff members were also encouraged to offer the scouts frequent activity breaks.

Dining Hall Changes:

Whole grains, more vegetables, cut fruit, leaner protein, and low fat dairy options were present in all meals.

The cafeteria was modified to bring fruit and vegetables to the front of the lines.

Trading Post Modifications:

Healthy options were brought to eye level and unhealthy options were pushed to the corners or relocated to the back of the store.


Physical Activity:

PlayFit games were made available and frequent breaks were given to scouts during badge sessions.

Pedometers were distributed each week for the Step Up Challenge, to motivate and facilitate competition between troops.

EVALUATIONS

Assessments each week measured plate waste, Trading Post sales, step count and activity levels. Focus groups with troop leaders were conducted at the end of weeks two, three and four.



RESULTS

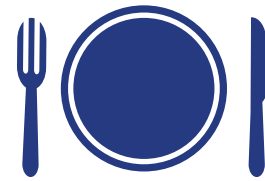
Summer camp revenue accounts for a large percentage of the Pennsylvania Dutch Council's annual revenue. Therefore, it was imperative that PRO Wellness encourage the implementation of low-cost changes. In addition to monitoring outcomes such as plate waste, Trading Post purchase patterns and step counts, PRO Wellness conducted weekly focus groups with troop leaders to monitor and evaluate the scouts and leaders tolerance to change. Topics such as food acceptance, physical activity levels, complaints and praises were heard as troop leaders were able to be honest about how camp changes had impacted their troops.





Plate waste per person decreased from week 1 to week 4

Plate waste was the lowest on week four when the altered menus were introduced in the dining hall.



NUTRITION MODIFICATIONS AND FEEDBACK DINING HALL



During weeks two and three, prior to dining hall modifications, focus groups with troop leaders identified concerns about the meals served in the dining hall, stating that meals were too low in protein and too high in starch content. Although scouts could always return to the line for second helpings, troop leaders were worried that their scouts' bodies weren't fueled properly for the amount of daily activity they were performing. One concerned leader voiced, "A lot of the meals this week had no protein... nutritionally, that's not the energy that these kids need to keep them going all day long. I'm watching a lot of my guys just wind down and wind down and wind down."

Once the changes to the menu were fully implemented in week four, the feedback was overwhelmingly positive. One leader indicated, "I think our kids have eaten better here than at any other Boy Scout camp that I've been to." Another stated, "The starches used to be overwhelming and the portions used to be uniformly too large. What I do see this year is a greater variety and the right sized portions, and I believe there's been less waste because of that." Our plate waste observations supported this claim, with the lowest plate waste per person observed during week four. Scouts also agree that the meals were greatly improved. When asked if they noticed a difference in food, one scout replied, "It's better... I think it's more balanced."

PLATE WASTE DECREASED AND TRADING POST SALES INCREASED WITH THE INTRODUCTION OF HEALTHIER OPTIONS

WEEK	MENU	PLATE WASTE (lb./person)	HEALTHY TRADING POST OPTIONS	TRADING POST SALES (per person)
1	Original	0.23	2	\$30
2	Original	0.23	11	\$36
3	Healthy Posters in Dining Hall	0.22	32	\$38
4	Healthier Menu	0.21	32	\$36

Table 1: Camp Bashore results

"This year the food was even better."

POST INTERVENTION TROOP LEADER INPUT REGARDING DINING HALL OPTIONS



NUTRITION MODIFICATIONS AND FEEDBACK

TRADING POST



Changes to menu options (Table 2) were well received by scouts and leaders. Both populations reported eating and feeling better during the final week of camp. “We are coming back here next year because the food was so great!”

Focus groups during the observational period, prior to any adjustment to the offerings at trading post, found unhealthy options were abundant in the Trading Post. As one leader stated, “I did hear one [of] the scouts commenting at the Trading Post, on how much candy there was. He could see for himself that there wasn’t healthy stuff there.” During the following weeks, as PRO Wellness staff coordinated

with Trading Post staff to incorporate healthier options, troop leaders and scouts began to notice.

“My son was really interested in the smoothies and he’s usually really big on the slushies.” In fact, Trading Post sales actually increased from week one to week four, by 20% per scout, indicating that the addition of healthier options could have helped increase sales. Unfortunately, due to restrictions with the point of sale system, PRO Wellness was unable to track exact quantities of specific products. During week four, troop leaders suggested continuing to make these positive changes, stating that scouts enjoyed healthier options such as the sunflower seeds, flavored water and smoothies.


CHANGING THE FOOD ENVIRONMENT TO NUDGE HEALTHIER CHOICES					RESULTS
EVIDENCE-BASED CHANGES*	The first highlighted entrée on the lunch line has an 11% advantage over the second option.	Products at eye level will have higher sales than those above or below eye level.	Marketing nutritious foods to children is an effective way of increasing selection of healthy foods in school cafeterias.	Fruit is consumed more when it is sliced.	 Environmental changes impact consumption
IMPLEMENTED AT CAMP	Vegetables and fruit were offered at the front of serving lines.	Trading Post was rearranged to put healthier options at eye level.	Healthy posters featuring vegetable lizards and marathon runners fueled from fruits and vegetables, were hung in the Trading Post and cafeteria.	Instead of offering dessert twice daily, PRO Wellness recommended sliced fruit in its place. <i>Campers didn't notice that the amount of dessert served was decreased.</i>	Campers and troops reported eating and feeling better.

Table 2: “Wansink, Brian. “Our Ideas.” Smarter Lunchrooms Movement. Cornell University, n.d. Web.



16,000 STEPS (8 MILES) PER DAY

average steps reported by scouts

meeting recommendation for boys to get 12,000-16,000 steps/day, or 60 minutes of physical activity



PHYSICAL ACTIVITY MODIFICATIONS AND FEEDBACK



Scouts are already very active during camp, but in general, most children get far less than the recommended amount of daily physical activity, which is 12,000-16,000 steps. Our goal was to provide scouts with options and motivation for participating in additional activities during down time. These included activity breaks, a pedometer challenge and PlayFit games. The goal was to show troops that these activities could be used during troop outings, meetings and family events. Troop leaders noted that scouts seemed motivated by the use of the pedometers. "The pedometers are so beneficial for them, there was excitement. It made them aware of how quickly and easy it is to accumulate steps." Step counts increased each week as the competition heated up. PlayFit games were well-received, with troop leaders noting that the most popular sports were football and ultimate Frisbee. One troop leader stated, "We bonded with another troop and they're playing football so they've even been active in their downtime."

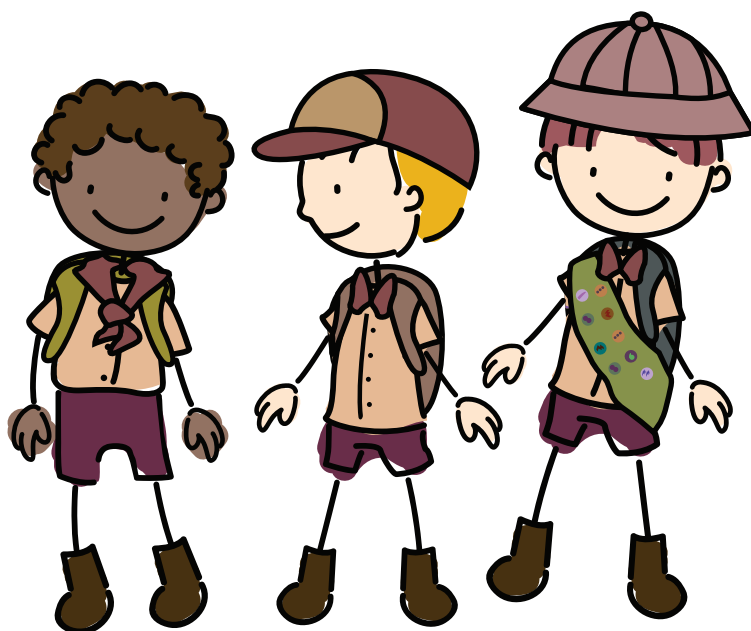
TOTAL AVERAGE STEPS

DAY OF THE WEEK	NUMBER OF STEPS
MONDAY	14,251
TUESDAY	15,959
WEDNESDAY	17,434
THURSDAY	17,550

Table 3: Average Step Count Increases by Day of the Week

The level of activity was supported by pedometer readings. Some troops recorded up to 25,000 steps per scout per day on average. "The kids were more active here than they've been at any other camp." It's recommended that boys get 12,000-16,000 steps to maintain a healthy BMI. Although scouts are exceeding this number at camp, there is concern that they may not continue to be active at home. "When we go to summer camp, this is some of the only exercise the boys get." This brings attention to the need for increased physical activity opportunities throughout the Scouting year.

**"The kids were
more active here
than they've been
at any other camp."**



"I think our kids have eaten better here than at
any other Boy Scout camp I've been to."

POST INTERVENTION TROOP LEADER INPUT REGARDING DINING HALL OPTIONS



MOVING FORWARD



Operation Revamp Camp found that troop leaders and scouts expressed overwhelming support of this healthy initiative. Feedback from troop leaders and camp staff was essential to the success of camp initiatives and will help to inform future work with Boy Scout troops during the school year. PRO Wellness acknowledges that every summer camp and Boy Scout council are unique. Therefore, we propose a larger scale study to further develop and test a packaged health initiative toolkit that will work in a variety of camp settings. With a greater focus on health and wellness, both during camp and throughout the year, Boy Scouts can serve as a leader among youth organizations in addressing the childhood obesity epidemic.

FEEDBACK: Parents, Troop Leaders and Scouts

**"For one,
the kids did
REALLY
like it."**

"I think what you are doing is **commendable** and I think it could be a real plus for Boy Scouts of America."

"I think outreach efforts need to switch focus onto **FAMILIES.**"

"I am a big believer in getting kids up and moving."

**"We are coming back
here next year because
the food was so great!"**

"I like the options
of salad, fruit and
yogurt in the morning.
It's all positive."



ACKNOWLEDGEMENTS

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Others:

Edward and Jeannie Arnold

Matthew Adams, Scout Executive, PA Dutch Council

Bashore Scout Reservation

J. Edward Mack Scout Reservation



ABOUT BOY SCOUTS OF AMERICA

Boy Scouts of America is one of the nation's largest and most prominent values-based youth development organizations. Boy Scouts of America provides a program for young people that builds character, trains them in the responsibilities of participating citizenship and develops personal fitness.

For more than a century, the Boy Scouts of America has helped build the future leaders of this country by combining educational activities and lifelong values with fun. Boy Scouts of America believes — and, through over a century of experience, knows — that helping youth is a key to building a more conscientious, responsible and productive society.

ABOUT PENN STATE PRO WELLNESS

Penn State PRO Wellness is committed to educating and inspiring youth and their families to eat well, engage in regular physical activity, and become champions for bringing healthy choices to life. PRO Wellness provides healthy eating and active living strategies to approximately 800 schools in Pennsylvania, as well as communities and corporate business partners. Advised by over 50 corporate, government and academic officials, PRO Wellness is highly visible in the health and wellness arena and positioned as a statewide thought leader in obesity prevention. As an integral component of Penn State Health Milton S. Hershey Medical Center's community service mission, our approach of prevention, research and outreach provides schools, communities and like-minded organizations with program development and implementation, assessment and evaluation, capacity building, technical assistance, collaborative partnerships and access to proven wellness interventions. For more information, visit ***PennStateHershey.org/PROwellness***.

REFERENCES

1. American Heart Association. (2016). Overweight in Children. Retrieved from <http://www.heart.org/HEARTORG/HealthyLiving/HealthyKids/ChildhoodObesity>.
2. Christeson W, Dawson Taggart A, Messner-Zidell, S. (2010) Too Fat to Fight. Mission Readiness Washington, DC.



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PHONE: 717.531.1440

