

# Student Recommendations for Improving Nutrition in America's K-12 Schools

*By Student Participants in the 2006 Keystone Youth Policy Summit*

## **Program Introduction and Overview**

Co-hosted by the National Consortium for Specialized Secondary Schools of Mathematics, Science, and Technology (NCSSSMST) and The Keystone Center, the third annual Keystone Center Youth Policy Summit focused on Adolescent and Childhood Nutrition in America's K-12 Schools. In June 2006, 40 students from 10 math and science schools came together in Keystone, Colorado, to develop recommendations for solutions to this ever-increasing problem in the United States.

After months of research and study, students spent the week of June 19 to 23 working in stakeholder groups, discussing, arguing, developing, and finally reaching resolutions and recommendations. With guidance from The Keystone Center staff members and Consortium representatives, these 40 high school students produced viable approaches for addressing a problem that is confounding policy makers.

We are proud of the initiative shown by these students and the quality of their product that resulted. We believe you will find their final report to be well-researched, thoughtful, and practical. This report comes from the very population of individuals that are affected most by the need to educate and learn about proper nutrition and the effects of poor diet on overall health.

Please use the students' final report to help young people make good choices. Distribute it to those who are involved in policy and decision-making on food, nutrition and exercise initiatives in America's schools.

The Keystone Center and the NCSSSMST support the continuing focus on quality education and opportunities for students in math, science, and

technology. You may contact us with questions or find additional information regarding our organizations by visiting our websites at [www.ncsssmst.org](http://www.ncsssmst.org) and [www.keystone.org](http://www.keystone.org).

According to a report from the Institute of Medicine, obesity among children and youth has more than tripled over the past four decades. More than 15 percent (9 million) of U.S. children and youth are obese, and another 15 percent are at risk of becoming obese.<sup>1</sup> Decision-makers in government, industry, the public health community, the medical professions, schools, etc., are striving to identify successful, feasible strategies for preventing and treating childhood obesity and other nutrition-related problems affecting America's children.

Schools are viewed by many experts as especially important venues for assessing and combating the problem. School-aged children and adolescents spend consume a significant percentage of their meals and calories in school. Schools constitute important environments in which to learn about, and engage in, sound nutrition and appropriate physical activity. While in school, students are subjected to formal education, peer information-sharing, social marketing messages, and commercial promotions related to nutrition. Time spent on school grounds and engaged in school activities represents an essential opportunity for educators to influence children's behaviors and attitudes regarding nutrition.

Forty of the brightest high school students in the country gathered in Keystone, Colorado, to participate in The Keystone Center's Youth Policy Summit on "Nutrition in America's K-12 Schools." The 2006 Summit, now an annual collaboration between The Keystone Center and The National Consortium for Specialized Secondary Schools

of Mathematics, Science and Technology (NCSSSMST), focused on identifying ways to help reverse incidence of obesity through school-based interventions.

The students prepared for the Summit by engaging in semester-long independent research projects on relevant dimensions of the problem – e.g., consumption patterns among school-aged children, nutrition standards for various foods served in schools, trends in nutrition and physical education, the physiology of childhood obesity, and the psychological and emotional impacts of overweight and obesity. Throughout their stay in this picturesque mountain village, students also received orientations in interest-based negotiation and problem-solving, and spent a day interacting with a panel of national experts who shared diverse perspectives and backgrounds. Finally, the students spent three days in intense negotiations, playing the roles of actual key stakeholders and developing consensus recommendations for addressing nutrition problems in the school environment. This resulting report is being disseminated to decision-makers in government, industry, education, and the public health community.

While the students generally maintained a focus on schools, they encountered several aspects of the problem that necessitated a broader approach. Rather than artificially isolating the school environment, some recommendations in this report therefore call for broad action meant to affect schools as well as other venues for change. In their deliberations, the students considered the following questions.

### Questions/Issues

1. There is considerable debate about the role different foods play in the obesity problem as it is experienced within the U.S school-aged population. What foods or eating behaviors are most contributive to obesity-related health problems in schools, and what changes should be encouraged?
2. What changes, if any, should be made to the federally funded school meals program administered by the USDA? What changes, if any, should be made to current practices

regarding the availability of other foods in schools?

3. Should food-related advertising and marketing in schools be restricted in any way? If so, please recommend appropriate changes, being mindful of financial trade-offs.
4. What is the appropriate role of school curricula and extra-curricular activities in combating obesity and nutrition problems?
5. What key messages should children receive about healthy eating and active lifestyles, in order to address the problem of obesity? What strategies would be effective in getting those messages across? Who is in charge of getting the message to the public?
6. What else, if anything, should be done within K-12 schools to help prevent and treat child and adolescent obesity-related problems?
7. What are the most pressing issues over the next 10 years and what, in order of priority, should government give incentive or underwrite with its limited research budget?

### Final Policy Recommendations

**Issue 1. There is considerable debate about the role different foods play in the obesity problem as it is experienced within the U.S school-aged population. What foods or eating behaviors are most contributive to obesity-related health problems in schools, and what changes should be encouraged?**

The poor eating habits and food choices of school-aged population is a major contributor to the increasing obesity epidemic in the United States. Many adolescents prefer foods with large quantities of calories, fats (both saturated and *trans*), sugar, and cholesterol. These foods are also usually devoid of the much needed vitamins and minerals which are staples of a healthy diet. This lack of nutrients is due to a deficiency of certain healthful foods such as fruits, vegetables, and dairy products.

Oftentimes, the vegetables that children consume, such as french fries, are low in nutrients and poorly prepared. Subsequently, these vegetables are poor suppliers of the aforementioned nutrients. Beverages also play a large role in this obesity epidemic. Vending machines in schools supply students with beverages that contain large quantities of calories and sugars. Although many vending machines also offer healthier choices with reduced calories and sugar, students do not seem educated enough to choose these healthier options. Their poor decision making is one of the primary reasons for our nation's obesity problem.

It is imperative that appropriate measures, such as encouraging an increase in nutritional education and changes in the food offered in school meals and vending machines, be taken in order to stem the flow of this growing obesity epidemic.

**Issue 2. What changes, if any, should be made to the federally funded school meals program administered by the United States Department of Agriculture (USDA)? What changes, if any, should be made to current practices regarding the availability of other foods in schools?**

The majority of beverage companies are already shifting toward a healthier product profile in high schools, consisting of low- or no- calorie soda, juice, and sports drinks. As healthier alternatives to current drink programs are already being created by companies, no recommendations will be made regarding beverage vending machines in schools.

A 50-50 program consisting of 50 percent healthy<sup>1,2</sup> and 50 percent top-selling items should be implemented within the food vending machines and the a-la-carte menus within each school's meal program. The 50-50 program should be evaluated at the beginning of each school year, replacing any of the previously designated top-selling items with the top-selling items of the immediately preceding year. Coupled with proper nutritional education, the 50-50 plan could help create an environment in which, each year, the availability of healthy items increase in a participating school without necessitating a change in vendors.

If the items in the 50 percent "healthy" section are also a part of the 50 percent top-sellers, they would only count as a top-selling product, and would be replaced by another healthy item in the healthful 50 percent. This policy would be applied to both food vending machines and the a-la-carte menus in school. Along with the new food policies, nutrition education should be emphasized in schools in order to guide the students in making healthy food choices.

The government could also offer incentives, such as fruit and milk grants, to increase the availability of healthy foods in schools. Ultimately, the hope is that healthier items will replace all "unhealthy" items in the top-selling half, resulting in an entirely healthy portfolio of school foods.

**Issue 3. Should food-related advertising and marketing in schools be restricted in any way? If so, please recommend appropriate changes, being mindful of financial trade-offs.**

While advertisements in schools are not necessarily negative, some restrictions should be imposed on the food-related marketing in the learning environment. Since some companies already practice restraint in marketing, the changes proposed are not drastic but would help the nation's youth to lead healthier lifestyles and make wiser decisions about the foods they consume.

The first suggested change is the exclusion of any advertisements that portray products not actually sold in schools. This measure should help the obesity problem by allowing younger children only the option of healthier products during school hours, which, paired with better nutrition and healthy lifestyle information, would help youths make better choices earlier in life.

Companies are also encouraged to use positive role models, such as athletes, to endorse their healthy products. When school advertising is converted to such beneficial messages, there will be no need to reduce the overall number of messages.

Other methods of advertising, such as vending

machine panels, should also promote healthy options and lifestyles. Advertising in schools is regulated on a school-by-school basis. It is primarily up to the companies' discretion; however, healthier choices are strongly encouraged.

**Issue 4. What is the appropriate role of school curricula and extra-curricular activities in combating obesity and nutrition problems?**

Education plays an essential role in contributing to the physical activity and education of youth. As such, elementary and middle school students should engage in some equivalent of physical education or physical activity daily throughout the entire school year. High school physical education should be required for a minimum of 270 hours per student throughout their high school career. Medical exemptions from this rule are acceptable, by individual school discretion.

If participating on a varsity sport team requires a class taken during the school day, participation in this class may be substituted for physical education class credit. Students who practice for a sports team only outside of the normal school day should not be exempt from the physical education class. In addition to varsity sports taken during regular school hours, the only classes that should be substitutable for the physical education class are weightlifting, yoga, dance, swim, and other classes promoting lifelong physical activity. These classes are also to be taken during school hours.

Competitive sports that promote inactivity should be removed from the K-12 physical education curriculum. Sports that promote lifelong physical activity, such as running, swimming, tennis, and other individual sports, are strongly recommended. Individual schools should have final discretion as to which sports are offered.

It is strongly recommended that schools offer the option of intramural sports after school to provide students with an opportunity to play sports in a less competitive atmosphere. These extracurricular activities should not count for school credit and should not replace the physical education class.

Supervisors could include coaches, Parent Teacher Association members, and other volunteer school personnel. It is suggested that schools use their own physical education equipment, or that provided by students, for the intramural activities. This will cut down on unnecessary costs; fundraising will help cover additional costs. Permission slips could help eliminate the school's liability for student injury.

Nutrition curricula are integral to combating obesity. All K-8 students should be required to spend time on nutrition curriculum annually. In the regional equivalent of "high school," a one semester course on health and nutrition should be taught in class by teachers trained in the area of nutrition education, and it should be a graduation requirement. Guidelines on nutrition course curricula should be provided by appropriate government agencies. It is recommended that an equal amount of time be spent on health and nutrition, and that a separate nutrition class be offered as an elective for those students who wish to pursue an interest in nutrition education. Schools are strongly urged to make nutrition education interactive and integrate nutrition concepts into other classes where applicable (such as family and consumer science or cooking).

All students in the 6th and 11th grades should be required to take a standardized test which includes health and nutrition. It is strongly recommended that the standardized test have the same guidelines and requirements that the state utilizes for other math and reading standardized tests.

**Issue 5. What key messages should children receive about healthy eating and active lifestyles, in order to address the problem of obesity? What strategies would be effective in getting those messages across? Who is in charge of getting the message to the public?**

Children need to receive effective messages about healthy eating and active lifestyles to stop the growing problem of obesity.

Children need to be informed about nutrition beginning at an early age and benefit from a healthy lifestyle. Children should know that that obesity is

a disease, not just cosmetic, and that being healthy does not equate to being thin. They need to get at least 30-60 minutes of physical activity per day. They need to understand the importance of moderation in eating and that calories consumed should be the same as calories expended. One possible slogan for conveying these messages could be "BEAM"—Balance, Education, Activity, Moderation. For children to understand these concepts, many different strategies can be used. One way to get the message across is a "Tip of the Day" guide in which tips and strategies, created by the individual schools, are given to students by monetary-free means. Tips would be creative, interesting, incorporated from the teachings of the curriculum, and distributed by way of morning announcements, "Channel One," or some other monetary-free means not related to the private sector.

Industry and perhaps other parties could launch a "Healthier Lifestyle Campaign." A generic logo and motto such as "health first" could be used in campaign materials and corporations could sponsor the campaign by television commercials, posters, billboards, etc. that portray one or more influential athletes, celebrities, political figures acting on a volunteer basis to promote a healthier lifestyle.

The "Healthier Lifestyle Campaign" would give the private sector an opportunity to promote healthier products while creating awareness of a healthier lifestyle. Healthier products of individual sponsors could also be promoted within the campaign by product placement. The sponsoring companies and corporations would fund the campaign as they see fit. The "Healthier Lifestyle Campaign" would be comparable in reach to the "Read" Campaign or the "Verb" Campaign. Excluding elementary schools, the "Healthier Lifestyle Campaign" would be visible in the middle and high schools, in stores, and in public areas.

Parenting and pregnancy classes in the community could also be used to promote nutrition, since new parents need to be informed that eating habits are established at an early age. Awareness of healthy eating habits should be taught in classes and/or through supplementary materials.

It is the responsibility of the community, corporations, and schools to get the message to the public. If the public is better informed, then they can prevent children from becoming obese while teaching them healthy eating behaviors. They can also help any obese children to start being healthier and losing weight.

**Issue 6. What else, if anything, should be done within K-12 schools to help prevent and treat child and adolescent obesity-related problems?**

Strategies to prevent and treat child and adolescent obesity-related problems in K-12 schools include teaching nutrition in pregnancy classes to propagate good nutrition at an early age, distribution of healthy snacks at elementary schools and regulation of food in schools, encouragement of exercise programs and in-school physical activities, health awareness classes and information distribution, and government-funded advertisements warning about the dangers of obesity and suggesting strategies for prevention and treatment.

Nutrition awareness in pregnancy classes is recommended because of long-term eating habits children develop at an early age. Parents who learn proper nutrition in these classes will be better able to help their children develop a healthy diet.

Like nutrition awareness in pregnancy classes, distribution of healthy snacks in elementary schools helps develop lifelong healthy eating habits in young children.

Coupled with good nutrition, exercise is an integral part of a healthy lifestyle. Teaching children to begin exercising at an early age will help encourage lifelong fitness and early association of exercise with entertainment.

While the previously discussed strategies encourage children to develop good habits, information distribution helps change the habits of children who already eat an unhealthy diet. More importantly, adults who receive information brought home by children about healthy eating will be more likely to take action in their children's nutrition and levels of physical activity. Similarly,

government-funded advertisements will help propagate awareness of the negative effects of obesity and the importance of diet and exercise.

**Issue 7. What are the most pressing issues over the next 10 years and what, in order of priority, should government incentive or underwrite with its limited research budget?**

There are many research imperatives which require government funding. If these needs could all be addressed, then the rate of obesity (and related diseases) would decrease. Over the next 10 years, the most pressing issues in obesity research should be genetic research, innovative food preparation techniques, and obesity prevention and treatment. All of these issues should be addressed simultaneously, with equal priority.

Continuing government funded research should be aimed at pinpointing genes that contribute to obesity—already, over 200 genes have been found to play a role in obesity. Formal studies should be conducted to see which genes cause the most damage. This research may be funded by pharmaceutical companies, university grants, and governmental tax breaks for private companies. Genetic research should continue because twin and adopted children studies have already shown the genetic predisposition to obesity.

Secondly, innovative food preparation techniques should be researched further. Research should focus on development of new technologies that make food healthier and cheaper to the public. Funding for research on innovative food preparation techniques would be provided by selective government grants and the private companies themselves. The main goal of this research is to introduce these new products to the consumer with the intent of increasing demand for healthier products through education and assisted campaigns.

Thirdly, funding should be provided to study obesity prevention. More research needs to be focused on understanding trends in societal eating habits and causes of obesity, through inventories of stores, schools, etc. Private companies can use this research to assist them in providing healthier products that would be received by the public.

Research needs to be conducted for exercises and curricula that would be most effective for school-age children. Diet plans that would most benefit certain age groups and to-be-parents need to be studied.

The final issue that needs to be researched is obesity treatment, with priority placed on the needs of children whose age prevents them from invasive surgery and whose degree of obesity prevents them from sufficient exercise. Safe non-invasive methods of reducing obesity need to be studied, including safe metabolism-boosting medicines and diet pills. Safer techniques which would allow more obese children to receive weight reduction treatment also need to be examined. Medication that would be given for treatment should be through prescription.

**Conclusion**

If the aforementioned recommendations and legislations were acted upon, the issue of childhood obesity would move closer to resolution. These reforms would provide a good first step towards a world where the problems of obesity and debate about proper nutrition would be remnants of the past. Any funding provided to aid in solving the issue of obesity would be an appropriate investment in the health and prosperity of the nation, when considering the amount of money which is currently spent on obesity-related costs. It is with this vision of the future in mind that this body of students highly encourages that the solutions detailed in this report be implemented with the utmost of urgency.

**Footnotes**

<sup>1</sup> A healthy product made by the private sector must meet the nutrition standards set by the Child Nutrition Promotion and School Lunch Protection Act of 2006. It puts limits on fat and saturated fat as well as requirements for protein, vitamins, and minerals.

<sup>2</sup> Healthy, as defined for providing or serving a complete meal, is based upon the pyramid and serving guidelines set by the Harvard School of Public Health that alters and includes the USDA Dietary Guidelines and My Pyramid.