National Consensus Panel on School Nutrition:

Recommendations for Competitive Food Standards in California Schools

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SCHOOL NUTRITION CONSENSUS PANEL*

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** Panelists represented their own opinions, not those of the organizations for which they work.*

Table 1

School Nutrition Consensus Panel

COMPETITIVE FOOD STANDARDS RECOMMENDATIONS

GRADE LEVEL	ISSUE	RECOMMENDATION	RATIONALE	EXAMPLES OF WHAT WOULD BE IN & WHAT WOULD BE OUT
ELEMENTARY SCHOOLS **(Schools that have grade 6 or lower)**	**ALL COMPETITIVE FOOD**	Eliminate sale of all foods sold outside the school meal program during the school day. Individual items sold during morning / afternoon breaks must meet the standards described below for secondary schools.	(1) Young children should not have the opportunity to make unhealthy food choices at school; (2) The school environment should model healthy choices.	**Out:** All individual foods sales except fruits and vegetables, 100% fruit juice, low-fat / non-fat milk during the lunch period. **In:** Healthy options during nutrition break.
SECONDARY SCHOOLS	**BEVERAGES**	**Allow sale of:**		
		Beverages that contain at least 50% fruit juice with no added sweeteners	Fruits and vegetables contain necessary nutrients.	**In:** Fruit juices, Knudsen Spritzer
		Water	Water is an essential nutrient and a healthy beverage choice.	**In:** Bottled water
		Low- fat / nonfat milk	Availability promotes calcium consumption without contributing unnecessary calories from fat.	**In:** Low- fat and nonfat milk and chocolate milk
		Eliminate sale of:		
		Soft drinks, sports drinks, punch, iced tea, and other drinks containing less than 50% real fruit juice.	Eliminates beverages with little nutritional value and others that replace more healthful alternatives.	**Out:** Coke, Pepsi, Fruitopia, Sunny Delight, Snapple, Gatorade
		Beverages that contain caffeine (except chocolate milk)	Schools should not promote the consumption of habit-forming substances	**Out:** Coffee, teas

GRADE LEVEL	ISSUE	RECOMMENDATION	RATIONALE	EXAMPLES OF WHAT'S IN & WHAT'S OUT
SECONDARY SCHOOLS	**SNACKS, SWEETS, SIDE DISHES**	**Portion Size:** See attached chart	Larger serving sizes can lead to over-consumption	**Out:** All large- sized portions
		Fat: No more than 30% of total calories from fat	High- fat foods add unnecessary calories to the diet	**In:** Baked potato chips, pretzels, some popcorn, some granola bars, some baked French fries **Out:** Regular potato chips, fried French fries, some granola bars
		Saturated Fat: No more than 10% of calories from saturated fat	Foods that are high in saturated fat increase the risk of coronary artery disease by raising blood cholesterol	
		Sugar: No more than 35% by weight (except fresh, dried or canned fruits and vegetables)	Eliminate foods that (1) are high in calories and low in nutrients, and (2) promote development dental caries.	**In:** Some granola bars, trail mix, animal crackers, graham crackers, Devil's food cookies, gelatin desserts, fat -free fudge bar, frozen fruit bar **Out:** Some granola bars, some cookies, all candy
	ENTRÉE ITEMS and SIDE DISHES	**Portion Size**: No larger than portion served as part of school lunch.	Extra- large- sized portions add unnecessary calories, including calories from fat, especially saturated fat.	**In:** Reasonable portions of pizza, hamburgers, burritos, chili dogs, chicken nuggets **Out:** All oversized portions
	FRUITS AND VEGETABLES	Require the availability of quality fruits and vegetables at any place competitive foods are sold	Fruits and vegetables provide needed nutrients without adding low- nutrient -dense calories. Students must have healthy food options	**In:** All fruits and vegetables: fresh, cooked, dried, and canned without additional sweeteners.

Table 2

School Nutrition Consensus Panel

RECOMMENDED PORTION LIMITS

Snacks and Sweets	**1.25 oz**
chips, crackers, popcorn, cereal	
trail mix, nuts, seeds, dried fruit	
Jerky	
Cookies / cereal bars	**2 oz**
Bakery items (e.g., pastries, muffins)	**3 oz**
Frozen desserts, ice cream	**3 oz**
Yogurt	**8 oz**
Beverages (no limit on water)	**12 oz**

EXECUTIVE SUMMARY

The Centers for Disease Control has declared that there is an epidemic of child and adolescent obesity in the United States. California is no exception. Statewide, 30% of children are at risk or already overweight; in some school districts, 40-50% of children are overweight. Type II diabetes, once a disease only seen in adults, is increasingly common among California's children.

Poor nutrition and physical inactivity are responsible for 28% of preventable deaths in the U.S. (second only to tobacco), more than violence, AIDS, drugs, alcohol, and car crashes combined. Obesity results in $14 billion in economic costs in California every year, including at least $1.3 billion in Medi-Cal costs. If left unchecked, the long-term impact of this epidemic on California's families, on California's economy, and on future rates of cardiovascular disease, cancer, and diabetes will be staggering.

The causes of this epidemic are complex and multifaceted, resulting from changes in eating habits (increased caloric consumption) and decreased physical activity (decreased caloric expenditures). Efforts to address these factors must be comprehensive and must engage communities, schools, families and other institutions in supporting healthy diets and physical activity for all children. This report addresses one key component in the solution to the problem of childhood obesity: the role of schools in promoting and supporting children to develop healthy eating habits.

The Need for Expanded School Nutrition Standards. Historically, general nutrition guidelines -- such as the Food Guide Pyramid, the Dietary Guidelines for Americans, and the California's Daily Food Guide -- have been developed to address the nutrition needs for individuals over the course of a day or a week. Based on the premise that "no food is a bad food" and that "every food fits," these guidelines have assumed that people eat whole meals and that the content of those meals can "balance out" over time.

Unfortunately for many students, school mealtime rarely -- if ever -- consists of a nutritionally balanced meal. For many young people, breakfast and lunch at school consist of individual items selected daily from a la carte food lines, vending machines, and the school store. Items available at these locations are typically large portions that are high in fat, sugar, sodium, and ultimately, calories. These items are also typically low in essential nutrients such as vitamins and minerals, including calcium. When nutritionally inadequate foods are available and promoted to children at school everyday, it becomes increasingly difficult for children to "balance out" their excesses.

While the federal government has established nutrition standards for school meals, there are no effective standards for competitive foods – foods and beverages sold a la carte, in vending machines, in school stores, or as part of school fundraisers -- sold in California schools. At the same time, over the past few decades, school food service operations have increased the availability of less healthy foods in an attempt to maintain a financially stable food service business.

Establishment of the National Consensus Panel. In August 1999, the California Center for Public Health Advocacy (CCPHA) was awarded a grant from The California Endowment to educate policy makers in California about the importance of nutrition and physical activity for children and adolescents. As part of that effort, CCPHA established a panel of respected state and national experts to develop recommendations for nutrient standards for competitive foods sold in California schools.

There was unanimous agreement among Panel members that the time has come to establish reasonable standards for competitive foods sold on school campuses. As summarized in Tables 1 and 2, the Panel recommended the establishment of mandatory minimum standards for elementary and secondary schools, addressing beverages, fat and saturated fat, sugar, portion sizes, and the availability of fruits and vegetables. The Panel's recommendations are guided by the following common-sense ideas:

- Food is meant to be enjoyed; A healthy diet can include snacks, desserts, side dishes and reasonably sized portions of most of students' favorite entrees;
- Schools should be adequately funded, eliminating any incentive schools have to raise funds to support student programs by selling foods and beverages that compromise children's health
- Schools should be a safe haven where students can learn to make healthy food choices outside the usual unrestricted marketplace with its intense marketing and ready availability of less healthy foods;
- Schools should not contradict health and nutrition messages taught by parents and teachers; and,
- Children, schools, manufacturers, and growers can all win by promoting the sale of healthy foods.

The Panel encourages local, state, and national policy makers to adopt these standards as one step toward addressing the current epidemic of childhood obesity. If successfully implemented, these standards will help maintain children's health, ensure that our children are ready to learn, and will guarantee that school environments support parents and teachers in encouraging children to establish the healthy eating behaviors they should maintain throughout their lives.

RATIONALE FOR COMPETITIVE FOOD STANDARDS

THE EPIDEMIC OF CHILDHOOD OBESITY

Prevalence. California's children are facing a health crisis. The number of overweight and obese children in the state is rising quickly. The Pediatric Nutrition Surveillance System found that the percentage of overweight children in the state increased from 12.4% in 1990 to 14.1% in 1998 (California Department of Health Services, 2000), higher than the national average. Data from the California Teenage Eating, Exercise and Nutrition Survey classified 31% of California youth ages 12-17 overweight or at risk of being overweight (Foerster, 2000). In some school districts in California, 40-50% of children are overweight (Slusser *et al.*, 1999, and Bassin *et* al, 1990).

Consequences. The current childhood obesity epidemic has significant medical and pyschosocial consequences. First, there is a strong correlation between childhood and adult overweight. Fifty percent of overweight children and teens remain overweight as adults (Dietz, 1998). Second, adult obesity is associated with a number of chronic diseases including diabetes, heart disease, hypertension and some cancers. Alarmingly, some of the chronic diseases that have traditionally been considered "adult onset" are now appearing in younger segments of the population. Evidence indicates that Type II diabetes is increasing in children and adolescents – an increase that has paralleled the rising childhood obesity rates (American Diabetes Association, 2000; Rosenbloom, 1999). A number of studies have detected high rates of cardiovascular disease risk factors among very young children.

Finally, obesity has serious and persistent psychosocial consequences for children as well. Overweight children are at increased risk for discrimination, low self-esteem and poor body image (UCB/Cooperative Extension, 2000). School children as young as five years old perceive overweight as undesirable (Feldman, 1988) and children in one study identified thin body types as having more friends, being better looking, smarter and neater that fat body types (Harris, 1983). Likewise, feelings of low self-esteem and symptoms of depression are associated with obesity (French, 1995). One study of 9 – 11 year olds found lower self -esteem in overweight children who felt responsible for their weight or who felt that their weight negatively impacted their social interactions.

Causes of Obesity. The causes of obesity are complex and multifaceted, necessitating prevention efforts that are comprehensive and that engage communities, schools, families and other institutions in supporting healthy diets and physical activity for all children. According to the Centers for Disease Control and Prevention, shifts in food practices in the United States such as increases in fast food, portion size, and soft drink consumption along with increases in snacking and meal skipping have occurred during the same period as obesity rates have increased. Combined with decreases in physical activity and increases in physical inactivity, these changes in diet have set the stage is

set for the epidemic of childhood obesity currently affecting our nation.

TRENDS IN SCHOOL FOOD

The Important Role of School in Promoting Healthy Eating. Schools are uniquely positioned to model and reinforce both the healthy eating and physical activity behaviors that children need throughout their lives. On the nutrition side, schools have the opportunity to:

(1) provide students with healthy foods to eat;

(2) teach healthy eating habits in the classroom, reinforcing health messages taught at home; and

(3) model healthy food choice by ensuring that the school environment one that is free from the intense marketing and ready availability of less healthy foods found in the unrestricted marketplace.

Schools have an additional incentive to promote healthy food consumption: healthy eating plays a very important role in learning and cognitive development. Poor diet has been found to adversely influence the ability to learn and to decrease motivation and attentiveness (Nutrition-Cognition National Advisory Council, 1996). Such findings indicate that young people will not be ready to learn and achieve their full potential unless they are healthy and well nourished.

School Food Service and the Role of Competitive Foods. Unfortunately, school food service is caught between the competing pressures of serving children nutritious foods and running a financially stable food service business. Recent studies have shown that schools in California and across the country are relying heavily on sales of competitive foods – foods sold a la carte, in vending machines, in school stores, or as part of school fundraisers -- in order to boost their profits and remain financially viable (USDA, 2001). A case-study analysis of 10 school districts in California found that a la carte sales accounted for between 7% and 12% of a district's operating budget. A la carte sales on high school campuses are often double the a la carte sales on elementary and middle school campuses (CFPA, 2001). A study conducted by the Public Health Institute showed that 95% of responding California school districts reported selling fast foods as a la carte items. (Craypo, in press) The most common fast foods sold as a la carte items were identified as pizza, cookies, chips, and burritos. Commenting on the abundance of fast food in the cafeteria, one high school sophomore said "I wish they had more stuff to choose from. There's nothing really good in the cafeteria. If this is the only thing to choose from then I'm going to keep buying it."

A recent USDA analysis of dietary intake data showed that children who ate the National School Lunch Program (NSLP) meal had higher intakes of vegetables, milk, dairy products, protein rich foods and many nutrients, and lower intakes of added sugars than children who did not participate in the NSLP (Mathematica, 2001). At the same time,

the USDA has found that sales of competitive foods undermine the nutritional integrity of the school meal programs and discourage participation. Specifically, the USDA reported the following negative impacts of competitive food sales (USDA, 2001):

- Competitive foods are relatively low in nutrient density and high in fat, added sugar and calories. When children replace school meals with these less nutritious foods, they are at risk for inadequate nutrient intake and excess calorie intake. When competitive foods are purchased in addition to the school meal, there is the risk of over-consumption that may contribute to overweight and obesity.

- Competitive foods stigmatize participation in the school meal program. The NSLP is often viewed as a program only for poor children, since children with money are able to purchase competitive foods. This perception has decreased the willingness of all children to participate in the NSLP.

- Competitive foods convey a mixed message. When children are surrounded by unhealthy foods on the school campus, the effectiveness of the nutrition education taught in the classroom is diminished.

SCHOOL FOOD STANDARDS

General Food Standards. Historically, nutrition guidelines - such as the Food Guide Pyramid, the Dietary Guidelines for Americans, and the California's Daily Food Guide -- have been developed to address the nutrition needs for individuals over the course of a day or a week. Based on the premise that "no food is a bad food" and that "every food fits," these guidelines have assumed that people are eating whole meals and that the content of those meals can "balance out" over time. If one meal includes a special treat -- a piece of chocolate cake, for example -- it could be balanced by slightly fewer calories and fat at other times.

The National School Lunch Program. *The National School Lunch Program (NSLP),* administered by the U.S. Department of Agriculture (USDA) in cooperation with state and local education agencies, subsidizes the cost of preparing and serving meals at all participating schools. NSLP was created in 1946 in response to post-WWII concerns that young American's would not be healthy enough for a future war.(Bogden, 2000) “As a measure of national security, to safeguard the health and well-being of the Nation’s children and to encourage the domestic consumption of nutritious agricultural commodities and other food,” (Federal Register: 7 CFR Part 210.1) Congress established the program to assures that lunch is available to all students at participating schools. The full, free-or reduced-priced breakfast and lunch are served in the school cafeteria and operated within each school district.

In accordance with the National School Lunch Act and the Child Nutrition Act of 1996, schools are required to offer varied and nutritious food choices that are consistent with the federal government’s Dietary Guidelines for Americans. Under these rules (USDA,

1995), subsidized meals must meet the following guidelines over the course of each week**:**

- Limit total fat to 30% of calories, and saturated fat to 10%
- Meet 1/3 of the RDA for protein, iron, calcium, vitamin A and vitamin C
- Provide a variety of foods moderate in sugar and salt, and high in fruits, vegetables, and whole grains

A La Carte and Competitive Foods. Foods sold individually in the cafeteria but outside of the regulated NSLP meal are referred to as "a la carte foods." Food items sold during meal periods outside the cafeteria -- from vending machines, student stores, at school fund raisers, on food carts, or food concessions -- are known as "competitive foods" because they compete with the school food program for student buyers. According to national data, these foods are widely available on school campuses. In fact, 78% of high schools, 65% of middle schools and 31% of elementary school offered foods a la carte. Eighty-eight percent of high schools, 61% of middle schools, and 14% of elementary schools had food or beverage vending machines for student use (Burghart, 1993). None of these a la carte or competitive foods are bound by the dietary guidelines to which the NSLP must adhere.

Federal Regulation of Competitive Food Sales. Federal regulations prohibit only the sale of foods of minimal nutritional value in food service areas during meal- times. A food of minimal nutritional value is defined as a food which provides less than five percent of the Reference Daily Intakes (RDI) for each of eight specified nutrients per serving, in the case of artificially sweetened foods; and in all other foods, as a food which provides less than five percent of the RDI for each of eight specified nutrients per 100 calories and less than five percent of the RDI for each of eight specified nutrients per serving (Federal Register: 7 CFR Part 210.11). These standards do not address foods sold outside of the cafeteria – often within just a few feet of the cafeteria door! -- or those sold before or after school meal periods. (Federal Register: 7CFR, 210.2, 210.12:220.2 and 220.12) As a result, many schools sell and serve foods that compete with the reimbursable meals and that are high in added sugar, sodium, and fat. A study conducted by the American School Food Service Association (ASFSA) revealed the prevalence of these high-calorie/low-nutrient foods is on the rise, with the largest increase seen in elementary schools. In the ASFSA study, the most popular a la carte items were ice cream, milk, cookies/desserts, snack foods, and pizza (American School Food Service Association, 1999).

State Regulation of Competitive Food Sales. As outlined in Attachment 1, states across the country have a variety of standards regulating competitive foods. In some states (e.g., Colorado, Idaho and Nebraska), competitive food sales are not allowed from one half-hour before until one half-hour after the breakfast/lunch period. In other states (e.g., Illinois, Louisiana, New Jersey and Virginia), the income from competitive food sales must accrue to the school food service. One of the most detailed set of state regulations has been developed in West Virginia, which prohibits the sale of chewing gum, candy bars, food or drinks containing 40% or more sugar or other sweeteners,

juices containing less than 20% real juice, and foods with more than eight grams of fat per one ounce serving. Soft drinks are also prohibited at elementary and middle schools (West Virginia Board of Education).

California Standards. According to the California Department of Education Nutrition Services Division, "competitive foods" are any foods sold in competition with the National School Lunch and School Breakfast Programs to children in food service areas during the lunch and breakfast periods. According to Education Code §38085,

> *"Fifty percent of all food items offered for sale each school day at any site by any organization or entity during regular school hours shall be selected from the specified list of nutritious foods."*

As outlined in Attachment 2, the Education Code defines nutritious foods as including milk and dairy products, fruits and vegetables, fruit and vegetable juices, nuts and seeds, nonconfection grain products, meat / poultry / fish products, and legumes and legume products. Established in 1976, these standards are widely considered outdated as they do not address the growing availability of soda machines, fast foods concessions, candy sales, and high-fat/high-sugar items so widely available on school campuses today.

CONCLUSIONS: SCHOOLS MUST TAKE ACTION

For many students, school mealtime rarely -- if ever -- consists of a nutritionally balanced meal. For these students, breakfast and lunch at school consists of individual items selected from a la carte food lines, vending machines, and the school store. Items available at these locations are typically high in fat, sugar, sodium, and ultimately, calories. These items are also typically low in essential nutrients such as vitamins and minerals, including calcium.

While the federal government has established nutrition standards for school meals, there are no reasonable standards for competitive foods sold in California schools. At the same time, over the past few decades, school food service operations have increased the availability of less healthy foods in an attempt to maintain a financially stable food service business.

Because nutritionally inadequate foods are now so widely available to children at school every day, it has become increasingly difficult for children to "balance out" their excesses, thereby making all meal-based nutrition guidelines ineffective. In such an environment, it is essential that nutrition standards be developed for individual competitive foods.

DEVELOPMENT OF THE STANDARDS

In August 1999, the California Center for Public Health Advocacy (CCPHA) was awarded a grant from The California Endowment to educate policy makers in California about the importance of nutrition and physical activity for children and adolescents. As part of that effort, CCPHA established a Panel of respected state and national experts to develop recommendations for nutrient standards for competitive foods sold in California schools.

Selection of Panel Members. CCPHA solicited recommendations from 15 education, nutrition, school food, and public health experts from the following organizations, to recommend individuals to participate on the Panel:

- California Food Policy Advocates
- California School Boards Association
- California Project LEAN
- California Department of Health Services
- California Dieticians Association
- The Food Systems Project
- CAWAER
- California Teachers Association
- California School Food Service Assoc
- California Dept of Education
- Samuels and Associates

Based on their suggestions, ten panelists were selected, each of whom agreed to participate. Midway through the project, one panelist withdrew due to time constraints.

Meetings and Decision-Making Process. On January 16, 2001, the Panel came together for a half-day meeting in Sacramento, California. Following a brief discussion about the growing epidemic of childhood obesity and the increasing availability of high-calorie, low-nutrient foods on school campuses, Panelists agreed about the importance of establishing nutrition standards for individual competitive food items. At the same time, they were acutely aware of the challenge they faced: while other groups had attempted to set such standards, to their knowledge, none had ever been successful.

As a starting point for continued discussion, the Panel reviewed some preliminary research conducted by California Project LEAN. By the end of the meeting, it was agreed that the Panel would work toward establishing standards for the following:

- Beverages
- Fat and saturated fat
- Sugar
- Portion size
- Fruits and vegetables.

Finally, it was agreed that (1) all decisions made by the Panel would be made by consensus, that recommendations would be put forward only if all members of the group agreed to include them, and (2) CCPHA would contact Panel members over the coming

weeks to work toward developing a consensus on recommendations for all selected issues.

Follow-Up Discussions and Development of Final Recommendations. Over the course of the next five weeks, CCPHA spoke to each of the Panelists at least once. By February 23, Panelists had agreed that competitive food standards should address not only "obesity prevention," but also promotion of healthy eating habits in general. In addition, there was consensus about standards for fat, saturated fat, caffeine, and milk, and there was agreement that elementary schools should eliminate all competitive food sales. Finally, an initial set of additional policy recommendations had also begun being compiled. To aid Panelists with their discussion, a summary table was compiled showing the fat, saturated fat, and sugar content of common competitive foods.

Following the distribution of the initial set of recommendations, CCPHA held another round of discussions with Panelists. By March 5, Panel members had agreed that they did not wish to recommend elimination of the sale of bakery goods. Instead, they wanted to establish standards that would encourage young people to eat low- fat, low-sugar versions of snacks and sweets when they chose to eat these items. In addition, the Panel had agreed on secondary school standards for beverages, and for fat content and portion sizes for snacks, sweets, and side dishes. The only remaining questions were the specific sugar content standard and fat content and portion size for entrees.

After one final round of discussions, by March 26th,there was unanimous consensus about these standards as well. First, after reviewing a list of sugar content for commonly consumed snacks and side dishes, the Panel agreed that these should have sugar content of no more than 35% by weight. Second, the Panel agreed that the portion size for a la carte entrees should be the same size as the same entree when it is part of the school meal. While portion size alone for entrees does not eliminate the possibility that small size entrees will be served that are very high fat, this limitation does address what the Panel considered the more important problem: the general availability of substantially oversized entrees on school campuses.

The Panel's Basic Guidelines. The Panel's recommendations are guided by the following common sense ideas:

- Food is meant to be enjoyed; A healthy diet can include snacks, desserts, side dishes and reasonably sized portions of most of students' favorite entrees;
- Schools should be adequately funded, eliminating any incentive schools have to raise funds to support student programs by selling foods and beverages that compromise children's health
- Schools should be a safe haven where students can learn to make healthy food choices outside the usual unrestricted marketplace with its intense marketing and ready availability of less healthy foods;
- Schools should not contradict health and nutrition messages taught by parents and teachers; and,

- Children, schools, manufacturers, and growers can all win by promoting the sale of healthy foods.

To support implementation of these standards, the Panel encourages school districts to:

- Educate students, teachers, parents and administrators about the new guidelines
- Provide technical support to help schools adjust to new standards (addressing such issues as healthy recipes and healthful forms of fundraising).
- Ensure that standards are properly enforced, tying enforcement to accreditation, Average Daily Attendance, or other school- funding mechanism
- Phase in standards over a two-year period to give school districts and the food industry time to adjust.
- Establish an evaluation monitoring system to determine the impact of standards and other supporting policies.

A detailed description of the nutrition standards begins on page 11. If successfully implemented, the Panel is confident that these standards will help maintain children's health, ensure that our children are ready to learn, and will guarantee that schools' environments support parents and teachers in encouraging children to establish healthy eating behaviors they can maintain throughout their lives.

THE PANEL'S RECOMMENDATIONS

The remainder of this report provides supporting documentation for the nutrition standards for competitive foods recommended by the National Consensus Panel established by the California Center for Public Health Advocacy. The Panel encourages local, state, and national policy makers to adopt these standards in schools throughout the nation, as one step toward addressing the current epidemic of childhood obesity.

STANDARD #1 ELEMENTARY SCHOOLS	
All Competitive Foods	**Eliminate sale of all foods sold outside the school meal program during the school day.**
Beverages	**Allow sale of water, low-fat or nonfat milk, and beverages that contain at least 50% fruit juice with no added sweeteners.**

The Elementary Schools standard aims to improve the nutritional quality of foods available to children in grades six or lower by ensuring that no foods or beverages available on elementary school campuses contradict nutrition messages taught by parents and teachers. Compared to Middle Schools and High Schools, most Elementary Schools currently sell very few competitive foods or beverages. Immediate implementation of this standard will therefore act as a preventive agent, ensuring that the Elementary Schools" menus of tomorrow do not look like those of the secondary schools of today.

The standard was developed based on the following rationale:

- Young children do not have sufficient knowledge or experience to make healthy choices at school
- Schools have a responsibility to establish an environment that models healthy food choices and to provide nutritionally balanced meals.
- There is nothing wrong with an occasional "sweet treat." Therefore this standard does not apply to special foods (cake, ice cream, etc.) given to students as part of a special event, e.g., a child's birthday.

Studies have shown that nutrition education and obesity prevention efforts must begin as early as possible to be effective, with the elementary school years being a particularly critical period when children form healthy eating habits. A number of researchers have suggested that the critical period for initiation of obesity prevention efforts is between five and nine years old (Shapiro, 1986; Whitaker, 1997).

Schools can play a central role in helping children establish healthy eating habits: schools can educate children about nutrition, and schools have the opportunity to provide children with nutritious, well-regulated food choices, and schools model healthy food selection by the food options sold on campus. As noted above, those children who eat from the National School Lunch Program – a program with well-designed nutrition standards – have been shown to have lower intakes of added sugars, and higher intake of vegetables, milk, dairy products, protein rich foods and many nutrients than children who did not participate in the NSLP (Mathematica, 2001). At the same time, the USDA has found that sales of competitive foods undermine the nutritional integrity of the school meal programs and discourage participation.

STANDARD #2 SECONDARY SCHOOLS: BEVERAGES	
Sales Allowed	♦ **Beverages that contain at least 50% fruit juice with no added sweeteners** ♦ **Water** ♦ **Low- fat and nonfat milk**
Sales Eliminated	♦ **Soft drinks, sport drinks, ice tea and other drinks containing less than 50% real fruit juice** ♦ **Caffeine containing beverages (except chocolate milk)**
Portion size	♦ **12 oz or less (no limit for water)**

This standard promotes consumption of fruit juices, water, and milk, while eliminating sales of beverages with little or no nutritional value.

Fruit Juice. Fruit juice consumption is encouraged because fruit juices are rich in necessary vitamins and minerals. Nationally, only 14% of children consume the recommended number of servings of fruit on a daily basis (Mathematica, 2001). According to a 1997 survey of California high school students, only 16% had consumed three or more servings of fruit on the previous day and over one- quarter had not consumed any fruit (Foerster, 2000). An increase in juice intake would boost California children's intake of fruit. 50% juice is the current California Department of Education standard for beverages sold as part of school meals. Since this regulation is already in place, it can easily be applied to competitive foods.

Water. Although water consumption has become more popular in the last few years with the advent of designer spring water, the majority of Americans continue to consume inadequate amounts of water, often resulting in chronic dehydration. Schools should encourage students to drink water and meet the recommended 64 ounces per day by offering water as one of the beverage choices available on school campuses.

Milk. The California Daily Food Guide for Adolescents recommends consumption of three or more servings of fat- free or 1% milk products daily. The vast majority of ado-

lescents fall short of this recommendation. One recent analysis showed that only 10% of girls and 29% of boys consumed the recommended amount of dairy foods (Munoz, 1997). Only 13.5 % of girls and 36.3 % of boys age 12 to 19 in the United States get the recommended level of calcium, placing them at high risk for osteoporosis and other bone diseases, according to statistics from the US Department of Agriculture (American Dietetics Association, 2002). At the same time, children's diets are high in total and saturated fat, consuming an average of 34% of calories from fat and 13% of calories from saturated fat as compared to the recommended limits of 30% of calories from fat and 10% of calories from saturated fat (ERS, 1996). Children and adolescents who consume skim or low- fat milks are more likely to have lower fat intakes while consuming greater amounts of calcium (Peterson, 1997; Johnson, 2000).

Soft Drinks and Sport Drinks. Schools should eliminate the sale of soft drinks and similar low nutrient-density beverages for a number of reasons. First, soft drinks, sports drinks, fruit punches and other beverages with small amounts of full -strength fruit juice provide unnecessary, empty calories. Second, U.S. teenagers are consuming large quantities of soft drinks – 12- to 19 year- old boys consume an average of 28 ounces of soft drinks per day and girls in this age group consume an average of 21 ounces (Jacobsen, 1999). There is evidence that the decline in milk intake among youth is in large part due to the increasing consumption of soft drinks, and that soft drink consumption is associated with inadequate intake of many nutrients, including calcium, riboflavin, vitamin A, phosphorous, folate and vitamin C (Harnack, 1999). Every additional daily serving of sugar-sweetened soda increases a child's risk for obesity by 60%, making soda an independent risk factor for childhood obesity. (Ludwig, 2001) A study of high school girls found that active girls drinking colas were five times more likely to develop bone fractures. (Wyshak, 2000)

Finally, this standard eliminates the sale of caffeinated beverages. It is appropriate to limit caffeine intake in adolescents for the following reasons:

- Caffeine is a mildly addictive stimulant drug, often causing nervousness, irritability and sleeplessness. Consumption of caffeine in one's youth can lead to lifelong dependence (Jacobson, 1999)
- Caffeine consumption increases the excretion of calcium in the urine, contributing to the risk of osteoporosis (Massey, 1988).

STANDARD #3 SECONDARY SCHOOLS: SNACKS, SWEETS, SIDE DISHES	
Fat	**No more than 30% of calories from fat**
Saturated Fat	**No more than 10% of calories from saturated fat**
Sugar	**No more than 35% added sugar by weight (except fresh, dried or canned fruits and vegetables)**
Portion Size	**Limit portions to specific sizes** ♦ **Snacks and Sweets: 1.25 oz** ♦ **Cookies and cereal bars: 2 oz** ♦ **Bakery items: 3 oz** ♦ **Frozen desserts: 3 oz** ♦ **Yogurt: 8 oz**

Snacks, sweets and side dishes are mainstays of adolescent diets. A recent study found that 70% of California adolescents consume pastries, fried foods, chips, desserts, candy or sodas two or more times per day (Foerster, 2000). The Panel considered it imperative that standards be established to address the portion size, fat and saturated fat content, and sugar content of these widely consumed foods.

Total Fat. Snacks, sweets, and side dishes are contributing to high fat intakes among youth. Current dietary guidelines from a number of public and private sources recommend that all children over age two consume a diet that provides 30% or less of calories from total fat (American Academy of Pediatrics, 1992). A diet lower in total fat is associated with lower risk of overweight, obesity, cardiovascular disease and some cancers. Research has shown that it is possible for children to reduce fat intake to the recommended level without compromising nutrient adequacy of the diet (Peterson, 1997). While all current nutrition standards apply only to total calories during a certain period of time, the Panel considered the same criteria to be equally applicable to individual food items.

Saturated Fat. The *2000 Dietary Guidelines for Americans* recommend limiting saturated fat to less than 10 percent of calories, for everyone over the age of 2. Children currently consume an average of 13% of calories from saturated fat (ERS). Recent research indicates that saturated fat intake plays a significant role in development of cardiovascular disease and may have a greater impact on heart disease risk than total fat consumption. While all current nutrition standards apply only to total calories during a certain period of time, the Panel considered the same criteria to be equally applicable to individual food items.

Sugar. The *2000 Dietary Guidelines for Americans* recommends choosing beverages and food that moderate intake of added sugars. In the U.S., adolescent boys currently consume twice the recommended amount of sugar each day, almost half of which comes from soft drinks; teenage girls consume almost 3 times the recommended

amount of sugar, 40% comes from soft drinks (Jacobson, 1999). According to the USDA, the following are the major sources of added sugars in the US diet: soft drinks, cakes, cookies, pies, fruit-ades and drinks, dairy desserts and candy (Munoz, 1997). This list is similar to the foods identified in California and national surveys of popular "competitive" foods sold in schools (USDA, 2001).

Excess intake of added sugar increases risk of dental carries and contributes to intake of empty calories that provide little or no nutritional value (Stang, 2000). Despite a relatively high naturally occurring sugar content, whole, canned and dried fruits and vegetables are exempt from this standard because of their high nutrient density. The Panel unanimously selected 35% by weight as the standard, after reviewing the ingredients of common snack foods. The Panel members consider this level to be one that both limits sugar content but still provides a wide range of relatively healthy snack choices.

Portion size. Supersize or extra-large portion sizes have become an increasingly popular marketing strategy for food and beverage manufacturers. "Supersizing" is often effective because the consumers feel they are getting a better value for their money, not recognizing that increased food and beverage consumption could be bad for their health. Many school food service operations have also instituted supersize portions for their competitive foods in their ongoing battle to compete with food retailers for student customers.

Although research into the dietary impact of large portions is just beginning, it appears that supersize portions can significantly contribute to overconsumption of total fat, saturated fat, sugar and calories, contributing to increased risk of overweight (USDA, 1999). A typical supersize serving of french fries, for example, contains 28 grams of fat – almost half of the recommended daily fat intake for an adult woman. The Panel recommended portion sizes based on the FDA's recommendations for portion size and on their personal knowledge and experience working in food service programs.

STANDARD #4 SECONDARY SCHOOLS: ENTRÉE ITEMS	
Portion Size	**Limit portion size to no larger than portion served as part of school lunch.**

The portion sizes of entrees provided as part of the school meal program are determined by the U.S. *Dietary Guidelines.* Portion sizes beyond these standards encourage students to eat far more calories than needed for healthy growth and development. Encouraging over-consumption of any food, even those that provide important nutrients, can be unhealthy and put the person at risk for obesity. While portion size alone for entrees does not eliminate the possibility that small size entrees will be served that are very high fat, this limitation does address what the Panel considered the more important problem: the general availability of substantially oversized entrees on school campuses.

STANDARD #5 SECONDARY SCHOOLS: FRUITS AND VEGETABLES	
Availability	**Require the availability of quality fruits and vegetables any place competitive foods are sold**

Adequate fruit and vegetable consumption is a key dietary factor in chronic disease prevention and specifically, in prevention of certain cancers by virtue of their vitamin, mineral and fiber content. As mentioned earlier in this Report, very few children consume the recommended number of daily servings of fruits and vegetables. The Calteens survey of California high school students found that nearly half of all teens reported eating no vegetables on a typical day. In addition, the survey found that only one out of five boys and two out of five girls reported eating the minimum number of servings of fruits and vegetables needed for good health. When queried about the barriers to eating fruits and vegetables, the Calteens respondents cited availability as one of the top four barriers (Foerster, 2000). Requiring the sale of fruits and vegetables any place that competitive foods are sold will improve students' access to fruits and vegetables and encourage increased intake.

CONCLUSION

As concerns about poor eating habits, chronic disease and childhood overweight increase, coordinated and specific policies addressing nutrient standards for competitive foods has become a necessity. Implementation of the Consensus Panel's recommended standards throughout California and across the country would be an important part of the solution. These standards ensure that all foods available on school campuses meet minimum nutritional guidelines consistent with U.S. Dietary Guidelines, the California Daily Food Guide, and recommendations from many national organizations, such as the American Cancer Society, American Heart Association, American Dietetic Association, American Academy of Pediatrics. All of these organizations recommend limiting fat, saturated fat and sugar, and promoting intake of fruits and vegetables.

Importantly, the standards recommended by the National Consensus Panel will not eliminate all snack items and competitive foods in schools. Instead, the standards would increase the availability of appealing nutritious food and beverages while eliminating the availability of their high-calorie / low-nutrient counterparts, thus ensuring that foods sold on school campuses are not contributing to the current epidemic of childhood obesity facing our state and our nation. There can be no question that children must be given a wide array of food options while at schools. But certainly these options must be within parameters deemed reasonable by the nations health experts.

Children's health and well-being is the ultimate goal of these standards. The outlined requirements would allow for clear definition of what is appropriate nutrition for youth. The Panel recommends that these standards be adopted throughout the country as a way to prevent chronic disease, ensure that children are ready to learn, and that school environments model healthy eating behaviors for their students.

ATTACHMENT 1

State Competitive Food Policies

U.S. Department of Agriculture*

STATE	POLICY
California	At least 50 percent of all food items sold any day at any site on school premises must be selected from the "list of nutritious foods" (dairy products, juices which are at least 50 percent full strength fruit juice, fruits/vegetables, grains, meats, legumes and some snack items such as pretzels, crackers and popcorn.) Food items reimbursed under the national school lunch act are not included in the 50 percent calculation.
Colorado	No competitive foods on campus from ½ hour before until ½ hour after breakfast or lunch.
Connecticut	No extra food items anywhere on campus ½ hour before and after meal service. All income from food sales anywhere on campus accrues to the food service programs.
District of Columbia	No competitive foods on campus from beginning of school until end of last lunch period.
Florida	No competitive foods in elementary schools. No competitive foods in secondary schools until 1 hour after last lunch period.
Georgia	No foods of minimal nutritional value in elementary schools until the last lunch group is scheduled to leave. In other schools no foods of minimal nutritional value in food service areas during meal times.
Guam	No sales of foods of minimal nutritional value from vending machines anywhere on campus. Foods of minimal nutritional value may be sold in stores after the end of the last lunch period.
Hawaii	Sale of food is limited to USDA meal programs and "approved cafeteria supplementary food items." Only other foods permitted are from beverage vending machines, and beverages may not be sold during meal periods.
Idaho	No competitive food sales from ½ hour before until ½ hour after the last regular breakfast/lunch period.

* http://www.fns.usda.gov/cnd/HealthyEating/CF_State.htm

Illinois	Elementary schools may not sell competitive foods during regularly scheduled meal periods. All income from the sale of competitive foods in the food service area during meal periods accrues to the food service account.
Kentucky	No competitive foods on campus until ½ hour after last lunch period.
Louisiana	Grades K-6 - competitive foods permitted before end of last lunch period only if income accrues to the food service account. Grades 7-12 - competitive foods permitted before the last 10 minutes of each lunch period only if income accrues to the food service account.
Maine	No competitive food sales on campus at any time.
Maryland	No foods of minimal nutritional value on campus until end of last lunch period.
Mississippi	No food items sold on campus for 1 hour before the start of any meal period.
Nebraska	No competitive foods on campus from ½ hour before until ½ hour after breakfast or lunch.
New Jersey	No foods of minimal nutritional value anywhere on school property until end of last lunch period. Funds from sales of other competitive foods accrue to the food service account.
New York	No foods of minimal nutritional value anywhere on campus from beginning of school to end of last scheduled meal period.
North Carolina	Competitive foods must contribute to the nutritional well being of the child and aid in establishing good food habits. Income from sales before and during established lunch period must accrue to the food service.
Puerto Rico	No competitive foods during breakfast or lunch periods. Competitive foods may be sold during designated snack times but if in morning must be at least 2 hours before lunch.
Virginia	No foods of minimal nutritional value anywhere in school during lunch and breakfast periods. Income from the sale of other competitive foods anywhere in the school building during meal periods must accrue to the food service account.
Virgin Islands	No competitive foods sold before or during lunch period. No juice machines in or close to cafeteria unless proceeds go to food service.
West Virginia	No foods of minimal nutritional value in elementary schools. Sale of foods of minimal nutritional value may be approved for high schools at times other than the meal period(s). Revenues accrue to the principal for purchase of school supplies or to faculty senate for allocation. The state also establishes nutritional criteria for approval of foods (e.g., no foods containing 40 percent or more sugar by weight).
ALL OTHERS	USDA regulations

ATTACHMENT 2

CALIFORNIA EDUCATION CODE SECTION §38085

A minimum of 50 percent of the items**, other than foods reimbursed under Chapters 13 (commencing with Section 1751) and 13A (commencing with Section 1771) of Title 42 of the United States Code, **offered for sale each school day at any school site by any entity or organization during regular school hours shall be selected from the following list:

(1) **Milk and dairy products**, including cheese, yogurt, frozen yogurt, and ice cream.

(2) Full-strength **fruit and vegetable juices** and fruit drinks containing 50 percent or more full-strength fruit juice, and fruit nectars containing 35 percent or more full-strength fruit juice.

(3) Fresh, frozen, canned, and dried **fruits and vegetables**.

(4) Nuts, seeds, and nut butters.

(5) **Nonconfection grain products**, as defined by regulation of the United States Food and Drug Administration, including crackers, bread sticks, tortillas, pizza, pretzels, bagels, muffins, and popcorn.

(6) **Meat, poultry, and fish**, and their products, including beef jerky, tacos, meat turnovers, pizza, chili and sandwiches.

(7) **Legumes and legume products**, including bean burritos, chili beans, bean dip, roasted soybeans, and soups.

(8) Any foods which would qualify as one of the required food components of the Type A lunch which is defined in and reimbursable under the National School Lunch Act (Chapter 13 (commencing with Section 1751) of Title 42 of the United States Code).

For the purposes of this section, >item= shall be defined as each separate kind of food offered for sale as a separate unit.

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