

California High School Fast Food Survey:

Findings & Recommendations

Public Health Institute
Berkeley, Ca
February 2000

This survey was funded by a grant from The California Endowment.

***2000 CALIFORNIA HIGH SCHOOL
FAST FOOD SURVEY:***

Findings and Recommendations

February 2000

Public Health Institute

Prepared by:

**Samuels & Associates
3900 Lake Shore Avenue
Oakland, CA 94610**

For more information, contact:

**Amanda Purcell, M.P.H.
Assistant Director
Food on the Run
Public Health Institute
P.O. Box 942732, MS 675
Sacramento, CA 94234-7320
(916) 445-3513
(916) 445-7571 fax**

This survey was funded by a grant from The California Endowment

Executive Summary

BACKGROUND

Obesity has become an epidemic in the United States, affecting one-third of all adults.¹⁻² Obesity is also the most prevalent nutritional disease among youth with 27 percent of children and 21 percent of adolescents currently considered obese.³⁻⁴ Concern about obesity among adolescents has grown given studies that indicate a two-fold increase in the youth obesity rate over the past two decades.⁴⁻⁶ Obese adolescents face increased risks for many serious health problems that do not commonly occur during childhood, including high blood cholesterol levels, abnormal glucose tolerance, and high blood pressure.⁷⁻⁸ These are compounded by discrimination, psychological stress, poor body image, and low self-esteem.⁸⁻⁹ More than 80 percent of obese adolescents remain obese as adults, with even more severe consequences including heart disease, cancer and type 2 diabetes.¹⁰⁻¹¹

Although genetics can play an important role in obesity, dietary factors are also essential components. Poor diet has been found to adversely influence the ability to learn and to decrease motivation and attentiveness.¹² Such findings indicate that young people will not be ready to learn and achieve their full potential unless they are well nourished and healthy. Fast foods, available both on and off school campuses, may be an important part of this complex problem due to their limited nutritional value and high levels of fat, salt, and sugar.¹³

The Public Health Institute commissioned the *2000 California High School Fast Food Survey* to describe the prevalence of fast foods on California high school campuses and student access to healthy foods at school. Findings from the survey will be used by public health programs such as California Project LEAN (Leaders Encouraging Activity and Nutrition), California Adolescent Nutrition and Fitness Program (CANFit) and the Southern California Public Health Association, in their work on adolescent nutrition and physical activity issues.

The *2000 California High School Fast Food Survey* sought to describe the types of fast food being sold on California high school campuses, the factors that influence such sales, and the economic and policy issues associated with them. The study included a literature review, a self-

administered survey to all (323) district-level food service directors with a high school in their district, and a follow-up phone interview with 50 food service directors responding to the survey. While the survey uses only self-reported data from voluntary participants and cannot be assumed to represent all California public high schools, many of its findings are similar to those of a 1996 study conducted by the U.S. General Accounting Office.¹⁴

FINDINGS

Surveys were returned by 171 school districts that represent 345 high schools. Responding districts serve 16 percent of California's 1.7 million public high school students. Just under half of the schools represented by the responding districts (44 percent; 153) report that 40 percent or more of their student body is eligible for free or reduced-price meals from the U.S. Department of Agriculture's National School Lunch Program (NSLP). NSLP subsidizes nutritionally healthy meals at participating schools. In slightly more than a third of the schools that serve a substantial number of low-income students, fewer than 40 percent of the students participate in the NSLP. Campuses that do not allow students to leave the grounds during lunch have a higher participation rate in the NSLP than campuses that allow students to leave at lunchtime.

At 71 percent of the school districts surveyed, a la carte items, including pizza, hamburgers, submarine sandwiches, french fries, chips, cookies, yogurt, bagels, ice cream, and sodas, accounted for up to 70 percent of all food sales at the school. Brand-name products proliferate: more than half the schools either carry Taco Bell, Subway, Dominos, Pizza Hut, or other branded foods. Many school districts also sell healthier a la carte items. More than half offer fruit, yogurt, bagels, and packaged salads. A la carte items are primarily sold from free-standing vending machines, fast food carts, and snack bars. Of the high schools that sell a la carte items, more than half sell them in the cafeteria.

A growing trend, present in 14 percent of the responding districts, is to market fast foods under a district brand name, with foods either prepared by the district or purchased as generic items from a vendor. When the district controls the production, it can modify the foods to be healthier, for example, by using low-fat cheese on pizza and low-fat beans in burritos. Fifty-four percent of the districts sell modified versions of traditional fast foods.

Nearly two-thirds of the districts that sell a la carte items reported that the main reason they do so is because students like them. Nearly 30 percent said these items add variety, and another 30 percent said sales of these items keep the food service program operating in the black. About one-fourth said the foods are popular, affordable, and can adhere to nutritional guidelines. Others identified the constraints of a short lunch period or lack of facilities, personnel, and food options as the main reasons for offering students a la carte foods.

More than 85 percent of the districts that sell fast foods as a la carte items use the profits from sales of these foods to support their food service operations. Others use the profits to support other aspects of school functioning, including extracurricular activities, athletics, and educational programs.

Only a few of the districts actually contract with a vendor to operate a fast food concession. In a few other instances, a school organization such as a student club or student council shares profits with a vendor on campus.

At least 72 percent of the responding districts allow fast food and beverage advertising such as posters, advertisements on scoreboards, and other signage on high school campuses. Only 13 percent prohibit such advertising. Twenty-four percent of the districts that allow advertising have contracted promotional rights to a fast food or beverage company in exchange for cash or equipment.

In addition to the financial aspects, some food service directors characterized fast food sales as a tactic for keeping their student customers eating at the school; others felt high school students were old enough to make their own choices among the array of foods offered, including fast foods. Still others felt that education about healthy eating should begin with parents; some bemoaned the contradictions between the nutrition education the school was trying to imbue and the food being offered.

In a few school districts, food service directors, parents, or politicians have attempted to limit fast food sales by decreasing the number of days fast foods are available or by increasing the use of organic produce and milk.

CONCLUSIONS

Over the past ten years, fast foods have become a staple on high school campuses. Consideration must be given to the impact these foods have on the diets of teens now and the life-long eating habits they develop. Food service directors are hard pressed to find a balance between providing adolescents with healthy food choices that meet their nutritional needs, satisfying their student customers, and running a financially stable business.

Further research is needed on student food preferences, the reasons behind their food selections at school, reasons for students' low participation in the NSLP, and the availability and affordability of healthier food items for purchase by food service directors.

RECOMMENDATIONS

- Promote the link between a nutritious diet and learning.
- Investigate the reasons that students do not participate in the National School Lunch Program. Develop strategies to increase participation.
- Offer students more healthy foods that are just as convenient, inexpensive and appealing as fast foods.
- Involve students in choosing the healthy foods available in their school through taste tests, surveys, and classroom activities.
- Hold forums that inform students, parents, decision-makers, and the community about the effect of fast food on health.
- Examine the use of schools as a channel for food and beverage company promotions.
- Explore new opportunities to generate support and revenue that are not based on the sale of unhealthy foods.

REFERENCES

1. Kuczmarski RJ, Flegal KM, Campbell SM, Johnson CL. Increasing prevalence of overweight among US adults: the National Health and Nutrition Examination Surveys, 1960 to 1991. *JAMA* 1994 272:205-211.
2. Troiano RP, Flegal KM, Kuczmarski RJ, Campbell SM, Johnson CL. Overweight prevalence and trends for children and adolescents. The National Health and Nutrition Examination Surveys, 1963 to 1991. *Arch Pediatr Adolesc Med* 1995 149:1085-1091.
3. Dietz WH. Health consequences of obesity in youth: childhood predictors of adult disease. *Pediatrics* 1998 101:518-525.
4. Gortmaker SL, Dietz WH Jr., Sobol AM, Wehler CA. Increasing Pediatric Obesity in the U.S. *J Dis Child*, 1987; 141(5):535-540.
5. Prevalence of overweight among adolescents 1988-1991. *MMWR*: 1994, 43 (44):818-821.
6. Patricia Crawford. Children and weight: What professionals can do about it. Concept Paper 1998. University of California, Berkeley.
7. Kikuchi DA, Srinivasan SR, Harsha DW, Webber LS, Sellers TA, Berenson GS. Relation of serum lipoprotein lipids and apolipoproteins to obesity in children: The Bogalusa Heart Study. *Prev Med* 1992 21:177-90.
8. *The Surgeon General's Report on Nutrition and Health*. U.S. Department of Health and Human Services, DHHS Publication Number 88-50210. 1988, 287.
9. *Adolescent Nutrition: Assessment and Management*. Edited by Rickert VI. 1996, 201.
10. *Diet and Health: Implications for Reducing Chronic Disease Risk*. National Research Council, Committee on Diet and Health. 1989, 21-35.
11. Dietz WH. Childhood weight affects adult morbidity and mortality. *J Nutr* 1998 Feb;128 (2 Suppl): 411S-414S.
12. *Statement on the Link Between Nutrition and Cognitive Development in Children*. Center on Hunger, Poverty and Nutrition, Tufts University School of Nutrition. 1994.
13. *Adolescent Nutrition: Assessment and Management*. Edited by Rickert VI. 1996, 16.
14. *School Lunch Program: Role and Impacts of Private Food Service Companies*. United States General Accounting Office. August 1996.

2000 California High School Fast Food Survey

INTRODUCTION

Obesity has become an epidemic in the United States.¹⁻² It is the most prevalent nutritional disease among children and adolescents.³⁻⁴ Concern about adolescent obesity has grown given studies that indicate a two-fold increase in the youth obesity rate over the past two decades.⁴⁻⁶ Research shows that obese adolescents become obese adults. According to the National Research Council, more than 80 percent of obese adolescents remain obese as adults.⁷ Obese teens face an increased risk of many serious health problems that do not commonly occur during childhood, including high blood cholesterol levels, abnormal glucose tolerance, and high blood pressure.⁸⁻⁹ Adolescent health problems related to obesity can lead to chronic diseases in adulthood, such as heart disease, cancer, and type 2 diabetes.⁷⁻⁸ Obese adolescents also suffer from discrimination psychological stress, poor body image, and low self-esteem.¹⁰⁻¹¹ Research indicates a clear link between nutrition and learning. Poor diets have been found to adversely influence the ability to learn and have been shown to decrease motivation and attentiveness¹². These findings indicate that young people will not be ready to learn and achieve their full potential unless they are well nourished and healthy.

Although a number of factors, including genetics, contribute to the rising rate of adolescent obesity, there is consensus among medical professionals that poor diet plays an important role. For the most part, teens in the United States follow eating patterns that do not meet national dietary recommendations. Over 84 percent consume more than the recommended 30 percent of daily calories from fat¹³, and 90 percent exceed the recommendation for no more than 10 percent of daily calories from saturated fat.¹⁴ Fewer than five percent of teens eat the recommended five daily servings of fruits and vegetables.¹⁴ Some experts believe that poor teen diets have been influenced by the easy availability of fast foods high in calories and fat.¹⁵

Over the past decade, fast foods have become increasingly common on high school campuses. The General Accounting Office reported that brand name fast foods were found in 13 percent of schools nationwide in 1996, an increase from 2 percent of schools in 1990-91.¹⁶ Fast food sales have generated revenues that support food service operations and other school activities. However, the availability of fast food on high school campuses may contribute to the poor quality of student diets and negatively affect teen food choices, both in and out of school. Further, fast food at school may undermine nutrition education messages presented at school and may affect the lifelong eating habits of students.

BACKGROUND

The Public Health Institute commissioned the health program, policy, and research firm of Samuels & Associates to conduct the *2000 California High School Fast Food Survey*. The purpose of the survey is to describe the prevalence of fast foods on California high school campuses and student access to healthy foods at school. Findings from the survey will be used by public health programs such as California Project LEAN (Leaders Encouraging Activity and Nutrition), California Adolescent Nutrition and Fitness Program (CANFit) and the Southern California Public Health Association, in their work on adolescent nutrition and physical activity issues.

Three primary research objectives guided this study:

- To determine the extent of fast food sales on high school campuses.
- To assess the factors that influence fast food sales on high school campuses.
- To identify the economic and policy issues associated with fast food sales on high school campuses.

The study utilized a mixed-method approach: a literature review to identify priorities, a self-administered survey of all district-level food service directors with at least one public high school in their district, and a follow-up phone interview with a limited sample of food service directors who responded to the self-administered survey.

These survey findings provide preliminary data about the prevalence of fast food sales and a framework within which the health, economic, social, and policy implications associated with fast foods on high school campuses can be examined.

TERMINOLOGY

The following terms are used in this report:

Fast Foods: These include a wide variety of foods such as popular entrees like pizza and tacos, as well as items such as cookies, chips, and pastries. Fast foods are classified as branded and non-branded items.

Branded Foods: Items sold under a recognized retail brand name such as Domino's Pizza or Taco Bell.

Non-branded Foods: Generic items that are not sold under a brand name.

Food Service: The department within the school district or school that operates the school breakfast and/or lunch program. This includes the operation of the National School Lunch Program. The Food Service Department also may be referred to as the Child Nutrition Program.

National School Lunch Program (NSLP): This program, administered by the United States Department of Agriculture (USDA) in cooperation with state and local education agencies, subsidizes the cost of preparing and serving meals at participating schools. The NSLP assures that lunch is available to all students at participating schools and that the meals meet specific nutritional requirements.

Free or Reduced-Price Lunch: Students are eligible for a free NSLP meal if their family income is 130 percent of the federal poverty level or below. Students are eligible for a reduced price NSLP meal if their family income is between 130 percent and 185 percent of the federal poverty level. Students who do not meet the family income requirements for a free or reduced price lunches are allowed to purchase the NSLP meal at full price.

A La Carte: Foods sold individually and not as part of a complete NSLP meal. A la carte items are exempt from the dietary guidelines to which the NSLP meals must adhere. A la carte items may include fast foods.

Open Campus: On an open campus, students are allowed to leave during break periods and lunch.

Closed Campus: A closed campus does not allow students to leave during the school day.

SURVEY METHODOLOGY

A self-administered survey instrument was created and pre-tested with a small sample of food service directors. The survey included 19 multiple-choice questions and one open-ended question. The survey was designed to take no more than 15 minutes to complete. Survey questions focused on the following topics regarding food sales on high school campuses within the respondent's district:

- Availability of fast food

- Specific locations and times for fast food sales
- Economic issues associated with fast food sales
- Policy issues associated with fast food sales
- Identification of the decision makers involved with fast food sales
- Sales of branded versus non-branded fast foods
- Fast food advertising and promotion rights

The survey was mailed to all food service directors in California with at least one high school in their district (n=323) in March 1999. Only public school districts were included and a self-addressed stamped envelope was provided for return of the survey. To enhance the survey response rate, a second mailing of the survey was sent to all non-respondents approximately three weeks after the initial mailing. As an incentive to respond, food service directors were offered a free cookbook featuring recipes from premiere California chefs and a summary of the survey results.

Brief follow-up telephone interviews, 5 to 15 minutes long, were conducted with 50 food service directors who responded to the self-administered survey. The interview sample was designed to include a geographic mix of districts, with representation from urban, rural, and suburban communities. The telephone interviews provided more detailed, qualitative data on the factors that influence fast food sales and experiences with promoting and limiting fast food sales.

Survey data were cleaned, entered, and frequencies were calculated using the Statistical Analysis System.

SURVEY LIMITATIONS

Consideration of the findings from this survey should take into account the following study limitations:

- The survey uses only self-reported data.
- A validity study was not conducted with the survey instrument.
- Response to the survey was on a voluntary basis.
- The authors did not collect information on the non-respondents and do not know how their responses would have differed from the surveys completed.
- The survey sample is not representative of all California public high schools and therefore is not generalizable to all high schools.

SURVEY FINDINGS

A. Response Rate

Surveys were mailed to 323 California school districts that contain at least one high school. After a second mailing was sent to non-respondents, 171 completed surveys were received, resulting in a response rate of 53 percent. The responding districts represent 345 high schools with 264,595 high school students which is 16 percent of California's 1,659,030 public high school students.

B. Profile of Responding School Districts

A number of data elements were collected to describe the responding districts and the high schools within them. Profile information included the number of high schools in the district, whether the high school campuses are open or closed, the percentage of students eligible for free or reduced-price meals, the student participation rate in the NSLP, and the percentage of food sales accounted for by a la carte items.

Number of Schools in the District

Although the survey was sent to all districts regardless of size, a greater number of smaller districts responded to the survey. The majority of responding school districts contain three or fewer high schools: 43 percent include one high school, 24 percent include two high schools and 11 percent include three high schools. A number of districts (12 percent) include four or more high schools and one district reported 16 high schools. The responding districts represent high schools in urban, suburban, and rural communities throughout the state (Table B-1).

Table B-1: Number of High Schools in the District (N=171 school districts)

Number of High Schools in District	Responding Districts	Percent
1	74	43
2	41	24
3	19	11
4	10	6
5	4	2
6	2	1
7	1	1
9	1	1
16	1	1
Missing data	18	10

Source: Public Health Institute

Campus Status: Open or Closed

Respondents were asked to report if the high schools in their districts had open or closed campuses (Table B-2). Just under half of the schools in the responding districts have open campuses.

Table B-2: Open or Closed Campus (N=345 High Schools)

Type of Campus	Schools	Percent*
Closed	182	53
Open	157	46
Missing data	6	2

* Does not total 100 percent due to rounding

Source: Public Health Institute

Percentage of the Students Eligible for Free or Reduced-Price Meals

Students are eligible for a free NSLP meal if their family income is at or below 130 percent of the federal poverty level. Students are eligible for reduced-price NSLP meals if their family income is between 130 percent and 185 percent of the federal poverty level. Just under half of the schools represented by the responding districts (44 percent; 153) report that 40 percent or more of their student body is eligible for free or reduced-price meals, indicating that these schools are serving communities with a significant portion of children living in poverty (Table B-3).

Table B-3: Percentage of Students Eligible for Free or Reduced-Price Meals (N=345 High Schools)

Percent of eligible students	Schools	Percent
0-39%	175	51
40-69%	119	34
70-100%	34	10
Missing Data	17	5

Source: Public Health Institute

Participation in the National School Lunch Program

Meals served as part of the NSLP must adhere to nutritional requirements that reflect the United States government's recommendations for a healthy diet. Significant progress has been made in improving the nutrient profile of the NSLP meals. However, most high school students do not appear to be eating the NSLP meal. Students who are not participating in the NSLP are choosing foods that are not regulated for nutrient content, increasing the likelihood that these foods will not meet dietary recommendations and will be higher in fat, sodium, and sugar.

Survey respondents were queried as to overall student participation in the NSLP at each high school in their district (Table B-4). Fifty-six percent of schools have student participation rates below 40 percent. One-third of schools have student participation rates ranging from 40 percent to 69 percent, and only fourteen high schools have a 70 percent participation rate or higher. Participation in the NSLP is higher at schools with a closed campus. Forty-seven percent of closed campuses versus 30 percent of open campuses have NSLP participation over 40 percent (Table B-5). Participation in the school lunch program is highest at schools where more than 40 percent of the students are eligible for free or reduced-price meals. Of these schools, 62 percent have student participation rate over 40 percent (Table B-6).

Table B-4: Student Participation in the National School Lunch Program (N=345 high schools)

Student Participation Rate in NSLP	Schools	Percent
0-39% of all students	194	56
40-69%	118	34
70-100%	14	4
Missing Data	19	6%

Source: Public Health Institute

Table B-5: Participation in the National School Lunch Program—Open vs. Closed Campuses (N=339 high schools)**

Student Participation Rate in NSLP	OPEN CAMPUS		CLOSED CAMPUS	
	Schools	Percent	Schools	Percent*
0%-39%	105	67	89	49
40%-69%	46	29	72	40
70%-100%	2	1	12	7
Missing data	4	3	9	5

* Does not total 100 percent due to rounding

** Six schools did not report whether campus was open or closed

Source: Public Health Institute

Table B-6: Participation in the National School Lunch Program of High Schools with 40 percent to 100 percent of Students Eligible for Free or Reduced-Price Lunch (N=153 high schools)

Participation Rate: Schools with 40%- 100% of Students Eligible for Free or Reduced-Price Meals	Schools	Percent
0-39% of students	58	38
40-69%	82	54
70-100%	13	8

Source: Public Health Institute

Percentage of Overall Food Sales Accounted for by A La Carte Items

A la carte items account for a substantial portion of food sales on high school campuses. Examples of a la carte items include fast food items such as pizza, hamburgers, submarine sandwiches, french fries, chips, cookies, yogurt, bagels, ice cream, and sodas. A la carte items are sold separately from the NSLP meal and, thus, are exempt from the federal dietary guidelines to which the NSLP meals must adhere. As a result, a la carte items are often higher in fat, sodium, and sugar than the items offered as part of the NSLP meal.¹⁷ Nearly 60 percent of respondents say a la carte sales account for more than 40 percent of their total food sales (Table B-7).

Table B-7: Percentage of Overall Food Sales Accounted for by A La Carte Items
(N=345 high schools)

Percent of Sales from A La Carte Food	Schools	Percent
0-39%	123	36
40-69%	121	35
70-100%	80	23
Missing data	21	6

Source: Public Health Institute

C. Current Fast Food Sales

A series of questions was asked regarding current a la carte fast food sales. Fast foods were loosely defined as branded and non-branded items, including entrees and snack foods such as chips, cookies, and pastries. Respondents were asked to choose their responses from a list of common fast food items. The findings create a snapshot of the type, location, and frequency of fast food sales in the responding high schools.

Fast Foods Sold as A La Carte Items

Ninety-five percent of responding districts reported selling fast foods as a la carte items. These include a variety of foods, including entrees, snacks, and desserts. The most common fast foods sold as a la carte items are pizza, cookies, chips, and burritos (Table C-1). Traditionally, these foods are high in total fat, saturated fat, and sodium. Few of these foods include fruits, vegetables, or whole grains.

Seven (four percent) of the responding districts do not sell a la carte items. These are primarily small districts located in rural communities.

Table C-1: Fast Foods Sold as A La Carte Items
(N=171 school districts. Respondents selected all that apply.)

Fast Foods Sold as A La Carte Items	Districts	Percent
Pizza	149	87
Cookies	147	86
Chips	144	84
Burritos	142	83
Hamburgers	120	70
Nachos	115	67
Donuts	103	60
Cinnamon rolls	91	53
Pastries	91	53
Corn dogs	88	52
French fries (fried, not baked)	86	50
Hot dogs	72	42
Fried chicken sandwich/nuggets	67	39
Tacos	50	29
Taquitos	32	19
Fried fish sandwich/nuggets	22	13
Other fast food items	8	5
Soda	6	4
Ice cream	3	2
Don't sell a la carte items	7	4

Source: Public Health Institute

Fast Food Brands

Three brands are most prevalent in California high school districts (Table C-2). Represented in the survey are Taco Bell (sold in more than half of the districts), Subway sandwiches (sold in more than 20 percent of the districts), and Domino's Pizza (sold in nearly 20 percent of the districts). Sixteen percent of the districts sell non-branded fast foods such as pizza and burritos.

Fourteen percent of districts are part of a growing trend, the sale of fast food items under the school district's own brand name. These districts create and copyright their own brand name, logo, and food product line. District-branded foods are either prepared by the district, or are purchased as generic items from a vendor. Districts successfully using this tactic have found that

these foods sell well because the students feel a sense of ownership of the district brand and quickly develop brand loyalty.¹⁸

Table C-2: Fast Food Brands

(N=171 school districts. Respondents selected all that apply.)

Fast Food Brands	Districts	Percent
Taco Bell	91	53
Subway	38	22
Dominos	32	19
Non-branded fast foods	28	16
Other pizza brands	27	16
Pizza Hut	24	14
School district brand food	24	14
Round Table pizza	19	11
McDonalds	14	8
Little Caesars	14	8
Kentucky Fried Chicken	5	3
Burger King	3	2
Arby's	3	2
Other fast food brands chosen by less than 3 respondents	26	15

Source: Public Health Institute

Where are Fast Foods Sold as A La Carte Items?

Among those districts that sell a la carte fast food (N=164), the snack bar is the most popular location (Table C-3). Three-quarters of the responding districts use stands or small portable food carts to sell fast foods. But just over half of the districts also sell a la carte fast food items in the cafeteria.

Table C-3: Where are fast foods sold as a la carte items?

(N=164 school districts. Respondents selected all that apply.)

Locations	Districts	Percent
Snack bar	128	78
Fast food cart	106	65
Cafeteria	93	57
Fast food stand	18	11
Coffee cart	9	6
Vending machine	4	2
Campus or student store	3	2
Other	3	2

Source: Public Health Institute

When are Fast Foods Sold?

Fast foods are most commonly sold during the morning and afternoon breaks and for lunch (Table C-4). One in ten districts sells a la carte fast foods during after-school activities. Eight percent of districts sell a la carte fast food items during fundraisers.

Table C-4: When are fast foods sold?

(N=164 school districts. Respondents selected all that apply.)

Times food sold	Districts	Percent
During lunch	152	93
During morning/afternoon break	129	79
During after school activities	17	10
During fundraisers	13	8
During other times	2	1

Source: Public Health Institute

D. Healthy A La Carte Items

Most school districts sell a variety of healthy a la carte items, and a number of districts are re-working standard fast food recipes to improve the nutrient profile.

Healthy A La Carte Items Sold

A number of districts offer a la carte items that tend to have a lower fat content or contain fruits or vegetables. The majority of respondents list fruit, yogurt, bagels, and packaged salads among their a la carte selections (Table D-1).

Table D-1: Healthy A La Carte Items

(N=164 school districts. Respondents selected all that apply.)

Healthy A La Carte Items	Districts	Percent
Fruit	133	81
Yogurt	118	72
Bagels	111	68
Packaged salads	103	63
Other a la carte items	30	18
Sandwiches	6	4

Source: Public Health Institute

Modified Fast Food Recipes

More than half of the districts that sell a la carte fast foods have modified traditional fast food recipes to meet dietary guidelines that recommend no more than 30 percent of daily calories from fat, including no more than 10 percent of daily calories from saturated fat (Table D-2). Common modifications include substituting low-fat cheese for full-fat cheese on pizza and filling burritos with up to a half cup of low-fat beans.

The majority of districts that modify fast foods are selling these modified foods as both NSLP and as a la carte items (Table D-3).

Table D-2: Has Your District Modified Fast Food Recipes?

(N=164 school districts)

Modified Fast Food Recipes	Districts	Percent
Yes	88	54
No	67	41
Don't know	4	2
Missing data	5	3

Source: Public Health Institute

Table D-3: How are Modified Fast Food Items Sold?

(N=88 school districts. Respondents selected all that apply)

How modified fast food items are sold.	Districts	Percent
Both a la carte and in NSLP	54	61
Part of NSLP only	27	31
A la carte items only	7	8

Source: Public Health Institute

E. Factors Influencing Fast Food Sales

A number of factors influence a district's decision to begin or expand fast food sales. The key factors discussed in this section include the personnel most closely involved in decision-making related to fast food sales, the primary reasons that school districts sell fast food, and the uses of profits generated by fast food sales.

Who is Responsible for Decisions Regarding Fast Foods?

The majority of survey respondents identified the district food service director as the primary decision-maker for fast food issues (Table E-1). Other key personnel include the high school cafeteria manager and the district business manager.

Table E-1: Who is Responsible for Decisions Regarding Fast Foods?

(N=164 school districts. Respondents selected all that apply. *)

District Personnel	Districts	Percent
District Food Service Director	133	81
High School Cafeteria Manager	27	17
District Business Manager	12	7
High School Administrator	9	6
High school students	7	4
School Board	6	4
District Superintendent	4	2
Parents	3	2
High school teachers	2	1
Other	2	1
Missing	3	2

*Note: Respondents were asked to select only one response to this item. However, 26 respondents chose more than one response.

Source: Public Health Institute

The Primary Reasons for Selling Fast Foods as A La Carte Items

Respondents were asked to identify their primary reason for selling a la carte fast food items. The top reasons for fast food sales are related: students like fast foods, fast foods add variety, and fast food sales help maintain the food service department's financial stability (Table E-2). These data highlight that food service directors are under pressure both to meet perceived student preferences for fast foods and to maintain a solvent food service program. More than one-fourth of districts that sell a la carte fast foods do so because they are popular with students, are inexpensive, and can adhere to nutrient guidelines if recipes are modified or low-fat products are

selected. Seventeen percent of respondents identified the constraints of a short lunch period as their primary reason for selling a la carte items. Food service directors participating in the phone surveys also mentioned time constraints as an important factor in the decision to sell a la carte fast foods. Other factors include lack of facilities, personnel, and food options.

Table E-2: The Primary Reasons for Selling Fast Foods as A La Carte Items
(N=164 school districts. Respondents selected all that apply.*)

Reasons for Fast Food Sales	Districts	Percent
Students like fast food	106	65
Keep food service out of red	47	29
Fast foods add variety	46	28
Affordable, popular and can adhere to guidelines	43	26
Brief amount of time for meals	27	17
No adequate prep facilities	27	16
Food service is short staffed	19	12
Limited availability of commodities	4	2
Other reasons for fast food	3	2
Missing	2	1

*Note: Respondents were asked to select only one response to this item. However, 64 respondents chose more than one response.

Source: Public Health Institute

Utilization of Fast Food Profits

Eighty-eight percent (144) of the districts that sell a la carte fast foods use profits from sales of fast foods to support food service operations (Table E-3). In the telephone interviews, a number of food service directors reported that profits from fast food and other a la carte sales often subsidize preparation of the reimbursable lunch. Others use the profit to support other aspects of school functioning, including extracurricular activities, athletics, and educational programs.

Table E-3: Utilization of Fast Food Profits

(N=164 school districts. Respondents selected all that apply.)

Uses for Fast Food Profits	Districts	Percent
Supports food service operations	144	88
Supports facilities and equipment	39	24
Supports extracurricular activities	11	7
Supports athletic department	6	4
Supports expanded educational programs	4	2
Other	4	2

Source: Public Health Institute

F. Concessions, Advertising, and Promotional Contracts**Concession Contracts with Fast Food Vendors**

Seven percent (12) of the responding food service departments contract with a vendor to operate a fast food concession (Table F-1). Of the 12 districts that operate vendor concessions, there does not appear to be a single brand-name vendor dominating the market. However, pizza vendors are the most common, with nine (75 percent) of the concessions operated by pizza vendors (Table F-2).

Table F-1: Do you have a Concession Contracted to a Fast Food Vendor?

(N=164 school districts)

Concession Contract	Districts	Percent
Yes	12	7
No	152	93

Source: Public Health Institute

Table F-2: Vendors Operating Concessions on High School Campuses

(N=12 school districts)

Vendors	Districts	Percent
Other branded pizza concessions	4	33
Little Caesar's	3	25
Taco Bell	2	17
Pizza Hut	2	17
Subway	1	8

Source: Public Health Institute

School Organizations Contracting Concessions to a Fast Food Vendor

In 16 percent (N=27) of the districts that sell a la carte items, an organization other than the food service department holds a contract with a fast food vendor (Table F-3). These contracts specify a profit-sharing arrangement where both the vendor and the school organization benefit from the vendor's presence on campus. Student clubs, such as the Associated Student Body, are the most common organizations to contract with a fast food concessionaire.

Table F-3: Other School Organizations Contracting Concessions to a Fast Food Vendor
(N=164 school districts. Respondents selected all that apply.)

School Organizations	Districts	Percent
Student clubs	13	8
Booster groups	5	3
Other concession contracts	4	2
PE department	3	2
PTA	2	1
Food service contracts with vendors only	137	84

Source: Public Health Institute

Fast Food and Beverage Advertising on High School Campuses

The types of fast food and beverage advertising most commonly found on high school campuses are posters and advertisements on scoreboards and other signage (Table F-4). Thirteen percent of the responding districts do not allow advertising on campus.

Table F-4: Fast Food and Beverage Advertising on High School Campuses
(N=171 school districts. Respondents selected all that apply.)

Types of Advertising	Districts	Percent
Posters	66	39
Ads on scoreboards or signs	48	28
Ads in school paper	9	5
Ads over PA system	6	4
Ads on vending machine	5	3
Ads on menu	3	2
Ads on school radio	2	1
Ads on the school TV	1	1
Other types of advertising	1	1
Advertising not allowed	22	13
Missing	26	15

Source: Public Health Institute

Promotion Rights Contracted to Fast Food and Beverage Companies

Twenty-four percent of responding districts contracts promotion rights to a fast food or beverage company (Table F-5). Districts that contract promotion rights receive money or equipment in exchange for the company’s right to sell their products on campus and to place the company’s name and logo on school equipment and facilities. The most common promotion among the districts surveyed is the display of brand names on school facilities, and at school events (Table F-6).

Table F-5: Has Your District Contracted Promotion Rights to a Fast Food or Beverage Company?
(N=171 school districts)

Contracted Promotion Rights	Districts	Percent
Yes	41	24
No	114	67
Don’t know	12	7
Missing data	4	2

Source: Public Health Institute

Table F-6: Types of Fast Food and Beverage Promotions
(N=41 school districts. Respondents selected all that apply.)

Promotion Types	Districts	Percent
Brand names on facilities and equipment	28	68
Sponsorship of school events	22	54
Retail coupons	2	5
Food tastings	1	2
Other	2	5

Source: Public Health Institute

G. Philosophy Regarding Fast Food Sales

Fast foods are extremely common on the California high school campuses included in the survey responses. Although most of the districts sell fast foods, food service directors have varying philosophies regarding their sale. Many food service directors wholeheartedly endorse fast food sales because they vastly improve food service profit margins and allow food service departments to become the district’s “cash cow” rather than the district’s “cash drain.” A number of food service directors feel that fast foods greatly expand the food selection available to students on campus and that fast foods can be part of a carefully chosen well-balanced diet. The following comments from the survey respondents illustrate this viewpoint:

- “[Fast food sales are] an excellent way to boost all around sales. [They] help to ease the workload when short staffed. Most companies are willing to assist with school promotions by supplying ads or contest awards.”
- “If we do not supply the students with the items they want, they will leave the campus. Some do not return after lunch. Students are safer on campus.”
- “As long as they are priced correctly and students buy them, I’m all for fast foods.”
- “High school students have established eating habits. We supply students with a choice and we believe they are old enough to responsibly make that choice. Our program provides nutritious meals in the national school lunch and breakfast program and a la carte.”

Other food service directors view fast food as a necessary evil. They do not like selling fast foods, but feel compelled to continue to maintain profit margins and to keep their customers, the students, happy.

- “We have tried several healthy a la carte choices and the student response was extremely poor. We will lose them as our customers if we do not offer what they want.”
- “Fast foods are part of the high school generation. I would prefer other types of meals but the students don’t eat them. They have been brought up on fast food. We need to educate parents about nutritious foods in order for them to pass it [this information] on to their children.”
- “As a district that participates in the SHAPE project [Shaping Health as Partners in Education—a statewide effort to promote comprehensive school nutrition services, including healthy meals and nutrition education], I don’t feel fast foods promote the same healthy philosophy we are trying to attain.”
- “[Fast foods are a] very necessary evil. It helps pay all of the bills in food services and allows some money to go to special events.”

As mentioned earlier, a number of school districts are serving items that look like traditional fast foods but are lower in fat, higher in protein, and include fruits and vegetables. The districts selling these items have had a positive response from students and the school community. They feel strongly that these types of fast foods satisfy both customer satisfaction and nutrition requirements.

- “Fast foods are popular and are what the students like. We choose healthy ones and buy as low-fat as we can.”
- “My food service student [assistants] assist in food preparation so we can offer lots of yummy good-for-you specials. Today, they made grilled veggie wraps on homemade flat bread and Turkey Cutlets California [with guacamole and jack cheese on French bread].”
- “Fast food, particularly school-produced fast food, can be nutritious, meet the dietary guidelines, and appeal to our student customers.”

- “Fast food is the food of choice for our students. Food and nutrition services want to provide fast foods to our students that meet the nutrition standards. This creates a positive halo effect for our department among our students and the community in regard to our business.”

H. Attempts to Reduce or Curtail Fast Food Sales

Most of the food service directors surveyed are not attempting to curtail or reduce fast food sales. They believe the loss in revenue would severely hamper the food service department’s ability to operate as a financially sound business.

Fifteen percent of the school districts reported attempts to reduce or curtail fast food sales. These attempts were initiated by food service directors, parents, teachers, and in one case, a local politician and community members. Strategies to reduce or curtail sales include decreasing the frequency of fast food sales to one or two days a week. For example, in one district, french fries are sold only once a week and nachos are sold only twice a month. Another district has a policy mandating the use of organic foods, specifically produce and milk.

I. Student Input Into Foods Sold

Food service directors take student input on food selections very seriously. Many districts conduct formal written surveys and informal, in-person interviews to assess student likes and dislikes. A number of directors have regularly scheduled student advisory meetings in order to create food service products that meet students’ desires. Other directors listen in as students comment and complain during the lunch period. Finally, taste-testing has become a popular method for assessing the potential acceptance of new products and building excitement and enthusiasm for new items. Taste tests are often tied to promotions for new fast food products and are sponsored by food companies.

DISCUSSION

Very little has been published in the public health literature regarding fast food sales on high school campuses, indicating that this is a relatively new area of interest for public health professionals. However, a number of articles on fast food in schools have appeared in the lay literature and in publications for food service professionals. These publications corroborate the same top priority issues for high school food services that have emerged from this analysis.

The food service directors surveyed in this study consistently referred to keeping students happy and maintaining a financially sound business as primary reasons for selling a la carte fast foods. An American School Food Service Association (ASFSA) publication on branding illustrates the

appeal of branded fast foods: when three high schools in San Juan Capistrano, California began serving Taco Bell products, approximately 1,200 additional students patronized the cafeterias because the brand name gave the food service greater prestige and acceptability with students.¹⁸ The report comments that food service is a business with a bottom line to meet, and an increasing number of food service operators see branding as the key to ending up in the black rather than the red.¹⁸ Corporations agree. The Los Angeles Times reported that corporate executives believe there is no better place than the classroom to find new customers, and that the cafeteria has become a magnet for corporate promotions.¹⁹⁻²⁰

The findings of the present study echo a 1996 United States General Accounting Office (GAO) survey that found that the most popular branded fast foods on school campuses were pizza (sold by 80 percent of schools), burritos (sold by 21 percent of schools), and subs and sandwiches (sold by 11 percent of schools).¹⁶ The most common brands sold were Pizza Hut (36 percent), Domino's Pizza (27 percent), Taco Bell (22 percent), and Subway (6 percent).¹⁶

The GAO reported that brand name fast foods were found in 13 percent of schools nationwide in 1996, an increase from two percent of schools in 1990-1991. This sharp rise signifies the market power of nationally recognized brand-name fast food and the growing number of food service departments that are hoping to profit from fast food's popularity.²¹ Similar to the California food service directors surveyed, food service operators across the country stated the following reasons for selling branded fast foods: increase in school lunch and a la carte sales, student demand, potential decrease in plate waste, potential cost reductions, strong vendor sales pitch, lack of on-site cooking facilities, and parental suggestions.²¹ The California food service directors surveyed for this report also listed the brief amount of time allotted to lunch service as a motivation for fast food sales.

The GAO report showed that larger schools were more likely than smaller schools to serve fast food. Schools in suburban communities were most likely to serve branded fast foods, and rural schools were least likely to serve branded fast foods.¹⁶ The survey reported here also found that rural California school districts were least likely to serve generic or branded a la carte fast foods.

Clearly, student desires have a strong influence on what is sold by the school food service. Students participating in the 1997 ASFSA Nutrition Advisory Council survey said they would like to see schools offer more ethnic foods (25 percent), desserts (13 percent), beef items (12 percent), and fruits and vegetables (11 percent).¹⁸ Food service departments will make efforts to fulfill student demands, many with the expanded use of branded and generic fast foods and some with other alternatives.

CONCLUSIONS

The poor quality of teen diets is likely to be a major factor contributing to obesity, with its connected risks and problems. Fast foods, with their high fat, salt, and sugar contents, play a part in poor adolescent diets.

The majority of responding California school districts provide fast foods and other a la carte items, including brand-name and non-brand-name foods, to their students. With pizza, burritos, and submarine sandwiches topping the list of foods consumed by students, and with far fewer students than are eligible taking advantage of the National School Lunch Program's nutritiously balanced meals, it is clear that many of California's high school students are not getting the nutritional foundation that would enhance their ability to achieve in school. Although fifty-four percent report modifying at least some fast food items to meet dietary guidelines, work still needs to be done to assure that all food items sold at school offer students a strong nutritional foundation.

Food service directors are hard pressed to find a balance between the conflicting pressures of providing adolescents with healthy food choices that meet their nutritional needs, satisfying their student customers, and running a financially stable business. The solutions do not necessarily create healthy food choices at school. Many a la carte foods are sold at snack bars and food carts, and thus, many students never enter the cafeteria where they might be encouraged to experience a wider variety of food items.

For many school districts, feeding the student body nutritious meals and maintaining enough money to do so have become contradictory pursuits. Some are trying to turn the tide by creating their own school-branded versions of students' favorite foods, in which they have more control over the fat, sodium, and sugar content. Others are offering expanded choices, including fruit, yogurt, bagels, and packaged salads.

The findings of the *2000 California High School Fast Food Survey* reflect the situation across the country, as the United States General Accounting Office has reported. These findings, then, raise a number of important questions about the place of fast foods in high schools:

- How do fast foods affect the nutritional quality of the students' diets?
- How does the food available at school influence students' food choices outside of school?

- Should school food services consistently model good dietary practices for students?
- How do fast food sales influence students' perceptions of nutrition education messages?
- Are fast food sales to students the best way to generate additional resources for schools? Are there other ways to raise additional funds?
- Are fast food sales and promotions contributing to the increased commercialization of high school campuses?

This study is unable to answer these questions, but it does raise significant concerns about the role of commercial fast food sales on high school campuses. More research is needed to fully understand the impact of fast food sales at school on adolescent dietary behavior and quality. Steps need to be taken that support food service in its mission to serve healthy, affordable foods and that enable schools to respond to the findings in this study. The following require consideration by district and school administrators when making decisions about food sales on high school campuses.

RECOMMENDATIONS

- Promote the link between a nutritious diet and learning.
- Investigate the reasons that students do not participate in the National School Lunch Program. Develop strategies to increase participation.
- Offer students more healthy foods that are just as convenient, inexpensive, and appealing as fast foods.
- Involve students in choosing the healthy foods available in their school through taste tests, surveys, and classroom activities.
- Hold forums that inform students, parents, decision-makers, and the community about the effect of fast food on health.
- Examine the use of schools as a channel for food and beverage company promotions.

- Explore new opportunities to generate support and revenue that are not based on the sale of unhealthy foods.

REFERENCES

1. Kuczmarski RJ, Flegal KM, Campbell SM, Johnson CL. Increasing prevalence of overweight among US adults: the National Health and Nutrition Examination Surveys, 1960 to 1991. *JAMA* 1994 272:205-211.
2. Troiano RP, Flegal KM, Kuczmarski RJ, Campbell SM, Johnson CL. Overweight prevalence and trends for children and adolescents. The National Health and Nutrition Examination Surveys, 1963 to 1991. *Arch Pediatr Adolesc Med* 1995 149:1085-1091.
3. Dietz WH. Health consequences of obesity in youth: childhood predictors of adult disease. *Pediatrics* 1998 101:518-525.
4. Gortmaker SL, Dietz WH Jr., Sobol AM, Wehler CA. Increasing Pediatric Obesity in the U.S. *J Dis Child*, 1987; 141(5):535-540.
5. Prevalence of overweight among adolescents 1988-1991. *MMWR*: 1994, 43 (44):818-821.
6. Patricia Crawford. Children and weight: What professionals can do about it. Concept Paper 1998. University of California, Berkeley.
7. *Diet and Health: Implications for Reducing Chronic Disease Risk*. National Research Council, Committee on Diet and Health. 1989, 21–35.
8. Dietz WH. Childhood weight affects adult morbidity and mortality. *J Nutr* 1998 Feb;128 (2 Suppl): 411S-414S.
9. Kikuchi DA, Srinivasan SR, Harsha DW, Webber LS, Sellers TA, Berenson GS. Relation of serum lipoprotein lipids and apolipoproteins to obesity in children: The Bogalusa Heart Study. *Prev Med* 1992 21:177-90.
10. *The Surgeon General's Report on Nutrition and Health*. U.S. Department of Health and Human Services, DHHS Publication Number 88-50210. 1988, 287.
11. Adolescent Nutrition: Assessment and Management. Edited by Rickert VI. 1996, 201.
12. *Statement on the Link Between Nutrition and Cognitive Development in Children*. Center on Hunger, Poverty and Nutrition, Tufts University School of Nutrition. 1994.
13. Lewis CJ, Crane NT, Moore BJ. Healthy People 2000: Report on the 1994 nutrition progress review. *Nutrition Today* 1994; 29(6): 6-14.

14. Krebs-Smith SM, Cook DA, Subar AF, Cleavland L, Friday J & Kahle LL. Fruit and Vegetable Intakes of Children and Adolescents in the United States. *Archives of Pediatric and Adolescent Medicine* 1996; 150: 81-86.
15. Jacobson MF, Maxwell B. *What are we feeding our kids?* Workman Publishing, New York, New York 1994: 50-57.
16. *School Lunch Program: Role and Impacts of Private Food Service Companies*. United States General Accounting Office. August 1996.
17. Harris E, Lanzidelle D, McKinney S. The nutritional value of food purchased from an a la carte lunch menu. *School Food Service Revue*, 1990;14(2): 94-97.
18. Fitzgerald PL. *Branding: The building blocks to develop a branding program in your school meals operation*. American School Food Service Association, 1997.
19. Seymour L. A is for ad as firms gain hold on campus. *Los Angeles Times*, November 23, 1998.
20. Hamm J. Education: Some observers worry that schools are being sold to the highest bidder in accepting corporate sponsorships. *Los Angeles Times*, January 17, 1999.
21. White P. *A brand new trend*. American School Food Service Association, 1997.

12
12