

**Environmental Scan and Audience Analysis for
Phase II of Eat Smart. Play Hard.TM**

**Presented to:
U.S. Department of Agriculture
Food and Nutrition Service**

**Prepared by:
Prospect Associates, Ltd.**

March 2003



Contents

I.	Introduction.....	1
A.	Environmental Scan Background and Purpose.....	1
B.	Environmental Scan Document Structure	2
II.	Objectives.....	3
III.	Methodology	4
A.	Understanding the Target Audience	4
B.	Competitive Analysis.....	5
C.	Reaching the Target Audience.....	5
IV.	Understanding the Target Audience.....	7
A.	Demographic Composition.....	7
B.	Obesity, Physical Activity, and Nutrient Intake Statistics.....	9
C.	Psychosocial Development.....	15
D.	Media Habits.....	16
E.	The Impact of Mass Media Exposure.....	20
F.	Racial, Ethnic, and Socioeconomic Factors in Children’s Media Use and Their Significance	21
G.	Environmental Influences on Nutrition and Physical Activity.....	22
H.	Key Findings.....	26
V.	Competing and Complementary Nutrition and Physical Activity Initiatives	30
A.	Food and Nutrition Service (FNS) Programs	30
B.	National Initiatives.....	31
C.	Emerging National Initiatives.....	33
D.	Relevant State Initiatives	34
E.	Industry Initiatives	35
F.	Use of Cartoon Spokescharacters	36
G.	Key Findings.....	37
VI.	Reaching the Target Audience	39
A.	Media Openings and Opportunities.....	39
B.	Key Findings and Implications for Reaching the Target Audience	42
VII.	Audience Segmentation.....	43
A.	Introduction.....	43
B.	Why Segment?.....	43
C.	Possible Segmentation Factors	44
D.	Overall Summary and Implications.....	45
E.	Next Steps for Formative Research	46
Appendices		
	Appendix A. Competitive Analysis Detailed Findings.....	53
	Appendix B. KIDSNET Television Review: Programs for Tweens.....	64
	Appendix C. Children’s Web Site Survey	66

I. Introduction

A. Environmental Scan Background and Purpose

The Food and Nutrition Service (FNS) launched the Eat Smart. Play Hard.TM campaign to promote the U.S. Department of Agriculture's (USDA's) healthy eating and physical activity messages to children ages 2–18 and their caregivers. This campaign is an FNS agencywide initiative and represents the latest effort by FNS to meet its strategic goal of improving the nutrition of children and low-income adults while at the same time addressing the major public health issue of the increasing prevalence of obesity among our Nation's youth. The FNS nutrition assistance programs have a potential reach of more than 48.2 million children. Delivery of the Eat Smart. Play Hard.TM messages across these programs has the potential to impact eating and physical activity behaviors in a positive way.

During phase I of the campaign, an environmental scan and audience analysis was conducted. The resulting document included a review of nutrition and physical activity programs targeted to children ages 2–18; demographic information; and relevant information regarding their knowledge, attitudes, and behaviors related to psychosocial development and media habits. The primary resulting recommendation of the document was to narrow the target audience during the campaign's initial phases to children ages 8–12—or “tweens”—and their caregivers.

Basic campaign themes surfaced from focus group testing of the target audience. The choice was made by FNS to address four areas: breakfast, healthy snacks, balancing food intake and exercise, and physical activity. Phase I covered the development of the Power Pac, a resource and toolkit containing six nutrition and physical activity posters, four parent brochures, four activity sheets for kids, a bookmark, book covers, slicks of campaign images, stickers, media materials, and other related components. Phase I also covered the development of the spokescharacter, Power PantherTM, who is used as a key communication tool to engage and encourage children to choose healthy foods and to be more physically active. Power PantherTM conveys to children the importance of balancing what you eat with what you do in a way that is engaging and appealing to kids. During phase I, spokescharacter costumes were constructed. These costumes are available for loan to State and local program cooperators so that they can make campaign messages come alive at nutrition and health events.

The state-of-the-art materials, the appeal of the spokescharacter, and the cross-program applicability have resulted in widespread use of the materials. In the first 2 years, the campaign distributed nearly 9 million educational resources to FNS programs in all 50 States and several Inter Tribal Organizations.

Currently in phase II of development, Eat Smart. Play Hard.TM will begin to target specific segments of the population of tweens and their caregivers. This document, an environmental scan and audience analysis focusing specifically on tweens and their caregivers, was prepared as the first step in the formative research phase. The findings outlined in this document will be used to segment the target audience further and to solidify the research design for exploratory focus groups.

It should be noted that “tweens” is a term generally used to refer to 9- to 12-year-olds in the context of marketing and advertising worlds/realms, but it is unclear whether children in the targeted age group have heard the term, how they feel about it, and what it means to them. These may be issues for further clarification during the exploratory focus groups.

B. Environmental Scan Document Structure

The intent of this document is to present the research methods, research conducted, key findings, strategies for audience segmentation, major implications, and recommendations for next steps. Environmental scan research obtained and key research findings are presented in three sections: Understanding the Target Audience, Competitive Analysis, and Reaching the Target Audience. The remainder of the document discusses segmentation factors that may shape future research as well as an analysis of the research findings and what they mean for campaign activities. These topics are presented in three subsections: Audience Segmentation, Implications for Future Campaign Activities, and Recommendations for Next Steps. This information will be used, along with focus group findings and interviews, to determine an audience segmentation strategy that maximizes and extends USDA’s current resources and partnerships.

II. Objectives

The primary research objective of this environmental scan is to identify salient factors by which the target population of children ages 8–12 and their caregivers can be segmented and, based on these findings, to make recommendations for next steps in selecting and refining these audiences and campaign themes and messages. This document identifies and analyzes the complex social, behavioral, and environmental factors that may be contributing to obesity and inactivity among the primary audience, as well as the competitive environment in which the Eat Smart. Play Hard.TM campaign exists.

Secondary research objectives include:

- Solidifying the exploratory focus group research design
- Providing “leads” on the types of questions to be further explored during formative focus group research
- Providing direction on future activities of the campaign to promote healthy eating and physical activity in the target population

III. Methodology

Several approaches were used to develop this report on tween audiences. For each chapter of this environmental scan and audience analysis, the methods used to obtain information are described below.

A comprehensive, tailored search and review of electronic databases, relevant literature, and Internet sites was conducted to obtain information relevant to overweight and obesity among the 8- to 12-year-old (or tween) age group. In addition, information was obtained about the caregiver population, which includes parents and others who provide care to tweens.

The search was conducted for three purposes:

1. *To gather information about the target audiences.* This information is summarized in “Understanding the Target Audience” (section IV).
2. *To identify competing and complementary initiatives that shape the environment in which the Eat Smart. Play Hard.™ campaign exists.* This information is summarized in the “Competitive Analysis” (section V).
3. *To understand the tween media environment and media habits, as well as to gather the most recent information on the best channels for reaching the target audience.* This information is summarized in “Reaching the Target Audience” (section VI).

A. Understanding the Target Audience

In researching material that would describe the tween target audience, as well as their parents and caregivers, a review of the most recently published literature was conducted. This literature was identified through the PsychInfo Dialog search engine. Search terms included:

- Overweight
- Obesity
- Physical activity
- Nutrition
- Healthy eating
- Tweens
- Adolescents
- Preteens

In addition, bibliographies from the retrieved documents were reviewed for relevant publications. The latest data available on the U.S. Census Bureau Web site (www.census.gov) were reviewed and analyzed. This information was supplemented with searches of relevant Federal health agency Web sites to capture reports that may not have been published and, therefore, would be unavailable through a traditional literature search.

B. Competitive Analysis

To identify competing and complementary nutrition and physical activity initiatives targeting the tween audience, Web site searches and reviews of Federal agencies and nonprofit organizations that are most likely to engage in these types of initiatives were conducted. An Internet search was conducted using several search engines, such as *healthfinder.gov* and *ixquick.com*. In addition, several key documents retrieved for the “Understanding the Target Audience” section were reviewed for relevant initiatives.

To be considered relevant, an initiative had to meet the following criteria:

- Be of national scope
- Include physical activity and/or nutrition messages or programmatic components
- Include 8- to 12-year-olds in its target audience
- Be currently active

For each program identified as relevant, the following information was sought:

- Program name
- Sponsor(s)
- Year started
- Target audience
- Dissemination channels
- Materials
- Evaluation and outcome

If information was unavailable on the Web site, phone calls were made or e-mails were sent in an attempt to gather additional information.

In addition, research was conducted to understand the types of nutrition and physical activity initiatives in which popular food advertisers engage. A recent issue of *Nickelodeon* magazine was reviewed to identify food advertisers, and a search of those companies’ Web sites was conducted for relevant initiatives.

Finally, research on popular cartoon spokescharacters targeting the youth audience was conducted through Internet searches, e-mail correspondences, and telephone conversations.

C. Reaching the Target Audience

To better understand the media environment and media habits for tweens, as well as to find the most recent marketing and communication information, Web, ERIC, and PsycINFO Dialog searches were conducted, using search terms similar to those above but also including the term “media habits.” Also, an extensive amount of proprietary market data on children’s media habits was secured and reviewed from major survey companies, such as Nielsen, Jupiter Communications, Media Matrix, SRDS, Media Dynamics, Solomon and Parks, Simmons Kids Study, Children’s Measurement Callback Study, and Arbitron. In addition, information posted

online through the World Advertising Research Center and the European Society for Advertising Research was reviewed. The most abundant information on the media environment came from materials published online by marketing, advertising, and communication experts specializing in quantitative research with tweens.

Media gaps and opportunities for research were identified primarily through an Internet search. To gauge coverage of nutrition and physical activity topics on television, a review was conducted of the content of the KIDSNET monthly media guide. This guide lists programming that is tailored to children and that is available through cable and network stations. For the radio coverage scan, a Yahoo search on children's radio was conducted and was supplemented with information from materials published online by marketing, advertising, and communication experts. In reviewing Web sites targeted to kids, the top 10 Web sites as voted by children (as identified by Connect Online, which maintains the "Top 20kids.com—A Guide to Kids Games") were reviewed, as were sites of popular food manufacturing companies (e.g., cereal manufacturers) and school-related sites. Additional research on communication channels was conducted via ABI/INFORM and Sociological Abstracts. Finally, a search was conducted on health promotion interventions for children, with special emphasis on school-based activities, to discover any new and/or successful findings on communicating about these topics.

The information gathered in three phases of this search was compiled, analyzed, and summarized in this report. It is important to point out that much of the data gathered did not specifically address the 8- to 12-year-old age group. If the information reported herein relates to a different age group (e.g., 9- to 13-year-olds), it is clearly marked, and the appropriate age group to which it relates is noted.

IV. Understanding the Target Audience

A. Demographic Composition

More than 26 percent of the total U.S. population is under 18 years of age. Within this group of close to 52 million children, preteens (or tweens) between ages 8 and 12 are an audience as diverse as any other, with varied racial and ethnic backgrounds, social and cultural characteristics, and family structures. Because Census data are not available for 8- to 12-year-olds as a group, the table below provides demographic information for 10- to 14-year-olds (as available from the Census). These 10- to 14-year-olds make up 28.6 percent of all youth under 18.

Table 1: Race/Ethnicity Makeup of the Target Audience

Race/Ethnicity	Number of 10- to 14-Year-Olds ¹
White	14,899,672
Black/African American	3,332,324
Hispanic	2,995,000*
Asian	873,617
American Indian/Alaskan Native	400,989
Native Hawaiian/Other Pacific Islander	85,129
Total	22,586,000

*Includes Mexican, Puerto Rican, Cuban, Central/South American, and Other Hispanic

Any discussion of tweens must include a look at the composition of their families. Of the more than 100 million households in the United States, more than 71 million are defined as “family households” of some sort. Chart 1 presents a breakdown of U.S. families by both parental makeup and race/ethnicity.

As seen in Chart 1, the family composition of those under 18, including tweens, varies according to racial/ethnic group.² Chart 2 shows that more than three-quarters (77.5 percent) of all White families and just under three-quarters of Hispanic families (71.1 percent) with children under 18 are headed by two married parents, while fewer than half of African-American families (43.7 percent) are headed by two married parents.³ In addition, twice as many African-American families (with children under 18) are headed by a single mother as Hispanic families (50.3 percent versus 23.7 percent), with White families being the least likely to be headed by a single mother (17.3 percent).⁴ Similar to the statistics for all children under 18, although most White tweens live in two-parent families, the mothers of African-American tweens are present in the home 83 percent of the time, but a father is present only 36 percent of the time. Other caregivers in the homes of African-American tweens include grandparents or stepparents, and they are

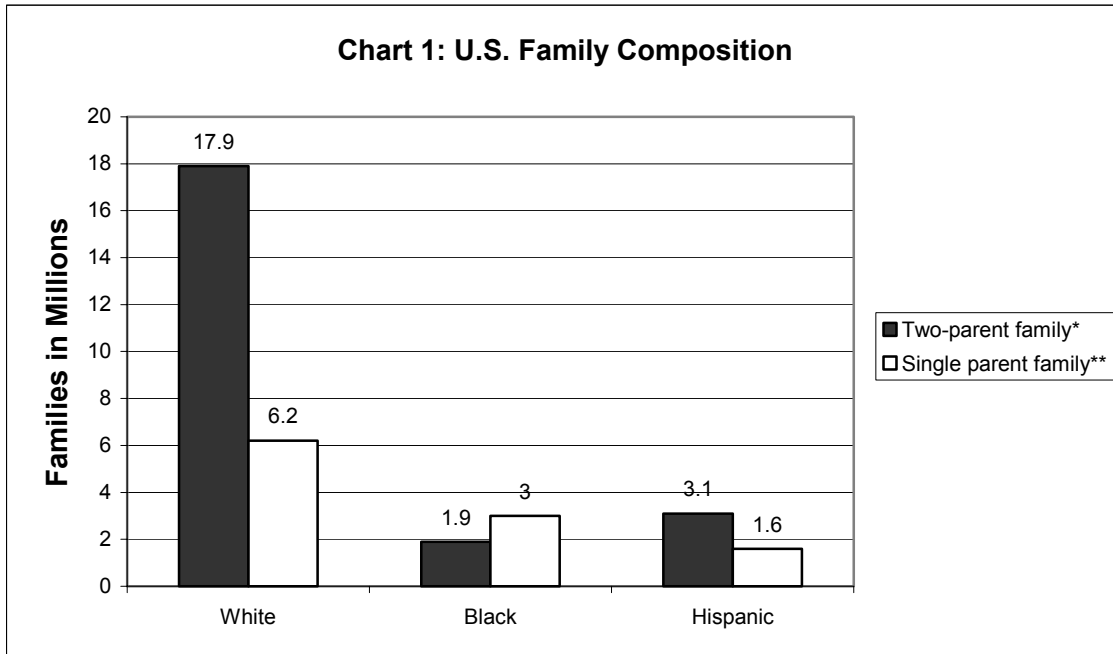
¹ U.S. Census Bureau. From <http://factfinder.census.gov>.

² U.S. Census Bureau, from http://factfinder.census.gov/servlet/BasicFactsTable?_lang=en&_vt_name=DEC_2000_SFI_U_DP1&_geo_id=01000US.

³ U.S. Census Bureau, from <http://www.census.gov/population/socdemo/hh-fam/p20-537/2000/tabF1.txt>.

⁴ Ibid.

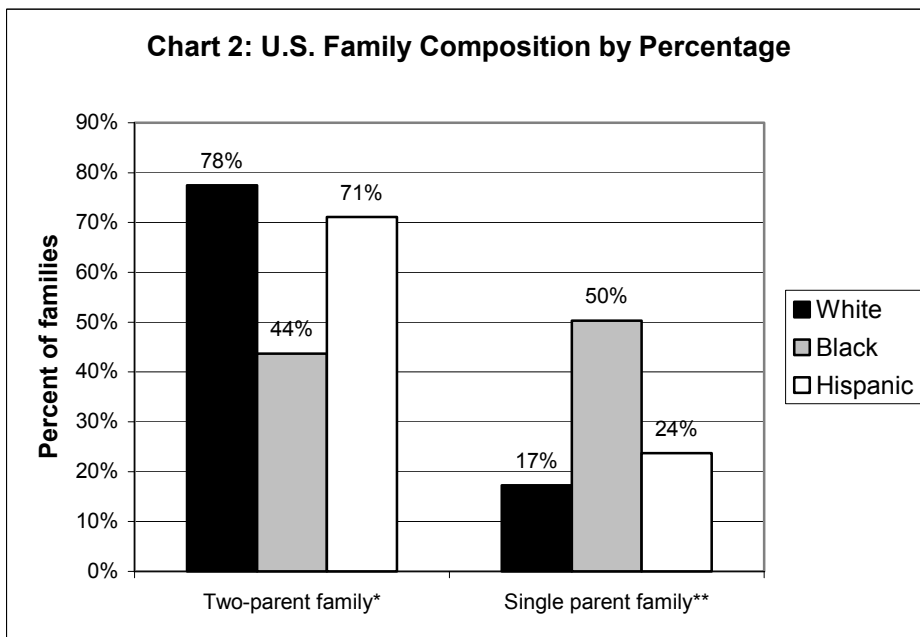
present 44 percent of the time, either with or without a parent or other caretaker present. This is a much higher percentage than found in White families.⁵



* Married couple with own child(ren) under 18

** Headed by woman

Source: 2000 U.S. Census



* Married couple with own child(ren) under 18

** Headed by woman

Source: 2000 U.S. Census

⁵ Centers for Disease Control and Prevention. *Life's first great crossroads*. May 2000.

B. Obesity, Physical Activity, and Nutrient Intake Statistics

Adults' unhealthy dietary habits and a lack of physical activity account for 300,000 deaths every year. With 61 percent of all U.S. adults classified as overweight (Body Mass Index [BMI] of 25–29.9) or obese (BMI of 30 or greater), this epidemic may soon catch up with cigarette smoking as a leading cause of preventable death.⁶ As is to be expected, children are not immune from this national epidemic. Thirteen percent of U.S. children ages 6–11 are overweight (defined as gender- and age-specific BMI greater than or equal to the 95th percentile), and 14 percent of children ages 12–19 are overweight.⁷

During the past two decades, the percentage of overweight children has nearly doubled (from 7 percent to 13 percent), and the percentage of overweight adolescents has almost tripled (from 5 percent to 14 percent).⁸ Countless studies have determined that overweight children and preteens are more likely to become overweight and obese adolescents and adults. Conditions associated with obesity, such as Type 2 diabetes, high blood lipids, hypertension, early maturation, and orthopedic problems, are showing up in increasingly younger children with greater frequency.⁹

Disparities in Prevalence

Overweight and obesity among both adults and children are more common among minority groups. Because obesity is correlated within families, it is important to consider the prevalence of obesity and overweight among those who may be parents, caregivers, or other influences on today's tweens.¹⁰ The prevalence and severity of overweight has increased significantly and steadily among African Americans, Hispanic/Latinos, and Whites across the board. African Americans and Hispanic/Latinos lead the way with an increase in overweight of more than 120 percent (between 1986 and 1998), while White adults have seen prevalence increase by more than 50 percent in the same time period. Although more focused studies have suggested that American Indians, Alaska Natives, and Pacific Islanders have a generally higher-than-average prevalence of overweight and obesity, and Asian Americans have a prevalence on the lower end of the racial/ethnic spectrum, large-sample surveys, such as the National Health and Nutrition Examination Surveys (NHANES) (used in the Surgeon General's *Call to Action*), contain too few respondents to provide effective comparisons. Table 2 presents data for the percentage of overweight youth ages 6–11 and 12–17. Although uniformity in age aggregation is difficult to find across data sources, the information below gives a good foundation from which to begin to understand the tween audience.

⁶ U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*. U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 2001. Available from: U.S. GPO, Washington, DC.

⁷ National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). Prevalence of overweight among children and adolescents: United States, 1999 [Internet]. [cited 2001 Oct 31]. Available from: www.cdc.gov/nchs/products/pubs/pubd/hestats/over99fig1.htm.

⁸ Ibid.

⁹ Dietz WH. Health consequences of obesity in youth: Childhood predictors of adult disease. *Pediatrics* 1998 Mar;101(3) Suppl:518-525.

¹⁰ The Surgeon General's *Call to Action to Prevent and Decrease Overweight and Obesity*. 2001.

Table 2: Prevalence of overweight in youth, ages 6–19, 1999–2000

Race/Ethnicity	Percent Overweight ¹¹	
Overall	Boys (6–11)	16.0%
	Girls (6–11)	14.5%
	Boys (12–19)	15.5%
	Girls (12–19)	15.5%
White, non-Hispanic	Boys (6–11)	12.0%*
	Girls (6–11)	9.8%**
	Boys (12–19)	12.8%
	Girls (12–19)	12.4%
Black, non-Hispanic	Boys (6–11)	17.1%
	Girls (6–11)	22.2%
	Boys (12–19)	20.7%
	Girls (12–19)	26.6 %
Mexican	Boys (6–11)	27.3%
	Girls (6–11)	19.6%
	Boys (12–19)	27.5%
	Girls (12–19)	19.4%

* Estimated

** 1988–1994 estimated data most recent available

In attempting to define the problem of tween overweight and obesity, much can be learned from the adults who are the parents and caregivers of tweens. The high rates of overweight and obesity overall and among certain racial/ethnic groups are similar to those found among tweens and illustrate the lifelong challenges that await today’s tweens. Mexican-American men have the highest prevalence among all men (69 percent), followed by White men (62 percent) and then by African-American men (58 percent). Within racial and ethnic groups, African-American women have a higher prevalence of overweight and obesity (69 percent) than do African-American men (58 percent). Although White men have a higher prevalence (62 percent) than White women (47 percent) for overweight or obesity, they have a lower prevalence for obesity alone, with men at 21 percent and women at 23 percent. Mexican-American men and women both have similar patterns and prevalence of obesity and overweight (69 and 70 percent, respectively).¹² Women who are members of racial/ethnic minority populations have higher rates of overweight and obesity than their White counterparts. This pattern appears to be consistent with the statistics for children presented in table 2.

Overweight children, tweens, and adolescents are more likely to become the overweight and obese adults described above.¹³ An overweight child is 2 to 6.5 times more likely to become an

¹¹ CDC, NCHS, NHANES 1988–94 and 1999–2000.

¹² Troiano RP, Flegal KM. Overweight children and adolescents: Description, epidemiology, and demographics. *Pediatrics* 1998 Mar;101(3): 497–504.

¹³ Dietz, 1998.

overweight adult.¹⁴ Children follow the leads of their parents and caregivers in many areas, including prevalence of overweight and obesity. Between 1986 and 1998, the overall prevalence of childhood overweight increased rapidly, with the strongest increases noted in:

- Boys, especially those of low socioeconomic status (SES) (defined as income less than or equal to 130 percent of the poverty threshold) and African-American and Hispanic boys (from 6.5 to 27.4 percent)
- African-American boys and girls (from 18 to 21.5 percent)
- Hispanic/Latino boys and girls (from 18.2 to 21.8 percent)
- Children living in the Southern United States (from 7.6 to 17.1 percent)¹⁵

This same study also found that, in 1998:

- 21.5 percent of African-American children (4–12 years old) were overweight.
- 21.8 percent of Hispanic/Latino children were overweight.
- 12.3 percent of White children were overweight.

Mexican-American boys have a higher prevalence than do their African-American or White counterparts, while African-American girls have a higher prevalence than do White and Mexican-American girls.¹⁶ The National Heart, Lung, and Blood Institute (NHLBI) Growth and Health Study, conducted in 1994, found that African-American girls ages 9 and 10 had higher mean BMIs than did White girls.¹⁷ This gap widened as girls reached adulthood.

The information available regarding the influence of family income and SES on the prevalence of overweight and obesity in children is inconsistent. In adults, the data indicate that women with a lower SES are 50 percent more likely to be obese than those women with a higher SES, whereas men's likelihood of being obese is not affected by their SES.¹⁸ With children, some data suggest that girls (across all racial/ethnic groups) who come from families with lower incomes are not more likely to be overweight than girls from families with higher incomes.¹⁹ The Surgeon General's *Call to Action* reported that increased prevalence of overweight in Mexican-American and African-American children and teens cannot be predicted based on family income. White adolescents from lower income families, however, do have a greater prevalence of overweight than do their higher SES counterparts.²⁰ Interestingly, based on a cohort of more than 8,000

¹⁴ The Center for Weight Loss and Health, College of Natural Resources, University of California, Berkeley. *Pediatric Overweight: A Review of the Literature*. June 2001.

¹⁵ Strauss RS, Pollack HA. Epidemic increase in childhood overweight, 1986–1998. *JAMA* 2001 December 12; 286(22):2845–2848.

¹⁶ Troiano RP, Flegal KM. Overweight children and adolescents: Description, epidemiology, and demographics. *Pediatrics* 1998 Mar;101(3):497–504.

¹⁷ Campaigne BN, Morrison JA, Shumann BC, Faulkner F, Lakatos E, Sprecher D, Schreiber GB. Index of obesity and comparisons with previous national survey data in 9- and 10-year-old African-American and White girls: National Heart, Lung, and Blood Institute Growth and Health Study. *J Pediatr* 1994 May; 124:675–80.

¹⁸ HHS. *Healthy People 2010*, 2nd ed. With understanding and improving health and objectives for improving health. 2 vol. Washington, DC: GPO, 2000. p. 19–12.

¹⁹ Troiano and Flegel, 1998.

²⁰ *Ibid.*

children and adolescents, Strauss and Pollack concluded that having a higher family income was protective of overweight among White children, had no effect among Hispanic/Latino children and was associated with increased rates of overweight among African-American children.²¹

Physical Activity

Not surprisingly, given the widespread problem of overweight and obesity, lack of physical activity in both adults and children is on the rise. In an effort to provide guidance to the American public, a number of Federal entities have become involved in fighting the growing rates of inactivity. The following are some of the major physical activity recommendations that have been made recently, based on an expert review of the scientific research:

- The *Healthy People 2010* objectives recommend that adults engage in 30 minutes of moderate physical activity at least 5 days a week. In 1997, 15 percent of adults engaged in this recommended amount of physical activity.²² Forty percent of adults do not participate in any leisure-time physical activity.²³
- The *Healthy People 2010* guidelines for adolescents recommend vigorous activity for at least 20 minutes on 3 or more days a week. In 1999, 65 percent of adolescents reported meeting these guidelines.²⁴
- *Dietary Guidelines for Americans* recommends 60 minutes of moderate physical activity most days of the week, preferably daily, for children.²⁵ It should be mentioned, however, that limited national data to assess whether or not children and adolescents are meeting these guidelines are available.²⁶

One factor that contributes to the physical inactivity of children and adolescents is the lack of availability of school-based physical activity programs as children get older. Although virtually all 10 year-olds participate in physical activity classes, only about one-half still participate by age 17.²⁷

Despite the movement toward gender equality in sports, boys are more physically active than girls. A study conducted in 1991 found that girls are aware that exercise is important for good health, but high school girls did not put this knowledge into practice; only 67 percent of them exercised at least 3 times a week, compared to 80 percent of boys. In addition, girls may not be participating in the type of physical activity that will help them make lasting changes throughout their adolescence and adulthood; of those who participate in school-based physical education classes, only 20 percent of their class time is used for moderate to intense physical activity, while more is concentrated on competitive team sports. These numbers have decreased in the years

²¹ Strauss and Pollack, 2001.

²² HHS, 2000.

²³ Ibid.

²⁴ Ibid.

²⁵ The U.S. Department of Agriculture and the U.S. Department of Health and Human Services from http://www.health.gov/dietaryguidelines/dga2000/document/aim.htm#physical_top.

²⁶ U.S. Department of Health and Human Services. The Surgeon General's *Call to Action to Prevent and Decrease Overweight and Obesity*.

²⁷ CDC. National Youth Media Campaign RFP, 2000.

since the study was conducted, and the patterns of behavior among boys and girls regarding physical activity and sports remain.²⁸

White students are more likely to participate in vigorous physical activity, while African-American and Hispanic students are more likely to report participation in moderate physical activity. Of all racial/ethnic and gender groups, African-American girls are the least likely to be physically active. Although no specific data on tweens and physical activity are available, it is clear that lack of physical activity and a sedentary lifestyle are related inversely to both the level of family income and the educational level of the parent or caregiver.²⁹ Therefore, a less-educated parent with a lower family income is more likely to have a child who is not physically active enough.³⁰

Dietary Habits

Further contributing to the issues of overweight and obesity, today’s tweens are not choosing the types or amounts of foods that they need for a healthy lifestyle. Only about 1 percent of tweens are meeting the food group intake guidelines from the *Dietary Guidelines for Americans* as established by USDA. Less than 30 percent of tweens eat the recommended amount of fruits, grains, meats, and dairy, and 36 percent eat the recommended amount of vegetables. The Youth Risk Behavioral Surveillance System (YRBSS), a self-report school-based survey developed by CDC, found that only 21.4 percent of high school children had consumed the recommended five servings a day of fruits and vegetables, and half of all children consumed less than one serving a day.³¹ Table 3 shows the self-reported fruit and vegetable consumption by high school students by race/ethnicity.

Table 3: Daily consumption of five or more servings of fruits and vegetables by high school students

Race/Ethnicity	Percentage of students
White	20.2%
Black	24.5%
Hispanic	23.2%
Other	24.7%
Total	21.4%

Source: 2001 YRBSS

A tween’s diet is typically made up of 30–35 percent fat, of which 12–13 percent is saturated fat, with greater-than-recommended levels of sodium.³² In addition, children are eating more—in terms of both portion size (e.g., “super-sized” fast food) and frequency. Children also eat more

²⁸ Meredith CN, Dwyer JT. Nutrition and exercise: effects on adolescent health. *Annual Review of Public Health*. 1991;134:668–674.

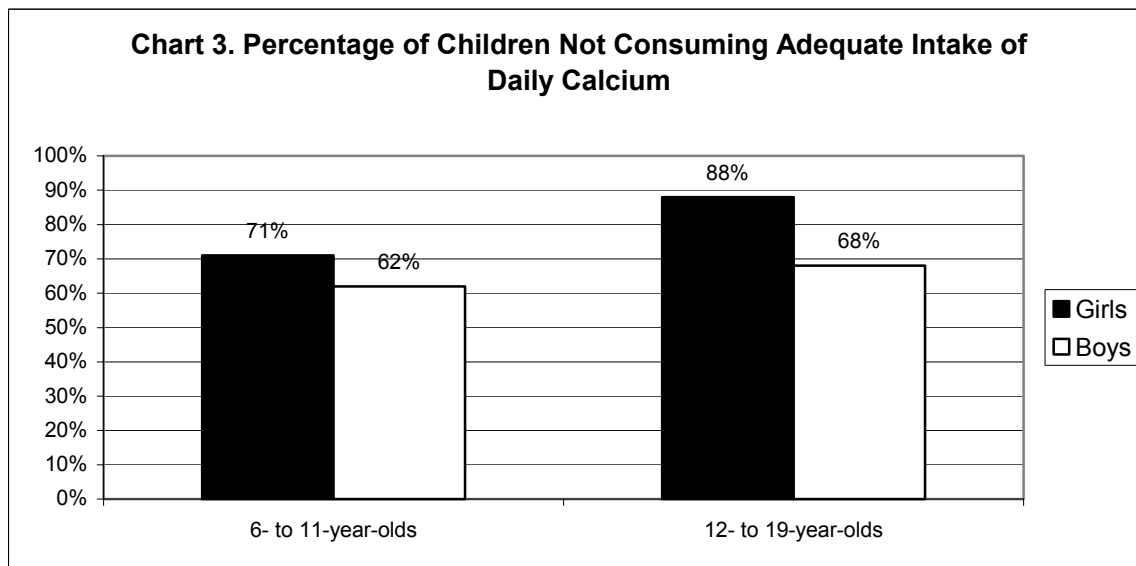
²⁹ CDC, 2000.

³⁰ Lowry R, Kann L, Collins JL, Kolbe LJ. The effect of socioeconomic status on chronic disease risk behaviors among US adolescents. *JAMA*. 1996;276:792–797.

³¹ 2001 YRBSS (<http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>)

³² CDC. Guidelines for school health programs to promote lifelong healthy eating. *MMWR* 1996;45(No. RR-9).

meals outside the home than ever before, and many meals come from fast-food vendors with limited healthy choices.³³ A marked rise in soft drink consumption in children and tweens has occurred over the past dozen years, with soft drinks becoming the sixth leading food source of energy and the second leading food source of carbohydrates among children ages 2–18.³⁴ Paralleling this rise in soft drink consumption, tweens are not consuming the recommended Adequate Intake (AI) of 1,300 milligrams of calcium per day.³⁵ As shown in chart 3, girls are less likely than boys to meet the AI for calcium, and this discrepancy increases with age.³⁶



Source: USDA Continuing Survey of Food Intakes by Individuals, 1994–1996

The more than 32 million students who participate in school meal programs, including the National School Lunch Program and the School Breakfast Program, are not immune from these dietary intake problems. Recent USDA data on children participating in school meal programs show that, on average, children in these programs do not receive adequate amounts of some vitamins and minerals, such as zinc, folate, and calcium. Adolescent girls, especially, are consuming inadequate levels of folate, calcium, and magnesium. African-American and Hispanic children who participate in school meal programs are at an increased risk of low or inadequate intake of vitamins and minerals also. All children eat diets high in added sugars, which contribute a mean of 20 percent of their total food energy.³⁷ On any given day, 56 to 85 percent of all children (depending on age and gender) consume soda.³⁸ African-American children, more than other racial/ethnic groups, are

³³ Kennedy E, Goldberg J. What are American children eating? Implications for public policy. *Nutr Rev.* 1995 May;53(5):111–26.

³⁴ Center for Weight and Health, University of California at Berkeley, 2001.

³⁵ From USDA Continuing Survey of Food Intakes by Individuals, 1994–1996.

³⁶ *Ibid.*

³⁷ U.S. Department of Agriculture Office of Analysis, Nutrition, and Evaluation. Children’s diets in the mid-1990s: Dietary intake and its relationship with school meal participation. From <http://www.fns.usda.gov/oane/MENU/Published/CNP/FILES/ChilDietsum.htm>. 1/15/02.

³⁸ *Ibid.*

most likely to exceed the daily 30 percent recommendation for total fat intake.³⁹ As with physical activity, a parent with a lower SES and less education is more likely to have a child who consumes less than the recommended amounts of fruits and vegetables.⁴⁰

C. Psychosocial Development

The tween years involve major shifts and changes—emotionally, physically, and in their relation to their families and the outside world. No longer are young people waiting until their teen years to confront life’s difficult choices; children are growing up faster than ever before. Tweens are looking outward towards their peers and society, yet they still seek parental/caregiver involvement and influence. Tweens may be savvier in some ways than their predecessors of just a few years ago; however, they often lack insight and information to help them make consistently healthy choices.

Once tweens hit middle school, everything changes. They are no longer the elders of their elementary schools. Upon entering this new environment, they are pushed to the bottom of the social ladder. They also find themselves under increased pressure to succeed and perform—academically, socially, and in sports. This pressure to succeed is manifested in social acceptance, with the “cool” kids often being those on sports teams. Other influences on their time and support systems include their peers, the media, and society, to whom they look for clues about how to behave and what choices to make. Their exposure to media, discussed in detail below, drastically increases at this age, and tweens are further exposed to the subtle and not-so-subtle influences of sex, violence, and other unhealthy behaviors.⁴¹

Dissatisfaction with body size is common among tweens. Anorexia and other eating disorders manifest themselves at increasingly earlier ages. Research suggests that approximately 1 percent of all adolescent girls suffer from anorexia, and an additional 4 percent suffer from bulimia nervosa.⁴² Although bulimia is rare in younger children, anorexia is being noted in increasingly younger children, some as young as 6 years old.⁴³ In addition, a rising problem is boys’ preoccupation with their physical appearance, which is manifesting itself as early as in the third, fourth, and fifth grades. Although anorexia, bulimia, and other related eating disorders have been viewed historically as problems primarily affecting young girls, estimates put the numbers of boys and young men with anorexia and bulimia at 10 percent of all cases. In fact, 80 percent of all boys state that they are dissatisfied with their bodies. Boys who develop eating disorders often have a history of overweight and obesity.⁴⁴

As tweens’ experience physical change with the onset of puberty, they seek information about their bodies, as well as their inner landscape of thoughts, dreams, and fears. They are concerned with very “grown-up” issues, many of which have touched their lives at an early age. When

³⁹ Ibid.

⁴⁰ Lowry, 1996.

⁴¹ CDC. National Youth Media Campaign RFP, 2000.

⁴² Anorexia Nervosa and Related Eating Disorders, Inc. <http://www.anred.com>.

⁴³ Ibid.

⁴⁴ Ibid.

asked what they worry “a lot” about, one group of 11- and 12-year-old boys and girls of mixed SES and race listed:

- Getting bad grades—50 percent
- Parents separating—40 percent
- The future—39 percent
- Dying—39 percent
- Getting AIDS—37 percent
- Getting arrested—30 percent
- Drugs—29 percent
- Appearance—27 percent
- Not having enough money—26 percent
- Getting hurt at school—26 percent
- Being fat—22 percent
- Getting a girl pregnant—22 percent
- What friends think—20 percent
- Getting/losing a boyfriend/girlfriend—20 percent⁴⁵

Although tweens may appear to be a cohesive developmental group, they differ on some levels, especially in their motivation for participating in activities. Younger tweens—8- to 10-year-olds—participate in activities because they are fun and because they can interact with their peers. Older tweens, however, are more concerned with attaining a level of skill for various activities and are more likely to participate in activities at which they feel that they can be successful. These older tweens look for a sense of accomplishment and reward from their activities; fun is secondary.⁴⁶

D. Media Habits

Tweens live in a media-saturated world and are surrounded by media products of all kinds. Moreover, their options are constantly expanding and changing to meet their expectations of new and “cool” experiences. The average child age 8–18 spends nearly a full-time work week using media, including television, Internet, radio, video games, compact discs, newspapers, magazines, and mobile phones—approximately 6 hours and 45 minutes per day. Children ages 8–11 use between four and six different media in an average day. The greatest media exposure of all youth is reported by 8- to 13-year-olds, with a total media exposure of more than 8 hours a day. Children who are heavy users of media tend to use a wide variety of personal media.⁴⁷

⁴⁵ Just Kid Inc. Kid Id Study. 1999. <http://www.justkidinc.com/>.

⁴⁶ CDC. National Youth Media Campaign RFP, 2000.

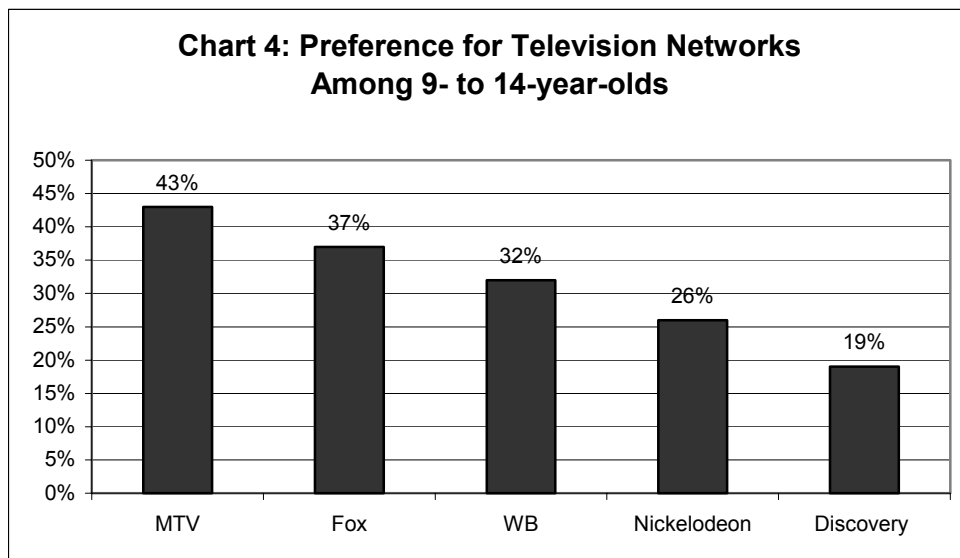
⁴⁷ The Henry J. Kaiser Foundation, *A Comprehensive National Analysis of Children's Media Use*, November 1999.

Tweens' reasons for using media include:⁴⁸

- To be entertained
- Not to be bored
- To learn new things
- To be socially aware
- To have fun
- To obtain information
- To escape

The average child's home has three televisions (65 percent have one in their own bedroom), three tape players, three radios, two VCRs, two CD players, one video game player, and one computer.⁴⁹ Many tweens have their own quasimedia centers located in their rooms; they have created what some observers refer to as a "bedroom culture" hidden from the prying eyes of parents. Televisions, radios, and tape players begin to appear in children's rooms very early, although there is little increase beyond age 13. The average 8- to 13-year-old watches 3 hours 37 minutes of television per day plus 20 minutes of taped television shows.

A 1999 media preference survey by Children's Market Research (CMR) found that children ages 9–14 seem to prefer specialty cable networks to major broadcast networks. As shown in chart 4, tweens have strong preferences for MTV, followed by Fox, WB, Nickelodeon, and the Discovery Channel.⁵⁰ They identified major broadcast networks less frequently. Girls identify WB as a preferred network more frequently than boys (40 percent vs. 25 percent). Boys more frequently prefer MTV (52 percent vs. 44 percent).⁵¹



⁴⁸ Soloman & Parks Study 2000

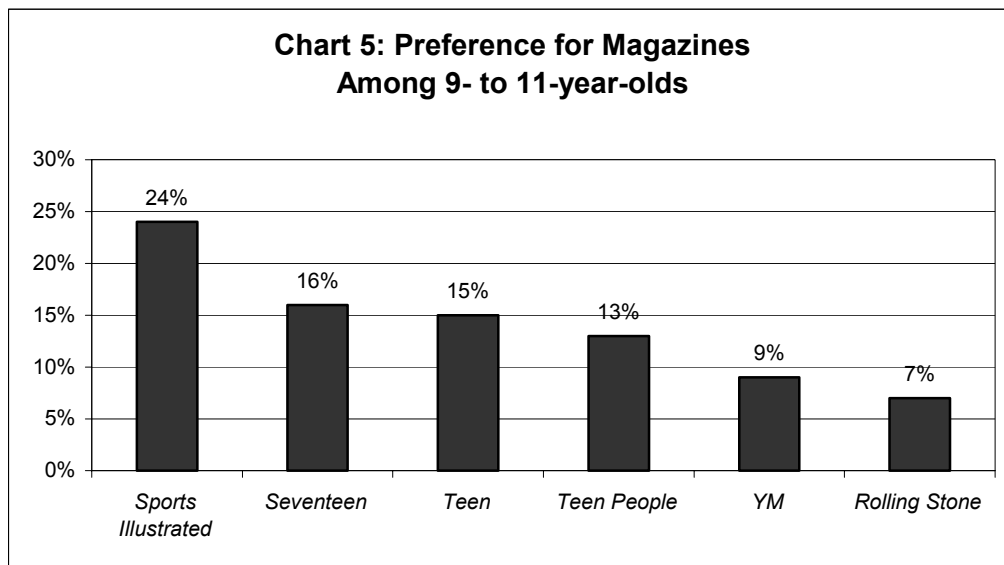
⁴⁹ The Henry J. Kaiser Foundation, A Comprehensive National Analysis of Children's Media Use, November 1999.

⁵⁰ CDC. National Youth Media Campaign RFP, 2000.

⁵¹ CDC, Youth Media Campaign Integrated Marketing Plan, January 2001.

Tweens listen to the radio frequently and turn primarily to local channels that air their favorite music formats. Most children (89 percent of girls and 84 percent of boys) between the ages of 9 and 11 have identified a favorite radio station.⁵² Radio is considered by this group to be important to keep up on “cool” trends. Thirty-four percent of children choose a particular station to listen to all or most of the time; 38 percent choose it some of the time; and 29 percent choose it almost never.

On the other hand, 8- to 18-year-old children spend less than 1 hour a day reading all print media combined, including books, magazines, and newspapers. Magazines, however, remain a standard channel for delivering messages to tweens; 55 percent of children ages 7–14 have their own subscriptions. Children read magazines from cover to cover, save back issues and reread them, and share magazines with their friends. For youth between the ages of 9 and 11, reasons for reading magazines include pursuing a topic of interest (e.g., *American Girl* for doll collecting and *Teen People* for celebrities and fashion) and learning about new things (e.g., video game magazines for boys who want to improve their skills).⁵³ According to CMR, and as shown in chart 5, preteens favor *Sports Illustrated*, followed by *Seventeen*, *Teen*, *Teen People*, *YM*, and *Rolling Stone*. Comic books remain a highly popular magazine category, with 449 comics titles.



Internet use among children, especially tweens, is increasing rapidly. As long ago as 1998, Jupiter Communications estimated that 20 million U.S. children, ages 2–12, were surfing the Web compared to 2.7 million in 1997.⁵⁴ The many reasons that kids go online include gathering information, playing games, participating in chat and message boards, participating in creative activities, and downloading files (e.g., music). When reviewing the most popular categories of Web sites visited by kids ages 8 to 13, Kaiser found that the most visited Web-site categories are entertainment, followed by gaming and sports. (See chart 6).⁵⁵ Total time spent on computer

⁵² Children’s Measurement Callback Study.

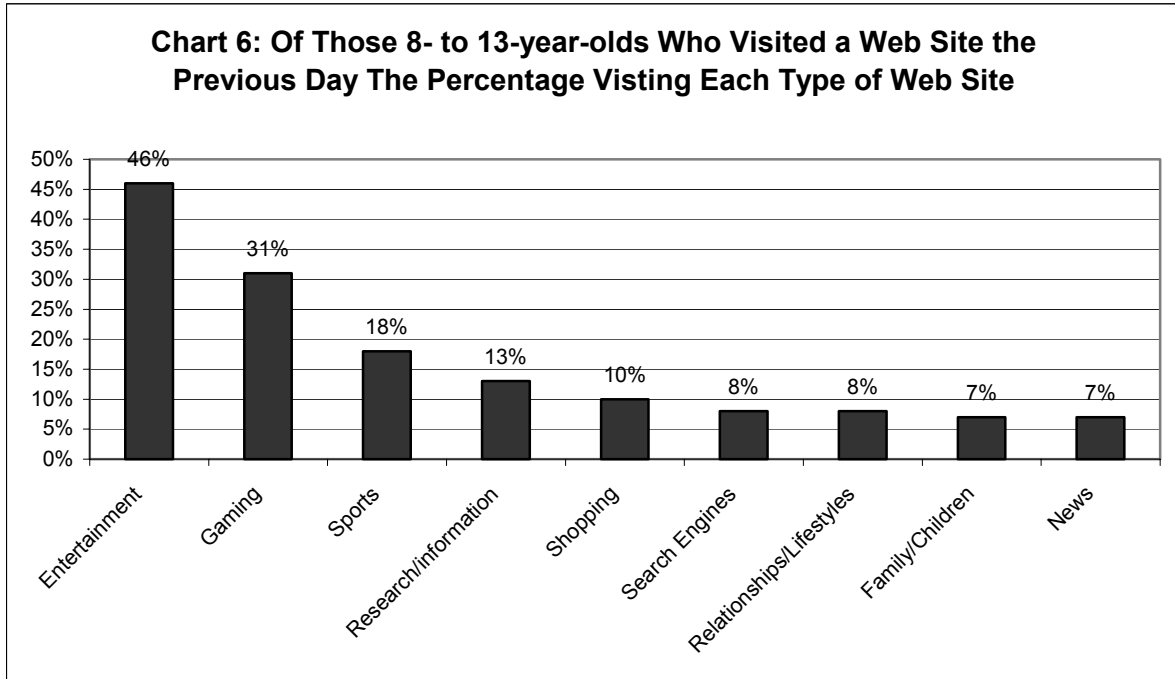
⁵³ Arbitron 2001.

⁵⁴ Jupiter Communications, cited in *The Industry Standard*, December 4, 1998.

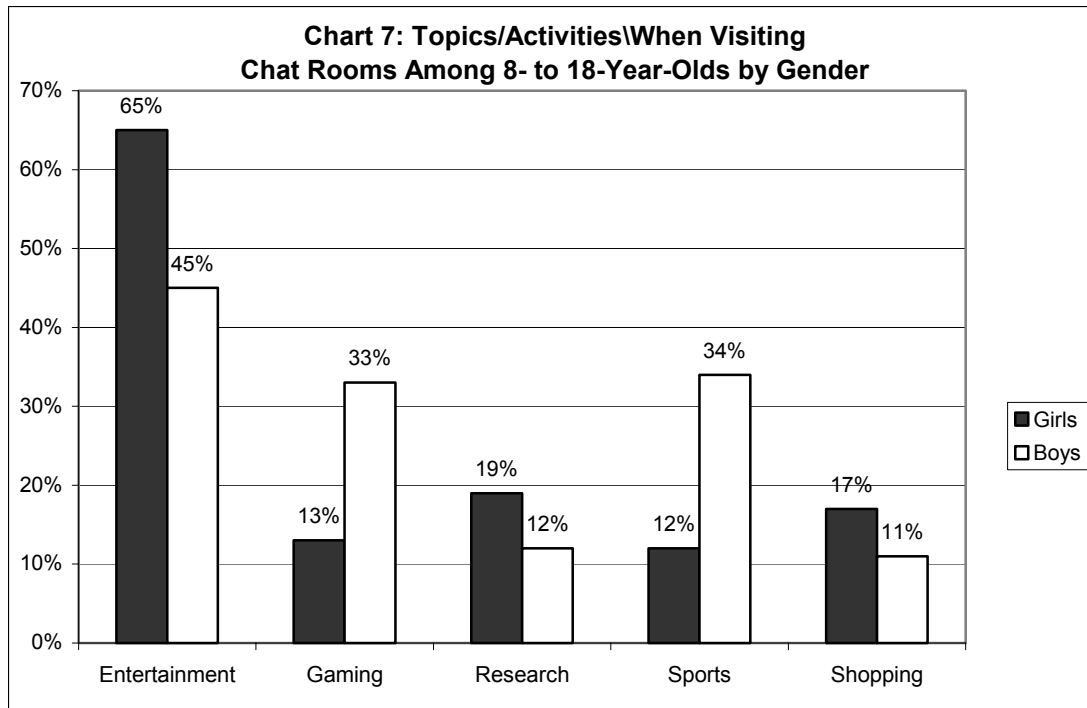
⁵⁵ Kaiser Family Foundation, 1999.

activity for tweens is less than an hour per day. When visiting chat rooms, 65 percent and 45 percent of girls and boys between ages 8 and 18, respectively, visited entertainment Web sites; 33 percent of boys and 13 percent of girls visited gaming sites; 12 percent of boys and 19 percent of girls researched information; 34 percent of boys and 12 percent of girls visited sports sites; and 11 percent of boys and 17 percent of girls visited shopping sites.⁵⁶ (See chart 7.)

According to *Connect Online*, the Web sites that made up the top 10 fell into 2 main categories: television networks, such as Nickelodeon/Nick Jr., Fox Kids, and the Cartoon Network; and “fun” sites, such as Barbie and MaMaMedia.



⁵⁶ Ibid.



E. The Impact of Mass Media Exposure

As indicated in the previous section, tweens are heavy users of a range of mass media, including television, radio, and magazines. Recent research indicates that this constant media barrage in every aspect of their lives has an effect on tweens' practices and beliefs related to food, nutrition, body image, and health.

Some evidence indicates that mass-media content may influence food consumption and preferences of youth. Advertisers spend the most dollars to promote convenience foods, confections, snacks, and soft drinks.⁵⁷ Food ads have declined as a proportion of all ads on children's television; however, nearly half of the advertising during children's programming is food related, and this is true across all time slots.⁵⁸ Restaurants, where a major proportion of choices have high fat content, are now an important presence on children's television programs. Restaurant advertising, as a percentage of total food-related ads, increased from 10.6 percent in 1992 to 21.6 percent in 1997.⁵⁹

The content and format of food advertising play roles in shaping children's preferences and behaviors. Exposure to advertising especially appears to relate to tweens' preferences for sugared snacks, such as presweetened cereals. Exposure to messages about food also influences their

⁵⁷ www.Mediascope.org.pubs.ibriefs/cha.htm.

⁵⁸ "Selling Food to Children," Bonnie B. Reece, Nora J. Rifon, Kimberly Rodriguez, in *Advertising to Children: Concepts and Controversies*, M. Carole Macklin & Les Carlson, eds., Sage Publications Inc., Thousand Oaks, CA, 1999.

⁵⁹ *Ibid.*

behavior. Positive nutrition messages may increase children's knowledge of desirable health behaviors, while exposure to ads for sugared products appears to be linked to their consumption.

Television viewing may play a role in increasing rates of obesity among children, in part because children who watch television often consume high-calorie snacks but expend fewer calories while watching.⁶⁰ This problem is compounded by the fact that some studies show that the metabolic rate actually decreases while an individual is watching television. Media content may also influence weight concerns, weight control/loss behaviors, and perceptions of body weight and size. For girls, pictures in magazines may influence their concepts of the perfect body shape and their desire to lose weight. Exposure to magazines also may motivate girls to diet or to exercise to lose weight or to improve their body shapes. It is not clear from this review whether celebrities, such as movie or rock stars (who tend to be thin), influence children similarly. On the other hand, parents can serve as important role models for both eating and physical activity behaviors, as will be discussed later. Some experts suggest the print media that targets young girls could serve a public health role by not relying on severely underweight models and by printing more articles on the benefits of physical activity.⁶¹ Others have challenged health educators to involve parents in helping their children become more educated consumers or to establish firm guidelines for media exposure, especially by limiting the amount of time a child spends watching television.

F. Racial, Ethnic, and Socioeconomic Factors in Children's Media Use and Their Significance

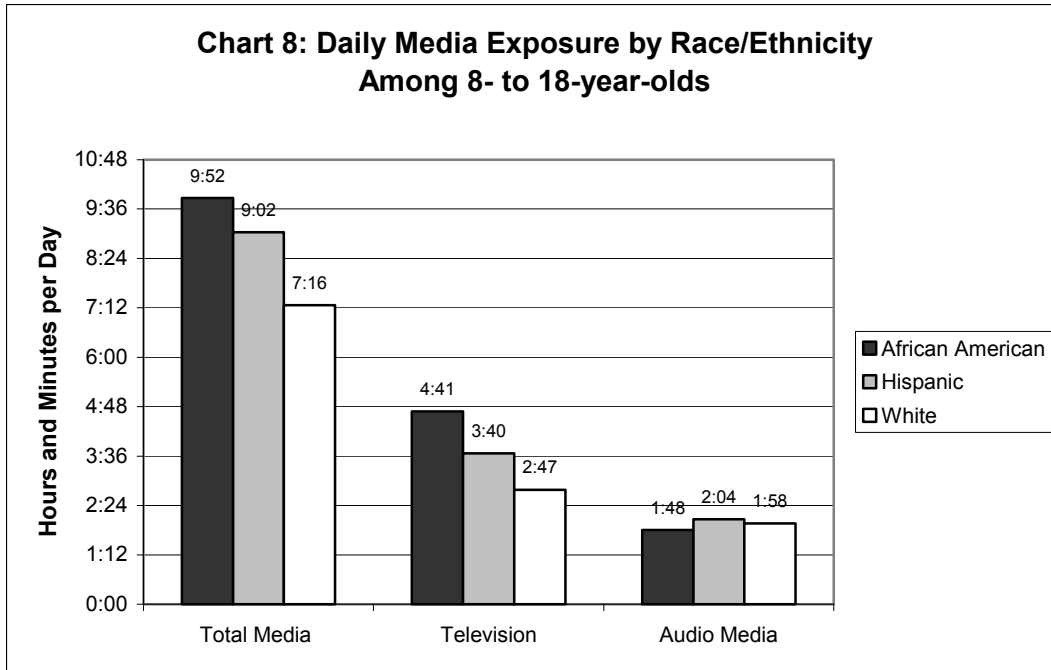
Ethnic and racial differences in media habits exist among African-American, Hispanic, and White children. As shown in chart 8, African-American children ages 8–18 have the highest total daily media exposure, followed by Hispanic children, and then White children.⁶² African-American children are most likely to have televisions in their bedrooms (69 percent), followed by Hispanic children (60 percent) and White children (48 percent). The trend of television watching follows the same pattern, with African-American children spending the most amount of time per day watching television, followed by Hispanics and Whites. For 8- to 18-year-olds, the average daily exposure to radio, CDs, and tapes (audio media) is highest among Hispanics, followed by Whites and African Americans.⁶³ Interestingly, although television and overall media consumption varies greatly by ethnic/racial group differences, the difference in music consumption habits is almost negligible.

⁶⁰ Deitz, WH, Gortmaker, SL. Do we fatten our children at the TV set?: Obesity and television viewing in children and adolescents. *Pediatrics*. 1985; 75:807.

⁶¹ Alison E. Field, Lilian Cheung, Anne M. Wolf, David B. Herzog, Steven L. Gortmaker, Graham A. Colditz. Exposure to the mass media and weight concerns among girls. *Pediatrics* 103(3) March 1999, p.e36.

⁶² For the Kaiser Family Foundation survey's purpose, media included television, taped TV shows, videotapes (commercial), movies, video games, print media, radio, CDs and tapes, and computers.

⁶³ Children's Measurement Callback Study.



Socioeconomic factors may influence television-viewing habits and thus the potential impact of television on youth. Children who live in single-family homes, who live in or go to school in communities with median incomes under \$25,000, and whose parents’ highest level of education is high school are less likely to live in homes where there are family rules related to television and are more likely than others to live in homes where the television is on most of the time, including during meals.⁶⁴

G. Environmental Influences on Nutrition and Physical Activity

Although preteens’ high engagement levels with media may affect their eating behaviors and physical activity, their choices also are influenced by many other settings and environmental factors that may support unhealthy patterns of eating and physical activity. Influential behavioral settings include the child’s home, neighborhood, community, and school. In many communities, for instance, concerns about safety may affect a child’s ability to engage in physical activity and free play after school or on the weekends.

It is impossible to discuss all the environmental influences on children that may affect children’s nutritional and physical activity status; this may be an issue to be explored during subsequent focus group research with the audience. This section, however, does review some of the factors discussed frequently in research literature, on consumer advocacy Web sites, and in the media. As an overview, table 4 illustrates the pervasive nature of the complex and interwoven environmental factors affecting the health of children.

⁶⁴ Kaiser Family Foundation, 1999.

Table 4: Influences on Physical Activity and Nutrition

Influences on Physical Activity	
Behavioral Setting	Influence
School	After-school physical activity programs
School	Physical education class availability
School	Physical education class content and training
Neighborhood	“Walkable” communities, e.g., sidewalks, proper lighting
Neighborhood	Crime and perceived safety
Home	Sedentary stimuli for leisure
Influences on Nutrition	
Behavioral Setting	Influence
Restaurants	Portion size (super-sizing)
Home	Variety/types of snacks purchased within household
School	Food service (self-supporting)
School, neighborhood, recreation centers	Vending machines
Home	Purchase of food within household
School	Direct advertising through multiple vehicles
School	A la carte meals
School	Nutrient standards for meals
School	Nutrition education
Neighborhood	Fast-food outlets
Food stores	Portion size and unit packaging, in-store promotions, availability of fruits and vegetables, placement of high-fat foods packages especially to attract children, and high-fat products targeted at children

Source: Introduction, Summit on Promoting Healthy Eating and Active Living: Developing a Framework for Progress,” Nutrition Reviews, Vol. 59, No. 3 (Part II), March 2001.

The Consumer Environment and Tweens

Tweens have easy access to a variety of “inexpensive and highly palatable energy-dense foods in the home, in restaurants, in vending machines, and in schools.”⁶⁵ At the same time, they have considerable financial clout to purchase beverages and snacks. According to *Brandweek*, a trade magazine for marketers, tweens “had an average income of \$22.68 a week, or collectively, around \$23 billion annually ... [This is] quite a windfall in contrast to a decade earlier, when they earned a weekly average of about \$6 and a total of \$6 billion a year.” Not only do tweens have

⁶⁵ Introduction, Summit on Promoting Healthy Eating and Active Living: Developing a Framework for Progress,” *Nutrition Reviews*, Vol. 59, No. 3 (Part II), March 2001

money, they are spending most of it. Tweens spent a total of \$21.7 billion during the year, saving only about \$1.8 billion.⁶⁶

Tweens' food-consumption behaviors clearly parallel changes in the last several decades in Americans' food-consumption behaviors. Constantly exposed to food and beverage marketing, tweens are eating out more often, being tempted to eat more as a part of aggressive "super-size" marketing, and obtaining more low-nutrient foods as snacks. Marketers from many industries also are creating "kids clubs," which connect a product or brand with a club for kids. These clubs, formed by national chains such as Burger King, also make hometown connections with kids. Through these clubs, "the marketer gives the product the shine of exclusivity, and the club members the feeling of being insiders, of being privy to secrets—hopefully instilling a sense of brand loyalty in the process."⁶⁷

USDA has collected a great deal of data on the extent and impact of the growing trend of eating out among all age groups, including 8- to 13-year-olds. USDA's findings indicate that preteens are indeed obtaining a higher percentage of calories from away-from-home foods, such as foods purchased at fast-food establishments or snacks at others' homes. Vending machines also are ubiquitous, making snacks readily available at schools and community centers.*

It is difficult to make positive changes in the nutritional quality and extent of foods available to children away from home. "Currently, it appears that consumers are more likely to value the nutritional properties of foods when eating at home than when eating away from home."⁶⁸ Efforts to introduce low-fat hamburgers by a major fast-food chain failed. In at least one case, efforts to promote an existing fast-food product as a healthy, low-fat option have succeeded (e.g., Subway sandwich shops). When eating out, Americans, including children, appear to make choices based on taste and price rather than nutrient quality.

Direct Advertising to Children in the Schools

With the expanded presence of advertising targeted to increasingly younger children, schools have allowed advertisers to promote many products, including food and beverages, directly to children during the schoolday. The tween market is one of the largest "captive audiences" in the Nation. While students have ready access to low-nutrient, high-calorie foods, many have little opportunity to burn off the excess calories because most schools lack regular physical activity requirements.

⁶⁶ "It's not easy being tween," McNeal, James U., *Brandweek* 22, 42, no. 16 (Apr 16, 2001).

⁶⁷ "Marketers from Diverse Industries Go Club Hopping to Reach Children," *Youth Markets Alert*, vol. 10, no. 10, p.NA.

* Note: USDA defines away-from-home foods and home foods by where these foods are obtained, not where they are eaten. Home foods are purchased at retail stores, such as grocery stores or supermarkets. Away-from-home foods are obtained from food service and entertainment establishments. Away-from-home foods are classified into four groups: restaurants, or places with waiter service; "fast food" such as self-service and carry-out eating places and cafeterias; "schools," including day care centers and summer camps; and "others," which include vending machines, community feeding programs, and someone else's home (*Food Review*, Vol. 24, Issue 2, p.8)

⁶⁸ *Away-From-Home Foods Increasingly Important to Quality of American Diet*. Lin BH, and Frazee E. Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture; and Guthrie J; Food and Drug Administration, U.S. Department of Health and Human Services. *Agriculture Information Bulletin*, No. 749.

Four categories of in-school commercialism include:

- **Inschool ads**—billboards, school buses, scoreboards, school hallways, book covers, piped-in radio programming, product coupons, and giveaways
- **Ads in classroom materials and programs**—any commercial messages in magazines or video programming used in school, including the ads on Channel One
- **Corporate-sponsored educational materials and programs**—free or low-cost items that can be used for instruction, i.e., multimedia teaching kits, videotapes, software, books, posters, reproducible activity sheets, and workbooks
- **Corporate-sponsored contests and incentive programs**—brand names are brought into the schools along with the promise of such rewards as free pizzas, cash, points toward buying educational equipment, or trips and other prizes

Cable in the Classroom: Channel One TV Marketing and Tweens

Channel One debuted in the spring of 1990 in 400 secondary schools across the country. The basic offer included a satellite dish, a videotape recorder, wiring, and a television monitor in each classroom, to show a 12-minute daily news and current events program that includes 2 minutes of advertising. Primedia, Inc., the current owner of Channel One, reports that 8 million students and 440,000 educators now watch Channel One daily. Additionally, Primedia has expanded its reach into the classroom via a Web site, www.channelone.com.

The presence of advertising remains the most controversial aspect of Channel One. Industry advertisers refer to the channel as “the smartest place to reach tweens,” and Primedia touts Channel One as “viewed by more teens than any other television program.” Federal Government advertisers include the U.S. Army, Navy, Air Force, and Marines.

The tone and emphasis of Channel One’s daily show has vacillated over the years between hard news and serious topics and pop culture orientation. In recent years, however, the show has emphasized social issues of interest to tweens. Currently, Channel One has a more indepth look, with a teaching focus, but it still includes commercial breaks and advertisements.

School Policies

Children and youth receive nutrition and dietary behavior instruction at school. At the middle-school level, 68.6 percent of States, 76.4 percent of districts, and 81.4 percent of schools require instruction on nutrition and dietary behavior.⁶⁹ Although most States, districts, and schools require physical education in middle schools (85.7 percent, 84.6 percent, and 96.8 percent, respectively), most schools do not have daily physical activity programs.⁷⁰ Eight percent of elementary schools, 6.4 percent of middle/junior high schools, and 5.8 percent of senior high schools provide daily physical education or its equivalent (150 minutes per week for elementary

⁶⁹ CDC, School Health Policies and Program Study (SHPPS) 2000, *Fact Sheet: Nutrition Services*. From www.cdc.gov/nccphp/dash/shpps/factsheets/fs00_ns.htm. 1/21/03

⁷⁰ CDC, School Health Policies and Program Study (SHPPS) 2000, *Fact Sheet: Physical Education and Activity*. From www.cdc.gov/hccphp/dash/shpps/factsheets/fs00_pe.htm 1/21/03

schools; 225 minutes per week for middle/junior and senior high schools) for the entire school year for students in all grades.⁷¹

Media Messages: Lessons Learned From Antismoking and Antidrug Campaigns

In our review of other initiatives that target this age group—including antitobacco campaigns, antidrug campaigns, and other health campaigns—media messages that have proven more effective:

- Are crafted with tweens as a part of the team—not simply as the audience
- Appeal to their sense of style and action
- Do not try to mimic their language
- Focus on the choices available
- Appeal to their aspirations
- Promote the behavioral choices as a badge (or brand), for example, “gear”
- Tap into rebellion or not going along with the crowd
- Portray tweens as an empowered group

H. Key Findings

Demographics

- More than 26 percent of the total U.S. population is under 18 years of age. Within this group of close to 52 million, preteens (or tweens) between the ages of 8 and 12 are an increasingly diverse audience, including Whites, African Americans, Hispanics, Asian Americans, American Indians/Alaskan Natives, Native Hawaiians, and Pacific Islanders.
- Twenty-two percent of family households with children under 18 years of age are headed by women.
- Most White tweens live in two-parent families; African-American tweens have a mother present in the home 83 percent of the time, but a father is present only 36 percent of the time. Other caregivers in the home of African-American tweens include grandparents or stepparents, who are present 44 percent of the time, either with or without parents or other caretakers present. This number is much higher than in White families. Additionally, Hispanic families are more likely than White families to be headed by a female with no spouse present.

Overweight and Obesity

- During the past two decades, the percentage of overweight children has nearly doubled (from 7 to 13 percent) and the percentage of adolescents who are overweight has almost tripled (from 5 to 14 percent).

⁷¹ Ibid.

- Although more common among adults and children in minority groups, overweight is an increased burden among all groups. African Americans and Hispanic/Latinos lead the way, with an increase in overweight of more than 120 percent between 1986 and 1998. In the same time period, White adults have seen the prevalence of overweight increase by more than 50 percent.
- Women who are members of racial/ethnic minority populations have higher rates of overweight and obesity than their White counterparts. This pattern appears to be consistent with the weight statistics for children.
- An overweight child is 2 to 6.5 times more likely to become an overweight adult.
- Between 1986 and 1998, the overall prevalence of childhood overweight increased rapidly, with the strongest increases noted in the following groups:
 - Boys, especially low-SES African-American and Hispanic boys
 - African-American boys and girls
 - Hispanic/Latino boys and girls
 - Children living in the Southern United States
- Mexican-American boys have a higher prevalence of overweight/obesity than do their African-American or White counterparts, while African-American girls have a higher prevalence than White and Mexican-American girls.
- Mexican-American men and women have equal patterns of prevalence of obesity and overweight.
- Mexican-American men have the highest prevalence of overweight and obesity among all men.

Physical Activity

- One factor that contributes to the physical inactivity of children and adolescents is the lack of availability of school-based physical activity programs as children grow older. While virtually all 10-year-olds participate in physical activity classes, only about one-half are still participating by age 17.
- Despite the trend toward gender equality in sports, boys are more physically active than girls. A 1991 study found that girls are aware that exercise is important for good health. Only 67 percent of high school girls compared to 80 percent of boys exercised at least three times a week. Of all racial/ethnic and gender groups, African-American girls are the least likely to be physically active.
- No specific data exist on tweens and physical activity, but it is clear that a lack of physical activity and a sedentary lifestyle are related inversely to both the level of family income and the educational level of the parent or caregiver. Therefore, a less-educated parent with a lower family income is more likely to have a child who does not get the proper amount of physical activity.

Dietary Habits

- Only about 1 percent of tweens are meeting the Dietary Guidelines for Americans as established by USDA. Less than 30 percent of tweens' diets meet the recommendations for fruits, grains, meats, and dairy; only 36 percent of their diets meet the recommendations for vegetables.
- As with physical activity, a parent with a lower SES and less education is more likely to have a child who consumes less than the recommended amount of fruits and vegetables.

Psychosocial Development

- Younger tweens (8- to 10-year-olds) participate in activities because they are “fun” and because they can interact with their peers. Older tweens are more concerned with attaining a level of skill for various activities and are more likely to participate in activities in which they feel successful.
- Dissatisfaction with body size is a common issue for tweens, and a rising problem is boys' preoccupation with their physical appearance. This manifests itself in an increase in eating disorders in boys as early as grades 3, 4, and 5.

Media Habits

- The highest amount of media exposure of all youth is reported by 8- to 13-year-olds, with a total media exposure—more than 8 hours a day.
- The average child's home has three televisions (65 percent have one in their bedrooms), three tape players, three radios, two VCRs, two CD players, one video game player, and one computer.
- Children ages 9–14 seem to prefer specialty cable networks to major broadcast networks. Tweens have strong preferences for MTV, Fox, WB, Nickelodeon, and the Discovery Channel. Girls identify WB as a preferred network more frequently than boys do. Boys more frequently prefer MTV.
- Tweens listen to radio frequently and turn primarily to local channels that air their favorite music formats. Children ages 9–11 consider radio to be very important to keep them up-to-date on “cool trends” and to tell them what is popular.
- In contrast to their exposure to other media, children ages 8–18 spend less than an hour a day reading all print media combined, including books, magazines, and newspapers. According to CMR, preteens favor *Sports Illustrated*, *Seventeen*, *Teen*, *Teen People*, *YM*, and *Rolling Stone*. Comic books remain a highly popular magazine category.
- Internet use by children, especially tweens, is increasing rapidly. According to Connect Online, the Web sites that made up the top 10 fall into two main categories: television networks (such as Nickelodeon/Nick Jr., Fox Kids, and the Cartoon Network) and “fun” sites (such as Barbie and MaMaMedia).
- African-American children ages 8–18 have the highest total daily media exposure, followed by Hispanic children and White children. Television watching follows the same pattern.

Impact of Food Advertising

- Food ads as a proportion of all ads on children’s television have declined; however, nearly one-half of the advertising during children’s programming is food related—this is true across all time slots. Restaurants, particularly those that serve fast foods high in fat, are now an important presence on children’s television programs.
- There is some indication that television viewing may play a role in increasing rates of obesity among children. This may be in part because children who watch television often consume high-calorie snacks but expend fewer calories while watching. In addition, some studies also show that a child’s metabolic rate actually decreases while he or she is watching television.

School Policies

- With the expanded presence of advertising targeted to increasingly younger children, schools have allowed advertisers to promote many products, including food and beverages, directly to children during the schoolday. The tween market is one of the largest “captive audiences” in the Nation.
- Tweens live in an environment in which low-nutrition, high-fat snacks are readily available. Tweens purchase snacks at fast-food restaurants in their neighborhoods and at vending machines in schools and community centers. Tweens consume these snacks at home or at their friends’ homes.

The Consumer Environment and Tweens

- According to *Brandweek*, a trade publication, tweens have an average income of \$22.68 per week, or collectively about \$23 billion annually. Tweens spend most of their money—a total of \$21.7 billion during the year—and save only about \$1.8 billion.
- Constantly exposed to food and beverage marketing, tweens are eating out more often, are being tempted to eat more as a part of aggressive “super-size” marketing, and are consuming more low-nutrient foods as snacks.
- Marketers from many industries are also creating “kids’ clubs,” which connect a product or brand with a club for kids. Through these clubs, “the marketer gives the product the shine of exclusivity, and the club members the feeling of being insiders, of being privy to secrets.”

V. Competing and Complementary Nutrition and Physical Activity Initiatives

A competitive analysis reviews other messages, materials, and campaigns that will “compete” with a future campaign for the target audience’s attention. It serves to equip the designer of future campaign messages and materials with an understanding of the environment in which all of those messages will coexist. Among other things, it helps in gauging the audience’s receptivity to future messages, assists in the identification of potential overlaps, sheds light on differences and similarities between campaigns, and points to potential collaborators or supporters.

The following competitive analysis reviews the nutrition education and physical activity initiatives that currently target 8- to 12-year-old children. (See the Methodology section for criteria used to select initiatives.) The objective of this analysis is to understand the communications environment in which Eat Smart. Play Hard.TM exists, enabling USDA’s Food and Nutrition Service (FNS) to establish a unique, attention-getting, and appealing position for the campaign in the minds of the target audience.

As background, this section first reviews FNS programs that are being implemented currently. This review is followed by a discussion of current as well as emerging initiatives at the national level, by Government and/or nonprofit organizations. Several State and regional initiatives were identified through the review of those that are national, and a brief discussion of those programs follows. Detailed findings for each of the initiatives can be found in Appendix A. The findings from an analysis of communications by selected food industry advertisers are then reported, and an analysis of cartoon spokescharacters follows. The competitive analysis concludes with a discussion of overall findings and implications.

A. Food and Nutrition Service (FNS) Programs

Because all FNS nutrition assistance programs have the potential to reach members of the two target audiences—8- to 12-year-olds and/or their caregivers—the programs present critical opportunities for points of contact with the target audience. The following paragraphs provide an overview of FNS food assistance programs.

FNS administers 15 nutrition assistance programs; many include nutrition education components that promote healthy eating and lifestyle behaviors.

- The **Child Nutrition Programs** provide support for children to “eat to learn and learn to eat,” with nutritious school meals, after-school snacks, and nutrition assistance for day care, after-school, and summer programs.⁷² These programs include:
 - The **National School Lunch Program**, which provides nutritious lunches and the opportunity to practice skills learned in classroom nutrition education. This program also offers after-school snacks in sites that meet eligibility requirements.

⁷² Food and Nutrition Service. *FNS Activities to Promote Healthy Eating*. USDA (undated).

- The **School Breakfast Program**, which provides nutritious breakfasts to promote learning readiness and healthy eating behaviors
 - The **Special Milk Program**, which offers milk to children who do not have access to other meal programs
 - The **Summer Food Service Program**, which serves healthy meals and snacks to low-income children during the long school vacations.
 - The **Child and Adult Care Food Program**, which provides nutritious meals and snacks (including after-school snacks) to infants, young children, and impaired adults who receive day care.
- The **School Meals Initiative for Healthy Children (SMI)** is a comprehensive effort to ensure that school children have access to nutritious meals that comply with *Dietary Guidelines for Americans*. The **Team Nutrition** program, mentioned previously, was designed to facilitate the implementation of the SMI.
 - The **Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)** provides supplemental foods, nutrition education, and health care referrals to low-income pregnant, breastfeeding, and postpartum women and to infants and children up to 5 years of age who are found to be at nutritional risk. WIC administers the **Farmer’s Market Nutrition Program**, which supports the increased consumption of fruits and vegetables. WIC education emphasizes relationships between nutrition and health, in keeping with the individual’s personal, cultural, and socioeconomic preferences.
 - The **Food Stamp Program** is the cornerstone of the national commitment to protect the nutrition, health, and well being of low-income families. Nutrition education is an important but optional component; however, in FY 2000, 48 states provided nutrition education. FNS encourages states to design plans to educate clients about a variety of issues, including healthful eating behaviors.
 - As an alternative to the Food Stamp Program, the **Food Distribution Program on Indian Reservations (FDPIR)** provides supplemental foods to low-income households living on Indian reservations and low-income Indian households living in designated areas near reservations.
 - The **Commodity Supplemental Food Program (CSFP)** provides pregnant women, new mothers, infants, children up to age 6, and elderly people with USDA commodity foods.

B. National Initiatives

The review conducted as part of this competitive analysis identified 16 initiatives being implemented at the national level by Government and/or nonprofit organizations. These initiatives were categorized as national campaigns, guides, or local implementation programs.

National Campaigns: These campaigns reach their respective target audiences at the national level through various communication channels, including media. The campaign and their sponsoring agencies include:

- The **Bodywise Eating Disorder Education Campaign**—U.S. Department Health and Human Services (HHS), Office on Women’s Health
- **Girl Power!**—HHS, Substance Abuse and Mental Health Services Administration (SAMHSA)
- **Media Matters: National Media Education Campaign**—American Academy of Pediatrics
- The **Milk Matters Calcium Education Campaign**—National Institutes of Health (NIH), National Institute on Child Health and Human Development
- The **National Bone Health Campaign—*Powerful Bones. Powerful Girls.*TM**—CDC, Office on Women’s Health, and National Osteoporosis Foundation
- **Team Nutrition**—USDA Food and Nutrition Service (FNS)
- **Verb. It’s What You Do.**—CDC

Guides: The main component of the following six initiatives is a guide or toolkit, for distribution to intermediary audiences, such as health professionals, school administrators, teachers, and community organizations:

- **Bright Futures in Practice: Physical Activity**—Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau
- **Bright Futures in Practice: Nutrition**—HRSA, Maternal and Child Health Bureau
- **Changing the Scene: Improving the School Nutrition Environment**—USDA, FNS
- **Hearts N’ Parks**—NIH, National Heart, Lung, and Blood Institute (NHLBI), National Recreation and Park Association (NRPA)
- **JumpStart**—NIH, NHLBI, NRPA, in conjunction with Scholastic Inc.

Local Implementation Initiatives: The remaining initiatives are sponsored and organized at the national level but consist of a prescribed implementation protocol that occurs at the local level. These include:

- **KidsWalk-to-School**—CDC’s Nutrition and Physical Activity Program
- The **President’s Challenge Physical Activity And Fitness Awards Program**—President’s Council on Physical Fitness and Sports
- **Sporting Chance**—Girls Incorporated
- **Walk To Schoolday—USA**—Pedestrian Bicycle Information Center for the Partnership for a Walkable America in cooperation with the U.S. Department of Transportation

Although these initiatives vary by goals, target audiences, and dissemination methods (as shown in Appendix A), they all aim to improve the nutrition and/or physical activity status of the youth audience. None of the above programs communicate the same messages as the Eat Smart. Play Hard.TM campaign nor do they target the same audience of 8- to 12-year-olds, yet it is clear from this review that many agencies and organizations at the national level are concerned with reducing obesity among youth. Many also are partnering with each other to pool resources and dissemination channels to expand their reach.

Although many of these programs are well established and have been active for years, the resurgence of new, innovative programs is imminent. The release of the Surgeon General's *Call to Action* continues to generate a great amount of publicity, and is likely to lead to a renewed interest in and support for these types of initiatives.

C. Emerging National Initiatives

In conducting a competitive analysis, it is critical to understand not only what initiatives are reaching the target audience with similar or competing messages, but also to learn about those that are being planned or are under development. Such information provides campaign planners with an opportunity to explore partnering possibilities at the most critical time—while both campaigns are still being planned. Such partnerships may allow for sharing of the organizations' existing dissemination channels as well as campaign messages and materials.

The following emerging initiatives were identified as relevant:

- **5 A Day The Color Way**—The Produce for Better Health Foundation: A national campaign that will promote a colorful diet of fruits and vegetables among elementary school youth (kindergarden through grade 6) in partnership with Crayola and Dole Foods. The campaign will include direct mailing of curricula, which will contain tools for teachers and children, to 12,000 elementary schools. The school activity will be supported by promotion of the new initiative in the produce sections of supermarkets as well as through media.
- **Healthy Eating for Boys**—USDA, CDC, and 100 Black Men of America, Inc. (BMOA): The goal of this initiative is to promote healthy eating among and African-American youth ages 11–18 and to teach them to act as change agents for healthy communities by introducing a nutrition and physical activity component into BMOA's mentoring program.
- **Neighborhood/Mobile Outreach Program**—The National Recreation and Park Association (NRPA), through a CDC grant: This program studies the trend toward neighborhood and mobile-outreach recreation strategies that promote physical activity. The project goal is to reduce existing barriers by advancing programs that reach youth, particularly 9- to 13-year-olds, with opportunities to engage in regular physical activity and healthy youth development.
- **Power of Choice: A Leader's Guide for Afterschool Nutrition Education**—USDA and FDA: The goal of this lifestyle initiative is to empower preteens with the specific skills and the confidence to eat smart and stay physically active now and into adulthood.
- **Reversing Childhood Obesity Trends: Helping Children Achieve Healthy Weights**—USDA's Cooperative State Research, Education, and Extension Services: This project will test a number of program interventions designed to reduce the prevalence of childhood overweight and obesity in various populations.

These emerging initiatives can be of value to the planning and implementation of the Eat Smart. Play Hard.TM campaign. If the findings from the NRPA and FNS studies become available in the near future, they may provide valuable insight into Eat Smart. Play Hard.TM campaign planning

and aid in the development of the best methods of reaching inner-city youth with physical activity programs. The Power of Choice program will target a subset of the Eat Smart. Play Hard.TM audience with physical activity and nutrition messages. The Healthy Eating for Boys campaign targets African-American boys, ages 11–18, and although this age range is slightly older, it overlaps the age range of the Eat Smart. Play Hard.TM target audience. Both of these initiatives should be further explored as potential avenues for implementation of the Eat Smart. Play Hard.TM campaign.

D. Relevant State Initiatives

Concurrent to the activity at the national level, Government and nonprofit organizations at the State and local levels throughout this country are actively engaged in initiatives that aim to reduce overweight and obesity among youth. This competitive analysis focuses on national initiatives, but several existing and emerging State and regional initiatives were identified during this review and are included in Appendix A. The glimpse into State and regional efforts provides a fuller portrait of the nutrition and physical activity promotion landscape. For example, the Division of Nutrition and Physical Activity at the CDC has initiated a program to support State health departments and their partners in developing and implementing targeted nutrition and physical activity interventions in an effort to prevent chronic diseases, especially obesity. As part of this program, 12 States were awarded cooperative agreements in 2000 and 2001, and at least 7 of the States plan to target youth audiences; these include California, Massachusetts, Montana, North Carolina, Pennsylvania, Rhode Island, and Texas. Descriptions of these 7 programs are found in Appendix A.

During the review of national initiatives, one interstate program was identified: Wellness in the Rockies. Implemented by three universities, this program spans three States—Montana, Wyoming, and Idaho—and provides specific outreach to youth and limited-resource audiences. Promoting Physical Activities Together (PHAT) is an innovative local program being implemented in Los Angeles by the California Adolescent Nutrition and Fitness (CANFit) Program. This campaign aims to increase physical activity and improve eating habits among African-American youth ages 10–14. Each participating organization is working with the youth audience to develop, produce, and disseminate a hip-hop health video. Another initiative in California—California Project Lean’s Food on the Run—works with teens, parents, community members, and local policymakers to educate them on the importance of healthy eating and physical activity, and to engage them in developing supportive policy solutions. The objectives of New York State’s Eat Well Play Hard campaign are to increase developmentally appropriate physical activity; the consumption of 1 percent or lower fat milk and other low-fat dairy products; and the consumption of fruits and vegetables.

Although the National Cancer Institute’s 5 A Day program does not target youth audiences, many of the State 5 A Day programs do, such as the State of Connecticut’s Captain 5 A Day program.

Collaborating with State health departments and organizations that are reaching out to youth audiences may provide FNS with more targeted reach and distribution channels for its materials.

E. Industry Initiatives

The following youth-targeting food advertisers were reviewed for nutrition and physical activity campaigns: Hostess, Kellogg Company, Nabisco, Del Monte, the National Fluid Milk Processor Promotion Board/Dairy Management Inc., Burger King, and General Mills. They were selected through a review of advertisers in *Nickelodeon* magazine.

Of these seven, only Kellogg Company and the National Fluid Milk Processor Promotion Board/Dairy Management, Inc. appear to engage in promotion or education of healthy eating or physical activity. On its Web site, Kellogg hosts a “Camp Nutrition” site, which features interactive games that teach about good nutrition and the *Food Guide Pyramid*. The Web site of the National Fluid Milk Processor Promotion Board/Dairy Management, Inc. “Got Milk?”^(R) Milk Mustache Campaign features information, activities, and programs that target a youth audience with nutrition and physical activity messages. The new SAMMY scholarship program, for example, rewards “high school scholar athletes who know the importance of good nutrition to help fuel academic and athletic activity.”

Although the other five companies mentioned above all engage in philanthropic activities, none focuses on physical activity and nutrition education. Even Del Monte, an advertiser that promotes fruit and vegetable products, does not capitalize on the opportunity to infuse its communication materials with healthy eating messages.

It is important to point out that all of these advertisers market actively to kids via the Internet. They offer interactive Web sites that engage audiences more on the basis of their interests than their age. For example, the Nickelodeon Web site offers many interactive features that focus on musical interests. The Web site of the National Fluid Milk Processor Promotion Board/Dairy Management Inc. “Got Milk?”^(R) Milk Mustache Campaign focuses mostly on sporting activities.

According to Marion Nestle of New York University, the Government’s entire budget on nutrition education is estimated at just one-fifth of the advertising budget for Altoids mints.⁷³ This discrepancy is reflected in the food advertisers’ online materials that target youth. The Web sites offer giveaways, promotions, regularly changing information, high-end interactive games—all reasons to return to the Web sites and be exposed to messages promoting food products. USDA will have to compete with such food advertisers for audience attention.

To understand the initiatives being sponsored by the sporting industry, we reviewed the Web site of the Sporting Goods Manufacturers Association (SGMA). One relevant initiative was identified. In 1999, SGMA started the PE4LIFE initiative to pass the Physical Education for Progress legislation in the U.S. Congress. Since then, the PE4LIFE initiative has evolved into a national awareness and advocacy campaign to:

- Promote the need for reforming educational policy to include mandatory daily physical education classes for children in grades K–12
- Promote model-quality physical education programs in every State

⁷³ *Whose Fault Is Fat?* Experts Weigh Holding Food Companies Responsible for Obesity. Abcnews.com, January 22, 2002. <http://abcnews.go.com/sections/us/DailyNews/obesityblame020122.html>

- Empower physical educators, parents, and community leaders to become advocates for quality, daily physical education
- Stimulate private and public funding for quality physical education

PE4LIFE brings together the sports and fitness industries, medical and educational professionals, the nonprofit community, and concerned individuals to make physical education a priority in national and local education policy. Campaign materials include a community action kit, with presentations, handouts, sample letters, and a video, as well as a newsletter for physical education teachers to send to parents.

F. Use of Cartoon Spokescharacters

Many private companies, particularly in the food industry, use spokescharacters to appeal to young people (e.g., Kellogg's Tony the Tiger, McDonalds' Ronald McDonald, Keebler Elves). Such spokescharacters are highly visible to children because of the large marketing budgets of the private companies that promote them. A USDA spokescharacter is competing for children's attention with these high-budget characters. Therefore, to be noticed, this spokescharacter must be differentiated substantially from the other spokescharacters.

A number of campaigns sponsored by the Federal government, State governments, and nonprofit organizations also use cartoon spokescharacters to increase their appeal. We examined the following spokescharacters to learn how they are used and whether research informed their development or evaluated their effectiveness (no exploration was conducted on the private industry spokescharacters):

- **Captain 5 A Day, Connecticut Department of Public Health**—A superhero character developed to encourage children ages 3–8 to eat five fruits and vegetables a day and to be physically active.
- **Thermy, USDA Food Safety and Inspection Service**—An animated thermometer designed to encourage the use of food thermometers by consumers when cooking meats, poultry, and eggs. This spokescharacter targets school-aged children and their parents.
- **BAC!, Partnership for Food Safety Education**—An animated germ used as a part of the Fight BAC! campaign aimed toward children and adults of all ages to promote keeping food safe from bacteria.

Some of these campaigns used research methods to determine the characteristics of the spokescharacter, and some have conducted evaluations that support their appeal. However, most of the evaluation efforts have been targeted towards the campaigns as a whole, rather than focusing exclusively on the spokescharacter. For the Captain 5 A Day character, for example, focus groups of parents were held in the initial development of the character, and focus groups were held with teachers as the costume was being developed. Although a formal evaluation of the spokescharacter has not been conducted, some evaluation data show that the curriculum as a whole, including audiocassettes and a poster featuring the character, improved lunchtime vegetable consumption in low-income 3- to 5-year-olds.

In the case of Thermym, focus groups were conducted with people of various ages, including the parents of young children, to pretest the graphics and the messages for the campaign. Although the use of food thermometers has increased since the campaign began, there has been no specific evaluation of the use of the Thermym character and its effectiveness.

Another research area that was not explored was whether there is a benefit to partnering with other spokescharacters. For instance, BAC! and Thermym sometimes appear together at events because their messages are complementary. However, it is unknown whether these partnerships boost the effectiveness or visibility of these characters and their campaign messages.

Other spokescharacters include “Carla,” who narrates the CDC’s National Bone Health Campaign Web site, and “Max,” a boy who walks the reader through the KidsWalk to School materials. These two spokescharacters are human characters, rather than objects or other living things (e.g., animals, bacteria). It might be useful for USDA to explore the effective use of spokescharacters with tweens.

Two additional spokescharacters that are familiar to many Americans are Smokey Bear, who spreads the message that people can help prevent forest fires, and Woodsy Owl, who alerts people to help prevent pollution. Both are well-established icons of the USDA Forest Service. The fact that many Americans instantly recognize these spokescharacters and their messages suggests that spokescharacters can be a very powerful part of a campaign.

G. Key Findings

Audience’s Receptivity to Future Messages

- Phase II of the Eat Smart. Play Hard.TM campaign will be implemented during a time of much national focus on obesity prevention and reduction among children and adolescents.
- The food industry is engaging the target audience with slick advertising and interactive Web sites and promotions, segmenting youth by interest and not by demographics.

Overlaps Between Current Initiatives and Eat Smart. Play Hard.TM

- Most initiatives that were reviewed focus on physical activity *or* nutrition. Those that focus on both, in general, do not specifically target tweens.
- In our review, initiatives that reach audiences similar in age to the audience for the Eat Smart. Play Hard.TM campaign generally target girls. Messages that target boys in this age group are noticeably absent.
- Capitalizing on the influence that caregivers have on tweens’ physical activity and nutrition behaviors, most initiatives reviewed reach out to both youth and their caregivers.

Differences and Similarities Between Campaigns

- Generally, tweens tend to be defined as the segment encompassing 9- to 12-year-olds. Although the Eat Smart. Play Hard.TM campaign does include this group, it also broadens the tween audience by including 8 year olds.
- The programs reviewed reach the target audiences through a variety of intermediaries, including health professionals, schools, community-based organizations, and parents.
- Some campaigns, such as the National Bone Health Campaign, reach their audiences through national media and the use of cartoon spokespersons. The National Bone Health Campaign's media approach includes advertising in magazines (such as *Sports Illustrated for Kids*, *All About You*, *Girl's Life*, *Family Circle*, *Ladies' Home Journal*, and *Essence*) as well as on the Radio Disney radio station. In addition, the campaign participates in the Radio Disney Live World Tour. Separate print and radio advertisements are created for girls and for their parents. Of the Web sites reviewed, that of the National Bone Health Campaign for girls is most similar in production quality and appeal to that of the food industry Web sites.
- A number of public-sector organizations use spokescharacters to reach their audiences. Some anecdotal data indicate that these characters may be appealing to young people, but formal evaluation has not been done with most campaigns to determine whether the spokescharacters are effective and reasons why or why not. It is important to note that research done on the spokescharacters themselves may need to be considered within the framework of the whole campaign. It is useful to know whether the spokescharacter is appealing on its own, but the context its use in the campaign may affect the appeal of the spokescharacter either positively or negatively.

Potential Collaborators or Supporters

- Team Nutrition and the FNS food assistance and nutrition programs provide a critical base from which to reach potential target audiences.
- A number of organizations either sponsor or serve as collaborators for programs that promote physical activity and healthful eating. For example, the NHLBI Hearts N' Parks campaign is being expanded to reach 50 new communities in regions of the country with populations with high rates of cardiovascular disease.

VI. Reaching the Target Audience

A. Media Openings and Opportunities

While the nation's marketers and advertisers court tweens for their vast spending power, the nation's media companies have responded to tweens' media consumption by creating a wave of targeted media vehicles. Television networks, record labels, radio networks, and Internet sites are developed to feed the tastes and interests of today's preteens.⁷⁴ As a result of this proliferation of media vehicles, tweens are easier to reach through the media than ever before. From television shows to teen magazines, countless Web sites, alternative magazines, local radio stations, and special events and venues, media companies are developing more innovative and effective ways to reach youth. This section reports on a review of the most popular media with the tween audience—television, radio, magazines, and the Internet—in regard to nutrition and physical activity content and messages. Gaps and opportunities are identified, as appropriate, in each section.

Television

Television is the top medium for youth between the ages of 8 and 11; 98 percent of all children in this age group are consumers of the medium. Youth audiences report that they are more likely to be influenced by TV than by other media and say that TV is the best way to advertise to them. Television programs for tweens are catching on. According to the *New York Times*, Nickelodeon, the Disney Channel, and the Discovery Channel with NBC News all air programming blocks targeted to tweens. To determine the extent of television coverage for those in the tween years on such issues as nutrition and physical activity for this environmental scan, a month of programming on the KIDSNET Web site was reviewed. Programs listed on the site must contain educational/informational material that can enhance learning, extend knowledge, and help children solve problems. We looked for children's programming that specifically covered such topics as body image, physical activity, nutrition, healthy lifestyles, social issues, and personal development. According to the KIDSNET review (see Appendix B), very few shows for tween audiences deal with such issues.

It should be noted that many tweens “view up.” That is, they watch television programs that deal with an array of “mature” subjects intended for teens and adults. A review of Nielsen survey data on the top-ranked television programs for children ages 9–11 confirmed this trend. These data included top 10 broadcast TV kids shows, top broadcast TV prime time shows, top broadcast TV Saturday morning shows, and top 10 cable TV kids' shows. Appendix B includes a chart with the top kids' shows and, when available, their content ratings.

Radio

As mentioned previously, most children and youth, ages 9–11, are consumers of radio programming. Parents and peers may influence the choice of station.⁷⁵ There is no way to review systematically nutrition and physical activity messages being communicated via radio to the

⁷⁴ CDC. National Youth Media Campaign RFP 2000.

⁷⁵ Arbitron 2001.

target audience. However, a search was conducted for national-level radio stations targeting children. One major media survey identifies Radio Disney and Fox Kids Countdown as stations for children only. Programming from Radio Disney is now broadcast in 46 cities and is available on the Internet as a Webcast. Radio Disney features a 24-hour radio format developed “Just for Kids” and targeted to 6- to 11-year-olds. Radio Disney reaches more than 1.1 million children daily. There are also a few regional children’s radio programs, which are now available nationally through Webcasting. Radio Webcasting is a growing trend among stations reaching adults—a trend that may spread to the preteen market. Given the high spending potential of the preteen market, it is quite possible that marketers and advertisers will be ready to support new radio networks or local stations offering Webcasting to tweens, providing additional opportunities for partnering with radio networks or stations reaching children.

Print Media and Outdoor Ads

According to survey data secured for this report, children ages 8–11 enjoy reading because it allows them to use their imagination. However, children of this age have difficulty distinguishing between advertising and editorial content. Eighty percent say that print ads give them something to show their parents and friends; 80 percent say that magazine ads make them want to buy the product; and 81 percent say they can save the ad.⁷⁶ Ranked by circulation figures, the top children’s magazines are *Teen People*, *Boys’ Life*, *Sports Illustrated for Kids*, *Disney Adventures*, *Nickelodeon*, *Crayola Kids*, *Girls’ Life*, *Harvey*, and *Soccer Now*. For this environmental scan, we reviewed some of these magazines for editorial content and messages conveyed to children about food, nutrition, physical activity, and exercise topics. We also reviewed advertising content.

Our scan found only a sparse number of articles on food, nutrition, and physical activity. For instance, *Boys’ Life*, which features articles and stories about tweens and teen boys in sports, outdoor adventure, scouting, camping, etc., published no articles on nutrition and/or physical activity in a 3-month period. Likewise, *Sports Illustrated for Kids*, which features professional athletes and sports highlights for kids, had no feature any articles on these topics over a period of 3 months. However, *Nickelodeon*, which features games, puzzles, television highlights, and articles on teen celebrities, featured two articles on nutrition and physical activity in one recent issue we reviewed.

Tween-focused magazines also carry food ads targeting tweens. Advertising that features popular foods (such as pizza, candy, cookies, crackers, and yogurt) commonly links images of media or physical activity and athletes to consumption of the product. One magazine featured two ads showing a boy playing a hand-held game or listening to music, while three ads demonstrated snowboarding, downhill skiing, or biking. In another magazine, seven of the ads featured athletes/physical activity associated with the product (e.g., skateboarding, wrestling, riding a bike, skiing, action heroes), but two ads involved listening to music while eating or playing handheld video games. Yet another magazine included 15 food-based advertisements that also highlighted active kids, as described above, and two of the ads featured games (mazes). Clearly, some advertisers recognize the value of pairing food (though not necessarily nutritious or healthy food) with physical activity to appeal to this audience. However, pairing food with more

⁷⁶ SRDS, November 2001.

sedentary activity, although less frequently shown, can be viewed with some concern as a possible future trend.

Online Media and Emerging Technologies

Many children and youth have access to the Internet at home, at school, in libraries, and at community centers. Approximately 5.1 million U.S. children ages 2–12 currently have online access, and 76 percent of U.S. schools are connected to the Web. Children use the Internet to maintain contact with friends and family and to form online communities with like-minded peers. Internet marketers create sophisticated online worlds designed to engage children in “flow states,” or deep immersion, in interactive activities on the sites.

Experts who study Internet marketing to children note that commercial sites for children engage their visitors in engrossing brand-related activities, they provide a highly interactive experience, and they use very sophisticated graphics. They also seek contact information from youth and, often within a week of the visit, will send out a reminder to their guest to revisit to enjoy new, updated activities. These heavily promoted commercial sites, mainly sponsored by media conglomerates and toy companies, overshadow the educational sites in their appeal to tweens’ interests and sensibilities.

To understand the types of nutrition and physical activity messages the target audience is exposed to via the Internet, the top 10 Web sites that target kids (according to www.connectonline.com) were analyzed based on the following criteria:

- Does the organization target/influence children?
- Does the Web site target a specific gender?
- Does the site include food and/or nutrition content?
- Does the site contain physical fitness content?
- What are the Web site features?
- Are additional resources available on site?
- Does the site contain adult/caregiver content?

In addition, Web sites of popular food manufacturing companies (e.g., breakfast cereal manufacturers), school-related sites, and others were analyzed. See Appendix C for the results of this review.

Overall, the analysis found that most Web sites do not provide nutritional or physical activity content for either the child or the parent/caregiver. Only a few have links to health-related Web sites. All of the Web sites contain bright colors and extensive animation and offer some type of interactive activities. Many of the sites ask the kids to register by filling out a form with their names and e-mail addresses and, as part of the registration, kids receive newsletters and announcements. Most of the Web sites reviewed do not provide gender-specific information. The two exceptions are *Barbie.com* and *MaMaMedia*, which added a separate activity section for girls; neither site offers health or physical fitness information.

Of the Web sites that targeted both kids and parents/caregivers, most provide food/nutrition content and physical fitness information. These companies include well-known food manufacturers such as General Mills, which has created several different Web sites; Dole's 5 A Day program; and the "Got Milk?" campaign. It is worth noting that these types of sites were not reflected in Connect Online's rating of top children's Web sites.

Among the Web sites reviewed, Nickelodeon/Nickjr.com, adapted from the cable channel Nickelodeon, was the only site to include USDA among its links for additional resources. Because its link to USDA already is established, Nickelodeon may be especially receptive to Eat Smart. Play Hard.TM messages.

B. Key Findings and Implications for Reaching the Target Audience

- The media provide very little information on food, nutrition, and physical activity that is designed to motivate children to practice healthy behaviors.
- Although some research indicates that pronutrition information in the media can influence children's behaviors, advertisers tend to promote conflicting messages about healthy lifestyles and food. For example, advertising featuring popular foods (such as pizza, candy, cookies, crackers, and yogurt) commonly links images of physical activity and/or athletes to consumption of the product.
- Preteens frequently listen to the radio and tend to have a favorite local radio station. However, very few radio formats or programs are targeted specifically to this age group.
- Webcasting may provide a technological impetus to create additional radio networks or stations to reach tween audiences. This possibility needs to be monitored at this time.
- The Internet is a highly promising communications channel to reach children. However, the Web, like all media, is a highly competitive communications environment. Corporate sites, in particular, are able and willing to invest tremendous resources in their Web sites to make them "cool" and appealing to youth.
- Few or no attempts have been made by commercial marketers to develop media vehicles that target segments of tweens according to race and ethnicity. USDA may wish to explore the implications of this finding in focus groups representing its target audiences.

VII. Audience Segmentation

A. Introduction

This document represents the first in a number of steps that will be used to identify the appropriate target audience segment for phase II of the Eat Smart. Play Hard.™ campaign. Although this environmental scan provides insight into the many ways the target audience of children ages 8–12 may be segmented, it does not recommend the exact segment that should be targeted in subsequent efforts. Rather, this section proposes a number of possible segmentation strategies that should be used to guide future discussion and planning efforts. It is worth noting that, depending on the segment or segments selected for the exploratory research and the subsequent research findings, the final target audience selection for phase II of the Eat Smart. Play Hard.™ campaign may not occur until after the exploratory focus groups are conducted.

B. Why Segment?

One of the hallmarks of a social marketing approach to behavior change is the idea of segmentation: subdividing the larger population group of interest into smaller, more manageable groups that are relatively homogeneous with respect to certain variables of interest (sociodemographic, behavioral, psychological).^{77,78} It is the process of identifying and understanding these subgroups that is the nucleus of program development.

There are several widely accepted reasons for segmentation as a strategy for social marketing and communications programs and campaigns.

1. Messages can be tailored to the unique needs and contexts of specific groups.
2. Channels for message delivery can be selected and utilized in ways that are more efficient and relevant to particular groups' lifestyles and media habits.
3. Messages, products, and services can be better crafted and positioned to fit individuals' lifestyles, perceptions of themselves, aspirations, and current practices.
4. Complete reach and coverage of the total market can be done in a systematic fashion rather than through what is referred to as “the shotgun approach.”⁷⁹

In theory, segmentation at its ultimate extreme is a process of developing “audiences of one”—that is, every individual is a target group of one. In practice, segmentation of audiences usually is limited to a few groups that are large enough (or important enough, e.g., high risk) to warrant the allocation of organizational resources, have relevance for creating different messages—or modes of delivery—for each segment, and require different appeals (benefits) and/or creative executions.⁸⁰ Other segmentation strategies focus on how the entire marketing mix (message, cost/benefit, distribution, and promotion) is shaped by the unique characteristics of each

⁷⁷ Kotler P and Roberto EL. (1989). *Social marketing: Strategies for changing public behavior*. New York: The Free Press.

⁷⁸ Lefebvre RC. Social marketing and health promotion. In: Bunton R, Macdonald G, eds. *Health promotion: disciplines and diversity*. London: Routledge, 1992:153–81.

⁷⁹ Weinstein A. (1987). *Market segmentation*. Chicago: Probus.

⁸⁰ Fine SH. (1981). *The marketing of ideas and social issues*. New York: Praeger.

audience.^{81,82} If differences between segments do not lead to changes in the program or campaign, such as illustrated above (e.g., you can say the same thing to everyone in the same way and they will all attend to it equally, remember it and act on it), then segmentation is not justified. However, that situation is rarely, if ever, the reality.

C. Possible Segmentation Factors

After reviewing the findings reported in this document, several key factors emerge by which the target audience can be segmented. Many of these factors appear to be interrelated. They include:

- **Race/ethnicity:** Overweight and obesity are more common among minority groups, both adults and children. In addition, minority populations suffer disproportionately from obesity-linked preventable health conditions such as Type 2 diabetes, high blood lipids, and hypertension—conditions that are being diagnosed increasingly in younger children.
- **Relative risk:** Prevalence data indicate that boys, African-American boys and girls, Hispanic/Latino boys and girls, and those living in the Southern United States are at the greatest risk of overweight/obesity. In addition, Mexican American boys have higher prevalence of overweight/obesity than do their African-American or White counterparts, while African-American girls have a higher prevalence of overweight/obesity than do White and Mexican American girls.
- **Socioeconomic status (SES):** The link between obesity and SES is clear in adults, but data on children appear to be inconsistent, at least with regard to African-American and Hispanic/Latino children. Whereas White children from lower income families have a higher prevalence of overweight, the Surgeon General’s recent Call to Action reported that increased prevalence of overweight in Mexican-American and African-American children and teens cannot be predicted based on family income.
- **Gender:** We note in this document that only one communications initiative that targets boys is underway, yet the problem of obesity is growing among boys. Boys and girls in the tween years perceive nutrition and physical activity differently, yet both are beginning to experience and grapple with issues related to body size and body image. Because rates of overweight/obesity and level/type of physical activity also differ by gender, different messages for each gender may be appropriate. Differences in media consumption patterns also may warrant the selection of gender-appropriate messages and channels. For instance, boys spend time on the Internet engaged in gaming activities, but girls spend more of their Internet time “chatting.” Also, some tween-targeted media are designed separately for boys and girls. (These issues could be further addressed during exploratory focus groups.)
- **Age:** Although tweens may be viewed as a cohesive developmental group, young tweens are just leaving their childhood years and older tweens are primed for or entering adolescence. Thus, one would expect some differences between younger

⁸¹ Kotler P, and Roberto EL. (1989). *Social marketing: Strategies for changing public behavior*. New York: The Free Press.

⁸² Lefebvre RC. Social marketing and health promotion. In: Bunton R, Macdonald G, eds. *Health promotion: disciplines and diversity*. London: Routledge, 1992:153–81.

tweens (8- to 10-year-olds) and older tweens (11- and 12-year-olds) that may affect the types of communications products developed for them. One relevant age difference identified in this document is motivation for participating in activities. Younger tweens participate in activities because they are “fun” and because they can interact with their peers. Older tweens are more concerned with attaining a level of skill for various activities and are more likely to participate in activities in which they feel they are successful.

- **Types of interests:** This factor runs the gamut from interest in/participation in organized sports to interest in/readership of magazines to interest in/activity on the Internet. For example, we know that media targeted to children is segmented by gender rather than racial/ethnic group. This is likely because the interests, concerns, and media habits of boys ages 8–12 differ greatly from girls of the same age.

USDA has a number of food assistance programs with educational components that reach certain segments of the target audience. These programs provide built-in distribution channels for phase II of Eat Smart. Play Hard.TM Because of eligibility requirements, participants in these programs frequently overlap several of the possible segmentation strategies described above, such as race/ethnicity, SES, gender, and age. Therefore, the use of these programs as distribution channels could significantly affect target audience definition.

D. Overall Summary and Implications

America’s tweens are a racially and ethnically diverse group; many grow up in single-parent homes, often cared for by a mother and other family members. The doubling and tripling of overweight and obesity rates among children and adolescents over the past 20 years are linked to little physical activity and poor dietary habits, especially in low SES households. Factors that contribute to a more sedentary lifestyle include the lack of school-based physical activity programs and increased mass media consumption, sometimes in excess of 8 or 9 hours a day. Poor nutrition behaviors often are attributed to large expenditures for advertising and daily exposure to advertising of higher fat, higher calorie foods, as well as their seemingly ubiquitous presence in the tweens’ environment. Through a multitude of promotional channels, marketers aggressively target children as an important consumer segment, exposing them to food and beverage marketing in neighborhoods; community facilities; restaurants; including fast-food outlets; and schools. Tweens are eating out more often, being tempted to eat more as part of aggressive “super-size” marketing, and obtaining more low-nutrient foods as snacks. These trends are compounded by many tweens’ dissatisfaction with their body image, reinforced by media images of physical perfection and advice to lose weight. Although they are greatly influenced by their peers, tweens still seek parental caregiver influence and involvement.

The public and private sectors have demonstrated great interest in preventing obesity and overweight among children. Capitalizing on the impact that caregivers have on tweens’ decisions about physical activity and nutrition, most campaigns reach out to both youth and their caregivers. However, few programs focus on both activity and nutrition. Currently, campaigns that reach audiences most similar in age to the Eat Smart. Play Hard.TM campaign audience are targeted to girls. Many programs reach their target audiences through a variety of intermediaries, including health professionals, schools, community-based organizations, and parents. The infrastructures of Team Nutrition and the FNS food assistance and nutrition programs represent

opportunities to reach the target audiences, especially since many of the food assistance programs reach either the tween audience or their caregivers.

The media provide little information on food, nutrition, and physical activity designed to motivate children to practice healthy behaviors. In all mass media, constant advertising of “pleasure foods” provides images of healthy lifestyles while promoting high-calorie, low-nutrition-content foods. The Web site survey clearly indicates that the Internet is a promising communications channel to reach children. Corporate sites invest tremendous resources in their Web sites to make them “cool” and appealing to youth. It will be very difficult for USDA to compete directly with commercial interests, especially on network television and the Internet. It was noted that commercial marketers made few or no attempts to develop media vehicles that target segments of tweens based on race and ethnicity. Instead, their messages tend to be either activity or interest based.

E. Next Steps for Formative Research

Given what we have compiled in this environmental scan, and given that the next steps of formative research include key informant interviews and exploratory focus groups with the identified target audiences, we recommend the following: Research with the target audiences should fill in current gaps in our knowledge of reality.

These areas include:

- The behavior changes that are most relevant and achievable, given their current lifestyle, interests, and aspirations
- The core benefits that campaign messages are designed to make appealing
- The persuasive (or support) statements that will reinforce this appeal and motivate change
- The relevant times, places, and states of mind to deliver messages so that they will be acted upon
- The audiences’ current exposure and response to messages about nutrition and physical activity from other sources/programs
- Appropriate models and/or sources for these types of messages

In the telephone interviews, further input should be solicited about the relevant behavioral choices to focus on for both tweens and their caregivers, credible and effective promotional channels to employ in message dissemination, and ways to fit Eat Smart. Play Hard.TM into existing USDA programs and initiatives.

In addition, the information contained in this environmental scan suggests a number of implications for the exploratory focus-group research to be conducted as the third step in this formative research phase. The following implications will serve as a guide for the discussion and decisionmaking necessary to inform the development of the final instruments for the exploratory focus groups. To facilitate the decisionmaking process, implications have been grouped below into two categories: those that will affect the audience segmentation (i.e., the screener’s guide) and those that will affect the content of group discussion (i.e., the moderator’s guide).

Implications for Audience Segmentation

- USDA's programs generally serve populations of lower SES. The literature indicates that low-SES African-American and Hispanic boys are more likely to be overweight than Whites. Therefore, SES should be a consideration when determining the segmentation strategy. The decision to target all overweight Americans vs. only those eligible for USDA programs will affect the numbers and the racial/ethnic mix of the focus groups.
- A large percentage of U.S. households are headed by women, particularly among African-American and Hispanic populations. Therefore, targeting only—or primarily—female caregivers should be a consideration when determining the segmentation strategy.
- Due to differing rates of obesity in racial/ethnic adult populations, as well as the many cultural and linguistic factors that may influence their caregiving behavior for children, segmentation by racial/ethnic status is recommended for caregiver groups.
- This document notes that commercial marketers do not segment the tween audience by racial/ethnic status; however, the varying increases in prevalence of obesity among ethnic/racial groups in the target age group indicates that segmentation by racial/ethnic status should be considered, at least for the exploratory focus group research.
- A higher prevalence of obesity in the Southern United States, as well as ethnic/racial differences noted above, supports holding focus groups in at least one location in the South. Texas, for example, has large Mexican-American and African-American populations. In addition, differences between genders for the increased prevalence of overweight and obesity suggest that focus groups also should be segmented by gender.
- USDA may wish to consider whether segmenting tweens by body weight would provide valuable information about the differences in how overweight and obese children and normal weight children perceive physical activity and nutrition messages, the relevant behavioral choices to promote, and the appropriate behaviors for their caregivers to adopt.

In addition, although no data specific to Native Americans were available for inclusion in this document, Native Americans are a population at risk for overweight and obesity. Therefore, a decision also must be made regarding inclusion of Native Americans in the audience segmentation strategy.

Areas for Exploration in Focus Group

Content Areas for Tween Groups

Gender-Related and/or Racial- and Ethnic-Related Topics

- Media content and individuals' current weight, as well as body image, may influence weight concerns and weight control/loss behaviors, level of activity, and/or the selection of more healthy food choices. Although girls appear to be receiving many messages about healthy eating, body image, calcium consumption, and physical

activity, boys and minorities are hearing little. At the same time, a rising problem is boys' preoccupation with their physical appearance, which manifests itself in an increase in eating disorders in boys as young as those in grades 3, 4, and 5. It would be wise to explore this phenomenon further in groups of male tweens, as well as exploring what types of messages regarding healthful eating and physical activity might be most appropriate for their particular needs.

- African-American girls are the least likely to be physically active of all racial/ethnic and gender groups. The barriers to physical activity and opportunities for engaging in more physical activity should be explored, particularly in focus groups with African-American girls.
- Few or no commercial attempts have been made to develop media vehicles that target segments of tweens on the basis of race and ethnicity. Instead, media messages tend to be based on activities or interests. Although it is recommended that tween groups be segmented by racial/ethnic group, similarities in preferred activities and interests—across racial/ethnic groups—should be explored during the focus groups.

Media Preferences and Habits

- The amount of time spent consuming various types of media varies greatly by ethnic/racial group, but the pattern in the types of media consumed is very similar. It may be worthwhile to explore the implications of tweens' heavy media use, as well as tweens' experience of and receptivity to hearing about nutrition and physical activity through mass media channels.
- Tweens utilize radio frequently, turning primarily to local channels airing their favorite music formats. Children ages 9–11 consider radio to be important to helping keep them up on “cool trends” and to telling them what is popular. Specific formats and programs, if any, should be explored to guide media planning and purchasing decisions.
- Children 9- to 14-years-old seem to prefer specialty cable networks to major broadcast networks. They especially prefer those networks that target this age group or slightly older ages, e.g., MTV, Fox, WB, Nickelodeon, and the Discovery Channel. Girls more frequently than boys identify WB as a preferred network. Boys more frequently prefer MTV. Specific programs of interest should be explored to help guide media planning and purchasing decisions as well as appeals/interests that are self-selected by these groups.
- In contrast to other media, children 8- to 18-years-old spend a total of less than 1 hour a day reading all print media combined, including books, magazines, and newspapers. Nevertheless, preferences regarding these media, such as favorite formats or columns, should be explored to help guide media planning and purchasing decisions.
- Internet usage among children, especially tweens, is increasing rapidly. The top-10 Web sites, according to Connect Online, fall into two main categories: television networks, such as Nickelodeon/Nick Jr., Fox Kids, and the Cartoon Network; and “fun” sites such as Barbie and MaMaMedia. These reported preferences should be verified and explored further.

- Webcasting is an emerging technology that should be monitored and explored further with tweens for its potential reach in disseminating Eat Smart. Play Hard.TM messages.
- It is unknown whether celebrities, such as movie or rock stars who tend to be thin, influence tweens' own body image, dieting, and physical activity. This issue could be explored further during focus groups with both girls and boys.

Tween Consumerism

- Tweens' spending habits should be further explored in relation to their implications for nutrition and eating habits, as well as physical activity.
- Quite possibly preteens do not realize how much food they eat away from home or the effect of these foods on their overall nutrition. USDA may want to explore tweens' knowledge and attitudes towards foods purchased away from home to determine whether they recognize how much of these foods they consume or the effect of away-from-home foods on overall nutrition. The findings may support the idea that programs aimed at preteens should emphasize building their awareness as consumers.
- Marketers from many industries are also creating "kids clubs," which connect a product or brand with a club for kids. The appeal of these clubs should be further explored.

Spokescharacters

- Tweens' familiarity with and receptivity to spokescharacters from similar campaigns targeted to their age group (e.g., "Carla" from the National Bone Health Campaign) should be explored. In addition, it could be helpful to explore the effectiveness of the Power Panther character itself with this age group, and to see whether partnerships with other spokescharacters might improve the visibility and effectiveness of the Power Panther.

Content Areas for Caregiver Groups

- Many campaigns formally designate the caregiver audience as a secondary audience and develop materials and messages specifically for them. For example, the JumpStart program distributes backpack stuffers to children to bring home. The stuffers encourage parent involvement in the program. It may be interesting to explore whether caregivers remember having received any materials related to their children's nutrition and physical activity and, if so, whether they were well-received.
- It may be useful to ask caregivers if they have guidelines that in any way limit their children's media use. Based on these data, USDA can consider the option of educating caregivers about the impact of media consumption on youth with respect to the choices they make regarding their nutrition and physical activity.
- Groups also should consider assessment of the degree of perceived control over physical activity and food choices made by their tweens; their own ability to model,

or at least be a champion, for healthier choices; and perceived efficacy (both theirs and their tweens) to make and sustain healthier choices.

Overall Implications for Strategic Planning

Strategic Considerations

- The vast array of data in this environmental scan reveals that tweens live in a media-saturated environment; they are exposed to slick and highly sophisticated advertising and promotions that are counter to the Eat Smart. Play Hard.TM program's objectives. Children between the ages of 8 and 18 are enthusiastic consumers of all media, especially television and radio, and some evidence indicates that the constant media barrage has an effect on their practices and beliefs related to food, nutrition, body image, and health. USDA should seriously consider mounting an innovative countermarketing campaign that will help educate tweens to be critical interpreters of all consumer materials they encounter, including advertising, in-store promotions, public relations, and other mass-mediated messages, while helping them develop the skills they need to be intelligent, aware consumers.
- The many national, State, and regional programs reviewed represent only a sampling of the communications environment. This presents both opportunities and challenges to FNS efforts. With so many organizations targeting youth audiences, youth are becoming more accustomed to hearing healthy eating/physical activity messages, therefore creating a fertile environment for future messages. However, because of the large variety of programs currently targeting youth, successfully "cutting through the noise" becomes a greater challenge (especially because tweens may be tuning out the messages because of saturation). Extensive exploratory research and message testing with the target audience will be critical to ensure appropriateness, relevancy, ability to motivate, and uniqueness of messages and communication channels. In addition, it will be important for FNS not to duplicate others' efforts but to complement them and, when possible, to build noncommercial partnerships with nonprofits and businesses to amplify the messages and to reduce competition.
- Although girls receive many messages about healthy eating, body image, calcium consumption, and physical activity, boys and minorities hear few. The programs reviewed target both boys and girls or girls only, but none focus specifically on boys or minorities, with the exception of the emerging FNS campaign in collaboration with the 100 BMOA, Inc., which targets African-American boys. Because of the scarcity of such programs, little is known about boys' and minorities' receptivity to such programs and messages; further research should be conducted. Any research conducted in the planning of the FNS/100 BMOA Healthy Eating for Boys campaigns can be useful for this program as well.
- The media highlights little information on food, nutrition, and physical activity that is designed to motivate children to practice healthy behaviors. Instead, constant advertising encourages them to consume high-energy, low-nutrition "pleasure foods." It will be very difficult for USDA to compete directly with commercial interests, especially television and the Internet, in an environment dominated by sophisticated and expensive marketing of food and beverages. USDA should avoid competing

- directly with food advertisers for audience attention and should maximize its ability to reach children in the schools and through its other food service programs.
- USDA should consider and explore how much Eat Smart. Play Hard.TM can or should leverage its link with the President’s Healthier U.S. Initiative.
 - The program can focus building on the highly visible and leveragable partnerships that can promote program messages in a consistent and sustainable fashion (see examples below).
 - Social marketing techniques should be considered that can deliver healthy eating messages that are *kid driven* in the school setting, including the cafeteria.
 - The effectiveness of spokescharacters in campaigns for children and tweens has not been evaluated. USDA may want to conduct an evaluation of the Power Panther character to determine how tweens respond. If the tweens do not respond well to that spokescharacter, USDA may want to consider additional research to determine whether the character can be changed to appeal more to tweens, or whether a new character would be more effective.

Dissemination Considerations

- USDA might consider partnering with Subway sandwich shops as a way of promoting “healthy fast foods.” Subway already has targeted the adult market with this approach and might be interested in building on this marketing idea. In particular, the idea of Subway “kids’ meals” might be appealing and give USDA another marketing channel for its materials.
- USDA should consider in-school advertising as a channel. MarketSource Boards are one of the most common ways that marketers connect with tweens at schools. These wallboards serve as electronic communications centers that combine a customized monthly calendar of relevant school activities with dramatic full-color advertising and a moving LED message programmed by the school to announce late-breaking school-related news. These advertising vehicles are located in 2,000 middle schools around the United States.⁸³ Targeting older teens as potential recruits, the U.S. Army, Navy, Air Force, and Marines advertise on Channel One—the daily cable television news program for the classroom. Research for this report indicates that the CDC’s Youth media campaign was scheduled to begin airing ads on Channel One in Fall 2002.
- FNS should explore the possibility of piggybacking on the Expanded Food and Nutrition Education Program (EFNEP) by encouraging States to incorporate Eat Smart. Play Hard.TM messages and materials into the training. EFNEP has tremendous reach. It operates in 50 States and in American Samoa, Guam, Micronesia, Northern Marianas, Puerto Rico, and the Virgin Islands. In FY 98, EFNEP reached 431,194 youth and 186,009 families; approximately 687,000 family members were indirectly reached through the adult participants. Because this program targets low-income youth and families specifically, this is an exceptionally powerful opportunity for partnership.

⁸³ MediaMatrix.

- Exploration of partnership opportunities with NHLBI is recommended. The NHLBI Hearts N' Parks campaign is being expanded to reach 50 new communities in regions of the country with rates of high cardiovascular disease.
- Many of the FNS food assistance and nutrition education programs, including Team Nutrition, capitalize on each other's dissemination channels, and Eat Smart. Play Hard.TM should continue to do so. Because all the food assistance programs reach either the tween audience or their caregivers, all of the programs can be considered for collaboration potential. Most notably, the Food Distribution Program on Indian Reservations (FDPIR) and the Commodity Supplemental Food Program (CSFP) should be explored as potential avenues to reach the Native American audience and the elderly caregiver audience, (i.e., grandparents) respectively.
- USDA should explore the prevalence of school-based Web sites and investigate possible ways to disseminate its information on these sites. USDA might consider, for instance, developing "fun" or "cool" ways that preteens can communicate these messages through e-mail to their peers. The Internet may offer opportunities for USDA to partner with Internet media to distribute positive messages about nutrition and physical activity. USDA also should consider undertaking public relations efforts to contact Web content editors, i.e., to promote the idea of USDA serving as a content site for other media to pick up "sound bytes" on nutrition and physical activity.
- Media partnerships to consider would include Disney Radio, Teen People, and popular Web sites such as www.barbie.com or those identified specifically in the focus groups. Several high-profile national partnerships with high local visibility should be considered (American Association of Zoos and Aquariums, National Recreation and Parks Association, Presidents' and Governors' Councils on Physical Activity and Sports, and State health departments' 5 a Day programs).

Appendix A.

Competitive Analysis Detailed Findings

Competitive Analysis Detailed Findings—National Initiatives

Program/ Sponsor	Year Started	Goal	Target Audience	Dissemination	Materials	Evaluation
Bodywise Eating Disorder Education Campaign HHS, Office on Women's Health	1999	Reduce the risk factors that contribute to eating disorders and increase the factors that protect youth.	Students, ages 9–12	Messages and materials are distributed through school personnel and other adults interacting with target audience.	Fact sheets and resource lists for use by providers and school personnel for detection of eating disorders and promotion of positive body image and healthy eating. Includes information African-American girls, boys, American Indian girls, Asian and Pacific Islander girls, and Latina girls.	An evaluation was conducted but data had not been made available during data collection for this report.
Bright Futures in Practice: Physical Activity HRSA Maternal and Child Health Bureau	1990	Improve the health and physical activity status of infants, children, and adolescents and establish health supervision guidelines.	Children and youth, ages 0–21, and their families	Distributed through health professionals and health departments; can also be used in child care facilities, schools, recreational facilities, and universities and colleges.	Guide presents physical activity guidelines and tools emphasizing health promotion, disease prevention, and early recognition of physical activity issues and concerns; provides information health professionals can use to screen and assess physical activity levels. Can serve as a resource for families and communities.	An evaluation has not been conducted and is not planned.
Bright Futures in Practice: Nutrition HRSA, Maternal and Child Health Bureau	1990	Improve nutrition status; identify desired health and nutrition outcomes; set guidelines to help health professionals.	Children and youth, ages 0–21, and their families	Distributed through health professionals, including dietitians, nutritionists, nurses, and physicians.	Guide emphasizes health promotion, disease prevention, and early recognition of nutrition concerns among children; and highlights how partnerships among health professionals, families, and communities can improve children's nutrition status. Can serve as a resource for families and communities.	An evaluation has not been conducted and is not planned.
Changing the Scene: Improving the School Nutrition Environment USDA, FNS	2000	Educate decision-makers about the role school environments play in helping students achieve and maintain healthy eating practices and physical activity patterns and enable action to improve schools' nutrition environments.	Prekindergarten through 12th grade	Distributed at the State and local level to parents, school administrators, teachers, school foodservice employees, or other concerned members of the community.	The comprehensive kit includes a how-to guide, support materials, related publications, presentation materials, a video and a brochure.	<i>Unable to get information.</i>

Program/ Sponsor	Year Started	Goal	Target Audience	Dissemination	Materials	Evaluation
Expanded Food and Nutrition Education Program (EFNEP) USDA, Cooperative Extension System	1968	Assist low-income people in acquiring the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sound diets; and contributes to their personal development and the improvement of the total family diet and nutritional well-being.	Low-income youth and low-income families with young children	EFNEP provides nutrition education at schools as an enrichment of the curriculum, in after-school care programs, through 4-H EFNEP clubs, day camps, residential camps, community centers, neighborhood groups, and home gardening workshops.	Series of lessons, administered through a hands-on, learn-by-doing approach.	A 1999 Study concluded that EFNEP families improved nutrient intakes and behaviors related to food selection, preparation, and resource management.
Girl Power! HHS, SAMHSA	1996	Increase awareness about health issues, including poor nutrition and lack of physical activity; increase knowledge about developing positive interpersonal and social skills; and provide resources and materials to achieve these skills.	Girls, 9–14, and the adults who care about them	National, State, and local organizations implement skill-building programs; partners include: Girls Incorporated®, Girl Scouts, the Boys & Girls Clubs, Join Together, the National Association of County and City Health Officials, and Jane Cosmetics by Sassaby. Public awareness materials are distributed through media.	Materials for girls include a diary, posters, pins, bookmarks, stickers, bookcovers, and Web site. Materials also include the Girl Power! Hometown Press Kit, with sample media pieces, fact sheets, and radio and print public service announcements adaptable for local use. Additional materials provide ideas and activities for parents to talk with and listen to their daughters about things that are important in their lives.	2001 focus groups with 100 participants showed improvement in various areas; did not assess changes in physical activity and nutrition status.

Program/ Sponsor	Year Started	Goal	Target Audience	Dissemination	Materials	Evaluation
Hearts N' Parks NIH, National Heart, Lung, and Blood Institute, and the National Recreation and Park Association	1999, as a pilot initiative in North Carolina	Reduce the growing trend of obesity and the risk of coronary heart disease by encouraging Americans to have a healthy weight, follow a heart-healthy eating plan, and engage in regular physical activity.	All Americans	Park/recreation departments and other community-based agencies adapt the program material and teach the science-based information as part of their regular activities.	Community mobilization guide and video; tools for measuring impact of program.	More than 2,000 participants in pilot programs retained information and intended to eat healthier. Children reported learning new physical activities and improving their performance in others.
JumpStart NIH, National Heart, Lung, and Blood Institute, and the National Recreation and Park Association, in conjunction with Scholastic, Inc.	1996	Promote active, healthy lifestyles.	Children in grades 3 to 5	Elementary school teachers integrate activities in existing curricula.	Teacher's guide integrates physical activity and heart-healthy nutrition into language arts, math, social studies, and science curricula; letter to teachers includes a one-page reproducible to be sent home to parents with ideas for active family play; and backpack stuffer encourages parent involvement.	Based on activities from two field-tested programs: 1) the Child and Adolescent Trial for Cardiovascular Health and 2) Sports, Play, and Active Recreation for Kids
KidsWalk-to-School CDC, Nutrition and Physical Activity Program	1996	Encourage children to walk and bicycle to and from school; to increase awareness of the importance of regular physical activity for children; improve pedestrian safety, and healthy and walkable community environments; and mobilize communities to work together to create safe routes to school.	Elementary school children	Involved citizens and organizations use the guide to promote and implement walk-to-school programs.	<i>The KidsWalk-to-School: A Guide to Promote Walking to School</i> contains sample letters, surveys, evaluations, a press release form, and a brochure. The materials include a cartoon spokesperson, "Max," a second grader who walks the reader through the program.	<i>Unable to get information.</i>

Program/ Sponsor	Year Started	Goal	Target Audience	Dissemination	Materials	Evaluation
Media Matters: National Media Education Campaign American Academy of Pediatrics	1997	Help pediatricians, parents, and children become more aware of the influence that media have on child and adolescent health. Issues of concern include obesity and poor nutrition.	School-age children and parents	Pediatricians educate parents and children during medical visits. Pediatricians participate in program training at conferences. Public is reached through national print media.	The <i>Media Education in the Practice Setting</i> guide helps pediatricians integrate discussion and education about media into their practices. Assessment form enables pediatricians to identify problems in behavioral risk areas associated with a child's media use. Brochure for families suggests ways families can promote media education at home. The Resource Kit contains articles, policy statements, resource lists, and background materials.	<i>Unable to get information.</i>
Milk Matters Calcium Education Campaign NIH, National Institute on Child Health and Human Development	1997	Increase calcium consumption among children and teens, focusing on educating people about the importance of calcium for building strong and healthy bones.	Children and teens	Messages are disseminated via parents, health professionals, educators, and media.	Available in Spanish and English, materials include coloring books, stickers, posters, brochures for parents, print PSAs for newspapers and magazines, parent brochures, and in-school program called "Crash Course on Calcium."	<i>Unable to get information.</i>
National Bone Health Campaign Powerful Bones, Powerful Girls.™ CDC, Office on Women's Health and National Osteoporosis Foundation	<i>Unable to get information.</i>	Encourage girls to establish lifelong healthy habits, focusing on increased calcium consumption and weight-bearing physical activity to build and maintain strong bones.	Girls, ages 9–12, and parents	Campaign messages and materials are disseminated through advertising, participation in the Radio Disney Live World Tour, and collaboration with government and nonprofit organizations.	Materials targeting girls include print and radio advertisements, a Web site, and a calendar. The materials feature "Carla," a cartoon spokesperson. Materials also include print and radio advertisements for parents.	A baseline survey is being done.

Program/ Sponsor	Year Started	Goal	Target Audience	Dissemination	Materials	Evaluation
President's Challenge Physical Activity and Fitness Awards Program President's Council on Physical Fitness and Sports	1956	Increase physical activity participation and opportunities by encouraging the development of community, recreation, physical fitness, and sports programs; promote physical activity and fitness in schools by encouraging innovative health and physical education programs.	Youth, ages 6–17	School-based physical activity/fitness awards program. Awards students for performing exercises that build strength, endurance, and flexibility, and motivates students to adopt and maintain physically active lifestyles.	Information for administering organizations and certificates for students.	No evaluations have been done since 1985. A report from the last evaluation is being sent.
Sporting Chance Girls Incorporated	1988	Provide girls with opportunities to have fun; to learn basic movement and sport skills; to increase their coordination, endurance, and strength; to consider the career opportunities connected to sports; to learn about successful athletes and the history of women in sports. They learn how to be both cooperative and competitive, how to discipline their bodies and their minds.	Girls, ages 6–8 and 9–11	Programs offered through a network of 1,000 sites nationwide and facilitated by trained professional staff.	<i>Unable to get information.</i>	Field test participation produced skill improvements in 91 percent of girls; 95 percent reported that they would participate in recreational or interscholastic sports if opportunities were available.
Team Nutrition USDA, FNS	1995	Improve the health and education of children by creating innovative public and private partnerships that promote food choices for a healthful diet through the media, schools, families, and the community.	School children, infants, and preschoolers in child care centers	Communication channels include food service initiatives, classroom activities, school-wide events, home activities, community programs and events, and media events and coverage.	Materials most relevant to tween audience: <i>yourSelf Middle School Nutrition Education Kit</i> helps students learn to make smart choices about eating and physical activity. Posters displayed in Food Stamp Program offices nationwide. Activity sheets for middle and high school classroom use or as a take-home nutrition education piece.	A multifaceted evaluation of four pilot districts showed a positive impact on the fourth-graders' self-reported eating behaviors, thus providing support for the multiple-channel intervention.

Program/ Sponsor	Year Started	Goal	Target Audience	Dissemination	Materials	Evaluation
Verb. It's What You Do. CDC	2002	To increase involvement in positive activities and decrease time spent in sedentary activities. To increase knowledge of options and opportunities for positive activities. To increase the belief that regular participation in positive activities is likely to lead to a variety of benefits.	Youth, ages 9–13, their parents, and their adult influencers	Media —Advertising, marketing, and promotional efforts reach target audiences through national general-market media, local media, and in-language media targeted to various ethnic groups. Partnerships —Partners are working with CDC to reinforce the campaign's messages. Community Events —The campaign brings events to selected cities.	Television, Internet, print, and radio ads, with specific messaging for youth, parents, adult influencers, and the African-American, American Indian/Alaska Native, Asian American/Pacific Islander, and Hispanic/Latino audiences.	Formative research and process measures are planned throughout the campaign to help fine-tune future activities. A national survey will assess changes in awareness, knowledge, attitudes, and behaviors relating to the campaign and positive activities.
Walk to School day—USA Pedestrian Bicycle Information Center for the Partnership for a Walkable America in cooperation with the U.S. Department of Transportation	1997	To bring forth permanent change and to encourage a more walkable America—one community at a time.	Elementary school children	Communities proclaiming national Walk to School day and planning events.	Press release and proclamation for use in communities, variety of tip sheets on holding events, and networking opportunities.	<i>Unable to get information.</i>

Competitive Analysis Detailed Findings—Select State and Regional Initiatives

EAT WELL PLAY HARD (EWPH)

New York State Department of Health, Division of Nutrition

www.health.state.ny.us/home.html

The long-term goal of EWPH is to prevent childhood overweight and reduce long-term risks for chronic disease through promotion of targeted dietary practices and increased physical activity beginning at age 2. The three strategies of the initiative include increasing 1) developmentally appropriate physical activity; 2) consumption of 1 percent or lower fat milk and other low-fat dairy products; and 3) consumption of fruits and vegetables. The initiative consists of:

- Developing partnerships with programs, State agencies, and private organizations
- Providing guidance to EWPH demonstration projects
- Ensuring that State-sponsored policies and protocols are consistent with EWPH strategies
- Promoting EWPH messages through media and marketing
- Providing guidance for evaluation

CALIFORNIA PROJECT LEAN’S FOOD ON THE RUN PROGRAM

California Department of Health Services

www.dhs.ca.gov/lean

California Project LEAN’s Food on the Run program is dedicated to increasing healthy eating and physical activity among adolescents. The program focuses on strengthening individual skills and knowledge while also working to influence high school policies and environments to increase access to healthy foods and physical activity options. Food on the Run works with teens, parents, community members, and local policy makers to educate them on the importance of healthy eating and physical activity and to engage them in developing supportive policy solutions. At full intervention, 28 low-income high schools in 20 counties participated in Food on the Run.

WELLNESS IN THE ROCKIES (WIN THE ROCKIES)

University of Idaho, Montana State University, the University of Wyoming

uwadmnweb.uwyo.edu/WinTheRockies/default.html

In the Rockies is a 4-year food and nutrition-related behavior-change consortium project. Its overall goals are twofold: to enhance the well-being of individuals by improving their attitudes and behaviors related to food, physical activity, and body image; and to help build communities’ capacities to foster and sustain these changes. Ultimately, the project seeks to reverse the rising tide of obesity in the three States by focusing proactively on prevention and positively on health (rather than weight) at the individual and community levels. In addition to serving the general population in Montana, Wyoming, and Idaho, the project provides specific outreach to youth, limited-resource audiences, and heavy adults.

PROMOTING PHYSICAL ACTIVITIES TOGETHER (PHAT)

California Adolescent Nutrition and Fitness (CANFit) Program

www.canfit.org

The goal of the PHAT campaign is to increase physical activity and improve eating among African-American youth, ages 10–14, residing in Los Angeles, California. The main activity of the program is the development, production, and dissemination of a hip-hop health video by youth teams. The campaign is disseminated through youth-oriented programs, such as community centers, athletic groups, or after-school programs that provide organized weekly services to the target audience. Participating programs and youth receive prizes, giveaways, and incentives. Materials also include a Web site that targets youth. Through surveys, each participating program will evaluate the effectiveness of the campaign.

The CANFit Program seeks to engage communities and build their capacity to improve the nutritional status and physical fitness of California’s low-income African-American, Latino, Asian/Pacific Islander, and American Indian youth between the ages of 10 and 14.

STATE-BASED NUTRITION AND PHYSICAL ACTIVITY PROGRAM TO PREVENT CHRONIC DISEASES, INCLUDING OBESITY

Centers for Disease Control and Prevention’s Division of Nutrition and Physical Activity

www.cdc.gov/nccdphp/dnpa/obesity/state.htm

Recently, the Division of Nutrition and Physical Activity at the CDC initiated a program to support State health departments and their partners in developing and implementing targeted nutrition and physical activity interventions in an effort to prevent chronic diseases, especially obesity. States were encouraged to use a social marketing approach in designing their population-based strategies, particularly policy-level and environmental interventions. The following States won cooperative agreements in 2000 and 2001. Those that specifically indicate that they will target youth audiences are designated by asterisks and described below. Those not marked as such also may plan on targeting youth audiences; however, this information was not provided on the CDC Web site.

California*	Michigan
Colorado	North Carolina*
Connecticut	Pennsylvania*
Florida	Rhode Island*
Massachusetts*	Texas*
Montana*	Washington

California—The mission of the Obesity Prevention Initiative of the California Department of Health is to reduce the life-long risk of obesity and overweight along with the associated health risks by intervening with youth (less than 18 years) in the State. This population segment was chosen on the basis of an initial review of epidemiological and behavioral research. The review specifically pointed to the need for increased work with children ages 11–14, although the specific target population will not be selected until a rigorous program planning process is conducted.

Massachusetts—With evidence of a high prevalence of overweight and risk for overweight among children and adolescents throughout the State, the Massachusetts Department of Health has identified youth as the primary target audience for obesity intervention. Program activities include:

- Establishing a coordinated statewide infrastructure to address obesity prevention and control in youth, culminating in a State plan that emphasizes environmental, policy, and social marketing approaches
- Enhancing current surveillance and monitoring systems with special emphasis on youth
- Developing an obesity prevention intervention for youth that focuses on improving nutrition and physical activity patterns and utilizes environmental, policy, and social marketing approaches

Montana—The Montana Department of Public Health and Human Services plans to pilot an obesity prevention program, in partnership with the Indian Health Service and Montana State University, addressing Native American children who are at risk for diabetes and obesity. This population was chosen as a priority on the basis of surveillance data and school health screening that indicated the high prevalence of overweight and related risk factors among Montana’s Native American children. The State plans to conduct a pilot project on four Montana reservations. The project will affect eating behaviors and physical activity habits, particularly during and after school. The project will be structured to maintain cultural values and traditions and will use multiple avenues to reach the target population.

North Carolina—The North Carolina Initiative for Healthy Weight in Children and Youth involves both strategic planning activities and pilot interventions. Both components will be guided by an internal project management team consisting of representatives of key public health programs and major partners, as well as by an external advisory committee consisting of members of the North Carolina Task Force on Child and Adolescent Overweight. The Task Force will develop a strategic plan focusing on four general areas: public awareness, primary prevention, secondary prevention (treatment), and surveillance and evaluation.

Pennsylvania—The goal of the Pennsylvania Department of Health project is to promote the adoption of healthy lifestyle behaviors and ultimately to reduce chronic disease related to poor nutrition, physical inactivity, and overweight among disparate low-income families. A Statewide coalition to reduce obesity will be built, and two pilot intervention sites will be selected through a needs assessment. The initial coalition stakeholders will participate in the development of a focused, comprehensive, strategic State plan to reduce overweight and obesity. Identified objectives for the intervention sites include:

- Increase the proportion of school-age children in the target group who are at a healthy weight
- Increase the proportion of adults and children in the target group who consume at least five servings of fruits and vegetables daily
- Increase the proportion of adults and children in the target group who consume no more than 30 percent of calories from fat

- Increase the proportion of adults and children in the target group who consume no more than 10 percent of calories from saturated fat
- Increase the proportion of children in the target group who engage in regular moderate activity

Rhode Island—Given the rapid increase in obesity among children and in racial/ethnic minority subgroups in Rhode Island, the Rhode Island Obesity Prevention and Control Program is targeting children and racial/ethnic minorities, particularly Hispanics, for surveillance efforts and community-based interventions designed to reduce the prevalence of obesity and Type 2 diabetes. The Rhode Island Obesity Planning Council—composed of practitioners, researchers, and policymakers—will work together to reduce racial/ethnic disparities in obesity and Type 2 diabetes.

Texas—The Texas Department of Health will develop a comprehensive strategic plan for physical activity and nutrition to prevent chronic disease and obesity. During year 1, the primary objective will be to identify and profile a target population. The initial focus will be on families with school-aged children, in order to plan and implement effective targeted nutrition and physical activity interventions in years 2 and 3. The Texas Department of Health will form a Statewide Obesity Taskforce that includes various health department programs involved in nutrition and physical activity interventions as well as external agencies and organizations.

Appendix B.

KIDSNET Television Review: Programs for Tweens

Appendix B. KIDSNET Television Review: Programs for Tweens

Show	Type of Program	Body Image	Physical Fitness	Nutrition	Healthy Lifestyles	Social Issues	Personal Development	Notes
ABC/ Disney "Lloyd in Space"	Weekly half-hour series dealing with transition from child to adult					X	X	ABC offers online educators' guide for related activities.
ABC, Inc. "My Wife and Kids"	Weekly prime-time half-hour family comedy						X	Tweens on show deal with issues facing tweens (i.e., gender issues, peer pressure, etc.).
Vox "WAM! Spill Your Guts"	Half-hour music-talk show airing several times weekly	X				X	X	Show uses studio audience to discuss issues facing tweens and teens.
HBO Family "Smoke Alarm: The Unfiltered Truth About Cigarettes"	Half-hour special airing several times during the month		X		X	X	X	Also looks at tobacco use and current events
HBO Family "What Matters"	1-hour special; airs several times during the month					X		Also includes current events and critical thinking skills
Kid's WB "The Zeta Project"	Half-hour Saturday morning TV						X	Animated series in 2040
PBS "In the Mix"	Half-hour TV magazine show					X	X	Hosted by diverse group of teens

Appendix C.

Children's Web Site Survey

Children's Web Site Survey

Web Site/Organization	Category	Food and nutrition content?	Physical fitness content?	Does org. have a nutrition/ physical fitness slogan?	Gender specific site/content	Web site ask children to register/compile personal profiles?	Web site sends newsletter announcements?	Web site offers interactive activities/animation	Chat rooms?	Separate food and nutrition information for parents/care-givers?	Separate physical fitness information for parents/care-givers?	Links to other health Web sites that offer advice, resources, and nutrition ?	If Web Site provides other links, does it include USDA?	Other unrelated advertisers/sponsors
Barbie.com	4	No	Yes	No	Yes—girls	Yes	N/A	Yes	No	No	Yes	No	N/A	None
Cartoon Network	4	No	No	No	No	No	No	Yes	No	No	No	No	N/A	Chuck E. Cheese
Cheerios (General Mills)	3	Yes	Yes	Cheerios May Lower Your Cholesterol	No	No	Yes	Yes	No	Yes	Yes	No	N/A	None
Crayola.com	6	No	No	No	No	Yes	N/A	Yes	No	No	No	No	N/A	None
Disney.com	6	Yes	Yes	No	No	Yes	Kids club members only—\$4.95 per month	Yes	No	Yes	Yes	No	N/A	MSN Internet & Kraft Foods
Disney Zeether	6	No	No	No	No	Yes	N/A	Yes	No	No	No	Family.com Recipes	No	None
Dole 5 a day.com	3	Yes	Yes	Yes—Eat 5 A Day	No	No	No	Yes	No	Yes	Yes	No	N/A	None
Fox Kids	1	No	No	No	No	No	Yes	Yes	No	No	No	No	N/A	None
Gamepro.com	4	No	No	No	No	No	Yes	No	No	No	No	No	N/A	No
Got-milk.com	3	Yes	Yes	Got Milk?	No	No	No	Yes	No	No	No	No	N/A	

1 = Television Show

2 = Movies

3 = Food Manufacturer

4 = Fun site

5 = Kids' Guides (e.g., search engines)

6 = Other

Web Site/Organization	Category	Food and nutrition content?	Physical fitness content?	Does org. have a nutrition/ physical fitness slogan?	Gender specific site/content	Web site ask children to register/compile personal profiles?	Web site sends newsletter announcements?	Web site offers interactive activities/animation	Chat rooms?	Separate food and nutrition information for parents/care-givers?	Separate physical fitness information for parents/care-givers?	Links to other health Web sites that offer advice, resources, and nutrition ?	If Web Site provides other links, does it include USDA?	Other unrelated advertisers/sponsors
Healthyeatingclub	6	Yes	No	Yes— Creating a healthier universe one... byte@a time	No	General Registration	Yes	Yes	No	Yes	No	Yes	No	None
Kellogg's Nutrition Camp (Kelloggs.com)	3	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	No	N/A	None
KidsHealth	6	Yes	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes	N/A	
Kiwi Box.com	6	No	Yes	No	No	No	Yes		Yes	No	No	No	N/A	Cellular phones.com
LycosZone	5	No	No	No	No	No	No	Yes	No	No	No	Yes—Kraft (Dannon Yogurt)	No	Literary Guild
MaMaMedia.com	4	No	No	No	Yes—a girls-only section	Yes	Yes	Yes	No	No	No	No	N/A	ET—Universal Studios
McDonald Land (Ronald.com)	3	No	No	No	No	No	No	Yes	No	No	No	No	N/A	None
Nick.com	4	None	No	No	No	No	No	Yes	No	No	No	No	N/A	Ralph Lauren Boys & Girls

1 = Television Show

2 = Movies

3 = Food Manufacturer

4 = Fun site

5 = Kids' Guides (e.g., search engines)

6 = Other

Web Site/Organization	Category	Food and nutrition content?	Physical fitness content?	Does org. have a nutrition/ physical fitness slogan?	Gender specific site/content	Web site ask children to register/compile personal profiles?	Web site sends newsletter announcements?	Web site offers interactive activities/animation	Chat rooms?	Separate food and nutrition information for parents/care-givers?	Separate physical fitness information for parents/care-givers?	Links to other health Web sites that offer advice, resources, and nutrition ?	If Web Site provides other links, does it include USDA?	Other unrelated advertisers/sponsors
Nickelodeon/ Nickjr.com	1	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes— Nick Jr. Parents	Yes	Yes	Yes	Hostess & Verizon
Nurtrition Café— exhibits.pacsci.org/ nutrition/(Joint venture between Pacific Science Center and the Washington State Dairy Council	6	Yes	Yes	No	No	No	No	Yes	No	No	No	No	N/A	None
PBS Kids	1	No	No	No	No	No	No	Yes	No	No	No	No	N/A	None
RadioDisney.com	6	No	No	No	No	No	No	No	No	No	No	No	N/A	No
Tobaccofreekids.org	6	No	No	No	No	Yes	N/A	Yes	No	No	No	No	N/A	None
Youruleschool.com (General Mills)	3	No	No	No	No	Yes	No	Yes	No	No	No	General Mills	No	None
Zoogdisney.com	6	No	No	No	No	No	No	No	No	No	No	No	N/A	No

1 = Television Show

2 = Movies

3 = Food Manufacturer

4 = Fun site

5 = Kids' Guides (e.g., search engines)

6 = Other