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The Prime Time Diet: A Content Analysis of Eating Behavior and Food Messages in Television Program Content and Commercials

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Abstract: The purpose of this study was to identify and analyze messages related to food and eating behavior as presented on prime time television (8:00-11:00 pm) both in programming and commercials. Food references occurred an average of 4.8 times per 30 minutes of programming time. Over half (60 percent) of all food references in programs were for low nutrient beverages and sweets. The prime time diet is inconsistent with dietary guidelines for healthy Americans. (*Am J Public Health* 1990; 80:738-740.)

Introduction

The American population spends more time watching television than it spends in any other activity except sleep and work.¹ There is increasing concern about the impact of this powerful and pervasive medium on health and health-related behaviors.¹⁻⁶ While the exact nature of the impact of television on behavior is controversial and largely unstudied, there

is no doubt that many health-related images and messages are constantly conveyed to viewers, and may influence health behaviors. Because of the accumulating knowledge of the relationship of diet to health and chronic diseases, we thought it would be interesting to see how food and eating behaviors are portrayed on television, and whether these messages and behaviors are consistent with dietary recommendations for good health. The purpose of our study was to identify television messages related to food and eating behaviors both in programs and in commercials. Prime time television (8:00-11:00 pm) was selected for content analysis because it attracts the largest viewing audience among all age groups, with the exception of preschoolers.

Methods

The 1988 Nielsen Report on Television⁷ was used to select the top nationally ranked prime time evening network programs for analysis. From the 15 top ranked shows among total US television households, only those featuring dramatic or situational comedy series were selected for analysis. Eleven programs were analyzed: the Bill Cosby Show; A Different World; Cheers; Growing Pains; Who's The Boss; Murder She Wrote; Golden Girls; L.A. Law; Moonlighting; Family Ties; and Alf.

Each program was video taped on two separate occasions during a nine-week period in the summer of 1988. A trained assistant viewed each video tape and coded all references to food and all eating occasions in programs and

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commercials on an instrument adapted from one developed by Kaufman.⁸ The coding was checked for reliability by double coding a subsample of programs by an independent observer. For each reference to food or drink in programming, the coder identified the food or drink involved, whether it was a verbal or visual reference, or an actual eating scene, and the context in which food was eaten (meal or snack). Incidental visual references to food (e.g., a basket of fresh fruit on a kitchen counter) were counted as food references. Verbal references using food in a figurative sense, such as referring to someone as "the big cheese" were not included. All commercials aired during the show were recorded but only those advertising food or beverages were analyzed. The following information was coded: the product name and company, any explicitly expressed messages or claims about the food being advertised, and food shown other than that being advertised.

Results

Food references in prime time shows (excluding commercials) occurred an average of 4.8 times per 30 minutes of programming time (134 food references). References to low nutrient beverages (coffee, alcohol, soft drinks) occurred at a higher rate than any other category of food (Table 1). Over

TABLE 1—Rates of Occurrences of References to Food in Television Programs by Food Category*

Food Category	Total References (n)	Rate (per Half Hour)
Low-Nutrient Beverages		
Coffee	26	0.93
Alcohol	18	0.64
Soft drinks	12	0.43
Total	56	2
Sweets		
Cakes, cookies, desserts	13	0.46
Donuts, sweet rolls	8	0.28
Candy	2	0.07
Ice cream	1	0.04
Total	24	0.86
Meats		
Beef	9	0.32
Poultry	1	0.04
Fish	1	0.04
Sandwiches	6	0.21
Total	17	0.61
Fruits and Vegetables		
Fruits	3	0.11
Fruit juice	3	0.11
Vegetables	7	0.25
Total	13	0.46
Salty Snacks		
Popcorn	4	0.14
Peanuts	3	0.11
Pretzels	2	0.07
Total	9	0.32
Breads and Cereals		
Cereal	4	0.14
Breads	2	0.07
Muffins	1	0.04
Crackers	1	0.04
Total	8	0.29
Dairy Products		
Cheese	2	0.07
Milk	5	0.18
Total	7	0.25

*A total of 28 half-hour segments were viewed.

TABLE 2—Number and Rates of Food Commercials Shown during Prime Time Television Programs by Category*

Types of Food Advertised	Total References (n)	Rate per 30 minutes	Rate per Minute
Restaurants			
Fast food	23	0.82	0.10
Family style	1	0.04	0.00
Low-Nutrient Beverages			
Soft drinks, regular	7	0.25	0.03
Soft drinks, diet	4	0.14	0.02
Coffee/tea	3	0.11	0.01
Beer/wine	5	0.18	0.02
Cereals			
Sugared	1	0.04	0.00
Unsugared	17	0.61	0.08
Sweets/Desserts			
Ice cream, frozen treats	5	0.18	0.02
Cake, candy, cookie, etc.	7	0.25	0.03
Entrees			
Convenience entrees	5	0.18	0.02
Dairy Products			
Cheese	1	0.04	0.00
Yogurt	3	0.11	0.01
Fruits			
Orange juice	2	0.07	0.01
Raisins	1	0.04	0.00
Salty Snacks			
Salty Snacks	2	0.07	0.01
Miscellaneous			
Butter	2	0.07	0.01
Condiments	2	0.07	0.01

*A total of 28 half-hour segments were viewed.

half (60 percent) of all food references in prime time programs were for low nutrient beverages and sweets.

In the 22 shows, there were 86 occasions of eating or drinking. Almost three-fourths (72 percent) of the food eaten on prime time shows is eaten between meals. Snacking occurred at a rate of 2.2 times per half hour of programming versus .86 times for meals. The most frequent snack food was sweets (44 percent), followed by salty snack foods (25 percent). Less than 10 percent of snacks were fruits (3 percent) or vegetables (6 percent). Coffee (43 percent) was the most frequently consumed beverage, followed by alcohol (28 percent) and soft drinks (17 percent).

Of the 24 episodes involving meals, 12 were evening meals and six were breakfast and six lunch. Breakfast foods consisted of either cereal and toast (50 percent) or sweet rolls and donuts (50 percent). Fruit was shown three times at breakfast and once at lunch. In almost one-third (33 percent) of the noon and evening meal episodes, the only food portrayed was dessert (with either coffee or wine). Other foods shown for these meals were sandwiches (28 percent); salads (11 percent); entrees (28 percent), consisting of stir fry vegetables and chicken which the children refused to eat; lobster with butter; hot dogs and veal with potatoes. One-third of all meal episodes included alcohol.

Of the 261 commercials aired, 91 (35 percent) were food ads. Table 2 shows the number and rate of food references in commercials by food category. Commercials for fast food restaurants occurred at a higher rate than any other food category. The fast foods advertised were hamburgers, fried chicken, pizza, and breakfast sandwiches. None of these commercials advertised salads or salad bars. Only three commercials advertised fruit, and none advertised vegetables; however, fruits and vegetables were incidentally shown in 36 percent of all food ads (e.g., orange juice in an ad for breakfast cereals; fruit shown in an ad for candy).

The most frequently expressed message in commercials were claims of "good taste" and food being "fresh and natural." Few commercials made explicit nutritional claims. Those that did tended to be ads for unsweetened breakfast cereals, claiming that the products were nutritious, low in fat and sodium, and high in fiber.

Discussion

References to food were pervasive, both in prime time programs and in accompanying commercials. The "prime time diet" primarily consisted of foods low in nutritional quality, such as low nutrient beverages, sweets, and salty snack foods. Foods were typically consumed as snacks rather than meals. This reflects the eating pattern of the American population: diets high in sugar, sodium, and fat and low in fruits, vegetables, and fiber.⁹⁻¹² Recent data,^{13,14} also indicate that both adults and children are snacking more frequently, and that families are eating fewer meals together. In light of the scientific evidence on the relationship of dietary factors to health and chronic disease risk, several studies, as well as numerous national reports and papers, have pointed to the wide-spread need for public education and changes in dietary behavior.^{9-12,15}

Given our findings that messages related to eating practices are conveyed frequently during prime time television viewing, and that the television diet exemplifies poor nutritional practices, an important but unanswered question is whether television exposure to food references has any impact on actual eating behavior. Modeling and social learning theory would suggest that frequent, regular TV exposure might influence eating habits. However, this is speculative and further research is needed.

We believe media can be important in creating social norms and promoting healthy eating practices. Much of the eating on TV programs is trivial and incidental, used for "stage business," that is something to do with one's hands. Although producers, writers, and directors are in the business of delivering entertainment, and not with projecting health images, there is an opportunity to present health

promoting messages by having characters model good dietary practices. Health professionals should initiate and work with the TV industry to encourage the inclusion of healthy eating patterns in programming.

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NIH Consensus Panel Issues Conference Report on Treatment of Destructive Behaviors in Persons with Developmental Disabilities

In September 1989, the National Institute of Child Health and Human Development co-sponsored a Consensus Development Conference on "Treatment of Destructive Behaviors in Persons with Developmental Disabilities." The panel's report, which contains recommendations and conclusions concerning treatment of such behaviors, has been printed and single copies are available free from: William H. Hall, Director of Communications, Office of Medical Applications of Research, National Institutes of Health, Building 1, Room 259, Bethesda, MD 20892. Tel: 301/496-1143.

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