Children Consumers: A recipe for obesity

by

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Despite all of the advancements in public health during the last century in the United States, our children are still suffering from an epidemic that will take years off their lives and reduce the quality of their life dramatically. This epidemic is obesity. Childhood obesity rates have more then doubled for preschool children aged 2-5 years and adolescents aged 12-19 years, and it has tripled in children 6-11 years since the 1960s (IOM, 2005). It is affecting both boys and girls and all races in the United States, at this present time it is estimated that nine million children over the age of 6 are considered obese (IOM, 2006). Of all the abundant of variables that contribute to the rise of childhood obesity, one factor that can be controlled through policy development is the message children receive through advertising and marketing directed towards them.

Children's food choices are affected by many factors; food marketing plays a key role in these choices. Parents bear the primary responsibility for feeding their children. However, getting children to eat a healthful diet would be easier for parents if they did not have to contend with billions of dollars of sophisticated marketing for low-nutrition foods. Children receive wide discrepancies between what their parents tell them is healthy and what marketing promotes as a desirable diet. In addition, parents and children only have a limited proficiency in nutrition where food companies have numerous experts with persuasive techniques to get children to purchase their low nutrition products (CPSI, 2003). The need for policy on standards for marketing to children is a crucial step in the right direction to help alleviate the growing waistline of children.

It is understood that children grow at different rates which is why it is complicated to define childhood obesity. It is generally accepted that childhood obesity is children between the ages of 2 and 18 who have body mass indexes (BMIs) greater than the 95th percentile of the age and gender specific BMI charts developed by The Center for Disease Control and Prevention. Children are considered to be overweight and at risk for developing obesity if their BMIs are greater then the 85th percentile for the age and gender charts. There is a parallel between the rise of childhood obesity and the rise of adult obesity in the United States over the same time period between 1960 and 2000, this suggests that overweight and obese children have a higher chance of becoming overweight and obese adults (IOM, 2005). This also suggests that some of the same factors that contribute to adult obesity also contribute to childhood obesity. Children of overweight and obese parents have a greater chance of becoming overweight as an adult versus a child of a parent of normal weight (IOM, 2005).

The factors that contribute to childhood obesity all overlap one another thus creating a complex environment for creating public policy to alleviate the current trend. These factors include social, environmental and policy contexts that influence children's eating and physical activity. The IOM identifies these key factors contributing to the rise of childhood obesity:

- Urban and suburban designs that discourage walking and other physical activities
- Pressures on families to minimize food costs, acquisition and preparation time, resulting in frequent consumption of convenience foods that are high in calories and fat
- Reduced access and affordability in some communities to fruits, vegetables, and other nutritious foods
- Decreased opportunities for physical activity at school, after school, and reduced walking or biking to and from school
- Competition for leisure time that was once spent playing outdoors with sedentary screen time including watching television or playing computer and video games.

While these factors have been identified as crucial components of the childhood obesity epidemic, the increase in advertising directed to children has also risen along with the obesity rate. This correlation between advertising and marketing food products to children and the increase trend of obesity is just now beginning to be explored. Media has a more central role in children lives, there are many avenues in which children are receiving messages – television, radio, magazines, internet, music, cell phones, product placement, endorsement marketing and in a variety of places, homes, schools, child care settings, grocery stores, malls, and sporting events. Children and youth spend more then 200 billion dollars annually and they have a strong influence on the purchases in the household (IOM, 2006).

It is well understood that nutrition behaviors from childhood track into adulthood and these behaviors contribute to long-term health and chronic disease risk (CDC, 1996). The dietary patterns of children and youth are poor and do not meet the national dietary goals (IOM, 2006, Neumark-Sztainer D, 2002). Nutrition during childhood is essential for properly balanced growth and development; even children who are not obese or overweight have diets that are too high in saturated fats, trans fat, and sodium which predisposes them to be at risk for chronic diseases (IOM, 2006). It is estimated that American children obtain over 50% of their calories from fat or added sugar in foods (Story, 2004).

It is important to recognize though that there are many factors that influence the eating behaviors of children: developmental, biological, and psychological factors, family and social influences, neighborhood and community environments, and macro system influences such as marketing, culture, and values (IOM, 2006). The family is the first social agent in which the child begins to make requests for products. In addition to the family the media now has a strong grip on the social development of children today. Between the ages of 2 and 11 years old they develop consumption motives as they are exposed to commercials. Here they quickly develop knowledge about products and brands. Children develop consumer social skills as early as the age of 2 years old; this skill matures with physical and cognitive development (IOM, 2006).

It has been reported that young children's food preferences are influenced by two primary factors, sweetness and familiarity (Birch, 1999, IOM, 2006). Children learn to prefer those flavors of foods that are associated with high-calories and fat content. However, this predisposition to sweet taste can be easily modified with exposures to a variety of foods (Drewnowski, 1997, Birch 1999, IOM, 2006). It is important that children learn healthy eating habits at an early age and gain an appreciation for a variety of foods.

The foods currently marketed to children are predominately high in sugar and fat and are inconsistent with national dietary recommendations. Since 1994 there have been more than 3,900 new food products and 500 new beverage products targeted at children and youth. Most of these new products are consistently high in total calorie, sugar or fat and low in other nutrients (IOM, 2006). US food consumption trends also show that children are eating more foods away from home, soft drinks, and snacking more frequently (USDA, 2001a). Children as early as the age of 2 years begin to request products at the supermarket, with the most requested item being high sugar breakfast cereal. Between the ages of 3-11 brand name requests for food account for 54% of total requests made by children. Twenty-Four percent of those requests are for snack and dessert foods (Story 2004).

It is estimated that the food and beverage industry spends over \$1 billion dollars on media advertisements targeted at youth with an additional 4.5 billion spent on youth promotions such as contest, sampling and sweepstakes, another 2 billion on broadcast, print, event marketing, and school relations. Approximately 3 billion is spent on packaging especially designed for children (Story, 2004). The food and beverage industry is undermining parents ability to have complete control over household purchases, marketers are counting on the "pester power" for their products to be purchased by the home (CSPI, 2003). It has been argued that even though companies market their products directly to children it is ultimately the parents' decision on whether to purchase the product. However, food marketing aimed at children makes it harder for the parents to say "no". Food manufactures use children characters and celebrities such as Harry Potter, SpongeBob Squarepants, Elmo, athletes, games, contest and prizes to entice children to make repeated request for these products. Currently Disney Pixar's latest movie Cars© is on approximately 56 food items found at Wal-Mart in Brier Creek at Raleigh,

these food items range from cereal, yogurt, fruit bars, snacks, ice cream and drinks all promoted to children at children's eye level in the stores. The use of characters and placement of these products creates a tremendous amount of conflict for the parent while shopping for the week's groceries.

Food and beverage companies use more than just characters on their products to promote their foods, they saturate the kids from a variety of formats. Below are examples that have been identified by the Center for Science in the Public Interest.

- Campbell's "Labels for Education" program encourages families to collect labels from Campbell products that schools can redeem for equipment. It's hardly model philanthropy, says CSPI, seeing that kids' parents would have to buy some \$2,500 worth of soup, for the school to qualify for a \$59 stapler.
- Krispy Kreme "Good Grades" program offers elementary school kids one doughnut for each "A" on their report cards. CSPI points out that some states wisely prohibit or discourage using food as a reward for good behavior or academic performance.
- McDonald's Barbie has the doll dressed up as a McDonald's clerk, feeding French fries, burgers, and Sprite to kid-sister Kelly in a restaurant play set. Other junk-food ads disguised as toys, like Play Doh's Lunchables kit, where kids are encouraged to assemble Play Doh versions of Oscar Mayer's notoriously fatty and salty lunch box items.
- The Oreo Adventure game on Kraft Foods' Nabiscoworld.com web site is one of many corporate "advergames". In this video game, children's "health" is reset to "100 percent" when kids acquire golden cookie jars on a journey to a Temple of the Golden Oreo. The Oreo Matchin' Middles shape-matching game, produced with Fisher Price, turns playtime into a chance for companies to cultivate brand loyalty and sell junk food.

- Pepsi's website profile of New York Yankees baseball star Jason Giambi, which prominently displays the quote, "I usually have several Pepsis each day—it really lifts me up," is one of many examples of a junk-food marketer linking consumption of its product with fitness.
- Cap'n Crunch Smashed Berries cereal—which, predictably, has no berries at all—encourages overeating in its magazine advertisements. Once such ad in Nickelodeon magazine reads, "Kids smashed 'em in the factory so you can fit more in your mouth."

The most predominant form of advertising to children is still through television. The average children spends 2-3 hours in front of the TV every day, even infants are watching television, 17% of children under the age of 1 and 48% of children between the 1 and 2 watch at least 1 hour of television a day. Children on average see about 21 thirty second commercials per hour on TV, over half of all the advertising on children's television is for food and beverages (CSPI, 2003, Story 2004, IOM 2006). A remarkable 98% of the advertising was for low-nutrition foods such as convenience foods, fast, foods, candy, snack foods and soft drinks (Gallo, 1999). The foods advertised on Saturday morning television are the most offensive. Of the foods advertised, 50.3% were fats, oils and sweets, 43.4% were for the bread, cereal, rice and pasta, and only 4% were for dairy. In addition, 60% of the items were high in sugar. There were no ads for fruits and vegetables, unless you count potatoes in the form of fries of chips, and most of the diary ads were for chocolate milk. (Kotz, & Story 1994,

Center for Social Marketing, 2003). Another emerging television advertising trend is the advertisement of branded items instead of the general generic food items that have previously been staples of meals cooked at home (CSM, 2003).

Schools are rapidly becoming the second most marketed place for children. Food and beverage companies discovered that they were able to increase sales and develop product loyalty at schools. In exchange for on campus advertising and sales, the food and beverage companies then donate money and supplies back into the school system. Schools are vulnerable to this marketing because of the financial shortcomings of the education system. In addition to advertising and product placement in vending machines there is also a growing trend of fast food venders in schools. Direct advertising can be as corporate logos on athletic scoreboards, sponsorship banners in gyms, ads in the school year books, textbook covers, and screen savers on school computers. Some teachers are even earning stipends for "freelance brand marketers" in Minnesota (Story, 2004).

There is not end in sight what food and beverage companies will do to develop brand loyalty and increase sales. Channel One a television program that is seen in 38% of the middle and high schools homerooms is approximately 12 minutes long and has two minutes of commercials for high fat snack foods and soft drinks (Story 2004, CSPI, 2003). There is also indirect advertising in schools through corporatesponsored educational materials, incentives and contest. Pizza Hut sponsors a reading program which gives rewards for a free personal pizza, McDonald's gives out coupons for free hamburger and cheeseburgers for obtaining perfect scores on spelling test. There are also classroom activities sponsored such as Campbell's Prego Thickness Experiment and Dominos Pizza's Encounter Math: Count of Domino (Story 2004, CSPI 2003).

Nineteen states have laws addressing commercial activities in schools but the laws are weak and not well regulated. Only 12% of schools prohibit the sale of junk foods out of vending machines, schools stores, snack bares, and outside venues in school cafeterias. Alabama and District of Columbia prohibit the use of food to reward children for good behavior or academics, seven other states discourage the practice.

Kids' clubs, Internet advergames, product placement and toy, book clothing product with brand logos are more avenues that the food and beverage industry use to target children. McDonald's Fun Time Restaurant Play set for Barbie comes with food counter, fries, burgers, pies, sodas and the golden arches. You can also purchase Barbie dressed as a McDonald's clerk and Kelly eating a Happy Meal. There are reading and counting books for toddlers such as *Kellogg's Foot Loops! Counting* Fun Book, The M&M's Book, and the Oreo Cookie Counting Book (CSPI, 2003, Story 2004).

Children and youth magazines are growing rapidly, in 1989 there were 130 magazines published for children and youth and in 2002 there were 190 magazines. The most popular kid magazines are Nickelodeon, Sports Illustrated for Kids, and Disney Adventures; for youth, Teen People, Seventeen, Dirt Rider and Boy's Life (IOM, 2006). The number of ads pages per month varies by magazine with an average of around 50 (range 11-110) (CSPI, 2003). While no studies have been conducted on food advertisement and magazines for children; recent studies have shown that more than 30 percent of teen's purchases for music, games, make-up and clothes were directly influenced by magazine advertisements (IOM, 2006). This suggests that children and teens are very receptive of this form of advertising.

Even grocery stores have marketing aimed at children. Food manufacturers pay grocery stores "slotting" and "pay-to-stay" fees in order to get and keep good shelf space (Federal Trade Commission, 2001, CSPI, 2003). This is one reason why there is so much space allotted to chips, cereal, candy, and beverages and why the placement is where children can reach it without assistance from parents. Product placement has grown ever since it was discovered with the release of *E.T.*. The Extra Terrestrial when sales of Hershey's Reese's Pieces rose by 65% within the month of the release of the movie (Story, 2004). In Spider-Man, the hero discovers his web-spinning power by retrieving a Dr. Pepper. Marketing, promotion placement and food packaging is designed for kids and is carefully researched to stand out and appeal to children (CSPI, 2003).

The food and beverage industry use advertising to sell more products, their goals is to develop brand loyalty by influencing children's food choices. If this was not the case the food and beverage industry would no spend \$26 billion dollars in advertising and promoting foods in 2000 (CSPI, 2003). Central to the discussion on marketing to children is children's ability to discern the difference between advertising and programming. Children under the age of 8 years old tend to view advertising as fun and entertaining, they can make a distinction between the programming and ads but only because the commercials are shorter (Story, 2004, CSPI, 2003). Between the ages of 9-12 years old children are aware that commercials are selling things but it isn't until the teenage years that there is complete understanding of the intent of commercials (CSPI,2003).

The Federal Trade Commission concluded that children under the age of 6 years old believe what is being marketed to them as truth.

Children in the fifth and sixth grade believed that 70% of the commercials they saw for healthy products were true and over 90% were able to describe the messages of the ads as they were intended to by the sponsor (CSPI, 2003). The Milward Brown research company found that children are three-times more likely to remember advertised brands than adults (CSPI, 2003). Because of these facts many believe that children are a vulnerable population and that children are exploited because they do not have the ability to comprehend the true intent of the commercial. Furthermore, children also do not have the understanding of good nutrition and do not understand the long-term health risk associated with a low-nutrition diet (CSPI, 2003).

In light of all these findings there is no policy or proposed policy to create legislation to stop the advertising to children. In 2004 Congress put funds aside to dig deep into the cause of childhood obesity, this report was published in 2005 by the Institute of Medicine, *Preventing Childhood Obesity, Health in the Balance* and in 2006 the Institute of Medicine published Food Marketing to Children: Threat or Opportunity. In both reports there is a great amount of attention paid to advertising and marketing low-nutrition foods to children yet neither report suggests a ban against this activity but did suggest that the food, beverage and advertising industry and the FTC should do more to prevent childhood obesity.

The Federal Trade Commission (FTC) is the agency charged with regulating unfair or deceptive advertising. As stated in a report from the FTC, they have a long history of protecting children from unfair and deceptive marketing and the FTC also considers children to be a vulnerable class of consumers and looks very closely at ads directed towards children (Engle, 2004). Advertising to children and the idea of banning ads directed at children has a long history both in policy development and in the FTC. In 1978 the FTC published a Notice of Proposed Rulemaking on the regulations of children advertising on television. This initial proposal was supported by the Action for Children's Television, the Center for Science in the Public Interest, the Consumers Union and the Commissioner of the Food and Drug Administration (FDA). The Rulemaking proposal, given the name "kidvid" attempted to accomplish the following:

1) Ban all TV ads to kids 6 and under

2) Ban TV ads for the most cavity-causing foods to kids 12 and under

3) Require TV ads for sugar products directed to older children to contain nutritional or health disclosures This proposal had over 60,000 comments and eventually the FTC brought the kidvid rulemaking to a close three years later. The Final Report stated:

While the rulemaking record establishes that child-oriented television advertising is a legitimate cause for public concern, there do not appear to be, at the present time, workable solutions which the Commission can implement through rulemaking in response to the problems articulated during the course of the proceeding

In 1981 Congress passed a law prohibiting the FTC from adopting any rule about childhood advertising. This congressional response was due to both skilled lobbying by the industry and the widely perceived notion that this was a grossly overreaching proposal (FTC).

In response to the recent reports and the rise in obesity rate the idea of banning advertising to children has resurfaced, and as reported by the FTC, "the Federal Trade Commission has traveled down this road before. It is not a journey that anyone at the Commission cares to repeat." Below are summaries of the FTCs arguments against banning advertising to children and rebuttals to some of their arguments:

> Parents in 2004 have many more options did parents in the 1970s – there are now Commercial-free television or the use of videotapes and DVD. Such alternatives make parental control over children's viewing more feasible today(FTC, WS). In response to this argument, there really is no commercial

free television PBS and the Disney Channel have sponsorship spots during children's programming (CSPI, 2003).

- It is difficult to ban advertising to an age range of children as television is a mass medium with audiences that are mixed.
 Solution bans all advertising to children that is of low-nutrition value.
- There is no definition of "junk food" and making rules for foods is difficult. There is no agreement on what this should be. The solution would be to develop a standard the meets current dietary guidelines.
- There are 2 government restrictions that prohibit this policy from occurring:
 - The 1st Amendment limits government regulation of speech, including advertising
 - Any government regulation of non-misleading advertising must meet the Supreme Court's Central Hudson test:
 - Substantial government interest
 - Regulation directly advances that interest
 - Regulation is narrowly tailored

Because the causes of obesity are complex it is nearly impossible to meet the standards of Central Hudson (Engle, 2004). The food and beverage industry is under self regulation through an organization called CARA (Children's Advertising Review Unit). It is has no legal authority and can only seek voluntary compliance. Their guidelines cover seven basic principle areas such as product presentation and claims, endorsement and promotional characters, sales pressures, disclosures, disclaimers, and safety concerns. It is evident that many of the food and beverage industry do not follow these guidelines and the CSPI believes that CARA was only formed as rebuttal argument by the industry for policy development.

It is apparent that it should be our nation's priority to create an environment in which children and youth can grow up healthy. It is well documented that eating behaviors and health habits established in childhood carry over to adulthood (IOM, 2006, Story, 2004). Many countries have developed a comprehensive policy for a healthy lifestyle. Norway was the first to develop a comprehensive health and nutrition policy in the 1970s to encourage and promote a healthy lifestyle, as part of this policy they do not allow advertising to children (Milio, 1986). Recently the European Union proposed policy that would ban advertising to children as part of a complete plan to reverse the trend of obesity and Australia has banned all food advertising during children's television (CSPI, 2003, Milio, 1986, Watson, 2005). It is obvious that the food and beverage industry in the US will require government regulation to stop the exploitation of children. Unfortunately unlike the tobacco regulations and alcohol regulations, food advertising to children will not meet the criteria needed for this to occur. The United States is behind the curve in developing policy to facilitate health lifestyle for not only children but all Americans.

RECOMMENDATIONS:

Federal Government: Congress may not need to ban food advertising to children, but rather alter the form of food and beverage marketing the children and youth are exposed too. It is evident that advertising influences the purchase of products by children and children have a profound effect on the type of products purchased by the home. A comprehensive policy needs to be developed to encourage healthy eating behaviors and physical activity in children.

- Increase advertising of nutritious foods to children and youth.
 This would include character licensing and promotion being placed on foods and beverages that support healthy diets.
- Healthy product placement in school, internet media, radio, and children and youth magazines, and only advertising healthy food on children television programs. The increase media campaign for healthy eating could alter children food choices.

- As it is not likely that the FTC will be able to ban food advertising to kids, with permission from Congress that FTC could only allow a 50% of advertising to children be for food, and furthermore require that a certain amount of advertising to children must be for fruit and vegetables and dairy products.
- Limit the number of minutes of advertising that can directed at children under the age of 8 years old, this would help decrease the "pestering" that many parents receive for items that are repeatedly advertised.
- Congress needs to set aside further funding to determine the impact of food marketing to children. Current research is suggestive that food marketing to children increases sales of foods that are consider being of low nutritional value but further research needs to be done.

Congress also needs to realize that like the tobacco policy there will never be a clear link to the cause of childhood obesity but any measure taken to further discourage poor diets and inactivity by children will make a positive impact on the overall health of children.

State Government: States should also provide funding for media campaigns to promote healthy eating and behaviors.

Development of a soft drink or junk food tax to support the additional funding needed for promotion of healthy eating. There is already a history of taxing items that are known to have a potential harmful health effect such as the tobacco and alcohol taxes. Not only will the taxes increase funds but they may also increase public awareness of the issues surrounding poor dietary habits. Seventeen states already have a soft drink tax but the money from most is not currently being used for the promotion of healthy behaviors (CSPI, 2003). The guidelines for the definition of "junk food" could be taken from NC Prevention Partners' Winner's Circle Healthy Dining Program. This program is designed to help the public determine foods that are a nutritious in content. The criteria for this program were developed from national nutrition recommendations and guidelines. More information can be found at <u>www.ncpreventionpartners.org</u>. The current criteria to qualify for the Winner's Circle Healthy Dining Program is below:

For a meal:

- Minimum of 2 servings of fruits/vegetables AND
- Minimum of 1 serving of grains or beans **OR**
- Minimum of 245 mg calcium

And meal must have:

- Maximum 30% of calories from fat
- Maximum 1500 mg of sodium per meal

For a single item or side dish:

- Minimum of 1 serving of grains or beans **OR**
- Minimum of 1 serving of fruits/vegetables **OR**
- Minimum of 245 mg of Calcium

And each item must have:

- Maximum 30% of calories from fat
- Maximum 1000 mg sodium

Qualifying beverages:

- Water and flavored waters with less than 50 calories per 8 oz serving OR
- Skim or 1 % milk **OR**
- At least 50% juice and < 12 oz serving OR
- Sports drinks < 100 calories, and < 12 oz serving AND
- Contain no added herbal Supplements

For a snack:

- Less than 30% fat AND
- Less than 480 mg sodium
 AND
- No more than 35 % sugar by weight **OR**
- For dairy snacks, 4oz servings must have at least 120 mg calcium, 6 oz servings at least 150 mg calcium, 8 oz at least 245 mg calcium
 - In schools, no snack package can contain more than 2 servings

Any meal, beverage, or single item/product that does not meet the above criteria would then be labeled as low-nutrition and therefore would be subjected to the "junk food" tax. Currently there are over 500 items that qualify for the Winner's Circle Healthy Dining Program and more are added each day. While these criteria will not make everyone happy it is a start for state legislatures to help curve the rise in childhood obesity by taxing unhealthy foods and promoting nutritious items.

Schools:

- School systems should adopt guidelines for food advertising and marketing within the school, even with contacts from the food and beverage industry.
- Develop standards for corporate sponsored educational materials in school, that these materials do not promote brand loyalty of low-nutrition foods (CSPI, 2003).

Industry: When marketing to children they should:

- Support parent's efforts to serve as the gatekeepers of good nutrition and not undermine parental authority. Marketers should not encourage children to nag their parents to buy low-nutrition foods.
- Depict and package/serve food in reasonable portion sizes and not encourage overeating directly or indirectly.
- Expand efforts to promote healthy eating habits consistent with the Dietary Guidelines for Americans and to promote healthful products. Do not portray healthy foods negatively.

Communities, Health Professionals, and Parents:

• Grocery stores, drug stores, gas stations, should not place lownutrition foods in check-out aisles or encourage the practice of "pay to stay" spots by industry. This practice keeps low nutrition food at children's eye level.

- Public Health officials and health care providers need to counsel families on achieving a healthy lifestyle, by encouraging families to eat together at the table not in front of the TV, to do physical activities together as a family.
- Parents should limit the amount of television viewing by children and be a positive role model on healthy eating as well as amount of television they watch.
- Parents should also write local, state and federal officials encouraging them to pass laws to limit food marketing to children. Officials will not act if they are not pressured to do so.

Now is the time for both the public and Congress to act, the prevalence of obesity in children has occurred parallel with significant changes in the US media and marketing environments, at this time there has been no direct link between advertising and obesity. However, it is evident that advertising increases food-purchases request by children to parents, has an impact on children preferences, and affects their consumption behavior. Congress needs to develop a complete comprehensive nutrition policy with the goal of reducing childhood obesity, promoting healthy eating and healthy lifestyle and decreasing the medical cost associated with obesity in both in children and later in life as an adult. An important part of this policy would be to establish strict guidelines on advertising and marketing to children instead of simply encouraging the industry to do son. The food and beverage company has shown that they don't care about America's waistline but about their bottom line.

Reference:

Institute of Medicine(2006). Food Marketing to Children and Youth, Treat or Opportunity? The National Academis Press

Institute of Medicine (2005). Preventing Childhood Obesity, Health in the Balance. The National Academis Press

Story, M, French, S (2004) Food Advertising and Marketing Directed at Children and Adolescents in the US [Electronic Version] Int.J Behav Nutr Phys Act, 2004;1:3

Watson, R (2005). Food Industry is under pressure to drop junk food advertisements [Electronic version] BMJ 2005; 330; 215(29 January).

Milio, N (1986). Promoting Health through Public Policy. Canadian Public Health Association Center for Science in Public Interest (CSPI) (2003). Pestering Parents: How Food Companies Market Obesity to Children

www.cspinet.org/pesteringparents

Neumark-Sztainer D, Story M, Hannan PJ, Croll J. (2002) Overweight status and eating patterns among children, how do youth stand in comparison with the healthy people 2010 objectives? Am J Public Health 200

Birch LL. (1999). Development of food preferences. Annu Rev Nutr 19:41-62.

Drewnowski A. (1997) Taste preferences and food intakes. Annu Rev Nutr 17(1):28-36.

Kotz K, Story M. (1994) Food advertisements during children's Saturday morning television programming is not consistent with dietary recommendations? J Am Diet Assoc 94:1296-1300

Gallo, AE. (1999) Food Advertising in the United States USDA

Federal Trade Commission (FTC) 1994 Enforcement Policy Statement on Food Advertising. Washington DC. Accessed at http://www.ftc.gov/bcp/policystmt/ad-food.htm USDA, 2001, Office of Analysis, Nutrition, and Evaluation. Changes in Children's Diets: 1989-1991 to 1994-1996. Washington DC. Report No. CN-010CD1

Engle, M (2004) Regulating Food Advertising to Children: An Historical Perspective. Presentation at IOM Meeting on Food and Marketing and the Diets of Children and Youth,