

## **The Effects of Television Food Advertising on Childhood Obesity**

**Aleathia Cezar, BSN, Health Educator**

### **Abstract**

Children's food choices are influenced by the media, television advertising, focusing directly at infants and toddlers. This literature review presents multiple studies that explain how TV advertising of fast food, sugary cereals and other foods high in calories, fat, sugar, sodium and low in nutrients are contributing to the increase rates of childhood obesity. It is concluded that children are exposed to high amounts of food advertisements which affect young children's food choices and poor food consumption. Due to the growing numbers of hours that children sit in front of the television, less physical activity and the epidemic of childhood obesity, formal product advertising restrictions should be established to change marketing practices directed at children. Restrictions can begin with large companies curbing their advertising of popular unhealthy snacks and promote healthy, nutritious snacks. Parents should restrict eating foods with poor nutrition content and also limit television viewing time, remove television sets from children's bedrooms, monitor the shows children are watching and to watch television with the children.

**Keywords:** television food advertising, television marketing, childhood obesity

### **Author Information**

aleathiacezar@yahoo.com

Recent statistics have shown that the prevalence of obesity among children in the United States has continued to rise at a rapid pace (Powell et al., 2006). According to the estimates from the Centers for Disease Control and Prevention, approximately 10% of 2 to 5-year-old children and 15% of 6- to 19-year-old youths in the United States have weights above gender- and age-specific 95th percentile values (National Center for Health Statistics, 2004). Studies have demonstrated that both younger children and adolescents consume excessive dietary fat and sugar, whereas fruit, vegetable, and various micronutrient intake is lower than recommended (Powell et al., 2006). Behavioral, environmental and social factors in addition to a genetic predisposition may have an important role in a child becoming obese or overweight (Arnas, 2006). Some researchers indicated that the time spent in front of the television can be an important environmental factor for development of obesity (Arnas, 2006). Longitudinal research determined that

there is a direct relationship between the time spent watching television and obesity and every additional hour spent watching television increased obesity by 2% (Arnas, 2006). In other studies, it was also found that children watching television for more than four to five hours a day were more overweight than children watching television for two hours or less (Arnas, 2006).

Children's food choices are influenced by the media, television advertising, focusing directly at infants and toddlers. Positive relationships between adiposity and TV viewing among children and adolescents have been found in four US national cross-sectional surveys and one national longitudinal survey (Coon & Tucker, 2002). Children aged 2 to 11 year-old spend on average three hours a day watching television-more time than with any other medium- and children see about 5,500 food advertisements per year (Batada et al., 2008). Tarras, Sallis, Patterson, Nader and Nelson (1989) observed that children's weekly TV viewing hours correlated significantly with reported requests by children for advertised foods and purchases by parents of such foods. Thirty percent of children 0 to 3 years of age and 43% of children 4 to 6 years of age had televisions in their rooms, a factor that increases children's likelihood of weight problems significantly (Connor, 2005). Television food advertising has attracted attention for its potential role in promoting fast food, sugary cereals, and other foods high in fat, sugars, or sodium or low in nutrition value and is out of balance with the foods recommended in the dietary guidelines for Americans. Do television food advertisements affect the increased rates of child obesity?

Television has changed a great deal in the past two decades. Children are being exposed early in life to more television and more advertisements than ever before. The Kaiser Family Foundation found that 58% of children <2 years of age watched television on an average day; the number increased to 70% for children 4 to 6 years of age (Connor, 2005). Saturday morning was the main period for cartoons and child-oriented programming, now weekdays are more likely viewing times for children. The Institute of Medicine of the National Academies found that food marketing influences children's food preferences, consumption, and health, and linked television advertising to obesity (Batada et al., 2008). Few parents or pediatricians are conscious of the advertising messages to which the children are being exposed on a daily basis. A study by Dr. Susan Connor, "Food-Related Advertising on Preschool Television: Building Brand Recognition in Young Viewers", used content analysis to explore how much and what type of advertising is present in television

programming on the Disney, Nickelodeon, and PBS channels. The three channels were recorded from 9 a.m. to 1 p.m. All the content that aired in between shows was examined. The three channels had a total of 130 food related advertisements, that is, 1.354 food advertisements per half-hour of viewing (Connors, 2005). Disney had the fewest advertisements; the station had a total of 26 advertisements, 17 of which were for Disney products, 9 non-Disney advertisements were McDonald's focused on children (Connors, 2005). PBS had a total of 65 advertisements, 39 which were food-related aimed at children (Connors, 2005). Nickelodeon had the most advertisements of the three channels, with a total of 283 advertisements; 21% were food-related focused on children (Connors, 2005). Fast food advertisements were the majority of the advertisements on all three channels. Disney and PBS focused specifically on McDonald's and Chuck E. Cheese. On Nickelodeon, 41% of the advertisements focused on McDonald's, Wendy's, Chuck E. Cheese, 41% were for cereal, 14% were for snack foods, and 4% were for frozen treats (Connors, 2005). Food advertisements are doing a good job of making it appealing for children to request a purchase from their parents. The most widely used appeals were fun (82% of advertisements) and action (57%). The fun appeal featured laughing, smiling, giggling, or playing children, in company of a licensed character. The action appeal featured excitement and high energy, for example, children running, jumping, playing sports such as rock climbing, skateboarding, or biking. Nickelodeon had more food products advertised that used a taste appeal. Forty-three percent of Nickelodeon's food advertisements used the taste appeal which promoted the product's sweetness. Snack food advertisements focus on the coolness or novelty of the food's shape, color or flavor. Fast food advertisements focus on toys and fun. For example, in a happy meal, children are encouraged to buy happy meal's to collect toys. The fast food advertisements presented in the study promote eating these foods that equate with good taste, fun and happiness, but in actuality it represents foods high in calories, fat, sugar, and/or sodium.

The study by Helen Dixon et al., "The Effects of Television Advertisements for Junk Food versus Nutritious Food on Children's Food Attitudes and Preferences," was designed to enhance the evidence base concerning the persuasive impact of TV food advertising on children's food-related attitudes and beliefs. According to Dixon et al., the social cognitive theory predicts that children learn from behaviors symbolically modeled in mass media, as well as from role models in their immediate social environment (Dixon et al., 2007). Social Cognitive

Theory has also been usefully applied to nutrition (Sahay, Ashbury, Roberts, & Rootman, 2006) and child overweight prevention interventions (Cole, Waldrop, D'Auria & Garner, 2006) and has been used as a basis for a model of individual and environmental influences on youth eating behavior that includes mass media (Story, Neumark-Sztainer & French, 2002). Based on the social cognitive theory, it would be expected that children exposed to patterns of eating behavior will adopt cognitions and behaviors modeled by television food advertisements. In this study, 1522 eligible students participated in a pre-test and a post-test after viewing the stimulus video for the advertising experiment. The results of the pre-test survey support the argument that cumulative exposure to TV food advertising promotes beliefs and attitudes supportive of those foods most heavily represented in food advertising on children's TV- fast foods, and sweet drinks. As hypothesized in the study, television exposure was associated with more positive attitudes toward junk food, the perception that consumption of these foods was more prevalent among other children their age, and higher self-reported frequency of consumption of junk food (Dixon et al., 2007). The positive association observed between television exposure and children's reported junk food consumption is consistent with the evidence base that suggests that television has an adverse effect on children's dietary behavior (Coon & Tucker, 2002). The experiment found that advertisements for nutritious foods promote selected positive attitudes and beliefs concerning these foods. Several attitudes toward healthy foods improved in response to exposure to healthy food advertisements. These findings support the proposition that increasing the amount of healthy food advertisements on children's TV may serve to promote the appeal of these foods to children. However, there was some evidence that when healthy food ads were aired with junk food advertisements, children showed more negative attitudes toward vegetables, where as there was no such change evident when the same number of healthy foods was aired without accompanying junk food ads. The study concluded that changing the food advertising environment on children's television to one where nutritious foods are promoted and junk foods are relatively unrepresented would help to normalize and reinforce healthy eating.

There are many studies that show the frequency of food advertisements on television, but few studies that show the children's food purchasing requests after viewing the food advertisements. The study by Yasare Arnas, "The Effects of Television Food Advertisement on Children's Food Purchasing Requests", took place in Turkey. The study

examined both the advertisement's contents and children's food consuming behaviors while watching television and their food purchasing requests during shopping. The study showed that children were exposed to advertisements for approximately 35 minutes on weekends. On a yearly basis, the children were exposed to approximately 1890 minutes of advertisements during the morning hours on weekends. In addition, children watch approximately seven lots of advertisements on one weekend and they are exposed to 347 food advertisements which equates to a total of 18,738 food advertisements during the year (Arnas, 2006). Arnas observed that during the morning hours on the weekends there were food advertisements that included 28.53% candy/chocolate, 23.91% chips, 12.96% milk and derivations of milk such as cheese and yogurt and 11.64% breakfast cereals. There were no advertisements about fruits, vegetables, legume or eggs which contain the most important nutrients. To evaluate the children's eating habits and purchasing behaviors, Arnas distributed a questionnaire to 347 parents; 104 of these parents' children were attending first, second, and third grades of the primary schools and 243 of the children were attending the pre-schools. The results of the analysis showed that 89.6% of children had a snack while watching television. It was determined that 60.8% of children consumed fruits, 44.1% consumed soft drinks, 36.6% corn/nuts, 33.7% cake, 33.4% chips, and 28.8% chocolate/candy, while watching television. The results of this study showed that only 2.6% of the children did not want or show any reaction towards buying the products that they viewed advertised while they were shopping at the supermarket with their parents. It was found that among 4 – 5 year old children, 32.85% of children asked their parents to buy the products presented in the advertisements; 40.3% wanted their parents to buy the products they saw on the advertisements; 13.5% pointed to the products they saw on advertisements and made comments about it; and 8.9% insisted on buying the products and cried while watching advertisements. During shopping, 59.1% of the children requested candies; 50.7% requested non-acidic soft drinks (fruit juice); 33.7% requested acidic soft drinks (such as cola); 26.8% requested milk and related products (cereal, yogurt, and ice cream) and 5.5% requested fish and meat products. Other studies determined that demands during shopping decreased by age and that preschool aged children tend to request more than older children because at an older age children have a cognitive understanding of television advertisements. The preschool aged children's requests were affected by the television advertisements because they mostly requested

candy/chocolate, ice cream, cake, fruit juice and soft drinks- items that were advertised on television.

A smaller number of studies have examined the nutritional content of food advertisements on television and have found that all food items advertised to be of poor nutrition content. The study by Lisa Powell, et al., "Nutritional Content of Television Food Advertisements Seen by Children and Adolescents in the United States", was the first study to use television ratings data to assess actual exposure to the nutritional content of food advertising seen on television by children 2 to 11 years old and adolescents 12 to 17 years old. The observers drew samples of top rated television shows by using data to research the caloric content and nutritional content for fat, saturated fat, sugar, sodium, and fiber of food advertised. The foods examined were separated in five categories that included cereal, sweets, snacks, drinks, and other food products. The results of the study showed the vast majority of food product advertisements seen on television were unhealthy. The study showed that 97.8% of children aged 2-11 year old and 89.4% of food product advertisements viewed by adolescents 12 to 17 years old, viewed food advertisements were high in fat, sugar, or sodium. The food products were very high in sugar. A total of 97.6% of cereal advertisements seen by children were for high sugar for cereals and low in fiber. Almost two-thirds of advertised snacks were high in sugar, with over one third being high in fat and one quarter being high in saturated fat. All beverages advertised were for high-sugar beverages. The study concluded that obesity will continue to increase if television and companies continue to advertise food products that are high fat, sugar, or sodium to our children. The findings will provide a benchmark against which future research can evaluate the commitments by food companies to change the nature of food advertising directed at American's children (Powell et al., 2007).

In conclusion, children are exposed to high amounts of food advertisements which affect young children's poor food consumption. Food marketing is aimed at children at an early age and it is directly effecting their food choices, food preferences and eating habits. Most of the food advertisements are not about foods with high nutrient levels consisting of vitamins, minerals and proteins. At this age, children are learning that through food advertisements certain food products and fast food restaurants equate fun and happiness which promote poor nutrition content products which can increase obesity at an early age. Children are more likely to consume foods that were depicted in food advertisements as fun and with taste appeal. Studies show that marketing to young children at an early age

are sending messages that associates high-calorie, high-fat, and high-sugar foods. Children were observed consuming foods that are high in fat and sugar while watching television and had problems with their parents about buying the products seen on the advertisements. It was also observed that the foods which were requested by most of the children during shopping at the supermarket were foods that were high in fat and sugar. Advertisers are gaining increasingly early brand recognition among young children, in a time period where rates of childhood overweight and obesity are increasing. Children are experiencing various health threats at an early age, such as type 2 diabetes mellitus, asthma, cardiovascular disease, orthopedic abnormalities, and high cholesterol levels, which are health threats that are usually associated with adults. Lastly, with the growing numbers of hours that children sit in front of the television, less physical activity and the epidemic of childhood obesity, formal product advertising restrictions should be established to change marketing practices directed at children. Restrictions can begin with large companies curbing its advertising of popular unhealthy snacks and promote healthy, nutritious snacks. Parents should restrict eating foods with poor nutrition content and also limit television viewing time, remove television sets from children's bedrooms, monitor the shows children are watching and to watch television with the children.

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