

Separate Viewing From Chewing: make meal time...family time

By Barbara J. Moore, PhD

In January, 2010, the U.S. Surgeon General, Dr. Regina M. Benjamin, issued a report¹ on the epidemic of overweight and obesity in America. In the discussion of the various causes of obesity, Dr. Benjamin's report stated that "[t]he more time children spend watching television, the more likely they are to eat while doing so and the more likely they are to eat the high-calorie foods that are heavily advertised on television."² In other words, eating in front of screens – TV screens, computer screens and video screens – promotes mindless munching on high calorie foods and increases exposure to commercial messages for unwholesome snacks and many other products such as movies and DVDs that encourage sedentary forms of entertainment for kids. An earlier report from the Institute of Medicine [IOM]³ details the extent and impact of marketing food to children and its impact on childhood obesity.

Health experts are urging America's children to increase their levels of physical activity and reduce their intake of high-calorie/low-nutrient foods and snacks and limit their intake of sugar-sweetened beverages. But the reality is that consumption patterns of America's youth reflect the marketing strategies of the \$900 billion⁴ food, beverage and restaurant industries. How are foods marketed to children? Primarily through screens – TV, computer, DVD and cell phone screens.

According to the IOM,⁵ the food and beverage industries spend approximately \$10 billion a year on marketing their products through various channels and "the preponderance of the products introduced and marketed for children and youth are high in total calories, sugars, salt, fat, and low in nutrients."⁶ When the report was released in 2006, Senator Harkin of Iowa remarked: "The food industry doesn't spend \$10 billion a year on ads to kids because they like

¹ U.S. Department of Health and Human Services. The Surgeon General's Vision for a Healthy and Fit Nation. Rockville, MD: Office of the Surgeon General, January 2010.

² U.S. Department of Health and Human Services. The Surgeon General's Vision for a Healthy and Fit Nation. Rockville, MD: Office of the Surgeon General, January 2010, p. 4.

³ Institute of Medicine [IOM]. *Food Marketing to Children and Youth: Threat or Opportunity?* National Academies Press 2006, 500 Fifth Street NW, Washington DC 20001 [The Institute of Medicine was established in 1970 by the National Academy of Sciences. The IOM convenes appropriately credentialed professionals to examine "policy matters pertaining to the health of the public."]

⁴ Annual sales of these three industries combined. See IOM report (reference 3), page 4.

⁵ See the IOM report (reference 3), page 4.

⁶ See IOM report (reference 3), page 4

to waste money. Their ads not only work, they work brilliantly.”⁷ There is evidence to support Senator Harkin’s statement.⁸ Dr. Thomas Frieden, current Director of the Centers for Disease Control and Prevention (CDC), predicted that 20 years from now people will look back and say: “What were they thinking? They’re in the middle of an epidemic and kids are watching 20,000 hours of commercials for junk food.”⁹

Through the use of cartoon characters recruited to pitch products to children and the development of “advergames” and other strategies targeting kids, the Internet, cell phone, DVD and TV marketers are collaborating in their efforts to control “share of mind.” This marketing concept refers to the objective of building “cradle to grave” brand loyalty that threatens to turn our children into passive “super consumers” – indeed supersized consumers.¹⁰ Advertisements for unhealthy foods and sedentary forms of entertainment provide children with “pester power” – and parents get worn down by their children’s constant requests for candy, sweetened cereals, cookies, cupcakes and sugary soda, not to mention the latest movies, computer games and DVDs – all sedentary forms of entertainment.

The percentage increase in the number of new food products targeted to children has skyrocketed¹¹ and this is because our children and teens have money to spend – as much as \$365 billion a year according to one estimate.¹² According to the IOM, television marketing strategies are contributing to the growing problem of childhood obesity: “Statistically, there is strong evidence that exposure to television advertising is associated with adiposity in children ages 2-11 years and teens ages 12-18 years.”¹³

The consequences for children’s health are alarming. In one study, 70% of obese young people had at least one risk factor for cardiovascular disease, while 39% had two or more.¹⁴ Type 2 diabetes, historically referred to as “adult-onset” diabetes was virtually unknown in children

⁷ Quoted by M. Burros, “Federal Advisory Group Calls for Change in Food Marketing to Children” NYTimes.com, December 7, 2005

⁸ Borzekowski DL, Robinson TN. The 30-second effect: an experiment revealing the impact of television commercials on food preferences of preschoolers. *J Am Diet Assoc* 2001; 101(1):42-46

⁹ Quoted by N.R.Kleinfield, “Diabetes and Its Awful Toll Quietly Emerge as a Crisis” NYTimes.com, January 9, 2006

¹⁰ Samuels et al. “Food and Beverage Industry Marketing Practices Aimed at Children: Developing Strategies for Preventing Obesity and Diabetes”, November 2003, A Report on the Proceedings from a meeting sponsored by the California Endowment, held in San Francisco June, 2003.

¹¹ See Williams J. “Product Proliferation Analysis for New Food and Beverage Products Targeted to Children 1994-2004. University of Texas at Austin Working Paper.

¹² See Samuels et al. (reference 9).

¹³ IOM report (reference 3), page 9.

¹⁴ Freedman DS, Mei Z, Srinivasan SR, Berenson GS, Dietz WH. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: The Bogalusa Heart Study. *J Pediatr*. 2007 Jan; 150:12–17.e2

and adolescents 30 years ago, but in some parts of the U.S. it now accounts for almost 50 percent of newly diagnosed pediatric cases of diabetes.¹⁵ It has been predicted that one out of every three children born in the year 2000 will develop diabetes in their lifetimes (for Hispanics, the prediction is one out of two).¹⁶ Children and adolescents who are obese are more likely to remain obese into adulthood.¹⁷ Obese adults who became obese as young children tend to be more severely obese¹⁸ and have earlier onset of co-morbidities such as diabetes, cardiovascular disease, and some cancers.¹⁹

A growing number of studies link screen viewing with decreased play,²⁰ increased body fatness,^{21,22} and a heightened risk of childhood obesity.^{23,24} Since the publication of the IOM report in 2006, a number of studies have examined how the use of media affect food intake, behavior and body fatness of children^{25, 26, 27, 28, 29, 30, 31, 32, 33} and the evidence continues to

¹⁵ American Diabetes Association (ADA). 2000. Type 2 Diabetes in Children and Adolescents. *Pediatrics* 105:67-80

¹⁶ Venkat Narayan KM. (Chief of the Diabetes Epidemiology section, Centers for Disease Control and Prevention [CDC]) 2003 Presentation to the ADA Annual Scientific Sessions. Report published in *JAMA* Oct. 8, 2003.

¹⁷ Whitaker RC, Wright JA, Pepe MS, Seidel KD, Dietz WH. Predicting Obesity in young adulthood from childhood and parental obesity. *N Engl J Med* 1997;337(13): 869–873.

¹⁸ Relationship of Childhood Obesity to Coronary Heart Disease Risk Factors in Adulthood: The Bogalusa Heart Study. *Pediatrics*, 2001;108(3): 712–718.

¹⁹ Ferraro, K.S., R.J. Thorpe Jr., and J.A. Wilkinson. 2003. The Life Course of Severe Obesity: Does Childhood Overweight Matter? *Journals of Gerontology, Series B, Psychological Sciences and Social Sciences* 58(2):S11-19

²⁰ Schmidt ME, Pempek TA, Kirkorian HL, et al. The effects of background television on the toy play behavior of very young children. *Child Development* 2009; 79(4): 1137-1151

²¹ Robinson TN. Television viewing and childhood obesity. *Pediatr Clin North Am* 48(4) 1017-1025

²² Jackson DM, Djafarian K, Stewart J, Speakman JR. Increased television viewing is associated with elevated body fatness but not with lower total energy expenditure in children. *Am J Clin Nutr* 2009; 89:1031-1036.

²³ Institute of Medicine. *Preventing Childhood Obesity: Health in the Balance*. National Academies Press, Washington DC 2005; pp. 301-305.

²⁴ Mendoza JA, Zimmerman FJ, Christakis DA. Television viewing, computer use, obesity, and adiposity in US preschool children. *International Journal of Behavioral Nutrition and Physical Activity* 2007, 4:44doi:10.1186/1479-5868-4-44 [The electronic version of this article is the complete one and can be found online at: <http://www.ijbnpa.org/content/4/1/44>; accessed March 13, 2010]

²⁵ Chamberlain LJ, Wang Y, Robinson TN. Does children's screen time predict requests for advertised products? Cross-sectional and prospective analyses. *Arch Pediatr Adolesc Med*. 2006; 160(4):363-368.

²⁶ Bellissimo N, Pencharz PB, Thomas SG, Anderson GH. Effect of television viewing at mealtime on food intake after a glucose preload in boys. *Pediatr Res*. 2007; 61(6): 745-749.

²⁷ Blass EM, Anderson DR, Kirkorian HL, et al. On the road to obesity: Television viewing increases intake of high-density foods. *Physiol Behav*. 2006; 88:597-604

²⁸ Francis LA, Birch LL. Does eating during television viewing affect preschool children's intake? *J Am Diet Assoc*. 2006; 106(4): 598-600

²⁹ Fitzpatrick E, Edmunds LS, Dennison BA. Positive effects of family dinner are undone by television viewing. *J Am Diet Assoc*. 2007; 107:666-671

³⁰ Kirkorian HL, Pempek TA, Murphy LA, et al. The impact of background television on parent-child interaction. *Child Development* 2009; 80(5): 1350-1359

grow. Some studies suggest that parental limits on TV viewing and other screens is helpful for changing behavior and preventing childhood obesity^{34, 35, 36} but that parents need guidance and support to implement changes in screen-viewing policies.³⁷

Children derive many benefits from family meals, including improved nutritional quality of foods eaten and an opportunity for meaningful parent-child interaction. In fact, higher BMI in children is associated with a lower frequency of family meals^{38, 39} and eating dinner together as a family 6-7 times per week has been identified as one household routine that is associated with obesity prevention.⁴⁰ It is important to keep the TV turned off during family meals because the benefits of family meals are apparently cancelled by background TV.⁴¹

In summary, reducing screen time and not allowing eating in front of screens is one part of the solution to childhood obesity. It is recommended that parents establish rules limiting the use of all recreational screens to a maximum of two hours per day and permit eating only at the table with the TV turned off. We are all role models for children so we need to set a good example by turning off the TV, DVDs, cell phones and computers, choosing foods and beverages carefully, and going outside to get more fresh air and physical activity on a daily basis – and take some kids along for the fun!

³¹ Chou S-Y, Rashad I, Grossman M. Fast-food restaurant advertising on television and its influence on childhood obesity. *J Law Economics* 2008; 51:599-618

³² Martin CK, Coulon SM, Markward N, et al. Association between energy intake and viewing television, distractibility, and memory for advertisements. *Am J Clin Nutr* 2009; 89:37-44

³³ Anschutz DJ, Engels RCME, VanStrien T. Side effects of television food commercials on concurrent nonadvertised sweet snack food intakes in young children. *Am J Clin Nutr* 2009; 89:1328-1333

³⁴ Anderson SE, Whitaker RC. Household routines and obesity in US preschool-aged children. *Pediatrics* 2010; 125:420-428

³⁵ Coon KA, Goldberg J, Rogers BL, Tucker KL. Relationships between use of television during meals and children's food consumption patterns. *Pediatrics* 2001; 107(1):E7

³⁶ Robinson TN, Saphir MN, Kraemer HC et al. Effects of reducing television viewing on children's request for toys : a randomized controlled trial. *J Dev Behav Pediatr* 2001; 22(3): 179-184

³⁷ Jordan AB, Hersey JC, McDivitt JA, Heitzler CD. Reducing children's television-viewing time: A qualitative study of parents and their children. *Pediatrics* 2006; 118:e1303-e1310

³⁸ Taveras EM, Rifas-Shiman SL, Berkey CS, et al. Family dinner and adolescent overweight. *Obesity* 2005; 13(5):900-906.

³⁹ Veugelers PF, Fitzgerald AL. Prevalence of and risk factors for childhood overweight and obesity. *CMAJ* 2005; 173(6):607-613.

⁴⁰ Anderson SE, Whitaker RC. Household routines and obesity in US preschool-aged children. *Pediatrics* 2010; 125:420-428

⁴¹ Fitzpatrick E, Edmunds LS, Dennison BA. Positive effects of family dinner are undone by television viewing. *J Am Diet Assoc.* 2007; 107:666-671