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# QUICK READ SYNOPSIS

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## Overweight and Obesity in America's Children: Causes, Consequences, Solutions

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## Childhood Overweight and the Relationship between Parent Behaviors, Parenting Style, and Family Functioning

Kyung Rhee, The Warren Alpert Medical School of Brown University

*Background* This article will explore the relationship between three levels of parental influence and its impact on dietary behaviors and the development of childhood overweight:

- specific parent feeding practices that are targeted toward the child with the intent to shape eating behaviors and intake;
- general parent behaviors that are not necessarily targeted at the child, such as food availability and parent modeling, but that also influence the development of child eating behaviors; and
- global influences like parenting style and family functioning that shape the socioemotional environment at home.

NOTE: Understanding the scope of parental influence may help to improve our efforts to prevent and treat childhood obesity.

*Parent Behaviors* Parents can shape their children's food preferences by exposing them to healthy foods at home and making them more easily accessible.

- Increasing the accessibility of fruits and vegetables can be helpful in increasing the consumption of these foods, particularly among children with low initial preferences for these foods.

- Helping parents increase availability and accessibility of targeted foods is important since it appears to increase the likelihood that children will eat these foods and can predict future consumption.
- Teaching parents to serve age-appropriate portions for children may be very beneficial and help children adjust their intake.

*Modeling*

Parents can indirectly influence their children's eating habits by modeling good eating behaviors.

- The impact of modeling may also be enhanced by positive social responses that are tied to the food and eating environment.
- Unfortunately, modeling of negative behaviors can have an equally strong but opposite effect and has been associated with the development of emotional eating, snacking, and body dissatisfaction.
- Studies demonstrate that parents can indirectly shape child behaviors through modeling. Encouraging parents to adopt healthy behaviors themselves may aid in our efforts to curb childhood obesity.

*Parenting Style*

Parenting style is the general pattern of parenting that provides the emotional background in which parent behaviors are expressed and interpreted by the child.

- It has been suggested that behavior delivered within the context of a more positive parenting style will have a different impact on the child than one delivered in a more negative parenting style.
- A positive parenting style, namely, the authoritative parenting style, is classified by high displays of sensitivity, emotional warmth, and involvement by the parent as well as high expectations and demands for maturity and self-control from the child.
  - This parenting style has been associated with positive childhood outcomes such as higher academic achievement, increased self-regulatory ability, more frequent use of adaptive strategies, fewer depressive symptoms, and fewer risk-taking behaviors.
- A critical dimension of parenting style is parental warmth and sensitivity toward the child. This dimension of maternal sensitivity is independently associated with a lower risk of child overweight by first grade.
  - Another study lends evidence to support the idea that the use of specific behavior modification strategies may be more effective when the child perceives greater involvement or warmth from the parent.

*Family Functioning*

A broader dimension that may impact the ability of parents to control their child's weight is family functioning.

- While poor family functioning has been related to poorer adherence to treatment in families with cystic fibrosis and diabetes, its role in pediatric overweight management has not been thoroughly explored.
- Some studies suggest that families of obese children are more conflicted and less cohesive.
- Moens et al. (2007) found that parents with overweight children used more maladaptive control or management strategies regarding food than parents with nonoverweight children.

- Dysfunction in many aspects of family functioning, like managing daily routines, accomplishing tasks, fulfilling parenting roles that assist in pediatric weight control efforts, communicating with family members, and controlling child behaviors may contribute to the poor energy regulation capabilities of overweight children.
- Positive family interactions and order in the household may create an atmosphere that allows for greater acceptance by children of particular parent behaviors regarding overweight management.

### *Conclusion*

Parents not only help mold and shape specific behaviors in children but also influence their attitudes and beliefs about food and eating practices.

- Traditionally we have examined the impact of specific feeding practices on child intake and weight, but the socioemotional impact of parenting and the stability provided by effective family functioning can also play a role in the development of healthy eating behaviors.
- These larger parent-level influences interact with specific behaviors to modify their impact on childhood overweight. Understanding the impact of these more global parental influences and trying to intervene at this level may provide additional strategies to help curb childhood obesity.

NOTE: As we have seen, the impact of specific behaviors on childhood overweight must be considered within the context of the larger community and culture. It is with further understanding of these complex interactions that a more comprehensive and potentially more effective strategy can be implemented to help reduce the rates of overweight among our children.

## Children's Healthy Weight and the School Environment

Laura C. Leviton, The Robert Wood Johnson Foundation

### *Background*

This article outlines the promise and limitations of schools for preventing childhood obesity.

- While schools are unlikely to reverse the epidemic of childhood obesity by themselves, they are an important venue for prevention.
- Advocates have called for reforms to restore time spent on recess and physical education, to limit "competitive foods" (foods of little nutritional value that compete with the school breakfast and lunch), and to improve healthy offerings in the school cafeteria.
- The environmental factors in school seem readily apparent and somewhat easier to change than the many forces in communities that are contributing to the problem of childhood overweight.

### *School Issues*

There are limits to what schools can do about the obesity problem.

- Schools are often hard-pressed financially, forcing them to make choices about programs to save or cut, including physical education.

- Schools have been forced into a focus on academic achievement scores.
- School personnel often suffer from “innovation fatigue”: they have seen many changes come and go.

*Healthy Food*

The food environments of schools are correlated with weight status—where school policies support frequent snacking and the availability of foods high in calories and fat, children’s body mass index is greater.

- Two general forces affect the food environment:
  - whether the school food service follows the USDA dietary guidelines and
  - whether competitive foods are present.
- A big problem is that school districts come to rely on the revenues from competitive foods to support not only food service but also academic and extracurricular activities.

*Obesity Prevention*

The direct relationship between physical activity and obesity prevention is clear in the review of studies.

- Moderately intense physical activity for thirty to sixty minutes a day led to a reduction in percent body fat for overweight children and youth.
- No reduction in percent body fat for normal-weight children occurred in these studies. It is important to bear in mind that prevention means maintaining the weight of normal-weight children, so one might not expect to see a change in those with normal weight.
- Changing the school food environment—that is, the price, promotion, and availability of foods—has been found effective in changing children’s choices of food during the school day.

*Physical Activity*

Enhanced physical education, which uses credentialed teachers, is effective in increasing children’s physical activity.

- In a quasi-experiment, children receiving instruction from specialists or trained teachers were more physically active at the end of two years than were control students.
- Physical activity outside of school hours was unaffected.
- Children are generally more active at school when there is equipment such as basketball hoops, improvements in playgrounds, and supervision to organize active games.

*Reducing TV Time*

Television and video games may be implicated in the rise in childhood obesity, because too much time in these sedentary activities replaces physical activity and because many children snack while viewing television.

*What Is Being Done?*

As policy and environmental approaches are proposed and endorsed, we are seeing a familiar pattern: local initiatives are taking the lead, followed by state and federal actions.

- At the federal level, resources have been provided for some time for training and technical assistance.
- National voluntary efforts combat childhood obesity through changes in school programs and environment.
- State legislatures and departments of education have been active in the past few years in passing new laws and regulations.
- At the district level change has been slow.

*Conclusion*

The school environment can contribute to an overall energy balance in children's lives.

- At a minimum, schools can reverse decades of policies and environmental changes that have helped to produce the obesity epidemic.
- Moving beyond the school walls, coordinated efforts include farm-to-school programs, safe routes that permit children to walk to school, use of the school facility by community organizations for active after school time, and a host of other efforts.
- The available evidence is that implementation is the key, and implementation is a long, hard road for any school program.

## Childhood Overweight and the Built Environment: Making Technology Part of the Solution rather than Part of the Problem

Amy Hillier, University of Pennsylvania

*Background*

The changing nature of how children engage with their environment is one factor in the dramatic increase in childhood overweight.

- Children are engaging much less with the world outside their homes in terms of physical activity and much more in terms of eating.
- Technological innovations have contributed to these changes.
- The media expose them to highly coordinated advertising campaigns, many of which target children with junk food and sweets.
- This article reviews many innovations in combating childhood obesity, including the use of geospatial technologies, electronic food and travel diaries, digital audio players, Web sites, and cell phones.

NOTE: "Built environment" describes everything that children encounter when they step outside their door in their immediate neighborhood area.

*Advertising*

Children have their greatest exposure to advertising through broadcast and cable television. Much of what they see advertised is food.

- Fast-food restaurants regularly partner with movies aimed at children and advertise special promotions on TV.
- The movie industry also does promotions for fast-food restaurants.
- Outdoor advertising has become increasingly creative in how it uses technology to target groups such as children.
- Increasingly sophisticated computer, television, and audio options keep children sedentary during much of their free time while exposing them to coordinated advertising campaigns disproportionately promoting unhealthy foods.

*Research Ops*

All of the technological improvements in the past ten years provide limitless opportunities for researchers to advance the understanding of how children interact with the built environment and how to intervene to reduce childhood overweight.

- Geospatial technologies including geographic information systems (GIS) and global positioning systems (GPS) are increasingly used by researchers to model the built environment.
- Research studies have used GIS to measure walkability and accessibility.
- Researchers have used GPS to monitor park and trail usage and accelerometers to measure physical activity levels.

*Eating and Travel Behavior*

- Technology is moving ahead to measure eating and travel behavior.
- The National Cancer Institute is developing a Web-based instrument called Automated Self-Administered 24-Hour Recall to assess eating behavior.
  - The author hopes to develop Food and Environment Diaries for Urban Places (FED-UP), a video game–like food and travel diary that students would complete online using a map interface.
    - This program would use cell phones and GPS devices.

*Improving the Built Environment*

- Policy makers, software companies, and government officials have found ways to use technology to reshape the built environment.
- For example, GIS and spatial modeling are being used to design healthier and more livable communities consistent with the research findings about walkability and mixed land use.
  - At least two computer games have been developed to encourage healthy eating.
  - A number of new technologically based games hold promise for reengaging children in physical activity and outdoors.

*Solutions*

- So how do we find solutions for the misuse of media and technology in the fight against childhood overweight?
- Part of the answer involves a conceptualization of childhood overweight that makes children active participants in solutions.
    - We must meet children where they are, and that means understanding why they are so interested in Wii, DDR, MySpace, YouTube, cell phones, text messaging, and other technologies that distinguish their childhoods dramatically from previous generations.
  - The companies that create the most successful video games, cell phones, and Web sites must be viewed as potential allies in the fight against childhood overweight.
    - It is unlikely that researchers and health advocates can develop and distribute new technologies like these on a large scale without the help of the entertainment industries.

NOTE: Ultimately, we need to help children make better choices over their life course, creating what King et al. (2002) described as “choice-enabling” environments. This means that all children need to have access to healthy foods and recreation; then we can focus on helping them to make good choices. They must see evidence that their choices can make a difference for themselves and for society, that childhood overweight is a problem, and that the problem is not intractable.

## Childhood Obesity Prevention: Successful Community-Based Efforts

Laure DeMattia, assistant clinical professor at the  
Medical College of Wisconsin; and Shannon Lee Denney,  
University of Wisconsin–Milwaukee

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### *Background*

The rates of childhood obesity have tripled since the 1960s, with more than 33.3 percent of children now at risk for obesity.

- The resulting excess weight puts children at risk for complicating diseases that are likely to persist into adulthood.
- As these overweight and obese children age, their health will continue to deteriorate and will further burden our health care system.
- While it may seem inequitable for the nation to incur the cost of prevention for what is largely considered an individual's problem, the taxpayers' current cost is astonishing at more than \$117 billion per year.
- We need short-term, intermediate, and long-term evaluation to have a sustained improvement of the childhood obesity epidemic.
  - There is a greater chance of success in addressing the childhood obesity epidemic if public, private, and voluntary organizations would combine and share respective resources to create a coordinated and sustained effort.
  - One recommendation—industry, communities, and schools build partnerships with government, academia, and foundations.

### *Ecological Model*

The Ecological Model of Childhood Overweight focuses specifically on characteristics that could affect an individual child's weight status in relation to the multiple environments in which that child is embedded.

- The first system is the individual child's genetic environment.
  - Children have different rates of growth and energy requirements, which vary by sex and age.
  - Additionally, if a child has two overweight parents in comparison to a child who does not have an overweight parent, a slight increase in dietary intake of the genetically susceptible child may show a larger increase in weight gain compared to the child with no familial obesity.
- The next system that influences a child's weight status is the family environment.
  - Neighborhood safety can influence the physical activity levels of children.
  - Living in neighborhoods without a grocery store is associated with reduced access to fresh fruits and vegetables. Increasing intake of fruits and vegetables is one way to displace energy-dense, low-nutrient foods that contribute to childhood obesity.

- American families are eating more outside their homes than any period before in history.
- According to the Growing Up Today Study, the length and exclusivity of breastfeeding is associated with reduced risk of childhood obesity.
- The Ecological Model forces us to take into account the larger community in which the child lives.
  - Studies often cite barriers to adopting healthy behaviors, such as lack of accessibility of recreational opportunities, decreased access to healthy food options, and lack of time to implement physical activity.
  - Community efforts outside of legislation are occurring at the local grassroots and academic levels.
  - Mixed use of land may help reduce obesity. Urban sprawl increases the probability of chronic disease by providing fewer opportunities for physical activity and appealing to less active people who are drawn to car-friendly areas.
  - Schools are an ideal location for education and for intervention against inactivity and poor nutritional intake.

*Federal Policies* Federal policies that will help support individual behavior changes are as follows:

- Develop tax incentives for schools.
- Improve accessibility to grocery stores and farmers markets by making the sale of healthy options more lucrative.
- Introduce regulation by the Food and Drug Administration requiring that all chain restaurants place clear calorie information at point of sale.
- Promote breastfeeding and protect a mother's ability to do so at work.
- Mandate physical activity as part of the curriculum for all students.

*Starting Point* Evolving research has shown that fetal malnutrition and maternal prepregnancy obesity are placing children at a lifelong risk of obesity.

- Prenatal counseling is where we need to start.
- Following up in the postnatal time period will potentially help parents learn about appropriate portion size and food choice.
- Targeting lower-income and overweight mothers for weight loss classes can improve the food choices of their young children.

*Conclusion* Small victories to reverse childhood obesity are being realized.

- While small victories are occurring, we see a future where this generation of children may not outlive their parents.
- Research shows that early intervention and prevention are more effective and less costly than treatment of adolescent or adult obesity.
- Increasing our national investment of research dollars, policy change, program funding, and health care benefits aimed at the prevention and early intervention of childhood obesity will change the environment to support individuals' behaviors that reduce their risk of obesity.

# The Effects of Food Marketing on Children's Preferences: Testing the Moderating Roles of Age and Gender

Ariel Chernin, Center on Media and Child Health,  
Harvard University

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## Summary

This study examined the influence of food marketing on children's preferences and tested whether age and gender moderated the effects of ad exposure.

- There is strong evidence that commercials shape children's food preferences and short-term eating habits and increase the number of purchase requests children direct to parents.
- Results indicated that exposure to food commercials increased children's preferences for the advertised products.
- Age did not moderate this effect; younger and older children were equally persuaded by the commercials.
- Boys were more influenced by the commercials than girls.

## Age

Age has been proposed as a moderator of advertising effects, with the frequent assumption that younger children are more susceptible to advertising than older children.

- Little conclusive evidence supports the assertion that younger children are more vulnerable to advertisers' messages than older children.
- Most studies have been conducted with samples that cover very narrow age ranges. Therefore, the moderating effect of age has been largely inferred from comparisons between different studies conducted with separate populations of children.
- This is problematic because differences in study design, stimuli, and measures limit one's ability to make valid inferences.
- Livingstone and Helsper (2004) tentatively concluded that older children and teenagers are more influenced by food advertising than younger children.

## Discussion

This study examined the influence of commercials on children.

- Exposure to commercials significantly increased children's preferences for the advertised products.
- The products appealed equally to younger and older children, and there was no evidence of an interaction between ad exposure and age on product preference.
- Future research should examine the relationship between children's emotional responses to advertising and their preferences for advertised products, as well as the relative contributions of affective and cognitive variables in explaining persuasion outcomes.
- While age did not moderate the effects of ad exposure, there was a significant interaction between exposure to the ads and gender.

- Limitations* Several limitations of the present research should be noted.
- The study was conducted with a convenience sample of children, which potentially limits the generalizability of the findings.
  - Children identified their preferred cereals and drinks from images and did not actually consume the products.
  - It is potentially problematic that not all of the drink options were available in stores at the time the study was conducted.
  - It should be noted that the regression model explained only a small amount of variance in product preference. The model likely omitted variables that could have contributed additional explanatory power.
- Conclusion* While efforts to restrict advertising to young children are well-intentioned, it has yet to be conclusively demonstrated that younger children are inherently more persuadable than older children.
- In fact, given that older children have more control over their diets than younger children, perhaps older children's responses to food marketing should be of greater concern.
  - Media literacy education is a possible avenue for intervention that can be tailored to children of different ages.

## Children, Television Viewing, and Weight Status: Summary and Recommendations from an Expert Panel Meeting

Amy B. Jordan, University of Pennsylvania; and Thomas N. Robinson,  
Stanford University

- Background* Research has indicated a wide range of factors believed to contribute to obesity among children, but of growing concern is the potential contribution made by children's media use.
- Children spend more time in TV viewing than any other home activity.
  - In April 2006, an expert panel was convened to address the topic of children, television, and weight status and to do the following:
    - examine the evidence for and mechanisms underlying the television viewing/childhood weight connection,
    - identify the most promising public health strategies to diminish the negative effects of television viewing and other screen media behaviors on childhood obesity based on current knowledge and expert opinion, and
    - develop a research agenda to diminish the negative effects of television viewing and other screen media behaviors.
- Causal Mechanisms* There are four hypothesized mechanisms through which television viewing may lead to childhood overweight:
- lower resting energy expenditure,
  - displacement of physical activity,

- food advertising leading to greater energy intake, and
- eating while viewing leading to greater energy intake.

*Interventions*

The expert panel identified a number of strategies.

- Eliminate TV from children's bedrooms.
- Encourage mindful viewing by monitoring screen media watched, budgeting TV time, fostering media literacy, and making program choices for children.
- Turn off the TV while eating.
- Use school-based curricula to reduce children's screen time.
- Provide training for health care professionals to counsel on reducing children's media use.

*Research Agenda*

A goal of the meeting was to develop a research agenda that will best inform strategies to diminish the negative effects of television viewing and other screen media behaviors on childhood obesity.

- Feasibility and pilot studies are needed to assess screen media reduction strategies and interventions to reduce weight gain and/or obesity.
- Randomized controlled trials are needed to be able to infer causality and estimate effect sizes with a high degree of confidence.
  - Efficacy studies identify and explore mechanisms leading to reduced screen time and/or reduced weight gain or obesity.
  - Efficacy trials identify individual or group characteristics that define who responds more or less to various interventions.
- Another priority research area identified by the panel is developing better measures of screen media use and/or exposure.

*Funding*

The panel recognized that their recommendations will depend on the availability of funding.

- Research funding is particularly needed for early-stage feasibility and pilot studies and efficacy and effectiveness studies.
- Empirical evidence offers the best chances of answering questions of relevance to parents, health professionals, schools, public health professionals, and agencies and public policy makers.

## Calories for Sale: Food Marketing to Children in the Twenty-First Century

Susan Linn, Harvard Medical School; and Courtney L. Novosat,  
Campaign for Commercial-Free Childhood

*Background*

Children are targets for a maelstrom of marketing for all sorts of products, enabled by sophisticated technology and minimal government regulation.

- A significant proportion of marketing that targets children is for energy-dense, low-nutrient food.

- Digital technology allows marketers to find more direct, personalized gateways to reach young audiences that sidestep parental authority and bank as much on the unknowing parent as the gullible child.
- The authors argue that parents can no longer keep pace either with innovations in advertising or increased spending, suggesting the need for tighter government regulations on food marketing to children.
- The unprecedented escalation of childhood obesity mirrors the equally unprecedented escalation of largely unregulated marketing to children.

NOTE: In 1984 the FCC “rescinded all restrictions on the amount of commercial content” in favor of a self-regulatory policy still in effect today.

### *Corporate Marketing*

Corporations want to expose their brand in as many different places as possible, or almost anywhere children turn in the course of their day.

- Brand licensing is particularly prevalent on television and is used to fund programs aimed at children, even on public television.
- Product placement is technically prohibited by law in children’s television programming but is rampant in the prime-time programs that are children’s favorites—also in films and video games.
- Contests or sweepstakes targeting children are frequently partnered with films or foods along with other promotions and tie-ins.
- Marketing to a captive audience in schools is especially effective.
- Ninety-four percent of high schools, 84 percent of middle schools, and 58 percent of elementary schools allowed the sale of soda or other soft drinks on their premises.
- Advertising frequently appears on school property including corporate names and logos on educational materials and programs.
- Fund-raising involves fast-food, candy, and junk-food sponsors.

### *Technology*

The vast array of new technologies makes it possible for companies to target children without parental knowledge or consent.

- The Internet is rife with marketing opportunities via such sites as Facebook, MySpace, and Yahoo.
- Video game example—in 2006, Burger King released three video games for multiple platforms featuring its King character.
- Cell phone example—Frito-Lay created an integrated marketing approach to promote Black Pepper Jack Doritos using text messaging, billboards, and the Internet alongside TV and radio spots.

### *Family Stress*

The sheer volume of marketing targeted at children is stressful for families.

- Corporations often undermine parental authority by encouraging children to nag. They inundate children with images that tend to portray adults as incompetent, mean, or absent.

### *Regulation*

There is a call for increased regulation of food marketing to children. The current administration, however, is philosophically opposed to regulation.

- We need significant grassroots pressure from advocacy groups.
- Warnings or idle threats are insufficient; only an “on the books” policy will quell the onslaught of food marketing to kids.

*Conclusion*

The rise of childhood obesity mirrors the unprecedented increase of food marketing aimed at children.

- Companies bypass parents and target children directly in myriad ways.
- While food companies and the marketing industry tout self-regulation, the rise in childhood obesity suggests that self-regulation has failed.
- From a public health perspective, what makes the most sense is to prohibit marketing brands of food to children altogether.
- We should also question the wisdom of depending on the food and media industries to promote healthy eating to children.

*Suggestions*

The following are suggestions for changes in policy that would limit the amount of child-targeted junk-food marketing:

- Congress should restore to the Federal Trade Commission its full capacity to regulate marketing to children.
- The marketing and sale of brands associated with unhealthy food products in schools should be prohibited, including corporate-sponsored teaching materials.
- Corporate tax deductions for advertising and marketing junk food to children could be eliminated.
- Product placement of food brands in all media could be discouraged.
- Food companies should be prohibited from using advertising techniques that exploit children's developmental vulnerabilities.
- Licensed media characters to market food products to young children should be prohibited.
- We should support a truly commercial-free Public Broadcasting System that would provide programming for children free of any marketing, including brand licensing.

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## First Amendment Implications of Restricting Food and Beverage Marketing in Schools

Samantha K Graff, Public Health Law & Policy

*Background*

By allowing junk-food and soda companies to saturate the school atmosphere with their products and messages, schools may be helping to fuel the American childhood obesity epidemic.

- A growing movement urges public school districts to limit nonnutritious food and beverage marketing on campus.
- A school may be inhibited not only by monetary and political pressures but also by legal questions relating to the First Amendment.
- This article seeks to demystify how the First Amendment bears upon efforts to restrict food and beverage marketing in public schools.
- The article distinguishes between two First Amendment standards of review that a court could apply to a school district advertising policy—a

- forum analysis and the commercial speech test—and argues that a forum analysis is the appropriate approach.
- The article identifies three types of advertising policies that should survive judicial review under a forum analysis.

*Advertising Regulations* Under the Supreme Court’s commercial speech doctrine, courts treat government restrictions on advertising as a First Amendment speech issue.

*Options to Avoid First Amendment Scrutiny* The public schools could combat the rampant promotion of unhealthy food and drinks on their campuses in at least two ways without invoking First Amendment scrutiny.

- They could restrict the sale of certain categories of products without restricting advertising for such products.
- They could draft individual contracts with vendors that do not permit certain sales and advertising practices.

*Possible First Amendment Legal Standards* From a First Amendment perspective, a policy limiting advertising of nonnutritious foods and beverages in public schools has two attributes: it involves a content-based government regulation on public property of advertising.

- As a result, if the policy is challenged in court, one of two First Amendment standards of review could apply: a forum analysis (focusing on the location of the speech regulation) or the commercial speech test (focusing on the type of speech being regulated).
- A forum analysis is a more lenient standard of review than the commercial speech test. It would require a school district policy to limit nonnutritious food and beverage advertising on campus to be “reasonable” and “viewpoint-neutral.”

*A Forum Analysis Should Apply* Plain logic, Supreme Court precedent, and Ninth Circuit precedent provide three sources of support for the conclusion that a forum analysis is the appropriate standard of review for a school district policy limiting advertising of nonnutritious foods and beverages on campus.

*Conceptualizing a Policy to Survive a Forum Analysis* A school district policy limiting junk food and soda marketing has a good chance of surviving a forum analysis (i.e., of being “reasonable” and “viewpoint-neutral”) if it bans:

- all advertising on campus,
- all food and beverage advertising on campus, and
- advertising on campus for those foods and drinks that are not allowed to be sold on campus.

However, a school district policy is unlikely to pass a forum analysis if it forbids advertising on campus for a category of food and drink products while simultaneously allowing the sale on campus of those same products.

*Conclusion*

Marketing goods and services, including junk food and soda, to public school students results in a collision between two classic American ideals.

- On one hand, our society nurtures a belief that a public school should be a protected environment in which students learn wholesome information and skills in preparation for democratic citizenship.
- On the other hand, we believe in the free market, accepting that access to new groups of consumers, including our nation's youth, bolsters the strength of our economy.

A well-developed body of constitutional law suggests that while the First Amendment keeps a tight rein on government entities that want to restrict advertising intended for adult consumers, it gives public school districts significant leeway to curb advertising directed at their student bodies.

## Assessing the Feasibility and Impact of Federal Childhood Obesity Policies

Victoria L. Brescoll, Yale University; Rogan Kersh, New York University;  
and Kelly D. Brownell, Yale University

*Background*

This article surveys national experts in nutrition and health policy on the public health impact and the political feasibility of fifty-one federal policy options for addressing childhood obesity.

- The aim of this article is to explore which childhood obesity policies are most likely to create optimal defaults for healthy eating and physical activity in children.
- Policies that were viewed as politically infeasible but having a great impact on childhood obesity emphasized outright bans on certain activities.
- In contrast, education and information dissemination policies were viewed as having the potential to receive a favorable hearing from national policy makers but little potential public health impact.
- A central need for the field is to develop the means to make high-impact policies more politically feasible.

*Unhealthy Eating*

In the United States, large portions, high consumption of soft drinks and high-calorie fast foods, low costs for high-calorie foods and higher costs for fruits and vegetables, limited access to healthy foods for the poor, and massive marketing campaigns targeting children are linked to poor diet, high risk for excess weight gain, and in some cases diseases such as diabetes.

- More than 17 percent of American children and adolescents are overweight or obese, with certain subgroups, such as African American youth, having even higher prevalence rates.
- This has led to increased incidences of hypertension, diabetes, and even heart attacks among obese children.

- Research has shown that the school food environment and food-related policies are associated with children's weight; snack foods, desserts, pastries, candy, and soft drinks are available in most schools.

### *Policy Study*

One problem facing policy makers and other opinion leaders is that there is little guidance about which policy proposals would have the greatest public health impact and which would be the most politically feasible.

- Given the gravity of the problem and the potential cost of implementing these policies, it is crucial to know two basic things about these policies:
  - Their political feasibility—will they receive a favorable hearing from policy makers?
  - Their potential public health impact—what is the likelihood that they will help reduce and/or prevent childhood obesity?

### *The Data*

Examining the policy study data qualitatively reveals five major themes.

- Policies viewed as being politically infeasible but having a great impact on obesity emphasized outright bans on certain activities.
- Nutrition labeling on menus in schools (including school vending machines and providing parents with nutritional information about school lunches) were seen as moderately feasible but low-impact relative to other policies.
- Policies in which the federal government would impose mandates on schools were generally seen as politically infeasible.
- Education and information dissemination policies, such as increasing federal funding for nutrition education, teaching healthy meal preparation and cooking skills to children, and providing nutritional information to parents about school lunches might receive a favorable policy hearing but might have little public impact.
- Increased funding for research was seen by both nutrition and policy experts as being impactful and politically feasible.

NOTE: Both nutrition and policy experts emphasized that to effectively combat childhood obesity, a wide array of these policies needs to be enacted. They also repeatedly mentioned the need to involve parents in childhood obesity policies, although this was not included in the list of policies that they evaluated. In addition, they mentioned the need to reform school lunches and expand the free fruit and vegetable program.

### *Conclusion*

This study is a first step in outlining areas of childhood obesity legislation that seem politically plausible and genuinely significant if implemented.

- Future research should expand on this study by paring down the number of policies and performing structured interviews with a subset of nutrition and policy experts.
- It remains troubling that a commitment toward a problem as serious as childhood obesity can change so rapidly with the political winds.
- We need a dynamic approach, one in which public health and policy experts work specifically to increase the political feasibility of high-impact policies.

- The above will involve changing public opinion, creating a stronger scientific foundation for policies, and examining novel legal and legislative approaches.
- Passing impactful legislation now, such as that which has been identified in this article, can prevent profound public health problems as the next generation of American citizens develops and matures.

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## Generation O: Addressing Childhood Overweight before It's Too Late

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### *Background*

Because of the serious health consequences of childhood obesity, there is an urgent need to make practical decisions now to address the problem, based on common sense, the best prevailing research, and the advice of experts.

- This starts with addressing the contributing factors behind the real culprits—poor nutrition and inadequate physical activity.
- We need to develop overweight prevention and control strategies focused on instilling in children the importance of healthy behaviors.
- This article reviews policy recommendations and intervention strategies for addressing childhood overweight.

NOTE: The fight against obesity and physical inactivity must include well-funded, long-term approaches; a research agenda that emphasizes longitudinal studies; and a fresh look at what constitutes “success” and how it is measured.

### *School*

School environments are a major influence on children's eating and activity habits, given the limited options children are given in a school setting.

- Nutrition standards of school breakfast and lunches wrongly focus on meeting minimum standards and keeping costs low.
- There has also been an influx in the availability of sodas, snack machines, and fast food on campuses and a reduction in the amount of physical education, recess, and recreation time.

NOTE: School-based efforts have focused on improving the quality of food sold in schools, limiting sales of less nutritious foods, improving physical education and health education, and encouraging increased physical activity.

### *Communities*

The communities where children live also can either encourage or inhibit opportunities for physical activity.

- A number of trends have resulted in people being less active, including communities that foster driving rather than walking or biking, lack of public transit options, poor upkeep of sidewalk infrastructure, walking areas that are often unsafe or inconvenient, and so on.

- Families* Efforts to involve families in obesity-prevention efforts are viewed by many as an effective area for intervention activities.
- Parents need to understand the benefits of providing healthier beverage options to children and encouraging more activity.
  - A number of studies have demonstrated a connection between the weight of parents, particularly mothers, and children.
- Head Start* Head Start could be a rich area for future studies and interventions.
- Healthy People 2010* Healthy People 2010 states that health education should include information about the consequences of unhealthy diets and inadequate physical activity.
- Government* In addition to state initiatives, the CDC provides federal support to a number of school-based obesity initiatives.
- The agency has established a Coordinated School Health Program—a model for how to integrate a range of school and community efforts.
  - The CDC also awards Division of Adolescent and School Health (DASH) “cooperative agreement” funds to twenty-three states to support state and local efforts. The DASH grants support the planning and coordination of school-based programs that address all aspects of health in a school.
- Public Education* Groups ranging from the Federal Trade Commission (FTC) to the Institute of Medicine (IOM) have issued reports encouraging the use of social marketing practices to promote healthier behaviors (e.g., increased physical activity) in children and youth.
- In addition, the food and beverage industries and restaurants should encourage healthier diets for children and youth through advertising.
  - Government should use taxes, incentives, and subsidies to encourage better marketing practices among the above industries.
  - Also, educating doctors about providing better counseling to patients about physical activity and nutrition has been an important factor in influencing patient behavior change.
  - Parents should role model for and teach healthy eating to their children, as well as stress the importance of physical activity.
- Conclusion* Short-term approaches to countering obesity have been repeatedly shown to fail over time.
- On the individual level, successful obesity intervention strategies incorporate dietary and physical activity changes into daily life on a permanent and ongoing basis.
  - We need the political will to provide enough funding to adequately support the development, implementation, and ongoing evaluation of large-scale obesity intervention studies.
  - Individuals, families, communities, local governments, states, schools, employers, industry, and the federal government all have the opportunity to recognize the costs and consequences of obesity.
  - Results from Trust for American’s Health’s Chronic Disease Directors (CDD) survey suggest that strategies must focus on supporting lifelong lifestyle changes.
  - Public health experts must help policy makers to better identify specific, practical strategies that are both proven and cost-effective.