Obesity

Environmental strategies

For preventing childhood obesity

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Childhood overweight and physical inactivity have reached epidemic levels in the United States, and they are taking a terrible toll on health. Skyrocketing obesity rates are a symptom of current community norms shaped by a market-driven economy that promotes overeating and sedentary behavior. Children and adults are targets of intensive marketing campaigns promoting soda, fast foods, high-calorie snacks, automobiles, and passive leisure-time activities including TV, movies, and video games. These commodities are frequently more readily available in schools and communities than healthy eating options, physical education, and attractive walking, biking, and other exercise opportunities.

Background

The problem of overweight affects more than 1 in 7 youth ages 6-17 (Flegal, et al., 2002; Ogden, et al., 2002). A number of factors contribute to this rising rate of childhood overweight. However, there is a consensus among scientists and medical professionals that overweight is chiefly a symptom of poor diet and lack of physical activity. (Berkey, et al., 2000; Rowlands, et al., 1999). Low physical activity levels and poor eating patterns have resulted in children experiencing increasing rates of diseases that have traditionally been thought of as adult medical conditions, such as type 2 diabetes. Unhealthy habits are contributing to increased risk even among normal weight children.

Although rates of poor nutrition, physical inactivity and diabetes are increasing among all children, disparities in these rates are related to ethnic background and socio-economic status. A number of environmental and social factors are responsible for these differences. Preventing childhood obesity must address the social and environmental factors that undermine the health of children. Efforts to treat overweight children through dieting, drugs, or surgery only place these children at higher risk for ongoing health problems and serve to further stigmatize fat children. Focusing on prevention and changing the food and physical activity environment will help to make healthy behaviors more accessible to all children.

Overweight

National rates of children who are overweight are soaring. The National Health and Nutrition Examination Survey (NHANES) data show that the prevalence of overweight among children from six to eleven years old increased nearly four-fold between 1963 and 2000 (Ogden et al., 2002). Among adolescents from 12–19 years old, the prevalence of overweight increased more than three-fold between 1966 and 2000 (Ogden et al., 2002).

Though the prevalence of overweight in children and adolescents is increasing, the rate of increase is particularly pronounced among certain ethnic groups (Ogden et al., 2002). For example, Pediatric Nutrition Surveillance System (PedNSS) data showed that 14% of low-income California youth under the age of 12 are overweight compared to 10.7% of low-income children nationally (CMS, 2000).

According to the Surgeon General (2001), overweight children face a greater risk of a host of problems, including type 2 diabetes, high blood pressure, high blood lipids, asthma, sleep apnea, chronic hypoxemia (too little oxygen in the blood), early maturation, and orthopedic problems. Overweight children also suffer psychosocial problems, including low self-esteem, poor body image, and symptoms of depression (UCB/Cooperative Extension, 2000). For girls in particular, poor self-image from being categorized as obese follows them into adulthood, resulting in fewer years of completed education, lower family incomes, and higher rates of poverty, regardless of their initial socioeconomic background (Dietz, 1998). Obese children are also hospitalized more often than children with healthy weight (Wang et al., 2002).

Because overweight children are likely to become overweight adults, these children are more liable to suffer from cardiovascular disease, cancer, and diabetes in adulthood—all chronic, but largely preventable diseases.

Physical Activity

The majority of children of all ages in the United States do not get enough physical activity; fully one-third are considered physically inactive (CDC, 2001). Data from the 2001 Youth Risk Behavior Survey (YRBS) show that more than 30% of the youth responding did not participate in either moderate or vigorous physical activity over the previous week (CDC, 2001) compared to 14% in 1996 (Surgeon General, 1996). Only 3% of respondents to the 2001 YRBS met the Healthy People 2010 Objective for continuous vigorous physical activity (Pate et al., 2002). According to the YRBS survey, only 52% of students in the U.S. were enrolled in a physical education class, and only 32% attended a physical education class daily.

Youth of all ethnicities are participating in less physical activity than recommended by the Surgeon General, and youth today are less physically active than youth in the past. Based on data from the National Heart, Lung, and Blood Institute Growth and Health Study, amounts of physical activity declined more in black girls than in white girls from ages 9-10 to 18-19. A study linking 1992 Youth Risk Behavior Survey data representative of the general US population with 1990 Census data found lower socioeconomic status to be associated with less physical activity. After adjusting for SES, being of Hispanic descent was more often associated with less physical activity than being of non-Hispanic descent. (Lee, et al., 2002).

Finally, neighborhoods can make a difference in physical activity. Adolescents who live in a neighborhood with a high level of “serious crime” are less likely to obtain moderate to vigorous physical activity compared to those who live in less crime-stricken areas (Gordon-Larsen, et al., 2000).

Type 2 Diabetes

One of the most serious consequences of overweight and obesity in children is type 2 diabetes. The last decade has seen a dramatic rise in the rate of pediatric type 2 diabetes in the United States, paralleling the rise in childhood obesity rates. Before 1992, type 2 diabetes accounted for 2-4% of all childhood diabetes cases and by 1994 the percentage of type 2 diabetes cases skyrocketed to 16%. More recent numbers estimate that up to 45% of all new childhood diabetes diagnoses are type 2 diabetes. Similar to adults, pediatric type 2 diabetes appears more frequently in certain ethnic groups. Among children diagnosed with type 2 diabetes, 80% are overweight. Children with a family history of type 2 diabetes and those who are members of specific ethnic groups, including African American, Latino, Native American, and Asian and Pacific Islander American, experience an increased risk of the disease (ADA, 2000).

Economic Costs

This combination of overweight and physical inactivity results in significant medical and financial resources being expended in the treatment of overweight youth and obese adults. Based on the Surgeon General’s (2001) assessment of the annual national cost of obesity, (including direct medical costs and costs attributed to illness, disability, and premature death), and based on population, the estimated cost of obesity in California is $14.2 billion. Medical care costs associated with obesity are greater than those associated with both smoking and problem drinking (Sturm, 2002).

As the percentage of children who are overweight rises, and as these children age, the health problems they face will burden the country with growing costs for medical care, lost productivity and human resources. From 1979 to 1999, national costs associated with childhood obesity increased three-fold, from $35 million to $127 million (Wang et al., 2002).

Causes of the Epidemic

The scientific literature suggests that the high prevalence of overweight and physical inactivity is caused by numerous individual, social, and environmental factors. Studies have linked the epidemic to conditions including, but not limited to, the following: increasing portion sizes, increasing consumption of fast food and soft drinks, lack of funding for nutrition and physical activity programs, availability of soda and junk food on school campuses including preschools and after school programs, poor physical activity infrastructures in schools and communities, limited compliance with physical education requirements in many schools, limited access to healthy foods in low-income neighborhoods, and advertising of junk food to children and their families. While no single factor is the primary cause of the childhood obesity epidemic, it is the constellation of these factors that have perpetuated the rising rates of childhood obesity and diabetes. The entanglement of social, environmental, and behavioral factors present a complex challenge when identifying targeted strategies aimed at addressing the problem.

Marketing and advertising play a particularly significant role in shaping norms and practices, especially for children. Children view between 20,000 – 40,000 commercials per year. Food accounts for over 50% of all ads targeting children. Over 75% of food advertising budgets and 95% of fast food chain ad budgets are for TV. Children view an average of one food ad every 5 minutes of TV viewing time. The heaviest food advertising is targeted to young children. (Lauro, 1999; Pollack, 1999)

Because of the enormity of corporate interests in the promotion of unhealthy foods and excessive eating and physical inactivity, changes are needed in policies that impact the food and physical activity environment. In California and in other states, new statewide and local policies have been adopted to eliminate the sale of sodas and junk food from school campuses.

Determinants of Risk

A multitude of factors have contributed to the increase in prevalence of obesity and type 2 diabetes. These factors include:

- *Physical environment*: Inadequate neighborhood access to health-encouraging environments, including affordable and nutritious food, and parks and other safe places to play and exercise. Many low-income neighborhoods are home to an excessive number of outlets for unhealthy foods, such as fast food, while concurrently lacking access to supermarkets, produce markets and other retailers of healthy food options. These neighborhoods also lack safe spaces for physical activity. High rates of neighborhood crime and violence limit the ability to play safely and be physically active outdoors in many low-income communities.

- *Social environment*: Communities lack individual and community support for prevention and management behaviors. A number of studies have identified a positive association between enhanced social support and prevention/care measures, such as diet and physical activity.

- *Access to health care*: Many lower income whites, African-Americans, Latinos, Native Americans, Asian Americans and Pacific Islanders experience a lack of access to both health care providers and diabetes management programs. Inadequate access to appropriate health care is an issue that is often cited as a cause of poor health outcomes for diabetics as well as a cause of disparities in health among different diabetic populations.

- *Quality of available health care*: Culturally and linguistically appropriate care, respectful treatment of patients by health care providers, and sufficient appointment time to address needs and concerns improve health outcomes, but are often lacking in health care settings.

- *Heredity*: Certain ethnic groups are at higher risk for obesity and diabetes than others and when genetic tendencies are combined with certain social and environmental factors, these groups can be at even higher risk.

- *Socio-economic status*: Socio-economic status impacts a number of these factors resulting in the disproportionate effects of obesity and type 2 diabetes on low-income and ethnic-specific populations. Lack of access to health insurance and health care causes low-income and ethnic-specific populations to receive insufficient and inadequate care. In addition, care for some ethnic populations is often provided in a culturally insensitive manner.

Shifting The Focus From Individual Behavior Change To Policy Change And Community Action

Historically, methods to reduce obesity have focused on a traditional medical model of individual behavior modification and treatment. In order to address health disparities and the larger social and environmental factors that influence them, obesity prevention efforts must include public policy options as part of the solution. In early 2002, The California Endowment sponsored a convening to bring together California's leaders in nutrition and physical activity and advocates from other health promotion fields. The discussion explored the successful strategies used to address issues, such as tobacco and violence/gun use, and how these strategies could be adopted by the nutrition and physical activity community. The key findings from the convening focused on the efficacy of public policy, rather than behavior change, as a primary strategy to address health issues traditionally categorized as "lifestyle diseases." (Prevention Institute 2002).

Some potential issues that are being considered as targets for action or mobilization include:

1. Competitive Foods in Schools
2. Physical Education in Schools
3. Super Size Portions
4. Access for Walking and Bicycling
5. Advertising and Promotion of Unhealthy Foods to Children
6. Lack of Institutional Support for Breastfeeding
7. Soda and Sweetened Beverages

Strategic Challenges

The following strategic challenges identify some of the difficult issues that are inhibiting the development of a strong consumer based movement aimed at preventing childhood obesity.

1. The food Industry cannot be demonized in the same way that the tobacco industry has been.
Food companies make a wide range of products, some that are healthy and some that are unhealthy. The food industry serves an important need by producing and processing foods for mass consumption. The policy levers effecting the quality of foods produced are related to agricultural subsidies, trade agreements, environmental policies, and food labeling. Health and health consequences are generally not a policy consideration. Sodas (sweetened beverages) are the one food product that may be most easily targeted because of their absence of any food or nutritive value and their positioning as a children's beverage.

2. *Regulatory efforts to limit television advertising of unhealthy foods marketed to children will not be adopted by the FTC.*

The experience of attempting to regulate television advertising of sweetened products aimed at children in the late 1970s has had a chilling effect on any future actions taken by the FTC. Since that time no efforts have been made to regulate food advertising aimed at children. Previous requirements to provide time for educational messages or local programming have essentially been abandoned. While many public service advertising or paid educational campaigns have successfully raised public awareness, few have actually demonstrated changes in behavior. Some class action lawsuits filed against food/supplement companies have resulted in settlements that have supported nutrition education programs aimed particularly at children. A potential opportunity for redirecting advertising aimed at children, challenge through the regulatory process ads that are misleading. Recommending voluntary standards for industry practices may also prove to be a more viable strategy.

3. *Taxation of unhealthy food products has not yet been a successful legislative strategy.*

The California legislature considered legislation to tax sodas to fund nutrition education programs. The bill and the strategy were unsuccessful. Strategies to replicate the tobacco control model of funding educational and advocacy programs through taxation of unhealthy products have been perceived as unlikely to gain popular support.

4. *Norms are slow to change, slowing the shift away from an individual behavior change model.*

Weight management is perceived as a matter of individual choice and discipline. Overweight is a reflection of self-indulgence and gluttony. The public has been slow to make the link between the obesity epidemic and an environment that is promoting unhealthy eating and an absence of physical activity. More progress has been made around identifying unhealthy foods and food environments, particularly in schools, and the need to change these environments through policy. Few efforts have successfully linked the physical activity environment to policy change. Furthermore, resources invested in the promotion of weight loss strategies through diet, pharmaceuticals and surgery as a quick fix, shift the focus away from prevention. There is a need to reframe these issues in a way that will build public support for broader policy solutions that will enable the public to more easily make these changes.

5. *The public is ready for some policy change but not comprehensive policy change.*

The public is ready to see changes in public policy. Changes in school nutrition/physical activity policies; changes in community design and access to healthy foods; changes in worksite food and physical activity policies all appeal to the public. Taxation, regulation, or restriction of industry practices appear to be less appealing.

Conclusion

Many children from low-income families live in communities with few resources and many detrimental social and environmental factors (pervasive fast food outlets, little access to healthy food, no safe play and physical activity areas) that lead to childhood overweight, obesity and type 2 diabetes. Intervening by changing the physical environment will be the most successful and cost effective prevention strategy for these children. Obesity prevention efforts will require numerous points of intervention, such as food security and food assistance programs, schools and child care settings, urban planning, public recreational facilities, and healthcare settings. (Prevention Institute, 2002)

Currently, local, state and national discussions have begun to address some of these issues through policy changes in schools. A number of school districts in California (including Los Angeles, Oakland and San Francisco) have adopted local school board policies to ban soda and improve the foods and beverages sold in these districts. Several California State legislators have introduced and passed legislation related to

improving foods sold at schools and physical education requirements. Other states including Arkansas, Maine, and New York have also introduced and adopted statewide school level obesity prevention policies.

A focus on changing the food and physical activity environment will help to build a strong social movement. We are up against a formidable industry, one with vast resources, far larger then anything we could bring to bear on this issue. We need a strong consumer-based movement to begin changing social norms around the causes and solutions for overweight and obesity. That is why we have formed the Strategic Alliance for Health Food and Activity Environments; to raise awareness about obesity prevention and to focus strategies on changing food and physical activity environments to enable everyone, especially those with the fewest resources, to practice healthy habits.

The Strategic Alliance: Promoting Healthy Food and Activity Environments

The Strategic Alliance is a coalition of organizations that have come together to promote healthy food and activity environments by reframing the debate on nutrition and physical activity, from primarily a matter of individual choice and lifestyle to consideration of the environment and corporate and government responsibility. By changing nutrition/physical activity norms and the environment, the Alliance's goal is to benefit the health and wellness of everyone.

The Strategic Alliance supports changes in five key sectors that influence the food and physical activity environment:

Children's Environments

- Fast food, junk food and soft drinks and marketing of these products should be eliminated from these settings.
- Establish break times for safe, unstructured outdoor play.
- Every facility should have working water fountains or other sources of free drinking water.
- Children should have safe walking and biking routes to school and other key destinations.

Government

- Public funds should be directed to improve the availability of affordable nutritious foods, pedestrian and bicycle access, and parks and facilities for active recreation.
- Public funds should not subsidize the production, distribution or marketing of products contributing to poor health.
- Government workplaces should implement standards to provide healthy foods in cafeterias and vending machines and facilitate exercise through bike racks, well-lit stairwells, and showers.

Industry Practices

- Industry should adopt guidelines for responsible marketing of food, entertainment, and sports-related products to children to eliminate promotion of unhealthy behaviors.
- Discontinue corporate sponsorships/partnerships that link popular children's media icons (professional athletes, cartoon characters, etc.) with soft drinks, fast foods, and other unhealthy products.
- Discontinue exclusive soft drink and fast food contracts with school districts, parks and recreation departments, and other public entities.

Health Care System

- Medical providers should adopt standards of practice that focus on effective patient education and counseling and minimize use of surgical or pharmaceutical treatments for childhood obesity.
- Health professionals and institutions should use their influence as health spokespeople to advocate for healthy food and physical activity environments as essential elements for good health.
- Health care facilities should support healthy behaviors including breastfeeding, healthy food options, and physical activity and not permit fast food chains on site.

Media

- Ensure media stories related to obesity, nutrition and physical activity include an environmental and policy perspective as well as discussion of individual responsibility.
- Reduce advertising to children broadcasted by television and radio stations.
- Shift the focus of obesity-related stories towards healthier eating & activity and away from weight loss.

The Strategic Alliance is currently engaged in building a broad and diverse membership. See eatbettermovemore.org or StrategicAlliance@preventioninstitute.org.

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