

Obesity
A Policy Research Study
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Abstract

The second leading cause of death in the U.S., obesity evolved in the second half of the twentieth century. So what happened in the 20th century that gave rise to this phenomenon? There are many factors involved for both its emergence and growth as will be explored. The obesity rate has accelerated dramatically in the past 20 years, in conjunction with a national trend toward sedentary lifestyles.

Although obesity is a recognized health risk, there have been relatively few public policies designed to reduce its prevalence. Americans have simply not given obesity the same attention as other risks, like smoking, but it is clearly a top health problem and one that is on the rise in all segments of the population. More effective clinical and public health approaches are urgently needed.

Further analysis of the impacts of obesity on health, economy, and society, as well as current legislation and the health care policy yielded recommendations promoting an integration of local school board requirements, Federal health programs, medical standards, corporate health programs, and family/community education for successful changes over time.

Purpose

This report will explore the evolution of obesity as an emerging epidemic in the developed countries spilling over into the developing countries. We will investigate the emergence of this post-modernist phenomenon as a by-product of our cultural, social, and technological advancements, and examine its impact on health, society, and economy. Through careful analysis of the current legislatures and policies, further recommendations will be presented in terms of public policy. Because the United States

is the undisputed leader in obesity prevalence, this report will focus on the problem in this country in the hopes of creating the foundation for a global expansion.

Introduction and Background

The second leading cause of unnecessary deaths, Obesity affects nearly one third of the adult Americans - approximately 60 million. According to the World Health Organization (WHO), this multifaceted disease is becoming a worldwide epidemic with the United States as the leader of its prevalence. Analysis of history reveals that this condition evolved in the second half of the twentieth century, more specifically, in the 1960s. So what changed in that period? It turns out that changes in culture, organization, and technology massively influenced the evolution of obesity in our society.

According to various theoretical writings, generational trends dictate the cultural opportunities and constraints imposed on individuals.¹ For example, the baby boomers experienced their childhood in the 1950s and came of age in the 1960s and 1970s. As a result of their shared historical experience, these men and women are, on average, more educated, have higher labor force participation rates (particularly the women), and practice vastly different familial forms than generations before them.² It is imperative to consider that one's body weight across the life course is constrained by the historical period she or he was born. That is to say some generation members are more likely to be obese than others simply because they were born during eras that obesity was more or

¹ Mannheim, Karl (1952), "Sociological Problems of Generations, Essays on the Sociology of Knowledge", *British Journal of Sociology*, 45, no 3 (Sept 1994): pp 481- 495, [http://links.jstor.org/sici?sici=0007-1315\(199409\)45%3A3%3C481%3AMSOGAU%3E2.0.CO%3B2-Z](http://links.jstor.org/sici?sici=0007-1315(199409)45%3A3%3C481%3AMSOGAU%3E2.0.CO%3B2-Z)

² Utz, Rebecca, "Obesity in America, 1960-2000: Is It Age, Period, or Cohort Phenomenon?" *Department of Family & Consumer Services, University of Utah*, (2005): <http://72.14.209.104/search?q=cache:zXfqccXjSGEJ:www.fcs.utah.edu/info/utahdemographers/binary/index.html%3Fid%3D38+history+of+obesity+in+america&hl=en&gl=us&ct=clnk&cd=9>

less common. That is why we see generations born later in the twentieth century exhibit higher prevalence rates at early ages than those born earlier in the twentieth century.³

According to American Association for the Advancement of Science, we live in a culture that promotes excessive food intake and discourages physical activity. “Although humans have evolved excellent physiological mechanisms to defend against body weight loss, they have weak physiological mechanisms to defend against weight gain when food is abundant.”⁴ This trend is noticeable in the restaurants around the nation as food portions are vastly larger from that of other countries. Other behavioral patterns also can modulate body weight, such as overeating due to boredom, depression, and anger among many others. If this trend continues in the same pattern, by 2016, 43% of our population will be obese.

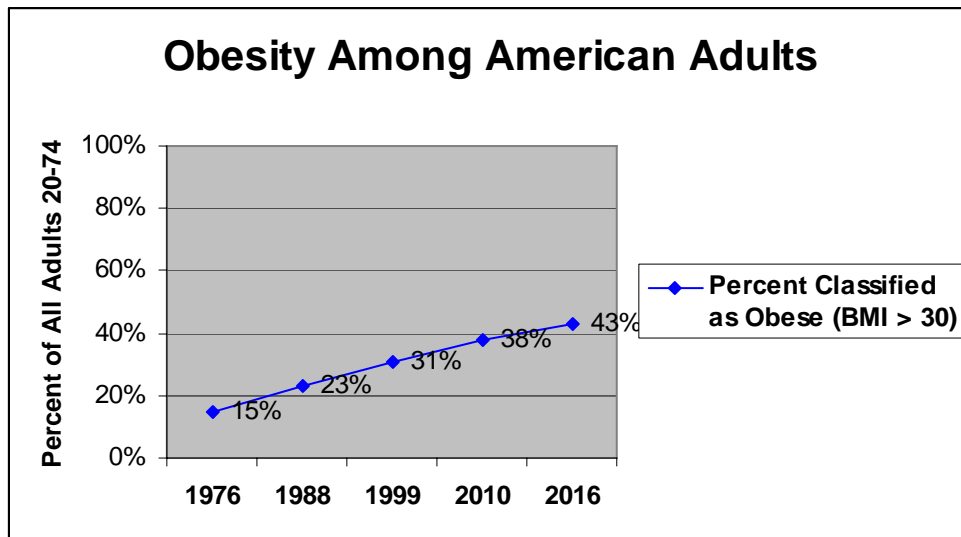


Figure 1: Continuing on current trends, nearly half of all Americans will be obese by 2016.

³ Ibid

⁴ James O Hill & John C Peters, “Environmental Contributions to the Obesity Epidemic”, *Science*, New Series, 280, no.5368 (May 29, 1998): 1371-1374, <http://links.jstor.org/sici?sici=0036-8075%2819980529%293%3A280%3A5368%3C1371%3AECTTOE%3E2.0.CO%3B2-V>

This social trend also differs from one race to another as well as different socio-economics groups. For example, obesity is far more prevalent in the African American community than white America. This could also be attributed to the fact that being overweight is socially more acceptable in black communities. Furthermore, research yields that Hispanic Americans also struggle more with obesity due to their cultural diet and lifestyles collectively. Another central factor to obesity in lower socio-economic classes is the much lower relative cost of food.

Enormous changes in agricultural policy in the US have led to food prices for consumers being lower than any other point in history.⁵ From another perspective, corporate America fails to market health and fitness to these communities as it will jeopardize its profits from the products targeted to these groups.

The twentieth century witnessed a massive explosion in technological advances. Television became a common household item in the 1950s. As the women of baby boomer generation embarked on the labor force, they relied more and more on “TV dinners” and processed foods to feed their families. Take-out is a common word among two-income families these days. Technology contributes to the problem of obesity on many different dimensions: for example, in the early 1980’s, the Reagan administration lifted most regulations pertaining to sweets and fast food advertising to children. As a result, increased marketing of these products plays a central role in the onset of childhood obesity. The sale of elaborate snack foods at schools and colleges highly influences the eating habits of children and adolescents. During the period 1971-74, childhood obesity stood at 5% between the ages of two and nineteen, whereas by 2002, nearly 15% of US

⁵ *Wikipedia*, s.v. “obesity”, <http://en.wikipedia.org/wiki/Obesity>

children were considered obese.⁶ Moreover, technology has exposed the young to the unprecedented sedentary lifestyles of this time and age. Where once childhood activities largely consisted of playing outdoors and more rigorous activities, children now spend the majority of their time in front of Xbox and various video games. This trend is also evident in the adult population. As technology has evolved, it expanded the market economy to include services that confine adults to spend more and more hours in front of computers or behind desks.

It is noteworthy to mention the role of heredity in obesity. Research has shown a link between genetics and obesity. According to scientists from Genetics and Genomics, Boston University Medical School, about 10% of humans have a sequence variation close to the INSIG2 gene. INSIG2 is a gene that controls insulin - in fact, it is induced by insulin. It inhibits the synthesis of fatty acid and cholesterol. People with a sequence variation near the gene seem less able to inhibit the synthesis of fatty acid and cholesterol - in other words, these people tend to accumulate more fat in the body. As a matter of fact, the Human Obesity Gene Map identifies more than 300 genes and regions of human chromosomes linked to obesity in humans. The map includes some 70 specific gene variants thought to cause a person to become obese.⁷

Aside from direct genetics role, there are possible conditions causing obesity.

The following lists some of these conditions:

- Eating disorder (Binge eating)

⁶ Patricia M. Anderson; Kristin F. Butcher, *The Future of Children*, Vol 16, no. 1, Childhood Obesity (Spring 2006), pp 19-45, <http://links.jstor.org/sici?sici=1054-8289%28200621%2916%3A1%3C19%3ACOTAPC%3E2.0.CO%3B2-W>

⁷Chagnon, Y.C., et.al, "The Human Obesity Gene Map: the 2002 Update", *Obesity Research*, 11(March 2004), pp 313-367, http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12634430&dopt=Abstract

- Hypothyroidism
- Metabolic syndrome
- Pituitary tumor
- Pseudohypoparathyroidism
- Cushing's syndrome
- Cohen syndrome
- Prader-Willi syndrome
- Laron Dwarfism
- Bardet-Biedl syndrome

Present-day Snapshot

- Today, approximately 127 million adults in the U.S. are overweight, 60 million obese, and 9 million severely obese.⁸
- Each year, obesity causes at least 300,000 excess deaths in the U.S.⁹
- Despite having been categorized as a clinical disease, overweight or obese individuals experience social stigmatization and discrimination in employment and academic situations.¹⁰
- According to a survey by Center for Disease Control, 9 percent of our national annual medical spending stems from obesity. About half of that is funded through the tax-payer's Medicaid and Medicare.¹¹

⁸ All data was extracted from American Obesity Association's website.
http://www.obesity.org/subs/fastfacts/obesity_what2.shtml

⁹ Ibid

¹⁰ Ibid

¹¹ The Daily Press, *Weighty Matters: Obesity is a Public Policy Issue – and Costly One*, (November 6, 2006), <http://www.dailypress.com/news/opinion/dp-66279sy0nov06,0,2324738.story?coll=dp-opinion-editorials>

- Obesity adds an additional \$33 billion to the cost of private health insurance.¹²
- In Virginia, obesity adds up to more than \$1.6 billion, of which, \$374 million is added to the state Medicaid budget.¹³
- Today, 16% of kids are overweight, and another 15% are at the risk of becoming too heavy. "Childhood obesity is like a massive tsunami headed toward the United States," says pediatric endocrinologist David Ludwig, director of the obesity program at Children's Hospital in Boston.¹⁴
- Parental obesity more than doubles the risk of adult obesity among both obese and non-obese children under 10 years of age.¹⁵
- According to a study by Harvard School of Public Health, women who are overweight or obese at the age of 18 are at a greater risk of dying in the middle age than women who stay at a healthy weight in their teens.¹⁶
- Obesity rates are increasing fastest among higher income Americans, those who make more than \$60,000 a year.¹⁷
- According to the National Heart, Lung and Blood Institute, an estimated 18% of U.S. adults older than 65 are obese and another 40% are overweight.¹⁸

¹² Ibid

¹³ Ibid

¹⁴ Nancy Hellmich, "Obesity Threatens Life Expectancy", *USA Today*, (March 16, 2005), http://www.usatoday.com/news/health/2005-03-16-obesity-lifespan_x.htm

¹⁵ Robert Whitaker, et al., "Predicting Obesity in Young Adulthood from Childhood and Parental Obesity", *The New England Journal of Medicine* 337, no. 13 (September 25, 1997), <http://content.nejm.org/cgi/content/abstract/337/13/869>

¹⁶ Nancy Hellmich, "Obesity at Age 18, Death in Middle Age", *USA Today*, (July 18, 2006), <http://www.keeppmedia.com/pubs/USATODAY/2006/07/18/1698886?ba=a&bi=14&bp=19>

¹⁷ Jennifer Robinson, MD, et al., "Obesity Spreading Out to All Income Levels", *Associated Press*, (May 3, 2005), http://www.biomed.lib.umn.edu/hmed/2005/05/20050503_obesity.html

Methodology

Research methodology consisted of:

a) An extensive literature search utilized the U.S. National Library of Medicine, Center for Disease Control, World Health Organization, Journal of American Medical Association, American Obesity Association, George Mason University library resources and various other electronic search engines. Research spanned the time period from 1960s to present time and materials were sorted into highly, moderately, somewhat and not relevant. Among the keywords that were used were “obesity epidemic,” “obesity in America” “overweight,” “obesity policy,” “obesity prevention,” “childhood obesity,” “economic effects of,” “media engagement,” “socioeconomic disparities,” “development interventions” and “risk factors.”

- b) Research analysis was focused on health, economy, and culture in terms of history and origins of the disease as well as factors involving its growth.
- c) Impacts of obesity on health, economy, and society were investigated.
- c) Extensive research on legislature, both on the past and present, was conducted.
- d) Analysis of a few corporations’ case studies was reviewed.
- e) Review of the Health Care Policy
- f) Conclusions & Recommendation were presented.

¹⁸ "Physical Activity and Older Americans: Benefits and Strategies," *Agency for Healthcare Research and Quality and Centers for Disease Control and Prevention*, June 2002, <http://www.seniorjournal.com/NEWS/Fitness/4-11-08DoctorFocus.htm>

Results

The American culture inadvertently promotes a lifestyle that facilitates, if not encourages obesity. Technical innovations to make life easier have made Americans lazy, impatient and gluttonous. We are a technologically-advanced culture that is dependent on ease of use and efficiency. Americans rely on technology to accomplish simple tasks that our ancestors did without aid. Technology has made lengthy processes much quicker and the American population has adapted to the new speed of life. But, ironically, as we lament how “fast time is moving” and the “speed of technology”; Americans are slowing down. Our work and leisure culture is centered around convenience rather than hard work and efficiency rather than challenge.

The prevalence of overweight among children aged six to eleven more than “doubled in the past 20 years, growing from 7% in 1980 to 18.8% in 2004. The rate among adolescents aged 12 to 19 more than tripled, increasing from 5% to 17.1%. Being overweight is the result of caloric imbalance (too few calories expended for the amount of calories consumed) and is mediated by genetics and health.”¹⁹ The CDC commissioned early efforts to examine obesity in children. The School Health Index (SHI), assisted schools as they assessed the increasing rate of obesity in school children: “By promoting healthy behaviors, schools can increase students’ capacity to learn, reduce absences, and improve physical fitness and mental alertness.”²⁰ The SHI was released in 2005 as an intensive campaign to battle the rising obesity rates. This campaign educates administrators on how to identify the healthiness of their schools and target unhealthy

¹⁹ Healthy Youth! Healthy Topics: Childhood Overweight
<http://www.cdc.gov/HealthyYouth/overweight/index.htm>

²⁰ School Health Index for Physical Activity and Healthy Eating: A Self Assessment and Planning Guide

behaviors in their student body. The SHI identifies the composites of a successful intervention team from several sectors including: health education, physical education, health services, nutrition services, counseling and psychological and social services, healthy school environment, health promotion for staff, and family/community involvement.²¹ This team is key to creating a holistic attack on obesity, and since the release of the SHI, communities have evaluated anti-obesity programs based on the involvement of all team members.

The efforts of the CDC were supported by academic surveys. Two studies, one published by *The American Journal of Clinical Nutrition* entitled “Pathways: a school-based, randomized controlled trial for the prevention of obesity in American Indian schoolchildren” and the other published in *Oxford Journals, Health Education Research* entitled “Healthy Youth Places promoting nutrition and physical activity” identified physical activity and healthy eating, along with education and lifestyle intervention, as norms in combating obesity in children. “The intervention had four components: 1) change in dietary intake, 2) increase in physical activity, 3) a classroom curriculum focused on healthy eating and lifestyle, and 4) a family involvement program. The main outcome was percentage body fat; other outcomes included dietary intake, physical activity, and knowledge, attitudes, and behaviors.”²² The holistic approach, including family education, instructor education, and nutrition was fundamental in working with students to make healthy choices preventing obesity.

²¹ [School Health Index for Physical Activity and Healthy Eating: A Self Assessment and Planning Guide](#)

²² [Pathways: a school-based, randomized controlled trial for the prevention of obesity in American Indian schoolchildren](#)

This year, on its website, The CDC recognized and warned the nation of the impending doom. It defined obesity as the condition when the weight of an individual is “greater than what is considered healthy for a given height²³”. The same website also estimated that over 30% of U.S. adults, about 60 million people, and 16% of children, about 9 million, were obese and warned of severe economic and social impacts. The World Health Organization (WHO) stated "the growth in the number of severely overweight adults is expected to be double that of underweight during 1995-2025" (WHO 1998). Crude projections of existing data in 2006 suggest that by 2025 as many as 45-50% of Americans would be obese²⁴.

The CDC attributed society’s tendency towards obesity to a combination of three causal factors a) behavioral, b) environmental and c) genetic factors. While genetics and individual metabolism do play a part, behavior and environment are equally important determinants of obesity.

In the recent past, “environmental factors” have played a significant part in obesity. The marketplace has seen a dramatic increase in the choice and variety of foods available to consumers. Large supermarkets and food-chains stock their shelves with greater and greater varieties of pre-packaged foods many of which are high in fats and sugars. Fast foods and soft drinks have also become increasingly popular and accessible as never before. In addition, the portion sizes have increased sizably. The NIH provides several informative brochures on this topic and offers this as an example: - In 1986 an average bagel was 3 inches in diameter and had 140 calories. Today, the size of a bagel

²³ <http://www.cdc.gov/nccdphp/dnpa/obesity/defining.htm>

²⁴ The Global Challenge of Obesity and the International Obesity Task Force, Report published at International Union of Nutritional Sciences (IUNS) website, <http://www.iuns.org/features/obesity/obesity.htm> (Date Accessed: Oct 15, 2006.)

has increased to 6 inches and has more than 350 calories. Twice the size and more than a two fold increase in calorific value. Needless to say, all of this has resulted in more calorie consumption.

Nevertheless, both in the work place and outside of it, Americans have become increasingly sedentary over the last few decades. The changing nature of the American economy, one from an industrial to information/technology based, has meant that physical activity is less and less a part of everyday American work life.

In addition, the “behavioral” choices made by consumers have contributed to obesity. The CDC noted that Americans have become increasingly sedentary²⁵ as technology has dramatically reduced opportunities for physical activity. The increasing availability of cars, elevators, dishwashers, washer/dryers etc. have meant that Americans don’t have to exert themselves quite as much physically as they once did. For example, Americans drive to a market a few blocks away than ride a bicycle or walk. As the Internet became more prevalent, Americans spent more time in front of their computer screens for information and entertainment. Several studies (CDC and the National Cancer Institute) have also clearly established a link between times spent stationary²⁵ in front of an electronic screen (TV, computer, video games etc.) and incidence of obesity. Furthermore, being “nutritiously aware” and making the right kind of food choices by avoiding foods high in fats and sugars can make a difference in obesity levels of an individual.

Studies demonstrated the importance of schools in providing nutritious meals, especially in communities with large populations of lower income families. A comprehensive campaign for local communities, school boards, and school committees

²⁵ <http://www.cdc.gov/nccdphp/dnpa/obesity/defining.htm>

implemented healthy changes in school foodservice programs. These programs are now providing material and information supporting dietary changes through Healthy School Nutrition Environment, Local Wellness Policy, and Healthier US School Challenge programs.

The program that proved to be most effective was the ‘Make It Happen!’ campaign. The success of Make it Happen! can be attributed to guidelines, support, and curricula focusing on local implementation of nutritional standards for competitive foods (defined as any food or beverage served outside of Federal meal programs, regardless of nutritional value.) Influencing food and beverage contracts, and making more healthful foods and beverages available.²⁶

An early success story came from The Austin Independent School District (AISD) in Austin, Texas. The AISD enrolls 78,000 students of whom 54.3% are eligible for free or reduced-priced school meals. The AISD was successful with its three objectives: 1) establish nutritional standards for competitive foods; 2) make more healthful foods and beverages available; and 3) use fundraising activities and rewards that support student health. As evidence of the program’s success, the state adopted new laws and developed a five year multi-strategy plan. At the local level, school volunteers were recruited to be trained in nutritional standards. The school board voted to make student health a top priority. Cafeteria meals were altered and carbonated beverages were prohibited in schools. As a result of fundamental local grassroots efforts such as in the AISD, 90% of school districts in the country have begun to address nutrition in schools since 2003.²⁷

²⁶ USDA <http://teamnnutrition.usda.gov/Resources/makingithappen.html>

²⁷ Success Stories: Approach 1: Establishing Nutritional Standards for Competitive Foods

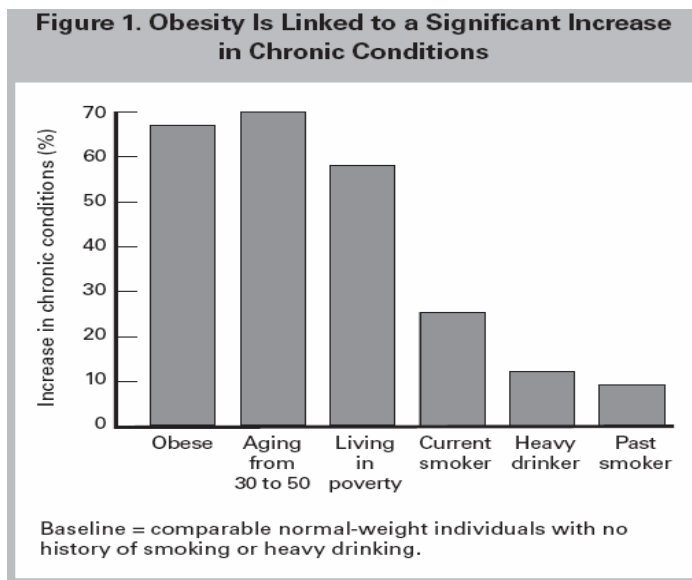
Impacts of Obesity

Health Impact

An explicit link between obesity and disease has been established for quite a while. It is well known that obese individuals are susceptible to many diseases. The CDC lists the following diseases that obese individuals are susceptible to:

- Hypertension (high blood pressure)
- Osteoarthritis (a degeneration of cartilage and its underlying bone within a joint)
- Dyslipidemia (for example, high total cholesterol or high levels of triglycerides)
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Sleep apnea and respiratory problems
- Some cancers (endometrial, breast, and colon)

In addition, Obesity is linked to a significant increase in chronic conditions



Clearly, obesity has reduced the quality of life of many of our citizens and has prevented them from leading a full, rich and productive life. The simultaneous effects have been felt on our health care system and the productivity and growth rate of our national economy.

Economic Impact

Obesity has put a severe dent in the economic health of our nation. The cost has been both direct and indirect. Direct medical cost has included “*preventive, diagnostic and treatment services*”²⁸ related to obesity. Indirect costs relate to morbidity and mortality costs. Morbidity costs are defined as “*income lost due to decreased productivity, restricted activity, absenteeism and bed days*”²⁹. Mortality costs are defined as the “*future income lost due to premature death*”³⁰.

Studies of direct costs quoted on the CDC website indicate that as early as 1998, the nations spent close to USD 78.5 billion (1998 dollars, about 92.6 billion 2002 dollars) in treating overweight and obesity. Approximately, half of these costs were paid by Medicaid and Medicare system³¹. In 1998 the incidence of obesity was much less than it is today (2016).

A simple mathematical extrapolation of these numbers demonstrates the approximate “direct” costs incurred by the U.S. economy to treat obesity. Conservatively, assuming a 20% incidence of obesity in 1998, and based on the WHO study quoted earlier, let us fix the incidence of obesity in 2016 at 40%, roughly twice that in 1998.

²⁸ http://www.cdc.gov/nccdphp/dnpa/obesity/economic_consequences.htm

²⁹ http://www.cdc.gov/nccdphp/dnpa/obesity/economic_consequences.htm

³⁰ http://www.cdc.gov/nccdphp/dnpa/obesity/economic_consequences.htm

³¹ http://www.cdc.gov/nccdphp/dnpa/obesity/economic_consequences.htm

Assuming linear costs, the U.S. economy will have to spend in 2016, twice the amount of money it did in 1998 which amounts to roughly U.S. \$200 billion in 2002 dollars. Further assuming a inflation rate of roughly 3% the cost to the U.S. economy in 2016 dollars can be estimated to be $\$200 \text{ billion} \times (1+0.030)^{14} = \300 billion .

The U.S. \$300 billion does not take into account any of the indirect costs (morbidity and mortality costs) that the economy will suffer in the future. While the few studies conducted on determining the indirect cost indicate that this cost will be much higher than the direct costs, it is difficult to pin down an exact number for the loss. Clearly, the cost of obesity will not be something that the U.S. economy can afford to ignore.

Social Impacts

Groaning under the weight of obesity related costs, (no pun intended) the nation's social security and health care system, which once provided America with the confidence to take risks, are now in a state of quick decline and face the prospect of bankruptcy within a few decades. The social security system built on the concept of "inter-generational trust" is betraying its participants – young and old – and will lead to intergenerational strife. This strife will manifest itself in the form of bitter political debates, partisan politics, protests, demonstrations and street agitations over issues such as taxation, public health care system, civil rights, pharmaceuticals, bio-technology, immigration etc.

Several big pharmaceutical companies have introduced the "skinny pill" to the market and doctors have prescribed it to millions of Americans. The cost of taking this pill is roughly \$200 for a monthly supply. The pharmaceutical companies spent over \$50

million on a mass marketing campaign to the American public advertising its safety and health enhancement benefits but never reveal some tragic side effects such as (stomach deformities, internal organ deformities, among other new diseases) caused to thousands of people. Most adverse side-effects do not show up until adulthood. Some effects have been seen in children taking this pill, though. Gastric bypass surgery is fast becoming more popular and routine as well as liposuction. Society is increasingly revolting against Big Pharmaceuticals by filing hundreds of lawsuits seeking personal and physical damages.

Legislation & Government

Federal and state laws do not have an enforceable impact on the increasing obesity problem. Trends in judicial decisions demonstrate that obesity is yet to be considered a disease or health issue in the same manner as other, more traditional, ailments. Radical proposals such as consumption taxes on junk food have received little support among legislators. Many local school systems have eliminated recess activities for elementary school students and cut physical education programs in middle school and high school.³² Despite changes coming from cash-strapped school boards, legislators have not stepped in to mandate more exercise in public schools.

A 2005 decision in the case of the Equal Employment Opportunity Commission versus Watkins Trucking Company (*EEOC v. Watkins, 2005*) demonstrated the legislative standing of obesity as a health care issue. The Sixth Circuit of Appeals upheld a lower court ruling that obesity is not a disability according to the Americans with Disabilities Act of 1990 (ADA) when the obesity is not physiological. In this case, an

³² Salinsky and Scott, p. 5

obese worker was injured when a ladder he was climbing broke. Unable to return to work within 180 days, he was terminated by his company. The plaintiff claimed he was protected by ADA and that his employer was discriminating against him because of his weight. The court ruled that his weight – almost 450 pounds – was caused by behavior and did not fit the intent of the disabilities described in the ADA legislation. Without this protection, the plaintiff and obese individuals like him are not protected from employment discrimination.³³

The courts and the government still do not recognize obesity as a disease. It is more difficult for obese people to afford expensive preventative treatments, particularly considering that Medicare and Medicaid do not cover preventative treatments or services. But awareness in the Federal government is increasing. As the link between obesity and government spending on expensive medical treatments grows, pressure will increase for the Federal government to intervene with tougher regulations and oversight. Government agencies such as the CDC and the National Institute for Health (NIH) continue to increase spending on programs to prevent and combat obesity. CDC spent \$34 million in fiscal year 2003 (FY 03) on programs to support research to increase physical activity and improve nutrition.³⁴ That focus from the Federal increased over the ensuing decade. It was barely enough, though, to counteract the aggressive spending of the food industry. Annually, the food industry spends \$33 billion on advertising and promotions.³⁵ This gross imbalance in spending ensures that the government agencies are unable to stem the rapid rise in obesity; although increased awareness and study have led to marginal improvements.

³³ *EEOC v. Watkins*, 2005

³⁴ Salinsky and Scott, p. 13

³⁵ *Ibid.*

Additional consequences include increased litigation of discrimination based on physical size. Lobbyists on both sides of the obesity issue are petitioning Congress and local legislators. For example, the New York City Mayor attempted to ban trans-saturated fats from restaurants in 2006. Many other cities considered similar actions.³⁶ However, snack food companies spend time and money lobbying to protect their right to produce and market snack food products. Therefore, the legislative environment will increasingly see an increase in lawsuits and lobbying efforts on both sides of the obesity issue.

Legislators recognized the obesity problem affecting child and adolescent populations. This is causing a proactive campaign in schools to educate younger generations about healthy lifestyles. Recently, Congress increased funding for programs to improve nutritional meals for schoolchildren. In addition to the National School Breakfast Program, the Department of Health and Human Services (HHS) funds a Summer Food Service Program and the largely-successful Women, Infants and Children (WIC) program. These are efforts to ensure access to nutritional meals among lower-income Americans – one of the most at-risk groups.³⁷

Discussion

Case Studies in Focus

Now we will explore the strategies and results of corporate wellness plans; from large corporations like General Motors and State Farm Insurance to smaller local businesses like Fairview Health Services and Florida Power & Light Co. These companies are the trailblazers in the early 2000's. Now other companies seek to emulate

³⁶ “Restaurant Industry Can’t Stop Transfat Grease Fire.” *New York Times*. October 31, 2006. <http://www.prwatch.org/taxonomy/term/136/9>

³⁷ Salinsky and Scott, p. 14.

this example by achieving a healthy, productive workforce while minimizing annual expenditures for their employees' health and wellness benefits.

Since companies come in all sizes, it is important to recognize that not all wellness programs aimed at fighting the symptoms of obesity are created equally. State Farm Insurance Co. offers a program that has expanded beyond corporate headquarters into the many representative offices around the country reaching over 72,000 employees.³⁸

The following is a list of incentives provided through the program that help curb obesity:

- Free and voluntary health exams at ages 25, 30, 35, every other year 40-50, and annually after age 50.
- Walking challenges to walk to work and during work in walking groups.
- Reduced-cost Yoga, Pilates, Weight Watchers at Work, and Jazzercise classes.
- National discounts to Bally's Total Fitness and/or Gold's Gym.
- "Lunch and Learn" seminars to educate employees on nutritional alternatives
- Monitoring and focusing on specific health topics such as obesity and eating right.
- Disease management for diabetes and other chronic issues associated with obesity through the State Farm Employee Group Health Plan.³⁹

The philosophy behind State Farm's plan for a healthier, more-fit workforce is simple. The company preaches managing risks to their clients. In turn, they feel their clients should be responsible enough to manage their own health risks as well. State Farm's success was exemplified early on in its implementation by employees like Lisa Holland who would try personal weight loss programs only to get bored and give up.

³⁸ Online Resource: State Farm Homepage <<http://www.statefarm.com>>

³⁹ Ibid.

After participating in the company's program, Lisa said, "Having the classes here at work is tremendously convenient and the price break is also a big plus, both of which have given me the opportunity to participate regularly. I'm having fun and am feeling good about myself. I don't think I'll ever get bored with exercising again because the possibilities really are endless!"⁴⁰

Medium-sized companies are also becoming more active in promoting healthier lifestyles. Fairview Health Services and Florida Power & Light Co. are both examples of successful companies that have managed to implement programs that are aimed in part at curbing obesity. In the case of Fairview, they spent \$2.3 million annually for their incentive-based program in 2005. 80% of their 13,000 employees actively participated. While upper management cringes at the thought of spending this much, the estimated savings justify the means. Barbara Eischen, director of health and benefits services, reported that over the period 1996 – 2003 the company saved, "\$464 per employee—\$282 in medical-plan expenses, \$75 in reduced absenteeism, and \$107 in workers' compensation costs—or \$5.6 million for the entire company."⁴¹

Because of the results at Fairview, the premiums on their employee health care plans increased at about half the rate of other area businesses. This saved the company substantial annual outlays that were reinvested in the program. As other companies adopted these practices, annual insurance premiums will level off with smaller growth than in previous years.

Florida Power & Light Co. is also not a giant in the corporate world. Yet FP&L has managed to produce a health program that can boast a 325% rate of return over a

⁴⁰ Ibid.

⁴¹ Mochari, Ilan, "Belt Tightening: Can coaxing employees to live healthy lives help keep the bottom line in shape?" *CFO Magazine* February 22, 2005.

five-year period. The reason is that unlike large corporations that outsource and spend money for other companies to create a health program, FP&L has created the program itself using internal resources; saving money in the process.⁴² FP&L believes the best way to get employees actively involved is by having upper management become visible participants in the program. As a result, FP&L has an 84% participation rate. The increasing margins of returns suggest that short run costs set up long term savings for just about any company of any size.

General Motors is probably the best case for how such benefits can be realized. It is estimated that about 3% of the employees classified as “mid to high-risk” move to “low-risk” on an annual basis at GM. Additionally, absenteeism has fallen leading to savings of \$350,000 per plant annually.⁴³ With a relatively stable workforce, GM is able to recoup its initial investment at a better rate than most other companies. By fighting the health care issues that cause obesity, the corporate world is indirectly creating a more stable environment and working harder on employee retention.

Not only are companies investing in wellness programs, some members of U.S. Congress are working to pass legislation that will support wellness plans in the schools and the workplace. In 2002, the Senate’s only physician, Bill Frist, stood up on the floor and noted the obesity statistics in America, sadly announcing, “what is remarkable is that this is getting worse.”⁴⁴ The movement towards the Improved Nutrition and Physical Activity Act (IMPACT) was underway. With bipartisan support, this bill made was enacted into law by 2004. It provided tax incentives to businesses for corporate wellness

⁴² *Ibid.*

⁴³ Berwick, Donald, et al. “The Business Case for Quality: Case Studies and an Analysis” *Health Affairs* vol. 22, no. 2, pp. 17-30, 2003.

⁴⁴ O’Bryan, Will, “Anti-Obesity Legislation Aims to get America Moving Again” *Health Behavior News Service*, 2002.

programs and focused particularly on nutrition in the schools.⁴⁵ In July 2005, a House resolution expressed the sense of the Congress with respect to obesity in the United States:

“(2) the Federal Government has a responsibility--

(A) to endeavor to raise awareness about the medical complications of obesity and its alarming prevalence and incidence growth, as well as the medical model for its assessment and treatment;

(B) to increase funding for research so that causes of and improved treatment for obesity and overweightedness may be discovered;

(C) to continue to consider ways to improve access to quality health care services for the early assessment of risk and treatment of obesity; and

(D) to target prevention and intervention to reduce obesity and overweightedness in children and adolescents;”⁴⁶

The Preventive Medicine for a Healthier America Act of 2006 includes a wellness program credit to companies “for any taxable year... equal to \$200 per qualified employee employed by the eligible employer during the taxable year.”⁴⁷

In addition to the government becoming involved, the health care and pharmaceutical industries recognized that there is a profit to be made by advancing technologies that can reduce obesity. While bariatric surgery is the commonly used high technology in 2006, by 2016 Transcend II Gastric Stimulator had replaced “stomach stapling.” Transcend II Gastric Simulator is a device that curbs the appetite by initiating

⁴⁵ O’Bryan, 2002.

⁴⁶ Library of Congress, H. Con. Res. 204, July 2005. <http://thomas.loc.gov/>

⁴⁷ Library of Congress, H.R. 5657, Sec.45N, June 2006.

the sensation of fullness.⁴⁸ A similar device is an implant the size of a 35mm roll of film that acts as a neuro-stimulator, again making the person feel full artificially. Additional electronic implants include one that inhibits the main nerve of the stomach accelerating the sensation of feeling full. Another electronic device being developed by Leptos Biomedical of San Diego stimulates the nerves that are activated during exercise. The hope is to increase metabolism and accelerate weight loss.⁴⁹

Health Care Policy

Obesity and its associated health issues are having a significant influence on the U.S. economy. In 1999, the American Obesity Association (AOA) commissioned a study to determine the real cost of treating medical conditions related to obesity (body mass index greater than 30). The study concluded that the total cost for treating all conditions related to obesity (such as diabetes, heart disease, apnea, hypertension, and lower back pain) was \$238.2 billion. Treating conditions related to all overweight health problems in adults (not necessarily with a BMI > 30) totaled \$936 billion in 1999 dollars.⁵⁰ These staggering figures continue to grow with profound impacts on the U.S. economy.

While spending on treatment of diseases related to obesity continues to increase, numerous Americans remain only partially covered by the health system. The privatized model of health care is already scrutinized for failing to cover 15.7 percent of the American public.⁵¹ The additional spending on obesity related illnesses will amplify this problem by increasing the cost of health care to the average citizen. As a result, the

⁴⁸ “Multiple devices under development to curb obesity without surgery. (Technology and Trends)” *Journal of Clinical Engineering*, Oct. – Dec. 2005, v30, i4, p.201.

⁴⁹ *Journal of Clinical Engineering*

⁵⁰ http://www.obesity.org/research/cost_report.shtml

⁵¹ <http://www.nchc.org/facts/coverage.shtml>

additional costs will likely increase the amount of people who cannot afford coverage and turn to government Medicaid and Medicare.

Further, private insurance companies are forced to stem the growing expense of dealing with obesity-related illnesses by providing coverage of preventative treatments and programs. Many insurance providers are recognizing that there is a correlation between obesity and other illnesses such as diabetes, cancer, heart disease, and hypertension and will promote preventative and diagnostic treatment. They encourage employers to support healthy lifestyles by sponsoring health awareness education, providing healthy meal options in company facilities and offering gym subsidies or access to exercise equipment. However, other insurance providers are reassessing their policies and classifying obesity as a pre-existing or high risk condition. This prohibits obese people from obtaining certain levels of health care coverage or life insurance, again forcing them onto the government's Medicaid roles and driving up the cost to the taxpayer.

Obesity disproportionately affects people in lower socio-economic classes. Healthy food options are generally more expensive than convenience and processed foods, which tend to be high in calories and fat content. Therefore, many families on limited budgets opt for low cost food items while sacrificing nutritional value. Numerous studies have shown that lower-income and minority groups are more susceptible to obesity problems. Poorer diets, because fast foods are cheaper than healthy alternatives, and decreased access to parks and sporting facilities lead to a higher rate of obesity among minorities and low income communities.⁵² HHS has recognized this correlation and is investing more Federal funding to improve access to Food Stamps and WIC.

⁵² Salinsky and Scott, pg. 6

Regulations on the use of food stamps are being adjusted to ensure that the Federally-funded program is used to supply nutritious foods rather than simply high-calorie foods to lower income Americans.

As Americans continue to gain weight and the cost of obesity-related problems increases, technology, government regulation, and business and economic pressures will combine to counteract the problem. Obesity will remain a significant and costly problem for the next decade. We will see little overall curbing of growth even as medicine and technology improve to make preventing obesity easier. The rate of increase in obesity will remain steady through the next decade. By 2016, 43% of Americans will be obese while the cost of obesity will rise above \$1 trillion annually.

Conclusions

The efforts to prevent and find a cure for obesity are integrated – science with social science, business, and government. Presently, we are on track to realize the best and worst scenarios for obesity. To change the future and increase the likelihood of a scenario we aspire to create there are important actions to take in the near term. It is not possible to convey all the possible choices available to public policy makers, employers, healthcare providers or patients or predict the outcome of all. However, the awareness to the obesity epidemic on the national health agenda should be raised with an urgency the crisis deserves. Even with effective policies it will take time to make headway because even the most optimistic scenario of grassroots, federal and academic programs shows that obesity will be with us for a while. If we stay the current course the incidence of obesity in U.S. will more than double.

Recommendations

It is my recommendation to develop educational efforts and preventive programs to tackle the issue of obesity. Several factors influence its success including nutritional diet, health education, and physical activity. Federal standards, academic studies, and grassroots activities should increase to influence a whole generation to overcome the obesity epidemic.

In concert with the great advancements in educational and youth programs for fighting obesity, the corporate world should make giant strides in tackling obesity. As part of an overall health agenda to cut operational costs associated with health insurance benefit plans, corporations could take a proactive role in preventing obesity. The belief is that the dramatic shift in the minds of corporate CEOs, from short-term cost cutting to long-term productivity, lays the groundwork for a healthier, leaner society. With good health habits instilled in the general workforce, these employees are expected to implement the same practices with their families. This leads to better health habits for both those being subsidized as well as the dependents of those employees.

Legislative efforts should support the positive transformation of the obesity crisis. Local school board requirements, Federal health programs, medical standards, and corporate health programs are examples of successful changes over time. Today, medical science proposes several cures – biotechnology, germ-line engineering, various surgery options, skinny pills, and even technological enhancements to the food we eat. These factors, in conjunction with an environment of scientific and technological breakthroughs can massively influence the trends of this phenomenon.

There is a bright future for policy makers, healthcare leaders and community activists to use as a guide for defeating obesity. I pose the following questions to policy makers to help with an effective agenda against obesity;

Obesity Public Policy Questions

1. Are there viable policy wins that could move us toward a systems change focused on factors that can address the epidemic of obesity?
2. What congressional committees have jurisdiction over policies to address each factor identified for intervening in the obesity epidemic?
3. What federal agencies should play a lead role and which should be involved in implementing policies?
4. Beyond the Federal Government, what policies for obesity should regulatory agencies, states, local governments, schools, employers, communities, and advertisers execute to address obesity?
5. What current Federal policies are preventing progress?
6. Can a market-driven approach to health care work or do we need universal access to provide effective prevention and obesity management?
7. Can we alter payment systems so that providers and consumers have the incentive for prevention, care coordination and healthy outcomes?
8. When should we look for cultural and behavior change rather than an expensive technology (such as surgery, germ-line engineering, drugs) to address obesity?
9. Should state power, possibly in the form of new regulatory institutions, be used to regulate biotechnology? Additionally, should we strive for strong international regulation of human biotechnology?

10. What are the responsibilities of the food industry (producers, processors, restaurants, marketers and advertisers) and what are the responsibilities of the individual in addressing obesity?

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