

# Social Burden of Obesity on US Adults

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**ABSTRACT.** Obesity has become a major public health problem in America. Nearly two-thirds of adults are either overweight or obese. This problem is large enough to begin to rival health problems associated with cigarette smoking. Epidemiological evidence suggests that obesity is associated with heart disease, diabetes, and other diseases that can lead to morbidity and even premature death. This paper examines the magnitude of the problem and then suggests several solutions from societal and social work perspectives. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.HaworthPress.com> © 2005 by The Haworth Press, Inc. All rights reserved.]*

**KEYWORDS.** Obesity, overweight, minority challenge, public health, advocacy

The health improvement enjoyed by Americans in the 20th century is nothing less than remarkable. The age-adjusted life expectancy over the last century increased by 56%. Correspondingly, the age-adjusted death rate declined by about 74%. In the year 2001, life expectancy reached a historic high of 76.9 years. The infant mortality rate was a record low of 6.9 per 1,000 live births. Timely prenatal care women received during the first trimester increased from 75.8% in 1990 to 83.4% in 2001. A

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major indicator of quality maternal care, maternal mortality, is about 7.1 deaths per 100,000 live births today, as compared to 916 in the early part of the 20th century (Guyer et al., 2000; MacDorman et al., 2002). Infectious diseases that accounted for nearly a quarter of all deaths in the early 1900s are no longer a leading health threat to Americans. Small pox is eradicated from the earth. Polio is no longer a health threat to Americans, and in the near future it, too, is expected to be eradicated for good (Foege, 2000).

Despite the remarkable health care achievements of the 20th century, the Surgeon General of the United States has declared that health problems resulting from overweight and obesity could reverse many of the health gains achieved in recent decades. The Surgeon General, however, acknowledges that while the overweight and obesity problem does not yet approach other major public health threats (e.g., heart disease, cancer, etc.), it could rival the number of diseases and deaths that result from cigarette smoking if it is left unabated (HHS, 2001). Overweight problems could become one of the most pressing public health challenges of today, and they must be confronted immediately. This paper examines the magnitude of the obesity problem in the US and suggests several actions that might reverse the current trends scientists have observed.

### ***PREVALENCE OF OVERWEIGHT AND OBESITY***

#### ***Source of Data***

The data for the following analysis come from the National Center for Health Statistics (NCHS), a division of HHS. To ascertain a variety of health indicators, the National Health Interview Survey (NHIS) was administered in selected households during the year 1997-1998. The data were collected by using a multi-stage clustered sampling technique. Through this process the nationally representative sample (N = 68,556) was produced from non-institutionalized adults over 18 years of age in all 50 states and the District of Columbia. A final response rate of 77.2% was obtained (Schoenborn et al., 2002).

Overweight and obesity are defined by Body Mass Index (BMI). Over 50 scientific and medical organizations determined that greater health risks are associated with a BMI greater than 25. To calculate BMI, divide weight in pounds by the square of the height in inches, then multiply that by 703. Under this guideline, persons with a BMI of at

least 25 and less than 30 are considered overweight but not obese. Persons with a BMI of 30 or more are classified as obese (HHS, 2001; National Institute of Digestive & Diabetes & Kidney Diseases, 2001).

### ***Findings***

Since heavier weight poses the greater health hazard, the focus of the findings will be centered on obesity with a general reference made to the overweight category when it merits attention. The data show that overweight and obesity are significant problems in the United States, and that the prevalence of obesity appears to be associated with a sociodemographic profile. Descriptive statistics are used to present the findings of this study. While a test of statistical significance may have produced a more robust analysis, the large number of the nationally representative sample (N = 68,558) involved in this study may be sufficient to negate any limitations inherent in the descriptive analysis. Given the sheer size of the sample, even a small variation is statistically meaningful and could not be ascribed to chance.

*Sex.* Both men and women have a significant problem with weight. About two-thirds (62.7%) of all adult men in the US and nearly one-half (46.9%) of all adult women in the US are either obese or overweight. Though there was virtually no difference in the obesity rate between men (19.7%) and women (19.3%), more men were overweight than women. Almost one-half of all men (43.3%) were overweight while 27.2% of all women were overweight. The difference in obesity rates between men and women in each respective race was minimal except for blacks. While the rate of difference for men and women in each of their respective races was less than 2%, the obesity rate for black women (32.9%) was nearly one-fourth greater than black men (24%) (Table 1).

*Race.* The obesity rate was higher among racial and ethnic groups. The obesity rate among whites was 18.2%, followed by Hispanics at 22.6%, but blacks (29%) were fully one-third greater than whites. Though overweight was significantly higher than obesity among all races, the association between race and obesity was more prominent than race and the overweight category. The obesity rate among Asian/Pacific Islanders was lowest at 6.3%, with overweight at 25.2%, but these figures are too problematic to be considered for comparison with other racial groups because this group lacks sufficient sample size, and they had a standard deviation that was too high to be completely reliable (Table 1).

TABLE 1. Percent Distribution of Body Weight for Adults, by Selected Characteristic, 1997-1998

	Total		Male		Female	
	Overweight (%)	Obese (%)	Overweight (%)	Obese (%)	Overweight (%)	Obese (%)
<b>Age</b>						
18 Years +	35.2	19.5	43.4	19.3	27.2	19.7
<b>Race</b>						
Hispanic	39.0	22.6	44.4	21.8	33.4	23.3
White	34.8	18.2	44.0	18.7	25.8	17.6
Black	36.6	29.0	41.7	24.0	32.3	32.9
Asian/Pacific Isl.	25.2	6.3	29.7	7.1	21.2	5.8
<b>Education</b>						
Less than HS	35.7	24.7	40.2	21.8	31.3	27.4
GED	35.3	25.0	39.9	24.4	30.0	26.1
HS Grad	35.9	20.9	43.9	20.9	28.9	20.8
Some College	35.6	19.7	45.0	20.6	26.7	18.9
Assoc Degree	35.8	19.5	46.0	20.1	27.4	19.0
BS/BA	33.9	13.6	44.3	14.8	23.2	12.5
MS/Doctorate/MD	31.0	11.3	41.7	12.0	18.6	10.5
<b>Poverty States</b>						
Below Poverty	30.9	26.0	35.3	21.7	27.9	28.7
1.00-1.99 x Above	34.5	24.2	39.6	22.8	30	25.4
2.00-3.99 x Above	36.1	20.6	43.3	20.2	28.8	20.9
4.00 x Above	35.9	15.8	45.9	17.7	24.4	13.7

N = 68,556

Source: Schoenborn, C.A. et al. (2002). Body Weight Status of Adults: US, 1997-1998. Advance Data From Vital and Health Statistics; No. 330. Hyattsville, MD. National Center for Health Statistics

*Education.* The obesity rate was highest among those with the least amount of educational attainment (24.7%). The rate of obesity decreased with an increasing amount of education. Those with the least amount of education had more than twice the obesity rate of those with the most education (11.3%). However, the prevalence of overweight appears to be unrelated to educational attainment; the difference between those with less than high school education (35.7%) and those with an advanced degree (31%) was only about 5%. Education had a limited impact on overweight for men (about 6% difference), but there was a noticeable difference for women. Over 31% of women with lim-

ited education were overweight while only 18.6% of those with the highest education were overweight (Table 1).

*Income.* Obesity was highest among persons living below poverty income (26%). Similar to the relationship observed between obesity and education, the obesity rate decreased with increased income. Those who earned more than four times the poverty income showed only about half the obesity rate at 15.8%. The impact of income appears to affect women more significantly than men. Women who live below poverty (28.7%) have more than twice the likelihood of being obese than those with more than four times the poverty income (13%). Overweight was noticeably associated with income for men, but there was no discernable association in the overweight category for women. While overweight decreased with increased income for men, women's overweight status was similar, regardless of income (Table 1).

## **DISCUSSION**

### ***Consequences of Obesity***

*Health.* Severe obesity among young adults can have a profound impact on life span. Fountain and Associate's (2003) calculation shows that the Years of Life Lost (YLL) due to obesity for white males is 13 years, and 20 years for black males. Obese white females lose 8 years of life, and black females lose 5 years. The total number of deaths resulting from obesity is now approaching the death and disease rate resulting from smoking in the United States. In their study, Allison et al. (1999) estimate that approximately 280,000 deaths per year are attributed to unhealthy weight. Another study shows that even a modest amount of excess weight (10-20 pounds) can increase the risk of death among adults (Calle et al., 1999).

Obesity not only contributes to increased mortality but it is also a known risk factor for a host of serious health problems. Willett et al. (1995) and Galanis et al. (1998) find that unhealthy weight gain increases the risk of coronary heart disease in both women and men. Even a modest amount of weight gain should be reason for concern. For example, Ford et al. (1997) find that with each kilogram increase in weight, the risk for diabetes increases by 4.5%. Unhealthy weight at the beginning of young adulthood that continues into adulthood is even associated with certain forms of cancer. Though overweight may not cause cancer,

Lubin et al. (2003) find that there is a statistically significant association between unhealthy weight and ovarian cancer among Jewish women.

*Financial.* The economic burden related to obesity is also substantial. Estimating from the 1988 and 1994 National Health Interview Survey (NHIS), Wolf and Colditz (1998) calculated that the total economic cost attributable to obesity was \$99.2 billion in 1995 dollars. The economic burden refers to both the direct medical cost and the indirect cost associated with obesity. The direct medical cost is calculated by examining hospital care, physician's services, medications, and the like, whereas indirect cost is estimated by examining the amount of lost productivity from premature death, and restricted labor activities associated with obesity.

Approximately \$51.64 billion was attributable to direct medical cost. Of that amount, more than half (\$32.4 billion) went to treating type 2 diabetes. Coronary heart disease followed with \$16.97 billion, then osteoarthritis with \$4.3 billion, and finally hypertension with \$3.23 billion. Though it is more difficult to estimate indirect cost, extrapolating from the labor days lost from premature death, disability, and excess absenteeism, it was calculated that approximately \$47.56 billion was lost from productivity (Wolf and Colditz, 1998). In a large study of employee absenteeism, Tucker (1998) finds absenteeism among obese employees to be more than 1.74 times those who had healthy weights.

*Social and emotional.* Obese persons encounter social stigmatization and discrimination. To some degree, a stigma against overweight people is still considered a socially acceptable form of prejudice because many believe that overweight people have control over their weight. Overweight people are often viewed as gluttonous, lazy, of weak character, or even immoral. Because of stigmatic stereotypes for overweight people, many experience difficulty obtaining jobs. Others experience forms of ostracism, discouragement, and violence from preschool to college. Some even encounter hostile attitudes from health care providers instead of compassionate care (Schwartz & Brownell, 2002; Solovay, 2000).

They also face an intense social pressure to lose weight, a pressure that rivals giving up alcohol and drugs. Getting unwanted advice is not unusual, and sometimes it is more disparaging than helpful. When they are unable to meet the demands and expectations of their family members, friends, and even themselves, they are convinced that they are undesirable and are willing to blame themselves for being viewed negatively. They experience greater social anxiety, depression, low self-image, and lower quality of life than those with healthy weights. Subsequently, they may choose to retreat from social opportunities and isolate themselves from

others, so they tend to date less or have less satisfying relationships with their spouse or mates (Schwartz and Brownell, 2002; Cook, 1991).

### ***Factors Contributing to Obesity***

Though the determinants of obesity are complex, obesity results when a person regularly consumes more calories than the body is able to metabolize over a period of time. How the body metabolizes calories differs from person to person, and what causes this to happen is not well known. However, there is increasing evidence that obesity is caused by a combination of behavioral, genetic, and social environmental factors

*Behavioral factor.* Unhealthy dietary habits and sedentary behavior account for a large part of the overweight problem in the United States (HHS, 2001). According to a recent report, very few Americans follow the dietary guidelines recommended by the Food Guideline Pyramid. As a result, many are consuming excessive calories and neglecting nutritional foods that are necessary to maintain healthy body weight (HHS, 2000). Katic (2003), testifying before a Senate Committee on Health, Education, Labor, and Pension, stated that though some foods are high in calories and fat, they of themselves are not necessarily “bad”; however, these foods can cause problems if individuals fail to proportion them in a balanced diet.

Physical inactivity is another behavioral factor that can contribute to the overweight problem. According to a recent study, less than one-third of all adults in the United States are involved in some form of physical activity, and fully 40% are not engaged in any form of useful physical activity. Many spend time on television and computers, and driving has replaced walking or riding bicycles (HHS, 2000).

*Genetic factor.* Though not all obesity is predetermined by genetic factors, there is a strong link between heredity and obesity. Family members tend to resemble each other, including body weight. It has been shown that adopted children develop body weights closer to those of their biological parents than those of their adoptive parents (NIDDK, 2001). Because of genetic variation, individuals tend to respond differently to food intake and exercise. Some have a predisposition to store more fat than others do. Thus, some are more susceptible to weight gain than others. It has been hypothesized that one’s predisposition to store energy into fat is a result of a long evolutionary process, and that to survive in a time of scarcity, the body stores fat during a time of plenty (Neel, 1999). Even though genes play an important role, genes and environmental factors must combine to increase one’s susceptibility to



obesity. In other words, in addition to genetic factors, food supply or types of food and other outside environmental factors often contribute to obesity.

*Social environmental factors.* Social environment is another factor contributing to increased weight. When easier access to food with fat and high caloric contents is coupled with changing family life, work arrangement, and community composition, it becomes increasingly difficult for people to make healthy life choices. As noted by Chou et al. (2002), as more people spend increased hours at work, they find less time to prepare nutritious meals at home. With limited time, people are consciously choosing to eat outside of the home to save time so that they can pursue other activities with the remaining time. Data show that meals and snacks eaten away from home have increased more than two-thirds between 1977 and 1995. While some of these foods are healthy, typical meals eaten outside of the home are higher in fat, sugar, sodium, and calories, and the portions tend to be larger than meals eaten at home (Lin et al., 1999).

### **INTERVENTION STRATEGIES**

Obesity is a public burden as much as it is an individual challenge. The impact of obesity is felt from the health care system to the macroeconomic outcome. Thus, the solution to the obesity problem cannot be left to individual efforts alone. The concerted efforts of intersectorial forces along with individual initiatives are required to better manage the obesity problem. In large part, the collaborative efforts of the individuals affected, social institutions, and public policy directives have made the improvements in the management of infectious diseases, tobacco cessation, violence prevention, and mental health treatment that we have witnessed in recent years (HHS, 2001). In the same vein, the following three initiatives should be considered to manage obesity more effectively. One, individuals and families must be given the basic knowledge and tools necessary to maintain a healthy weight. Two, social institutions and organizations in the community must be involved to create a healthful living environment. Three, government sectors must lead by implementing policy directives to promote positive social norms. The merits of these strategies are not based on curative effects; rather, these strategies are designed to help people promote and maintain a healthy body weight.



### ***Individual Behavioral Change Focus***

It would seem logical that if people are given the right information, they will make decisions based on that information and improve themselves. A cursory observation shows that there is a large body of knowledge on issues of obesity, but the way it is presented or documented is confusing or inappropriate for some cultural groups. Because of this, many do not benefit from the current knowledge in the field. To fully maximize the existing knowledge, only few selected individuals and organizations should disseminate it. For instance, family physicians are well positioned to provide timely information in a sensitive way during routine physical examinations. They can help dispel myths by using plain language that patients can understand. Moreover, as family physicians, they can impress upon patients that overweight is more than an embarrassing personal issue and urge them to take appropriate actions to manage their weight.

Women, Infant, and Children (WIC) providers are also well positioned to provide much-needed services and direction to those who are most disadvantaged. WIC is specifically designed to target low-income groups, but they also have the ability to reach out to other vulnerable groups in the community. WIC recipients would benefit even more if the providers were able to include more comprehensive obesity-prevention and weight-maintenance components into their nutrition classes and counseling services.

Public service announcements are another important strategy that can be used to disseminate relevant information to a wide audience. As noted by Dietz (2003), sophisticated marketing messages launched by the Center for Disease Control and Prevention (CDC) have increased healthy behaviors among youth. These public campaign messages have reduced television viewing and increased physical activity. The CDC anticipates that similar efforts in the near future will encourage parents to pay more attention to the overall health of their children.

### ***Neighborhood and Community Initiative***

A healthy neighborhood would provide more options for a healthy life style. People make decisions every day based on their environment. For instance, when healthy food is too expensive or is unavailable in the neighborhood, people will purchase more affordable but unhealthy food. People will drive more if the neighborhood is without sidewalks or if facilities are accessible only by driving. More people will drive if the neigh-

borhood is unsafe. On the other hand, if the neighborhood is more accommodating to walking or bicycling, fewer people will drive (Dietz, 2003). For this reason, community leaders must work together to create more health-conscious neighborhoods. In part, these efforts can be accomplished by encouraging food chains and restaurants to offer more affordable and healthy foods, working to create safer neighborhoods, and planning to build neighborhood schools, shopping centers, and local parks that are easily accessible to people who live in the neighborhood.

Public schools, in partnership with parent organizations (PTA, Parent Council, etc.), can work toward promoting healthy life options. Given that the overweight problem is a lifelong process and that most children spend a substantial amount of their time in school, launching programs for the promotion of healthy weight in schools can be effective. Some schools have already implemented innovative programs to fight overweight problems among students by increasing awareness and providing tools for teachers, parents, students, food service staff, coaches, and nurses. Other schools have prohibited the sale and serving of “junk food,” and have established a nutritional standard for breakfast and lunch served in elementary and middle schools. These types of programs could also be implemented in the work place and other social institutions in the community (Dietz, 2003).

### ***Public Policy Directives***

Another way to promote and maintain healthy weight is to reshape social norms by pursuing more aggressive public policy directives. Practices and conditions that have contributed to obesity have been ignored (if not tolerated) for too long. Legislating social behaviors may be difficult, but this approach has been found to be successful in other countries, and there is a growing movement toward adopting such an approach in the United States (Milo, 1998; Nestle & Jacobson, 2000).

Several exemplary public policies are already in place, and they should be accompanied by other policies to better confront obesity. Legislation that prohibits predatory practices in the food industry are heading in the right direction. Regulatory policies that require companies to place warning and nutrition labels on foods are also heading in the right direction. Likewise, the tightening of food-related health claims should be strengthened. How “junk food” is advertised to children should be seriously considered. Economic incentives to produce healthful food and greater taxation and increased liability for producing unhealthful food should also be considered. The creation of laws and

policies and the allocation of societal resources are both needed to improve our social functioning. Individual and community efforts can be undermined without the support of a broad public action (Hawkes & Madanat, 2003; Jacobson, & Brownell, 2000).

### ***ROLE OF THE SOCIAL WORKER***

Social workers can promote public action by raising attention to weight-related health problems. Though the obesity problem is both sensitive and challenging, if it is acknowledged as an important public health issue, the problems associated with obesity can be better managed. An effort to draw attention to this matter has been initiated by the Surgeon General's office, but its efforts have been insufficient to put the matter in the forefront of public interest. While government efforts are useful and necessary, public interest is more effectively generated at the community and neighborhood levels, a fact that is particularly true with low-income or disadvantaged communities. People tend to respond more positively to trusted individuals and neighborhood organizations. Hence, social workers need to mobilize and work with schools, churches, neighborhood associations, health care providers, media, and the like to begin community discussions. Many of these organizations are already committed to promoting the well-being of community members, and they have the resources and expertise that are relevant to the people in their community. Through partnership with these organizations, social workers can build awareness and interest and can help generate principles of intervention that are appropriate for the people.

Advocating a wide range of health policies that target the most vulnerable sections of the population would be another way social workers can help people who are struggling with weight problems. Despite the overall advances made in medical developments and health care policies, the risk of obesity still appears at a disproportionately higher rate among low-income and ethnic groups (see Table 1). Many of these people are at greater risk because they are unable to access medical treatment. They tend to receive care only when their conditions have significantly worsened. Even if they have insurance, not all policies cover treatments for obesity. The treatment is expensive, and there is limited relief available for those who pay out-of-pocket. As such, there is a need to expand health insurance coverage and tax relief for those who are medically underserved. Working to encourage employers to provide health insurance to low-wage earners and expanding treatments that are covered under private insur-

ance, Medicare, and Medicaid would be positive movements (Anderson, 2003). Likewise, working to allow a tax deduction for obesity treatments, such as appetite control and weight control, would also be desirable. Currently, only medical care given under a physician's direction is deductible, and this is only available to those whose medical expenses exceed 7.5% of their adjusted gross income (IRS figures, 2000). A call to expand tax relief is not without precedent. Deductibility is already allowed for alcoholism treatment, drug addiction treatment, and smoke cessation programs.

Social workers must also fight discrimination. Even if obesity did result from personal behaviors, those people have the right to live in dignity and to be treated with equal consideration. Verbal abuse and blaming should not be tolerated. It would be wrong to blame and withhold medical treatment from people because they have brought on skin cancer by exposing themselves to the sun. Obesity is not much different than many other diseases; its victims should not be singled out and mistreated.

### CONCLUSION

Although most Americans are enjoying better health today than ever before, the increasing obesity rate is pushing recent health improvements in the wrong direction. The burden placed on individuals and society by obesity is enormous. Nearly 300,000 premature deaths are attributed to obesity. Millions of other obese people are disabled. The cost of health care and lost productivity attributed to obesity is nearly \$100 billion. Millions live with social stigmatization. Obesity is an unnecessary problem for many because there are means to manage it better today. Though the issue is both sensitive and challenging, if the public acknowledges this as an important public health issue in this nation, we can prevent many health risks associated with obesity.

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