Partnership For Prevention™

Straight Talk about Obesity and Health

A recent study that has received a great deal of media attention has generated confusion about whether the death toll related to obesity is as significant as the public has come to believe. Regardless of whether the number of deaths attributable to overweight and obesity is as low as 26,000 per year, as the recent study estimates,[1] or exceeds 300,000 per year, as other studies have estimated,[2,3] obesity remains a significant, underlying cause of death in the United States.

The number of lives lost is only one measure of the scope of the obesity epidemic. Obesity brings with it illness, disability, and economic hardship that affect individuals, families, communities, employers, and nearly all facets of the health system. Overweight and obesity:

- Affect an increasing number of Americans each year.
- Are associated with an enormous burden of disease, disability, and reduced quality of life across the country.
- Add to the nation's health care spending and impose an economic burden on employers.

Through this brief paper, Partnership for Prevention seeks to summarize the evidence about overweight, obesity, the health consequences of these conditions, and the associated economic costs.

THE EPIDEMIC OF OVERWEIGHT AND OBESITY IS GROWING

The percentage of Americans who are overweight or obese has reached epidemic proportions. The epidemic now affects all segments of the population regardless of age, gender, or ethnicity. The progression of the epidemic can be viewed in a series of maps available on the web site of the Centers for Disease Control and Prevention at http://www.cdc.gov/nccdphp/dnpa/obesity/trend/maps/index.htm.

Adults

- As of 2002, 65% of adults in the United States were either overweight (Body Mass Index or BMI of 25-29.9) or obese (BMI of 30 or above) compared to 47% of adults who were overweight or obese in 1980.[4,5,6]
- As of 2002, 30% of adults in the United States were classified as obese, double the percentage of adults who were obese in 1980.[5]
- Between 1986 and 2000, the percentage of individuals with a BMI of 40 or greater (i.e., about 100 pounds overweight) quadrupled, increasing from about 1 in 200 adult Americans to 1 in 50.[7]

- Obesity is more prevalent among African Americans (39%) and Hispanics (32%) than whites (29%); women are more likely than men to be obese.[5]

Children and Adolescents

- Among youths aged 12-19, the prevalence of overweight more than tripled between 1980 and 2002, increasing from 5% to 16%.[5,6]
- Among children aged 6-11, the prevalence of overweight more than doubled during the same period, going from 7% to 16%.[5,6]
- Alarmingly, among 2-5 year olds, the prevalence of overweight rose from 7% to more than 10% between 1994 and 2002, a more than 40% increase.[5]
- Adolescents who are overweight have a 70% chance of being overweight or obese as adults.[8]
- The prevalence of overweight among youths aged 6-19 is higher for African Americans (21%) and Hispanics (22%) than for whites (14%).[5]

THE TOLL OF OVERWEIGHT AND OBESITY

Body mass index (BMI) is a measure of body fat based on height and weight that applies to adult men, women, and children. The health impact of being overweight (for adults, BMI of 25-29.9) and/or obese (BMI of 30 or above) has been well documented in the scientific literature. In fact, 70-80% of obese adults have diabetes, coronary heart disease, high blood pressure, high blood cholesterol, or osteoarthritis.[9] Individuals who are overweight or obese are at increased risk of developing the following illnesses:

Heart Disease

- Heart disease is a leading cause of premature, permanent disability among working adults as well as being the leading cause of death among all Americans. Heart disease includes heart attack, congestive heart failure, sudden cardiac death, angina or chest pain, and abnormal heart rhythm.
  - Individuals with a BMI of 25-29.9 are nearly 40% more likely to develop heart disease than normal weight individuals.
  - Individuals with a BMI of 30-34.9 have almost twice the risk of developing heart disease than normal weight individuals.
  - Individuals with a BMI of 35 or higher have an elevated risk of nearly 70%.[10]

- Hypertension, or high blood pressure, is the most common health condition related to overweight and obesity.[9] Known as the "Silent Killer" because of the lack of symptoms in most individuals with this condition, high blood pressure is the number one modifiable risk factor for stroke. Obese adults are more than twice as likely to have high blood pressure as normal weight individuals.[9]
- Among overweight or obese 5 to 10 year-olds, approximately 60% have at least one cardiovascular disease risk factor (e.g., high cholesterol, high insulin, or high blood pressure). Seventy-four percent of school-age children with 3 or more cardiovascular risk factors are overweight or obese.[11]

Diabetes

- People who are overweight or obese are at substantially increased risk for diabetes.
  - Individuals with a BMI of 25-29.9 are more than twice as likely to develop diabetes as are normal weight individuals.
  - Individuals with a BMI of 30-34.9 have more than triple the risk of developing diabetes than do normal weight individuals.
  - The risk of developing diabetes increases 6-fold for individuals with a BMI of 35 or greater.[10]
- Almost 90% of people with type 2 diabetes are overweight or obese, according to the North American Association for the Study of Obesity. The number of diabetes cases among U.S. adults increased by one-third during the 1990s, and the numbers are expected to increase further. This dramatic increase is due primarily to the growing prevalence of overweight and obesity.[12] Not only is diabetes a deadly disease — life expectancy is reduced by 5-10 years for adults with type 2 diabetes, and the risk of heart disease and ischemic heart disease mortality is 2-4 times higher for diabetic than non-diabetic persons[13] — it can result in severe disability and drastically reduce quality of life. The National Institutes of Health has concluded that diabetes is such a potent risk factor for heart disease that heart disease may simply be assumed to be present when someone has diabetes. Diabetes is also the leading cause of blindness, end-stage renal disease (kidney disease), and non-traumatic lower limb amputations. Diabetes also contributes to nerve damage, dental disease, and pregnancy complications.
- A weight gain of 11 to 18 pounds increases a person's risk of developing type 2 diabetes to twice that of individuals who have not gained weight, and a weight gain of 44 pounds quadruples the risk of developing type 2 diabetes over a ten-year period.[14]

- Nearly all children with type 2 diabetes are obese.[15]
- The increase in type 2 diabetes among adolescents – as early as age 12 – is due primarily to obesity. The earlier individuals become diabetic, the earlier they are likely to develop the complications of the disease, thus increasing the risk for premature death and disability.[16]
- At current obesity rates, for individuals born in 2000 the risk of being diagnosed with diabetes at some time in their lives is estimated to be 30% for boys and 40% for girls.[17]

Cancer

- Obesity and physical inactivity are associated with several types of cancer, including breast (postmenopausal), colon, endometrial, esophageal, gall bladder, and kidney.[18] These cancers can be lethal or debilitating and require painful and expensive treatment.
- For example, post-menopausal women who are obese have a 50% greater chance of developing breast cancer than do women of normal weight, and obese women are two to four times more likely to develop uterine (endometrial) cancer than normal weight women, regardless of menopausal status.[19]
- About 41,000 new cases of cancer in 2002 in the United States were estimated to be due to obesity.[20]
- Fourteen percent of cancer deaths among men and 20% of cancer deaths among women may be due to overweight and obesity.[21]

Arthritis

- The risk of developing arthritis increases by 9-13% for every two-pound increase in weight.[22] Arthritis is the leading cause of disability in the United States. Currently, 43 million people in the United States have arthritis that has been diagnosed by a doctor, and more than 20 million Americans have osteoarthritis, the form of arthritis most closely linked with obesity.
- Women who are obese have nearly 4 times the risk of knee osteoarthritis compared to non-obese women, and men have nearly 5 times the risk compared to men who are not obese.[23]

Breathing Problems

- Obesity is a leading risk factor for sleep apnea.[22] People with untreated sleep apnea stop breathing repeatedly during their sleep, sometimes hundreds of times during the night and often for a minute or longer. Sleep apnea can cause high blood pressure and other cardiovascular disease, memory problems, weight gain, impotency, and headaches.
- Among children and adolescents, pulmonary complications associated with obesity include asthma,[24] exercise intolerance,[25] and sleep apnea.[26]

Reproductive Complications

- Obesity in women can cause serious pregnancy-related complications, including increasing the risk of fetal and neonatal death.[27,28]
- Obesity during pregnancy is also associated with an increased risk of maternal death. Obesity is associated with a 10-fold increase in the risk of maternal high blood pressure as well as with an increased risk of diabetes, which often lead to pre-term delivery.[22,29,30]
- Women who are obese during pregnancy are at increased risk of developing complications in labor and delivery, including cesarean delivery and shoulder dystocia.[27,29]
- Obesity during pregnancy increases the risk of birth defects in the newborn infant, especially neural tube defects such as spina bifida.[31]

Psychosocial Consequences

- Obesity has serious psychosocial consequences that are not reflected in mortality figures. Persons who are obese are more likely to suffer from depression and low self-esteem than normal weight individuals.[22] These individuals are at increased risk for suicide, impaired job performance, and social isolation.
- Children and adolescents especially are at risk of developing serious psychosocial problems related to being obese, often resulting in low self-esteem, which may impair academic and social functioning.[32]

Additional Health Consequences

- Overweight and obesity are associated with increased risks of gall bladder disease, incontinence, and adverse surgical outcomes.[22]
- Obesity can affect quality of life by limiting mobility and decreasing physical endurance as well as through social, academic, and job discrimination.[33]

THE ECONOMIC BURDEN OF OVERWEIGHT AND OBESITY

Although not as visible as the health consequences of overweight and obesity, the direct and indirect costs of these conditions are well documented. (Indirect costs refer to such things as wages lost by people unable to work because of illness or disability, as well as the value of future earnings lost as a result of premature death.) Controlling the nation's skyrocketing health bill will be difficult if the epidemic of overweight and obesity is not addressed in meaningful ways.

- Estimates of the health care and other costs in 2004 dollars related to overweight and obesity range from $98 billion to $129 billion.[34]
- The average annual health care costs for adults who are obese are 36% higher than for normal weight individuals. Costs are more than twice as high for prescription drugs, 14% higher for outpatient services, and nearly 40% higher for inpatient services.[35]
- Taxpayers pay a significant portion of these costs since approximately half of the costs are borne by Medicare and Medicaid.[36] In addition, in 1998, obesity-related costs totaled $23 billion in Medicare spending and $14 billion in Medicaid spending.[37]
- Medical costs and lost productivity due to obesity impose costs on employers.
- The cost to business of obesity-related health care costs totaled $15.4 billion in 2002 dollars. Health insurance expenditures made up the bulk of the costs, but sick leave, life insurance, and disability insurance accounted for 39% of the total. This does not include other significant costs such as lost productivity and increased absenteeism.[38]
- One large study found that employees who had elevated BMI had average medical costs more than 50% higher than normal weight employees.[39]
- Obese employees are nearly 75% more likely to experience high rates of absenteeism (seven or more absences during a six-month period) than normal weight employees.[40]

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