

Testimony of Anne Wolf, MS,RD
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Thursday, March 26
Subcommittee on Department Operations, Oversight, Nutrition, and Forestry

The Economic Impact of Obesity

Congressman Baca and Congressional members of the Subcommittee on Department Operations, Oversight, Nutrition, and Forestry,

Thank you for inviting me to testify today on the economic impact of obesity in the United States. Testifying before this subcommittee is particularly important to me. As one of three children raised by a single mother, I and my family relied on both food stamps as well as the free school lunch program. I am deeply grateful to the government for helping our family during those tough times, and it did make a difference. While we didn't have much, I never went hungry and was able to focus on my school work, which eventually gained me entrance into Cornell University and the Harvard School of Public Health, and from there into the fight against obesity. So, I am honored today to testify in front of you about the economic impact of obesity.

Government, health care, and business leaders are concerned by the marked increase of overweight and obesity in the United States and the resulting impact on our nation's health, health care costs, and productivity. Most concerning is that excess weight carries major health risks. These conditions are associated with high costs, including both the direct costs of medical care and the indirect costs of lost productivity and disability. A recent report identified the growing prevalence of obesity as one of the primary factors responsible for the growth of private health care spending between 1987 and 2002.

There are over 120 articles published in peer-reviewed, scientific journals related to the cost of obesity and cost effectiveness of treatment. These studies consistently demonstrate five important findings: first, the direct cost of obesity is dramatic and contributes significantly to our rising health care costs; second, the cost is driven by obesity's high prevalence and its relationship to chronic disease; third, the government is paying the largest percentage of the health care bill related to obesity; fourth, employers are hit particularly hard because obesity impacts both health care costs and productivity; and fifth, some treatments are both effective and cost-effective.

The most recent direct cost, inflated to 2008 dollars, estimates that at a national level, obesity (including overweight) costs the United States 77.3 to 117.8¹ billion dollars a year, accounting for 9.1% of the national health care expenditure (in 1998, the year the analysis was undertaken). This is approximately 1.7 times the cost of stroke and 1.4 times the cost of hypertension in America. Obesity outranks both smoking and problem drinking in its deleterious effects on health and health care costs. In addition, 39.2 million work days, 239 million restricted activity days and 89.5 million bed days were attributable to obesity in 1994, the last time this analysis was undertaken.

¹ includes nursing home costs

Higher medical expenses are associated with the severity of excess weight-as body weight increases from overweight to obese to severe obesity, health care expenses rise. Per capita medical spending increases among the overweight by 14.5%, among the obese by 37.4% and by 100% - or doubled -- among the severely obese, compared to people with a healthy body weight. The rise in health care expenditures with higher weight occurs across all of the major categories of health care services. Obesity has been associated with higher inpatient utilization as well as more outpatient services, procedures and prescription medication use. Among children (age 6-17 years), the proportion of hospital discharges with obesity-related diseases increased dramatically from 1979 to 1999. The cost of obesity is not due to direct treatment costs- obesity is not systematically treated in the medical setting because it is not systemically reimbursed by CMS or health insurance companies. Most people who seek treatment have to pay out of pocket for the majority of their expenses.

If one looks at cost by type of payer (private, out-of-pocket, and government-sponsored), Medicaid and Medicare combined pay the largest percentage-- 48%--of the cost of obesity. The costs of obesity are particularly high among the older population because chronic medical conditions such as diabetes and heart disease are so highly associated with excess weight and advancing age. In basic terms, obesity + age = chronic illness. If you look at excess Medicare expenditures for a mildly obese person [among a person with a body mass index (BMI) between 30-35 kg/m²,] from age 65 to death, that person will incur approximately \$20,000-\$50,000 additional dollars compared to someone with a healthy body weight.

The costs of obesity to the employer are even more substantial since obesity is associated not only with higher health care costs but also with greater rates of lost productivity, disability and earlier mortality. Employers as diverse as General Motors, Bank One and Shell Oil have all demonstrated that excess weight is associated with lost productivity and greater medical and disability costs. Aggregating the direct and indirect costs of obesity to the employer the additional per capita costs to the employer due to excess weight ranged from \$175 [(overweight)] to \$2,027 [(class III obesity)] in men and \$588 [(overweight)] to \$2,164 [(class III obesity)] in women, depending on the degree of overweight and obesity. Obesity also imposes limitations while at work. Data from the 2002 National Health Interview Survey (NHIS) show that 6.9% of obese workers have work limitations, compared with 3.0% of workers with a healthy body weight. Worksite injuries are also significantly higher among overweight employees; low back injuries were 1.42 times higher and non-back musculoskeletal injuries were 1.53 times higher among overweight and obese employees compared with employees with a healthy body weight. Lastly, overweight and obesity is a significant predictor of transition from short-term to chronic back pain. Overweight employees have a 56% greater chance for developing chronic back pain and obese employees have an 85% greater risk compared with healthy-weight employees.

As members of this Subcommittee, you may want to know what type of legislation would help address the obesity epidemic in a cost effective manner, given your charge with food stamps and oversight of agriculture. There is evidence that lifestyle intervention --education and behavior change programs to improve diet quality and increase physical activity with resultant weight loss-- is cost effective in high medical risk populations. There is also evidence that the addition of medical nutrition therapy to usual medical care can reduce health care costs, improve absenteeism and disability, and have a positive return on investment. For example, from the work we have done at

the University of Virginia, for every dollar spent on lifestyle intervention with a registered dietitian among people with obesity and diabetes, there is a \$14.58 return on investment.

In summary, the cost of the obesity epidemic is enormous, in terms of both the financial costs and human costs. The financial costs are borne disproportionately by the federal government, but are felt keenly by employers as well. Most important are the personal costs to the individual suffering from obesity. There is a desperate need to promulgate programs with proven effectiveness to combat the financial, medical, and personal costs of obesity.

Relevant Published Papers

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2. Finkelstein EA, Fiebelkorn IC, Wang G. National medical spending attributable to overweight and obesity: How much, and who's paying? *Health Aff*. 2003;W3:219-226.
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4. Sturm R. The Effects of Obesity, Smoking and drinking on medical problems and costs. Obesity outranks both smoking and drinking in its deleterious effects on health and health costs. *Health Aff*. 2002;21:245-253.
5. Thorpe KE, Florence CS, Howard DH, Joski P. The impact of obesity on rising medical spending. *Health Aff*. 2004;W4:480-486.
6. Wee CC, Phillips RS, Legedza ATR, Davis RB; Soukup JR, Colditz GA, Hamel MB. Health care expenditures associated with overweight and obesity among US adults: importance of age and race. *Am J Public Health*. 2005;95(1):159-165.
7. Wolf AM, Colditz GA. Current estimates of the economic cost of obesity in the United States. *Obes Res*. 1998;6:97-106.
8. Wang G, Dietz WH. Economic burden of obesity in youths aged 6 to 17 years: 1979-1999. *Pediatrics*. 2002;109(5):E81-1.
9. Wang G, Dietz WH. Economic Burden of Obesity in Youth age 6-17 years: 1979-1999. *Pediatrics* 2002;109:81-87.

Indirect Cost Related To Obesity

1. Burton WN, Chen CY, Schultz AB, Edington DW. The Economic Costs Associated With Body Mass Index in a Workplace. *J Occup Environ Med*. 1998;40(9):786-792.
2. Tucker LA, Friedman GM. Obesity and absenteeism: An epidemiologic study of 10,825 employed adults. *Am J Health Promot*. 1998;12:202-207.
3. Finkelstein EA, Fiebelkorn IC, Wang G. The Costs of Obesity among Full-time Employees. *Am J Health Promot* 2005;20:45-51.

Obesity Intervention: Lifestyle Intervention Cost Analyses

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- preventing type 2 diabetes in adults with impaired glucose tolerance. *Ann Intern Med.* 2005;142:323–332.
2. Wolf, AM, Siadity, M, Yaeger, B, Conaway, MR, Crowther JQ, Nadler, JL, Bovbjerg, VE. Effects of Lifestyle Intervention on Health Care Costs: The ICAN Project. *J Am Diet Assoc* 2007;107(8):1365-73.
 3. Wolf, AM, Siadity, M, Crowther JQ, Nadler, JL, Wagner DL, Cavalieri S, Elward K, Bovbjerg, VE: Impact of Lifestyle Intervention on Lost Productivity and Disability: Improving Control with Activity and Nutrition (ICAN) *JOEM* 2009;51:139-145.
 4. Wolf AM, Crowther JQ, Nadler JL, Bovbjerg VE. The Return on Investment of a Lifestyle Intervention: The ICAN Program. Accepted for presentation at the American Diabetes Association 69th Scientific Sessions (169-OR), 7 June, 2009, New Orleans, Louisiana

Food Stamps and Obesity

1. Food Stamps and Obesity: What We Know and What It Means
<http://www.ers.usda.gov/AmberWaves/June08/Features/FoodStampsObesity.htm>
2. Improving Food Choices—Can Food Stamps Do More?
<http://www.ers.usda.gov/AmberWaves/May07SpecialIssue/Features/Improving.htm>
3. Gleason, Philip M., Allison Hedley Dodd. School Breakfast Program but not School Lunch Program participation is associated with lower body mass index. *Journal of the American Dietetic Association*, 2009. Vol. 109 (2,S1):S118-128.
4. Ver Ploeg, M., L. Mancino, B-H. Lin and J.F. Guthrie. U.S. Food Assistance Programs and Trends in Children's Weight. *International Journal of Pediatric Obesity*, 3(1):22-30, 2008.