



Heart Disease and Stroke. You're the Cure.

FACTS

With a Very Heavy Heart

Obesity and Cardiovascular Disease (CVD)

OVERVIEW

Once primarily seen as a behavioral and environmental problem, obesity is now viewed as a complex disorder and a major health risk factor linked to increased CVD, cancer, diabetes, and early death.

And more than just a contributing factor, obesity by itself increases the risk of heart disease. Framingham Heart Study researchers found that obese individuals had an incredible 104% increase in the risk of developing heart failure compared to non-overweight individuals.¹ Those with abdominal obesity are at particularly high risk. An obese person who has a stroke has longer hospital stays and a lower chance of being discharged home.²

OBESITY AS AN EPIDEMIC

The news is not good. The U.S. is now in the grips of a full-blown obesity epidemic. The prevalence of those who are obese has risen to 33.9%.³ In 2008, adult obesity rates rose in 37 states, and in more than half of our states, obesity rates exceed 25 percent of all adults.⁴ According to the WHO, the number of overweight and obese people world-wide is set to increase to 2-3 billion by 2015 if current trends continue.³

These rates bode poorly for health outcomes. A 2003 study showed that by age 40, a non-smoking obese woman loses 7.1 years of life expectancy and a non-smoking obese man loses 5.8 years.⁵ Severely obese individuals lose 8-10 years of life expectancy,⁶ which is comparable to the effects of smoking.⁶ Of greatest concern, the obesity epidemic is spreading to our children at an alarming rate.³ Nearly 10 million children and adolescents ages 6-19 are considered overweight.³ Sadly, one study has shown that obese children's arteries resemble those of a middle-aged adult.⁷ Over-weight adoles-

cents have an overwhelming chance of becoming obese adults and they are being sentenced to an early future of CVD and disability.⁸

THE COSTS OF OBESITY

Beyond the toll in human suffering and death, obesity and its associated diseases have a steep price tag. Obesity is a significant factor driving health care spending, accounting for an estimated 12 percent of growth in recent years.⁹ By one estimate, the annual cost of overweight and obesity is \$117 billion per year.¹⁰ The number of children who take medication for chronic diseases has jumped dramatically since 2002, another contributing factor to rising health care costs.¹¹ Obese Medicare recipients nearly doubled between 1987 and 2002 and the cost of treating them almost tripled.¹² Left alone, the situation will only worsen with America's public health, economy and productivity suffering.

WHY ARE AMERICANS OBESE?

AMERICANS OVEREAT AND ARE SEDENTARY

- USDA data indicate that between 1970 and 2003, the amount of calories people ate jumped from 2,234 to 2,757 calories per day. Total per capita consumption of added fats and oils rose by 63%. Annual corn sweetener consumption increased to 79 pounds in 2003, up 400% from 1970.¹³
- Of all U.S. deaths from major chronic disease, 23% are linked to sedentary lifestyles. The bottom line: \$5.6 billion in heart disease costs could be saved if one-tenth of Americans began a regular walking program.¹⁴

CHILDREN ARE NOT LEARNING HOW TO MAKE HEALTHY CHOICES

- Only 27% of schools require health education in grade 6, 10% in grade 9, and 2% in grade 12.¹⁵
- Children are not eating the recommended servings of fruits and vegetables each day. Only 2 percent of children in any age or sex subgroup

consumed five or more servings per day of vegetables and fruit consumption averages 1.3 servings/day for children ages 9-14.³

- Between 1977-78 and 2000-01, milk consumption decreased by 39% in children age 6-11, while consumption of carbonated soda rose 137%.¹⁶
- Only 3.8% of elementary schools, 7.9% of middle schools and 2.1% of high schools provide daily physical education or its equivalent for the entire school year. Twenty-two percent of schools do not require students to take any physical education at all.¹⁷
- Physically active transport to and from school has declined; only one third of trips to school ≤ 1 mile and $<3\%$ of trips ≤ 2 miles are made by walking or biking. Even recess has been reduced or eliminated in some elementary schools.¹⁸ 61.5% of children ages 9-13 do not participate in any organized physical activity during their non-school hours.³
- Simple, small changes in behavior such as walking an additional 2000 steps/day and eliminating 100 kcal/day from the diet, can lead to lower BMI in families.¹⁹

WORKSITE WELLNESS HELPS

Employer spending on health promotion and chronic disease prevention is a good investment. Programs have achieved a savings ranging from \$3-\$15 for each dollar invested and these savings are realized within the first 12-18 months.²⁰ The return on investment comes through reduced sick leave, absenteeism, a reduction in health care costs, and an average reduction in workers compensation and disability management claims costs.

AHA ADVOCATES

The American Heart Association has a goal of halting the annual rate of increase in obesity and overweight by 2010. To help achieve that goal, the AHA advocates for passage of legislation that increases physical activity and improves the health status of all Americans. This legislation includes:

- Fitness Integrated with Teaching Kids Act to increase quality physical and health education in schools.
- Child Nutrition Promotion and School Lunch Protection Act to update nutritional standards for foods consumed in the school environment.
- Healthy Workforce Act to increase physical activity opportunities in the workplace.

- A resolution promoting National Worksite Wellness Week (H. Con. Res. 450)
- Demonstration projects that test new strategies for reducing overweight and obesity among children and adults.

¹ Kenchaiah S, Evans JC, Levy D, et al., Obesity and the risk of heart failure. *New England Journal of Medicine*. August 1, 2002.

² Razinia T, Saver J, Liebeskind DS, et al., BMI and stroke discharge outcomes after ischemic stroke. *Archives of Neurology*. 2007; 64:388-391.

³ American Heart Association. *Heart Disease and Stroke Statistics – 2009 Update*. *Circulation*. January 27, 2009.

⁴ Trust for America's Health/Robert Wood Johnson Foundation. *F is in Fat: How Obesity Policies Are Failing in America*, 2008.

⁵ Peeters A, Barendregt JJ, Willekens F, et al., The Netherlands Epidemiology and Demography Compression of Morbidity Research Group. Obesity in adulthood and its consequences for life expectancy: a life-table analysis. *Annals of Internal Medicine*. January 1, 2003.

⁶ PSC secretariat, Clinical Trial Service Unit and Epidemiological Studies Unit (CTSU), Body-mass index and cause-specific mortality in 900,000 adults: collaborative analyses of 57 prospective studies. *The Lancet*. Early online publication. March 18, 2009.

⁷ Raghuvver G, et al., Obese kids' artery plaque similar to middle-aged adults. *AHA Scientific Sessions 2008*. Abstract 6077.

⁸ Baker JL, Olsen LW, Sorensen T. Childhood bmi and the risk of coronary heart disease in adulthood. *New Engl J Med*. 2007;357(23):2329-2337.

⁹ Goodell S, Ginsburg PB. High and rising health care costs: demystifying U.S. health care spending. Robert Wood Johnson Foundation Policy Brief. No. 16. October 2008. Companion report available at www.policysynthesis.org.

¹⁰ Weight Control Information Network, <http://www.win.niddk.nih.gov/statistics/index>.

¹¹ Cox, ER, Halloran DR, Homan SM, Welliver S, Mager DE. Trends in the prevalence of chronic medication use in children: 2002-2005. *Pediatrics*. 2008. 122; e1053-e1061.

¹² Thorpe KE, Howard DH. The rise in spending among medicare beneficiaries: the role of chronic disease prevalence and changes in treatment intensity. *Health Affairs*. 2006; 25(5):w378-w388.

¹³ USDA Economic Research Service. Food Consumption (per capita) Data System. US Department of Agriculture. December 21, 2005.

¹⁴ Bulwer B. Sedentary lifestyles, physical activity, and cardiovascular disease: from research to practice. *Crit Pathw Cardiol* 2004; 3(4): 184.

¹⁵ Kann L, Brener ND, Allensworth DD. Health education: results from the school health policies and programs study 2000. *Journal of School Health*. 2001; 71(7):266-278.

¹⁶ Storch P, Grunbaum J, Kann L, et al.. School health education profiles: surveillance for characteristics of health education among secondary schools (Profiles 2000). Atlanta, GA: CDC, 2003.

¹⁷ CDC. School Health Policies and Programs Study (SHPPS) 2006. *Journal of School Health*. 2007; 27(8).

¹⁸ Pate RR, Davis MG, Robinson TN, et al. Physical activity promotion in children and youth. *Circulation* 2006; 114:1214-1224.

¹⁹ Rodearmel SJ, Wyatt HR, Stroebele N, Smith SM, Ogden LG, Hill JO. Small changes in dietary sugar and physical activity as an approach to preventing excessive weight gain; The America on the Move Family Study. *Pediatrics*. 2007; 120(4):e868-e879.

²⁰ Anderson, DR., Serxner SA., Gold DB., Conceptual framework, critical questions, and practical challenges in conducting research on the financial impact of worksite health promotion. *American Journal of Health Promotion*. May/June 2001, 15(5):281-295.