

Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities

Employers



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION**

What Is *Moving into Action*?

Moving into Action is a series of action lists designed to help governors, state legislators, local officials, employers, and health care leaders promote heart-healthy and stroke-free communities. Each list suggests actions that range from ways to encourage general interest and awareness of these health issues to specific policies that promote healthy behaviors and reduce risks associated with heart disease and stroke. Included are examples gathered from states and communities that are working to reduce these risks and a summary of the science underlying heart disease and stroke prevention.

Suggested actions are based on current national guidelines, scientific evidence, and existing efforts from states throughout the country. For example, some actions are supported by years of research from leading public health, public policy, and medical organizations, while others stem from efforts by communities and organizations to address unhealthy behaviors related to heart disease and stroke.

Moving into Action can help policy makers, employers, and health care leaders assess what actions are most appropriate for their communities and can lend support to the efforts of individuals to prevent, manage, and control their risks for heart disease and stroke.

Share Your Experiences

In suggesting these actions, we also invite you to share your ideas and experiences. Please e-mail your questions, suggestions, and experiences on how you are *Moving into Action* in your community at ccdinfo@cdc.gov.

Additional Copies

Additional copies of these lists can be requested at ccdinfo@cdc.gov. They will also be made available on the Cardiovascular Health Web site at www.cdc.gov/cvh.

Suggested Citation

Centers for Disease Control and Prevention. *Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities (Employers)*. Atlanta, GA: U.S. Department of Health and Human Services; 2005.

A Message from the Centers for Disease Control and Prevention

Heart disease and stroke, the principal components of cardiovascular disease, are the nation's first and third leading causes of death. They are also major causes of morbidity and health disparities. Millions of Americans are at risk for these largely preventable conditions. Advances in science have been considerable, but the challenge of translating this knowledge into action remains.

To address this need, the Centers for Disease Control and Prevention, in collaboration with the American Heart Association/American Stroke Association and the Association of State and Territorial Health Officials, along with a host of other partners, developed *A Public Health Action Plan to Prevent Heart Disease and Stroke*. The *Action Plan*, released in 2003, calls for engagement by all sectors of society to support the prevention and control of heart disease and stroke. *Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities* suggests how certain sectors of society—policy makers, employers, and health care leaders—can take steps in this direction.

Can we imagine a world where our communities are designed to encourage safe physical activity? Where worksites and school cafeterias provide affordable, heart-healthy food options? Where the environment of public spaces is smoke-free? Where health care purchasers universally include preventive services, coverage for prescription drugs for heart disease, and counseling for therapeutic lifestyle changes? Where large and small health systems implement national guidelines recommended by federal agencies and national voluntary organizations? These scenarios are possible. The question is, how can we turn these scenarios into a reality?

Becoming engaged in the prevention of heart disease and stroke is a worthy cause for everyone, especially for those who can influence decisions that affect communities across the country. By sharing ideas, experiences, and expertise and by taking action now, we can effectively combat the persistent burden of heart disease and stroke and their related disparities in our society.

George A. Mensah, MD, FACP, FACC
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Centers for Disease Control and Prevention

A Message from the American Heart Association/American Stroke Association

When *A Public Health Action Plan to Prevent Heart Disease and Stroke* was first released at the Steps for a HealthierUS Conference in April 2003, the American Heart Association's president, Dr. Robert Bonow, observed that "this plan will help the public health community make the nation's number-one health threat a number-one priority. We already have much science and knowledge to help prevent and treat heart disease and stroke. Now we have a national vision and roadmap for the public health community to help guide its efforts, and strategies to give Americans a healthier future."

As the nation's largest voluntary health organization fighting cardiovascular disease, the American Heart Association and our division, the American Stroke Association, recognized that the release of the *Action Plan* was only the first step in a journey that would require strong partnerships and the active involvement of a number of government agencies and other organizations. We are pleased to be working with the Centers for Disease Control and Prevention and the Association of State and Territorial Health Officials to help guide the projects and activities that continue to take place as a result of the release of the *Action Plan*.

One such project is *Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities*. This document can help elected policy makers, public employers, and health care leaders across the country become more meaningfully engaged in heart disease and stroke prevention.

Once again, we applaud the Centers for Disease Control and Prevention for the release of this publication and for its continued commitment to *A Public Health Action Plan to Prevent Heart Disease and Stroke*. This is a significant step forward in furthering the vision of the *Action Plan* and the achievement of our shared goal of reducing heart disease and stroke and their risk factors.

Rose Marie Robertson
Chief Science Officer
American Heart Association/American Stroke Association

A Message from the Association of State and Territorial Health Officials

As one of the lead partners supporting *A Public Health Action Plan to Prevent Heart Disease and Stroke*, we are very pleased, along with the Centers for Disease Control and Prevention and the American Heart Association/American Stroke Association, to present *Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities*.

Heart disease and stroke are the first and third leading causes of death in the United States and continue to pose a formidable challenge to the public health community. We cannot address this challenge alone. Only through collaboration with elected officials, employers, health care leaders, and others can we adequately address the continuing burden of heart disease and stroke.

ASTHO is the national nonprofit organization representing the state and territorial public health agencies. ASTHO's members, the chief health officials of these agencies, are dedicated to formulating sound public health policy and to assuring excellence in state-based public health practice. We hope this document can serve as an important resource for those interested in addressing heart disease and stroke in their states.

ASTHO is committed to this public health issue and we will continue to strive for policies that promote heart-healthy and stroke-free states and local communities.

George E. Hardy, Jr., MD, MPH
Executive Director
Association of State and Territorial Health Officials

Heart Disease and Stroke Need Your Attention

What do we know about heart disease and stroke?

Heart disease and stroke are deadly, disabling, and costly. They are the nation's first and third leading causes of death, killing nearly 930,000 Americans each year. Heart disease is a leading cause of premature, permanent disability in the U.S. workforce, and stroke alone has disabled more than 1 million currently surviving Americans. The cost of heart disease and stroke in the United States is projected to be \$394 billion in 2005, of which \$242 billion is for health care expenditures and \$152 billion for lost productivity from death and disability. The costs, the disability, and the deaths will only increase as the baby-boomer generation ages and its age-dependent risks for heart disease and stroke increase.

Heart disease and stroke are largely preventable. Years of research have indicated that controlling high blood pressure and high blood cholesterol reduces a person's risk of developing heart disease or having a heart attack or stroke. Stopping smoking, eating a heart-healthy diet, being physically active, maintaining a healthy weight, and controlling diabetes can also help decrease a person's risk for heart disease and stroke.

How can we translate knowledge into action?

Promoting heart-healthy and stroke-free communities involves efforts from all sectors of society. Health care systems, state and local governments, and workplaces have important and distinct roles to play in improving cardiovascular health. Health care organizations can implement systems to better monitor and manage cardiovascular conditions in accordance with national guidelines. Policy makers can establish coverage for preventive health services, no-smoking laws, and emergency response systems. Businesses can provide employees with screening and follow-up services for blood pressure and cholesterol control and offer opportunities for physical activity.

Why should employers promote heart-healthy and stroke-free communities?

Employers hold an important and valuable position for protecting the health of the people in their organization. This document provides a range of actions you can take to promote heart-healthy and stroke-free communities, which revolve around four central themes:

- Demonstrate leadership.
- Implement policies and incentives to make healthy choices the easy choices.
- Promote coverage for and use of preventive health services.
- Implement life-saving improvements in health services and medical response.

The choice is yours. The time to act to address heart disease and stroke is now.

Actions for Employers

Demonstrate leadership

- Establish and support a worksite wellness committee. ①
- Hold a physical activity or health promotion day, month, or season spearheaded by a wellness committee and supported by the CEO. ①
- Sponsor campaigns to promote awareness of the risk factors for and signs and symptoms of heart attacks and strokes and the importance of calling 9-1-1 immediately when someone is having a heart attack or stroke. ②
- Disseminate heart disease and stroke prevention messages to employees (e.g., post signs reminding employees to get their blood pressure and cholesterol levels checked, eat 5 fruits and vegetables per day, quit smoking, and avoid exposure to secondhand smoke). ②

Implement policies and incentives to make healthy choices the easy choices

- Create opportunities for physical activity and good nutrition by
 - Promoting healthy options in cafeterias and vending machines. ②
 - Providing access to a gym at the workplace. ③
 - Providing walking trails with mile markers on or near the building property. ②
 - Placing signs by elevators that encourage people to use the stairs. ③
- Provide shower and locker room facilities and bike racks to encourage physical activity and alternative forms of transportation. ①
- Prohibit all tobacco use in indoor areas and near building entrances and exits. Reduce exposure to secondhand smoke by establishing smoke-free campus policies. ③
- Promote office-based team incentives such as gift certificates and lower insurance premiums for employees who participate in health risk assessments, competitions, and support groups that promote disease prevention measures (e.g., logging miles walked, quitting smoking, getting blood pressure checked, getting cholesterol checked). ②
- Provide a health club membership or reimbursement for a health club membership for employees. ②
- Partner with food vendors and cafeteria managers to provide low-cost, healthy food choices for employees, along with point-of-purchase nutrition information. ②
- Provide heart-healthy nutrition, weight control, and tobacco cessation classes through a worksite health promotion program. ②

Promote coverage for and use of preventive health services

- Provide health risk assessments, medical screening, and effective follow-up education and counseling to help employees control their blood pressure, blood cholesterol, and blood sugar levels and quit smoking. ②
- Negotiate health benefit plan designs that provide coverage for preventive services and emphasize quality, cost-effective medical care. ②
- Provide tobacco cessation counseling or access to counseling services (e.g., refer employees to quitline service provider). Provide coverage for FDA-approved medications to help employees quit using tobacco. ②

Implement life-saving improvements in health services and medical response

- Install automatic external defibrillators (AEDs) as appropriate. Train employees to use AEDs. (This training can be coordinated with annual CPR training.) ②
- Ensure that you have an emergency response plan. ①

What the Symbols Mean

The actions in this document are divided into three categories, which are indicated by the number following each action.

- ① Approaches that will bring visibility and support to the issues of heart disease and stroke.
- ② Interventions found by several studies or scientific reviews to support cardiovascular health.
- ③ Interventions recommended by CDC's Guide to Community Preventive Services or clinical guidelines.

References for level ② and level ③ actions are listed on the following page. References for level ② include pre/post, quasi-experimental, and experimental studies.

REFERENCES FOR EMPLOYERS

- Addy CL, Wilson DK, Kirtland KA, Ainsworth BE, Sharpe P, Kimsey D. Associations of perceived social and physical environmental supports with physical activity and walking behavior. *American Journal of Public Health* 2004;94(3):440-443.
- American Heart Association. *Heart Disease and Stroke Statistics – 2005 Update*. Dallas, TX: American Heart Association; 2005.
- Biener L, Glanz K, McLerran D, et al. Impact of the Working Well Trial on the worksite smoking and nutrition environment. *Health Education and Behavior* 1999;26(4):478-494.
- Brice JH, Griswell JK, Delbridge TR, Key CB. Stroke: from recognition by the public to management by emergency medical services. *Prehospital Emergency Care* 2002;6(1):99-106.
- Coffield AB, Maciosek MV, McGinnis JM, et al. Priorities among recommended clinical preventive services. *American Journal of Preventive Medicine* 2001;21(1):1-9.
- Erfurt JC, Foote A, Heirich MA. Worksite wellness programs: incremental comparison of screening and referral alone, health education, follow-up counseling, and plant organization. *American Journal of Health Promotion* 1991;5(6):438-448.
- French SA, Jeffery RW, Story M, et al. Pricing and promotion effects on low-fat vending snack purchases: the CHIPS study. *American Journal of Public Health* 2001;91(1):112-117.
- Goetzel RZ, Kahr TY, Aldana SG, Kenny GM. An evaluation of Duke University's Live for Life Health Promotion Program and its impact on employee health. *American Journal of Health Promotion* 1996;10 (5):340-342.
- Labarthe DR. *Epidemiology and Prevention of Cardiovascular Diseases: A Global Challenge*. Gaithersburg, MD: Aspen Publishers, Inc.; 1998.
- Matson DM, Lee JW, Hopp JW. The impact of incentives and competitions on participation and quit rates in worksite smoking cessation programs. *American Journal of Health Promotion* 1993;7:270-280.
- Matson-Koffman DM, Brownstein JN, Neiner JA, Greaney ML. A site-specific literature review of policy and environmental interventions that promote physical activity and nutrition for cardiovascular health: What works? *American Journal of Health Promotion* 2005;19(3):167-193.
- Matson Koffman DM, Goetzel RZ, Anwuri VV, Shore K, Orenstein D, LaPier T, Mensah GA. Heart-healthy and stroke-free: successful business strategies to prevent cardiovascular disease. *American Journal of Preventive Medicine* (in press).
- Moher M, Hey K, Lancaster T. Workplace interventions for smoking cessation. *Cochrane Database System Review* 2003;(2):CD003440.
- Ozminkowski RJ, Ling D, Goetzel RZ, Bruno JA, Rutter RR, Isaac F, Wang S. Long-term impact of Johnson & Johnson's Health and Wellness Program on health care utilization and expenditures. *Journal of Occupational and Environmental Medicine* 2002;44(1):21-29.
- Pelletier KR. Clinical and cost outcomes of multifactorial, cardiovascular risk management interventions in worksites: a comprehensive review and analysis. *Journal of Occupational and Environmental Medicine* 1997;39(12):1154-1169.
- Public Access Defibrillation Trial Investigators. Public-access defibrillation and survival after out-of-hospital cardiac arrest. *The New England Journal of Medicine* 2004;351(7):637-646.
- Schwamm LH, Pancioli A, Acker JE, et al. Recommendations for the establishment of stroke systems of care. Recommendations from the American Stroke Association's Task Force on the Development of Stroke Systems. *Stroke* 2005;36:1-14.
- Task Force on Community Preventive Services. Recommendations to increase physical activity in communities. *American Journal of Preventive Medicine* 2002;22(4Suppl):67-72.
- Task Force on Community Preventive Services. Recommendations regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. *American Journal of Preventive Medicine* 2001;20(2Suppl):10-15.
- U.S. Department of Health and Human Services. *A Public Health Action Plan to Prevent Heart Disease and Stroke*. Atlanta, GA: Centers for Disease Control and Prevention; 2003.
- U.S. Preventive Services Task Force. *Guide to Clinical Preventive Services*. 2nd edition. Baltimore, MD: Williams & Williams; 1996.

Examples of Employers Promoting Heart-Healthy and Stroke-Free Communities

- Sponsor campaigns to promote awareness of the risk factors for and signs and symptoms of heart attacks and strokes and the importance of calling 9-1-1 immediately when someone is having a heart attack or stroke.



The Montana State Heart Disease and Stroke Prevention Program collaborated with Emergency Medical Services and staff from the Montana Department of Public Health and Human Services (MDPHHS) on a multi-phase MDPHHS worksite intervention. Objectives were to 1) increase employees' awareness of signs and symptoms of heart attack and stroke and the need to call 9-1-1, 2) install AEDs in selected MDPHHS buildings and the capitol, and 3) increase the purchase of heart-healthy items in vending machines and snackbars.

To address the first objective, health communication messages were sent out weekly to staff through e-mail distribution lists. Educational messages were also displayed in bathrooms, and weekly contests on recognizing heart disease and stroke symptoms were conducted via e-mail. As a result of the intervention, awareness of heart attack signs and symptoms increased significantly among employees.



- **Prohibit all tobacco use in indoor areas and near building entrances and exits. Reduce exposure to secondhand smoke by implementing smoke-free campus policies. Provide tobacco cessation counseling or access to counseling services. Provide coverage for FDA-approved medications to help employees quit using tobacco.**

Union Pacific Railroad (UPRR) implemented a “Butt Out and Breathe” program, which incorporated policy changes with activities to raise employers’ awareness of the health risks of smoking and provide education, risk identification, and clinical interventions to help them quit smoking. At the beginning of this process in 1987, UPRR’s smoking policy was to prohibit smoking in offices, but smoking rooms were available until 1996. Smoking was not prohibited at all sites and on all equipment until 1999. Smoking cessation services are now available for UPRR employees who are interested in quitting. These services include a readiness review survey, health risk appraisal, self-directed workbooks, telephone counseling, in-person counseling, Internet counseling, health coaches, and periodic assessments. Clinical interventions available through employee health plans include access to prescription drugs to help employees quit smoking and may include nicotine replacement therapy in the future. UPRR’s “Butt Out and Breathe” program is having positive results. The proportion of UPRR employees who smoke decreased from about 40% in 1993 to 25% in 2001. The Assistant Vice President credits the company’s commitment to smoking cessation for the continuing decline of smoking among employees.



➤ **Establish and support a worksite wellness committee.**

The South Carolina Heart Disease and Stroke Prevention Program collaborated with the University of South Carolina Prevention Research Center to produce Worksite Wellness in South Carolina. This project was a comprehensive assessment of worksite policies and environmental supports for heart disease and stroke prevention and control, including the availability of preventive health screenings. Nine hundred worksites with at least 50 employees responded to the assessment. The most common types of screening offered were for blood pressure and cholesterol. The project also assessed cardiac emergency preparedness, including the availability of AEDs and CPR training and the presence of signs describing the signs and symptoms of a stroke and providing instructions for contacting 9-1-1. Survey findings revealed that worksites that had wellness committees or coordinators offered a greater number of employee health and wellness services. The state program will use this information to develop worksite wellness activities and evaluation measures.



- **Negotiate health benefit plan designs that provide reimbursement for preventive services and emphasize quality, cost-effective medical care.**



North Carolina Prevention Partners developed the BASIC Model Preventive Benefits Initiative, which is designed to increase the number of health plans in the state that cover assessment, counseling, and referral for tobacco use, physical inactivity, and unhealthy eating. The initiative has increased the number of health plans that provide coverage for tobacco use by 100%, for nutrition by 100%, and for physical activity by 50%. Efforts have included training employers in purchasing preventive benefits and making the business case for doing so. “Starting the Prevention Conversation” brochures for tobacco, physical activity, and nutrition have been developed for distribution to physicians’ offices. The initiative is now promoting coverage for hypertension and cholesterol control and developing supports

to help physicians treat risk factors according to the latest Joint National Committee (JNC7) guidelines and the National Cholesterol Education Program (NCEP ATP III) guidelines.



What the Science Tells Us

Blood Pressure

- Sixty-five million Americans have high blood pressure, and another 59 million are prehypertensive.¹
- A 12–13 point reduction in systolic blood pressure can reduce heart attacks by 21%, strokes by 37%, and all deaths from cardiovascular disease by 25%.² Nearly 70% of people with high blood pressure do not have it under control.³
- The Dietary Approaches to Stop Hypertension (DASH) study has shown that following a healthy eating plan can both reduce a person’s risk of developing high blood pressure and lower an already elevated blood pressure.⁴
- Medications can also help reduce high blood pressure.⁵

Cholesterol

- A 10% decrease in total blood cholesterol levels may reduce the incidence of coronary heart disease by as much as 30%.⁶ Only 18% of adults with high blood cholesterol have it under control.⁷
- Lowering saturated fat and increasing fiber in the diet, maintaining a healthy weight, and getting regular physical activity can reduce a person’s risk for cardiovascular disease by helping to lower LDL (bad) cholesterol and raise HDL (good) cholesterol.⁸
- A class of drugs called statins can reduce deaths from heart disease by reducing cholesterol levels.⁹

Emergency Response

- Forty-seven percent of heart attack deaths occur before an ambulance arrives and 48% of stroke deaths occur before hospitalization.^{10, 11}
- Only 3%–10% of eligible stroke victims get the emergency therapy (tPA) that can lead to recovery.¹²

Tobacco

- Cigarette smokers are 2–4 times more likely than nonsmokers to develop coronary heart disease.¹³
- Cigarette smoking approximately doubles a person’s risk for stroke.¹³

- People who quit smoking reduce their risk of death from cardiovascular disease by half within a few years.¹³
- Each year, secondhand smoke results in an estimated 35,000 deaths due to heart disease among nonsmokers.¹⁴

Nutrition¹⁵

- Fruits and vegetables are high in nutrients and fiber and relatively low in calories. A diet rich in fruits and vegetables can lower a person's risk of developing heart disease, stroke, and hypertension.
- Grain products provide complex carbohydrates, vitamins, minerals, and fiber. A diet high in grain products and fiber can help reduce a person's cholesterol level and risk of cardiovascular disease.
- Foods that are high in saturated fats (e.g., full-fat dairy products, fatty meats, tropical oils) raise cholesterol levels.
- People can lower their blood pressure by reducing the salt in their diets, losing weight, increasing physical activity, increasing potassium, and eating a diet rich in vegetables, fruit, and low-fat dairy products.

Physical Activity¹⁶

- Regular physical activity can decrease a person's risk of cardiovascular disease and prevent or delay the development of high blood pressure.
- People of all ages should get a minimum of 30 minutes of moderate-intensity physical activity (such as brisk walking) on most, if not all, days of the week.

Obesity^{15, 17}

- Because people who are overweight or obese have an increased risk for cardiovascular disease, diabetes, and hypertension, weight management can reduce a person's risk for these conditions.

Diabetes^{17, 18}

- Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes, and the risk for stroke is 2 to 4 times higher among people with diabetes. About 65% of deaths among people with diabetes are due to heart disease and stroke.

REFERENCES FOR “What the Science Tells Us”

1. American Heart Association. Heart Disease and Stroke Statistics – 2005 Update. Dallas, TX.: American Heart Association; 2005.
2. He J, Whelton PK. Elevated systolic blood pressure and risk of cardiovascular and renal diseases: overview of evidence from observational epidemiologic studies and randomized controlled trials. *American Heart Journal* 1999;138(3 Pt 2):211-219.
3. Chobanian AV, Bakris GL, Black HR, et al. Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension* 2003;42:1206-1252.
4. National Heart, Lung, and Blood Institute. Facts About the DASH Eating Plan. Bethesda, MD: National Institutes of Health; 2003. NIH Publication No. 04-4082. Available at: <http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm>. Accessed July 25, 2004.
5. National Heart, Lung, and Blood Institute. The Seventh Report of the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Bethesda, MD: National Institute of Health; 2003. NIH Publication No. 03-5233. Available at: <http://www.nhlbi.nih.gov/guidelines/hypertension/express.pdf>. Accessed August 11, 2004.
6. Cohen JD. A population-based approach to cholesterol control. *American Journal of Preventive Medicine* 1997;102:23-25.
7. Ford ES, Mokdad AH, Giles WH, Mensah GA. Serum total cholesterol concentrations and awareness, treatment, and control of hypercholesterolemia among US adults. Findings from the National Health and Nutrition Examination Survey, 1999 to 2000. *Circulation* 2003;107(17):2185-2189.
8. National Heart, Lung, and Blood Institute. High Blood Cholesterol—What You Need to Know. Bethesda, MD: National Institutes of Health; 2001. NIH Publication No. 01-3290. Available at: http://www.nhlbi.nih.gov/health/public/heart/chol/hbc_what.htm. Accessed July 26, 2004.
9. Wilt TJ, Bloomfield HE, MacDonald R, et al. Effectiveness of statin therapy in adults with coronary heart disease. *Archives of Internal Medicine* 2004;164(13):1427-1436.
10. Ayala C, Croft JB, Keenan NL, et al. Increasing trends in pretransport stroke deaths—United States, 1990-1998. *Ethnicity and Disease* 2003;13(2 Suppl):S131-S137.
11. Centers for Disease Control and Prevention. State-specific mortality from sudden cardiac death: United States, 1999. *Morbidity and Mortality Weekly Report* 2002;51(6):123-126.
12. National Institute of Neurological Disorders and Stroke, rt-PA Stroke Study Group. Tissue plasminogen activator for acute ischemic stroke. *New England Journal of Medicine* 1995;333(24):1581-1587.
13. U.S. Department of Health and Human Services. Reducing the Health Consequences of Smoking — 25 Years of Progress: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services 1989. DHHS Pub. No. (CDC) 89-8411.
14. Centers for Disease Control and Prevention. Targeting Tobacco Use: The Nation’s Leading Cause of Death. At A Glance 2004. Atlanta: U.S. Department of Health and Human Services; 2004.
15. Krauss RM, Eckel RH, Howard B, et al. AHA Dietary Guidelines. Revision 2000: A statement for healthcare professionals from the Nutrition Committee of the American Heart Association. *Circulation* 2000;102(18):2284-2299.
16. U.S. Department of Health and Human Services. Physical Activity and Health. A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services; 1996.
17. National Heart, Lung and Blood Institute. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults: the evidence report. Bethesda, MD: National Institutes of Health;1998. NIH Publication No. 98-4083. Available at: www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.htm. Accessed 1 Feb 2005.
18. Centers for Disease Control and Prevention. National Diabetes Fact Sheet. Atlanta: U.S. Department of Health and Human Services; 2003.



Acknowledgments

The following individuals contributed their scientific and editorial expertise to the creation of this document.

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The Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention (CDC) is one of the 13 major operating components of the Department of Health and Human Services (HHS), which is the principal agency in the United States government for protecting the health and safety of all Americans. Since it was founded in 1946 to help control malaria, CDC has remained at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats.

CDC's Heart Disease and Stroke Prevention Program is located in the National Center for Chronic Disease Prevention and Health Promotion, which is part of the Coordinating Center for Health Promotion. The central strategies of the program include a focus on high blood pressure and cholesterol control, increasing knowledge of signs and symptoms of heart attack and stroke, improving emergency response, improving quality of care, and eliminating health disparities between population groups. Heart disease and stroke outcomes are also related to healthy eating, physical activity, and tobacco use, as well as diabetes and obesity. CDC's Heart Disease and Stroke Prevention Program coordinates these activities to improve overall cardiovascular health in the United States.

For more information on heart disease and stroke prevention at CDC, please visit www.cdc.gov/cvh.

The American Heart Association/American Stroke Association

The American Heart Association is a national voluntary health agency whose mission is to reduce disability and death from heart disease and stroke. Together with the American Stroke Association, the volunteer-led affiliates and their divisions form a national network of local AHA organizations involved in providing research, education, and community programs to prevent heart disease and stroke. The network continues to gain strength as it expands at the grass-roots level in states and local communities.

For more information on the American Heart Association/American Stroke Association, please visit www.americanheart.org.

The Association of State and Territorial Health Officials

The Association of State and Territorial Health Officials (ASTHO) is the national nonprofit organization representing the state and territorial public health agencies of the United States, the U.S. Territories, and the District of Columbia. ASTHO's members, the chief health officials of these jurisdictions, are dedicated to formulating and influencing sound public health policy and to assuring excellence in state-based public health practice.

For more information on the Association of State and Territorial Health Officials, please visit www.astho.org.

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