HEART DISEASE

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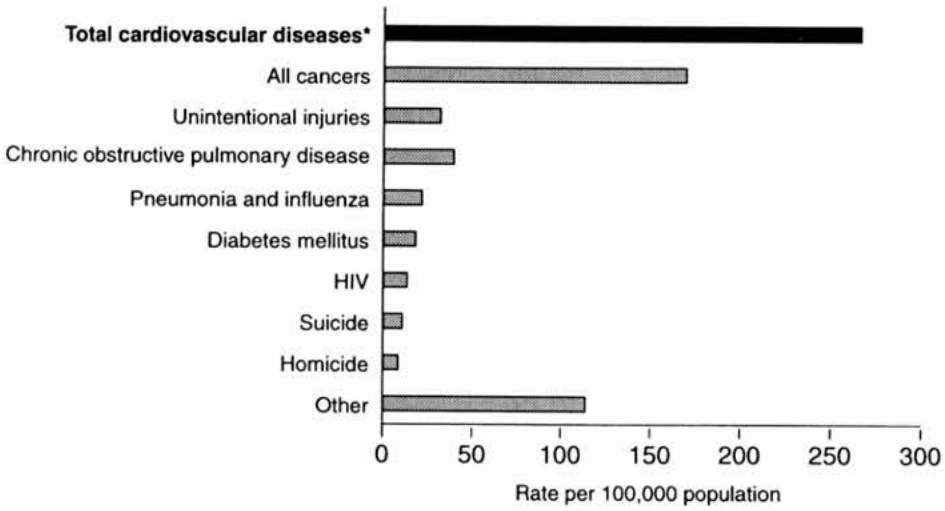
Preventing Cardiovascular Disease:
Addressing the Nation's Leading Killer

AT-A-GLANCE

1998



*Total cardiovascular disease death rate includes the rate of death due to ischemic heart disease (135.2 per 100,000) and the rate of death due to stroke (42.5 per 100,000).

Source: National Center for Health Statistics and National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1995.

"The realization has grown worldwide that clinical care—while remaining necessary and important—is not enough, and it is critical that we ***prevent*** *cardiovascular diseases by preventing, from childhood on, development of the risk factors leading to them."*

Rose Stamler, MA, Northwestern University Medical School
Third International Conference on Preventive Cardiology
(*Preventive Medicine* 1994;23:529)

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Cardiovascular Disease: The Nation's Leading Killer

Among both men and women, and across all racial and ethnic groups, cardiovascular disease is our nation's leading killer. More than 960,000 Americans die of cardiovascular disease each year, accounting for more than 40% of all deaths.

Everyday, more than 2,600 Americans die of cardiovascular diseases, an average of one death every 33 seconds.

Although cardiovascular disease is often thought to primarily affect men and older people, it is a major killer of women and people in the prime of life. More than half of all cardiovascular disease deaths each year occur among women. The disease is the leading cause of death among Americans in middle age, killing more than 160,000 people between the ages of 35 and 64 each year. In addition, the rate of premature deaths due to cardiovascular disease is greater among black than among white Americans.

Deaths Only Part of the Picture

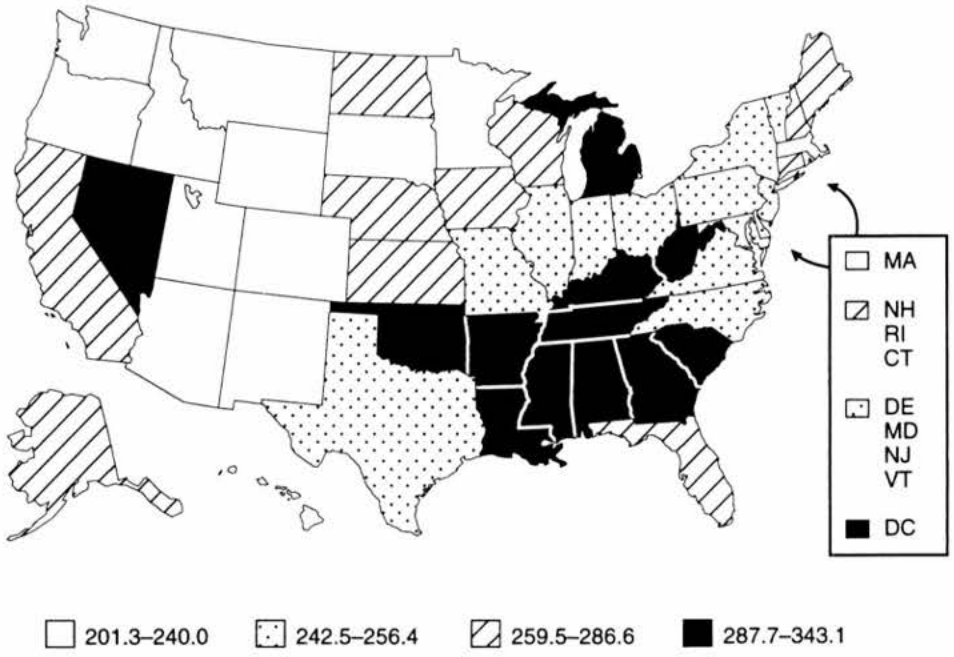
A consideration of deaths alone severely understates the burden of cardiovascular disease. About 58 million Americans (almost one-fourth of the nation's population) live with some form of the disease.

The term "cardiovascular disease" refers to a variety of diseases and conditions affecting the heart and blood vessels, principally high blood pressure, heart disease, and stroke. Almost 10 million Americans aged 65 years and older report disabilities caused by heart disease. Stroke is also a leading cause of disability in the United States, accounting for the reported cause of disability among more than 1 million people nationwide. Almost 6 million hospitalizations each year are due to cardiovascular disease.

Health Burden Rivaled by Economic Burden

The economic burden of cardiovascular disease has a profound impact on the U.S. health care system, and this burden continues to grow as the population ages. The cost of cardiovascular disease in the United States in 1998 is estimated to be $274 billion. This figure includes health expenditures and lost productivity resulting from illness and death. The use of expensive treatment, while effective in delaying death from cardiovascular disease, is likely to continue to increase the financial impact.

Rates of Death Due to Total Cardiovascular Diseases, 1995*



*Per 100,000 population. All data are age-adjusted to the year 1970.

Risk Behaviors Are Largely Responsible

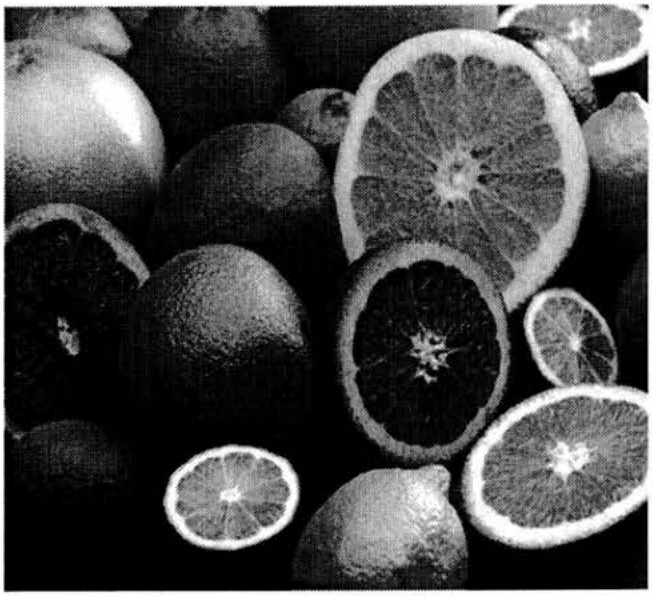
A limited number of health-related behaviors practiced by individuals every day contribute markedly to cardiovascular disease.

Tobacco Use

Cigarette smoking is a major cause of heart disease among both men and women. Smokers have twice the risk of heart attack of nonsmokers. Nearly one-fifth of all deaths from cardiovascular disease, or about 180,000 deaths each year, are attributable to smoking. Surveillance data indicate that an estimated 1 million young people become regular smokers each year.

Lack of Physical Activity

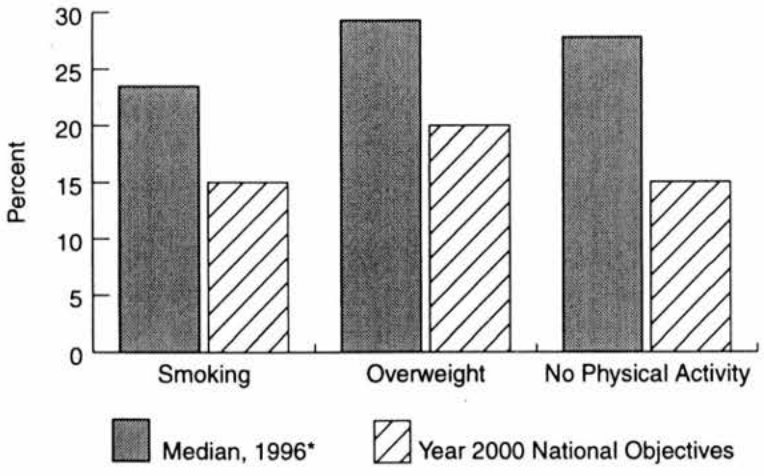
People who are sedentary have twice the risk of heart disease as those who are physically active. Despite these risks, America remains a predominantly sedentary society. Surveys have shown that more than half of American adults do not practice the recommended level of physical activity, and more than one-fourth are completely sedentary. Physical activity reduces the risk of dying of heart disease and provides protection against other chronic diseases and conditions such as high blood pressure, diabetes, and colon cancer. It also helps reduce blood pressure in people who already have high blood pressure.



Poor Nutrition

More than 30% of the nation's adults (some 58 million people) are obese and thus have a higher risk for heart disease, high blood pressure, high cholesterol, and other chronic diseases and conditions such as diabetes. Only 27% of women and 19% of men report eating the recommended five servings of fruits and vegetables each day.

Behavioral Risk Factors Among Adults for Heart Disease



*Source: CDC, Behavioral Risk Factor Surveillance System, 1996.

Studies have shown that individuals can reduce their risk of heart disease by modifying their behavior. For example, people who stop smoking experience a rapid and substantial reduction in their risk of dying of heart disease. Improved nutrition and physical activity help to lower cholesterol and high blood pressure and reduce obesity.

CDC's National Leadership

Every state needs to be part of a nationwide, comprehensive, and integrated national program to prevent cardiovascular disease and to target its major risk factors.

Recognizing the immense burden of this disease, in fiscal year 1998, Congress for the first time appropriated targeted funding of $8.1 million. This amount, together with CDC's limited in-house funding of $2.8 million for cardiovascular disease, provides the basis on which to initiate a national prevention program. The program will be supported by critical elements already in place through the efforts of CDC and its partners.

Planning for a Nationwide Prevention Program

Working with the states and other national partners, CDC has provided national leadership in the development of a strategy for a nationwide prevention program. *Preventing Death and Disability from Cardiovascular Diseases: A State-Based Plan for Action* outlines the core functions of state-based cardiovascular disease programs and emphasizes strategies targeting the underserved. CDC's key partners in developing the plan include the American Heart Association; the National Heart, Lung, and Blood Institute; and state health department staff with experience and expertise in the area of chronic disease prevention.

Strengthening the Science Base

CDC strengthens and expands the scientific basis for prevention measures by examining health effects related to major risk factors. The benchmark report *Physical Activity and Health: A Report of the Surgeon General*, released in summer 1996, brings together what has been learned about physical activity and health from decades of research. Among the major findings is that regular physical activity reduces the risk of developing or dying of some of the leading causes of illness and death in the United States, including cardiovascular disease. People who have been inactive can improve their health and well-being by becoming even moderately active on a regular basis. The report identifies promising ways to help people include more physical activity in their daily lives.

The Surgeon General's reports on smoking and health document comprehensive, scientific information on cigarette smoking and smokeless tobacco use. Recent reports have addressed tobacco use among adolescents and among special populations. Information in these reports is used by the scientific community and policy-makers to design and foster efforts to prevent tobacco use.

CDC's National Standards Laboratory is a state-of-the-art facility that supports research efforts to better define the relationship of levels of cholesterol and other related lipids to the risk of developing heart disease. This laboratory has established national standards for cholesterol measurement that are used as reference points by laboratories around the country. Such standards enable laboratories to measure the accuracy and reliability of study results and to ensure that results are comparable between studies.

Improving Prevention Strategies

CDC supports 14 Prevention Research Centers (PRCs) at schools of public health and medical schools with preventive medicine residencies. The PRCs develop and evaluate promising prevention strategies that can be rapidly applied to public health practice in the community. These centers serve as the focal points around which various entities in the health arena—academicians, clinicians, scientists, community leaders, and staff from HMOs and state and local health departments—coalesce to target such issues as increasing physical activity among the elderly, reducing risk factors for heart disease among urban minority populations, and workplace health promotion.

Getting Health Messages Out and Acted On

CDC has collaborated with a host of national partners to develop a health communications campaign promoting healthy eating, physical activity, and reduced tobacco use. In doing so, CDC has taken advantage of expertise and experience from the field of social marketing to strengthen and fine-tune health promotion messages.

To strengthen health promotion for children, CDC has consulted with scientific experts and national health and education organizations to develop guidelines for use by schools and other organizations serving youth. These guidelines, covering topics such as tobacco use, unhealthy dietary patterns, and physical inactivity, provide specific recommendations for effectively promoting healthy behaviors among youth.

CDC Assistance to States and Communities

Through funding and technical assistance, CDC provides valuable support to states and communities in tailoring existing state-based programs to help prevent cardiovascular disease.

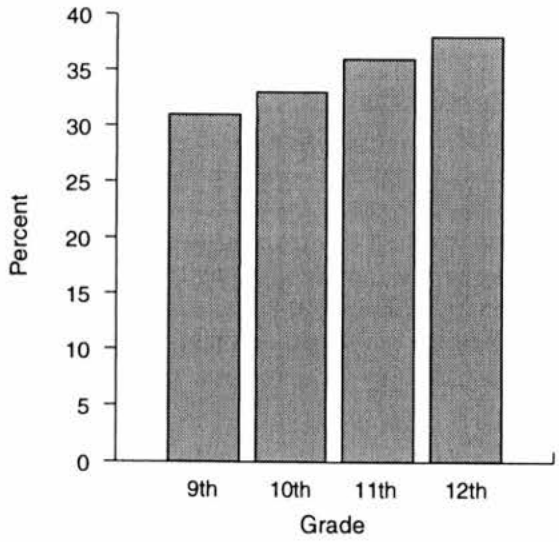
Guidance for Community Efforts

To assist community programs in better targeting and evaluating prevention efforts, CDC has developed the handbook *Evaluating Community Efforts to Prevent Cardiovascular Diseases*. The handbook assists program staff in tracking and analyzing prevention activities to determine their effectiveness. With the handbook as a reference, CDC is offering technical assistance on evaluating and sustaining effective local cardiovascular disease prevention activities.

Targeting Tobacco Use in States

To reduce the prevalence of tobacco use, CDC supports and coordinates tobacco use prevention and control programs in 32 states and the District of Columbia. These programs include strategic activities designed to reach those most at risk, including youth, racial and ethnic minority groups, women, and people with low socioeconomic status.

Adolescents' Current Cigarette Use,* by Grade



*Reported smoking one or more cigarettes in the last 30 days.
Source: CDC, Youth Risk Behavior Survey, 1995.

Targeting Increased Risk of Heart Disease and Stroke Among People With Diabetes

People with diabetes are two to four times more likely to have heart disease or stroke than people without diabetes. As part of its national strategy to address the burden of diabetes, CDC provides resources and technical assistance to state health departments, national organizations, and communities to determine the size and nature of diabetes-related problems and the reasons they exist, to develop and evaluate new strategies for diabetes prevention, to establish partnerships to prevent diabetes problems, and to improve access to quality diabetes care in order to prevent, detect, and treat diabetes complications. Each state and U.S. territory receives at least limited funding for diabetes control activities.

Source of Federal Funding for States

Until 1998, CDC's Preventive Health and Health Services Block Grant was the only source of federal funding for states for ongoing efforts related to cardiovascular disease. This funding continues to be essential to states in addressing unmet needs.

Investing in Our Children's Future

Although cardiovascular disease usually becomes evident in middle or older age, progressive harmful conditions leading to such disease (e.g., atherosclerosis) begin in childhood. Reducing the health and economic burden of cardiovascular disease in the United States depends in large measure on reaching our young people early, before unhealthy behaviors are adopted.

CDC is assisting 15 states in providing high-quality, school-based health education that gives young people the information and skills they need to avoid health risks such as tobacco use, unhealthy dietary patterns, and inadequate physical activity. In addition to providing instruction, coordinated health education gives young people the opportunity to practice decision making, communication, and peer-resistance skills that will enable them to make healthy behavior choices.

CDC's Physical Activity and Nutrition Program for Adolescents (PAN) seeks to improve our understanding of the roles of physical activity and nutrition in the health and well-being of children and to test new approaches for encouraging young people to adopt healthier lifestyles.

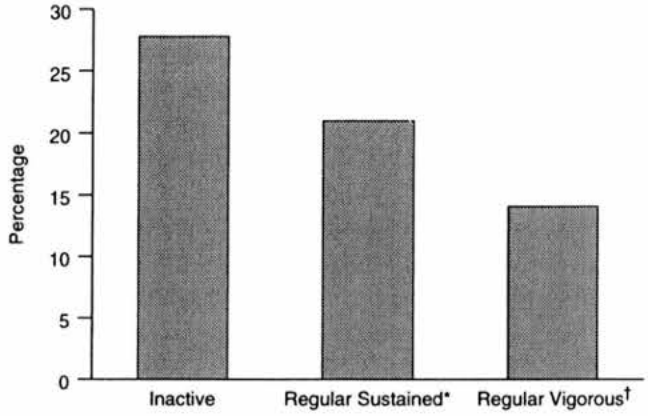
Surveillance Provides Vital Information

National and state-based surveillance is essential to support successful cardiovascular disease prevention efforts.

Measuring the Disease Impact

CDC has recently developed cardiovascular disease surveillance reports that provide extensive information on the occurrence of stroke and heart disease and related deaths and hospitalizations. Comprehensive tables and figures in these reports present data for the United States by race, sex, age group, and region. Death rate information is provided by state. These surveillance reports are being used by state and local health departments and other health agencies to develop and focus cardiovascular disease prevention strategies.

Median Levels of Physical Activity Among Adults, United States



*Regular Sustained—30 minutes of any intensity 5 times per week.
†Regular Vigorous—20 minutes of vigorous intensity 3 times per week.
Source: CDC, Behavioral Risk Factor Surveillance System, 1996.

Information on Risk Factors Essential

In targeting cardiovascular disease, it is crucial to know the extent to which Americans are engaging in behaviors that put them at higher risk. A unique source of such information is CDC's state-based Behavioral Risk Factor Surveillance System (BRFSS). Now active in all 50 states, this system gathers information from adults on knowledge, attitudes, and behaviors related to key health issues, such as tobacco use, dietary patterns, level of leisure-time physical activity, and use of preventive services (e.g., screening for hypertension and elevated cholesterol).

Information from the BRFSS enables CDC and the states to better target scarce health resources by determining the prevalence of risk behaviors and the populations most at risk.

Information to Better Target Prevention Among Young People

Until the 1990s, little was known about the prevalence of behaviors among young people that increase their risk for cardiovascular disease in their middle or later years. The Youth Risk Behavior Surveillance System, developed by CDC in cooperation with federal, state, and private-sector partners, now provides such information.

This surveillance system includes voluntary surveys conducted by CDC among a national sample of 12,000 students as well as surveys conducted among smaller samples by state and local education agencies every two years. The information collected on the prevalence of key cardiovascular disease risk factors—tobacco use, lack of physical activity, and poor nutrition—is crucial in targeting health promotion efforts to our nation's young people.

For more information or additional copies of this document, please contact the Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Mail Stop K–13, 4770 Buford Highway NE, Atlanta, GA 30341-3717, (770) 488-5080.
ccdinfo@cdc.gov
http://www.cdc.gov/nccdphp