



Cardiovascular Disease

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In Developing Countries, Cardiovascular Disease Claims Nearly Three Times as Many Lives as HIV, Tuberculosis, and Malaria Combined

Cardiovascular disease (CVD)—which includes heart diseases and stroke—is the leading cause of death worldwide. Long a problem in high-income countries, CVD is now recognized as a global problem.

CVD accounted for more than one-quarter of all deaths worldwide in 2001, with four-fifths of those deaths occurring in low- and middle-income countries (see figure). CVD was responsible for 31 percent of deaths in Latin America and the Caribbean in 2001 and will account for a projected 38 percent of deaths in the region by 2020.

Just three of the many forms of CVD account for the vast majority of the CVD health burden and are the primary targets for public health interventions: ischemic heart disease, stroke, and congestive heart failure. Major risk factors for CVD include tobacco use, high blood pressure, high cholesterol, excessive alcohol use, obesity, and lack of physical exercise. Many of these are also risk factors for developing diabetes and some forms of cancer.

Costs of treatment are substantial and growing. For example, CVD treatment consumed about 25 percent of South Africa's health expenditures in the 1990s, accounting for up to 3 percent of that country's gross domestic product.

Cardiovascular Disease, Affluence, and Aging

CVD has been associated with affluence because many aspects of industrialization and economic development also raise the risk of CVD: increasing tobacco use, more sedentary jobs, greater use of cars, and diets higher in unhealthy fats and refined sugar. As public health measures have helped reduce the toll from infectious disease and more children have survived to adulthood, CVD accounts for an increasing proportion of deaths. These risks increase with age, and global population aging means that the population at greatest risk of

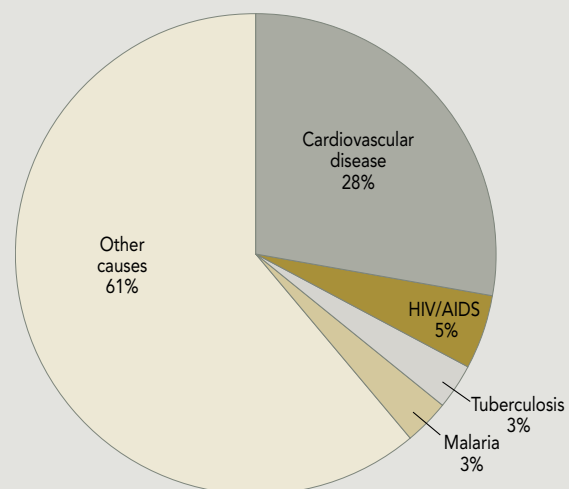
CVD is expanding rapidly. CVD strikes working-age adults, robbing a country's labor force of productive workers. In Brazil, China, India, Mexico, and South Africa, an estimated 21 million years of future productive life are lost each year because of CVD.

Reducing the Health Burden From Cardiovascular Disease

Many developed countries have reduced the health burden from CVD by targeting specific risk factors through individual lifestyle and behavior changes and medical treatment, and by creating public policies aimed at reducing risk factors.

Rates declined in higher-income countries like Australia, Sweden, and the United States, while they increased in countries with emerging market economies like Kazakhstan.

Deaths in Low- and Middle-Income Countries by Selected Causes, 2001



Source: Jamison, D. T. 2006. "Investing in Health." In *Disease Control Priorities in Developing Countries*, 2nd ed., ed. D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, P. Jha, A. Mills, and P. Musgrove, table 1.A1. New York: Oxford University Press.

Many health interventions that helped lower CVD in Western Europe and the United States can be applied to low- and middle-income countries.

Change long-term unhealthy habits. Most people find it very difficult to change long-term unhealthy habits like smoking, overeating, and a sedentary lifestyle. Public policies and regulations can help people with lifestyle changes, and can help children avoid unhealthy habits and behavior. The most important lifestyle changes include:

- Curb tobacco use through education, antismoking regulations, nicotine replacement therapy, and tax policies to keep people from adopting the habit and to help smokers quit. (See fact sheet on Tobacco Addiction.)
- Promote healthy diets through education and food policies. Effective policies include requiring the food industry to replace saturated and trans fats with healthier fats, reduce the salt content of processed foods, and offer low-fat dairy products. Other strategies include requiring schools to serve healthier meals to children and educating adults and children about the benefits of eating less fat, sugar, and salt, and more fruits, vegetables, and whole grain foods.
- Encourage regular physical exercise to fight obesity and maintain a healthy cardiovascular system. School curricula, community design, and education campaigns are effective strategies.

Implement cost-effective medical interventions. Sustained lifestyle changes have proved difficult to achieve, but cost-effective medical interventions can significantly reduce CVD risks among people at high risk. Higher-risk individuals include people who have already had a heart attack or stroke as well as people diagnosed with high blood pressure and high levels of cholesterol. Common treatments include:

- Aspirin and other drugs to reduce the buildup of platelets that reduce blood flow. Long-term use of such drugs in CVD patients leads to a 25 percent reduction in the risk of major events such as heart attack and stroke.

- Medicines to control blood pressure and lower blood cholesterol. Controlling blood pressure has lowered risk of mortality and illness from CVD by at least 25 percent among high-risk people. Lowering blood cholesterol has been associated with a 25 to 30 percent reduction in the risk of CVD mortality and illness among high-risk people.

One promising intervention to prevent a second CVD event among high-risk people is a cost-effective “polypill” containing a combination of drugs. People are more likely to take a single pill than several pills regularly, thereby reducing their risk of stroke or heart attack.

For More Information

See the following chapters in Jamison, D. T., J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, P. Jha, A. Mills, and P. Musgrove, ed. 2006. *Disease Control Priorities in Developing Countries*, 2nd ed. New York: Oxford University Press.

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