

Lifetime risk of developing cardiovascular disease substantial

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Even in men and women with an optimal cardiovascular disease (CVD) risk factor profile, the lifetime risk estimate for CVD is greater than 30 percent, and is more than 50 percent for men and women overall, according to a study appearing in November 7 issue of *JAMA*, a theme issue on cardiovascular disease. The study is being released early online to coincide with the American Heart Association's Scientific Sessions.

"To date, there have been no published data on the [lifetime risk](#) for total CVD (including [coronary heart disease](#) [CHD], atherosclerotic and [hemorrhagic stroke](#), [congestive heart failure](#) [CHF], and other CVD death)," according to background information in the article. "Estimates of lifetime risk for total CVD may provide projections of the future population burden of CVD and may assist in clinician-patient risk communication."

John T. Wilkins, M.D., M.S., of the Northwestern University Feinberg School of Medicine, Chicago, and colleagues conducted a study to estimate lifetime risk for total CVD in separate models for men and women overall and by aggregate risk factor burden at index ages of 45, 55, 65, and 75 years. The study consisted of a pooled survival analysis of data from 1964 through 2008 from five National Heart, Lung, and Blood Institute-funded community-based cohorts: [Framingham Heart Study](#), Framingham Offspring Study, Atherosclerosis Risk in Communities Study, Chicago Heart Association Detection Project in Industry Study, and Cardiovascular Health Study. All participants were free of CVD at entry into the study with risk factor data (blood pressure [BP], total

cholesterol [TC], diabetes, and smoking status) and total CVD outcome data. The primary outcome measure for the study was any total CVD event (including fatal and nonfatal coronary [heart](#) disease, all forms of stroke, congestive [heart failure](#), and other CVD deaths).

Across all index ages, 1.7 percent to 7.9 percent of individuals were in the all optimal risk factor group. In contrast, more than 55 percent of individuals were in the 1 major or at least 2 major risk factor strata at all index ages. At some time during follow-up across all index age groups, approximately 30 percent to 35 percent of individuals experienced CVD events. The researchers found that at an index age of 45 years, overall lifetime risk estimates for total CVD through age 95 years were 60.3 percent for men, and 55.6 percent for women. Women had significantly lower lifetime risk estimates than men at all index ages.

At index ages 55 and 65 years, men and women with at least 1 elevated risk factor (BP, 140-149/90-99 mm Hg; or TC, 200-239 mg/dL; but no diabetes or smoking), 1 major risk factor, or at least 2 major risk factors (BP, 160/100 mm Hg or greater or receiving treatment; TC, 240 mg/dL or greater or receiving treatment; diabetes mellitus; or current smoking) had lifetime risk estimates to age 95 years that exceeded 50 percent. At an index age of 55 years, [men](#) with optimal risk factor profiles [BP,

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