Risk of fatal coronary heart disease higher among black men

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In an examination of the incidence of coronary heart disease (CHD) in the U.S. by race and sex, black men and women had twice the rate of fatal CHD compared with white men and women, with this increased risk associated with a greater prevalence of CHD risk factors, 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.

"Although mortality rates for acute myocardial infarction [MI; heart attack] and coronary heart disease have declined in the United States since the 1970s, both death certificate data and evidence from 4 U.S. communities suggest a steeper decline in acute CHD mortality between 2000 and 2008 for whites than for blacks, widening a long-standing disparity," according to background information in the article. It is unknown whether disparities in the incidence of CHD among U.S. blacks and whites persist.

Monika M. Safford, M.D., of the University of Alabama at Birmingham, and colleagues conducted a study to examine racial and sex differences in incident total CHD, fatal CHD, and nonfatal CHD across race-sex groups. The study included 24,443 participants without CHD at the beginning of the study from the Reasons for Geographic and Racial Differences in Stroke (REGARDS) cohort, who resided in the continental United States and were enrolled between 2003 and 2007 with follow-up through December 2009. Blacks and whites had a similar average age, but smoking, diabetes, and reduced estimated glomerular filtration rate (a measure of kidney function) were more prevalent, and systolic blood pressure and body mass index were higher among blacks than whites.

The average follow-up time was 4.2 years. There were 659 total incident CHD events through December 2009, including 153 events in black men, 254 in white men, 138 in black women, and 114 in white women. The researchers found that although the measured incidence rate of total CHD was similar among black men and white men, black men had higher incidence of fatal CHD and lower incidence of nonfatal CHD. Women had lower incidence rates than men within each racial group. However, black women had higher incidence rates for total CHD, for fatal CHD, and for nonfatal CHD, compared to white women. The increased risk of fatal CHD among blacks was associated with a higher prevalence of cardiovascular disease risk factors.

"Excess risk factor burden among black men and women continues to be a major public health challenge, along with their high risk for death as the presentation of CHD. Increased emphasis on optimizing well-established CHD risk factors among blacks could potentially reduce these disparities," the authors conclude.

Michael S. Lauer, M.D., of the National Heart, Lung, and Blood Institute, Bethesda, Md., writes in an accompanying editorial that two studies in this issue of JAMA (by Safford et al and by Daviglus et al) "send a powerful and sobering message: despite 50 years of epidemiological knowledge and despite numerous therapeutic advances, risk factor burdens among minority populations are unacceptably high and consequential."

"[These reports] demonstrate the ongoing power of epidemiology. These reports should stimulate results-based transformations of epidemiological science that, in consonance with digital revolution, are better, faster, cheaper, and more responsive to current needs. These transformations will occur if epidemiologists and their supporters join forces with many other stakeholders. This is already happening to some degree with the Million Hearts Initiative and the National Program to Reduce Cardiovascular Risk. These transformations will also ensure that epidemiology will have much to

give, whether lately or later."

More information:
JAMA, 2012;308[17]: 1768-1774.
JAMA, 2012;308[17]: 1804-1805.

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