

# Two studies show power of epidemiology research: Underscore need to address health disparities

November 6 2012

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Hispanic Community Health Study/Study of Latinos (HCHS-SOL)—which will be presented at the American Heart Association Annual Meeting in Los Angeles on Nov. 5 and published in the Nov. 7 issue of the *Journal of the American Medical Association (JAMA)*—finds heart disease risk factors are widespread among Hispanic/Latino adults in the United States.

Reasons for Geographic and [Racial Differences](#) in Stroke (REGARDS) study—which will be published in the Nov. 7 issue of *JAMA*— finds black men and women are about twice as likely to die from coronary heart disease (CHD) compared with their age-matched white counterparts.

## Rates of heart disease risk factors vary across Hispanic/Latino populations

Heart disease risk factors are widespread among Hispanic/Latino adults in the United States, with 80 percent of men and 71 percent of women having at least one risk factor for heart disease, according to a study funded by the National Institutes of Health. The Hispanic Community [Health Study](#)/Study of Latinos (HCHS-SOL) is the largest study to date to examine the prevalence of heart disease risk factors—[high blood pressure](#), [high cholesterol](#), obesity, diabetes, and smoking—within a diverse Hispanic/[Latino population](#).

Findings from HCHS-SOL also showed that the prevalence of risk factors varies across and within Hispanic/Latino populations. For example, people of Puerto Rican background experienced higher rates of heart disease risk factors compared to other Hispanic/Latino groups.

Participants who were more acculturated (born in the United States or lived in the United States for 10 years or longer or preferred using English rather than Spanish) were significantly more likely to have three or more risk factors as well as self-reported heart disease or stroke. And those with lower education or with annual incomes less than \$20,000 were more likely to have multiple heart disease risk factors than those with higher education and incomes.

"Heart disease is the leading cause of death among Hispanic/Latino people in the United States, so it was critical to conduct a study that looked at the burden of heart disease risk factors in specific populations," said Larissa Aviles-Santa, M.D., M.P.H., project officer for HCHS/SOL in the National Heart, Lung, and Blood Institute (NHLBI) Division of Cardiovascular Sciences, part of the NIH.

HCHS-SOL is a multi-center, prospective, population-based study that includes more than 16,000 Hispanic/Latino adults of different backgrounds—including Cuban, Dominican, Mexican, Puerto Rican, Central American, and South American—between the ages of 18 and 74.

The participants were recruited from randomly selected households in four U.S. communities: the New York City borough of the Bronx, Chicago, Miami, and San Diego. Participants underwent an extensive baseline examination and also completed questionnaires about their medical history, lifestyle, education, annual income, and acculturation. Data were collected from participants between March 2008 and June 2011 and then analyzed.

"The results of the HCHS-SOL study show the need to implement education and lifestyle change programs to lessen the burden of [heart disease risk](#) factors among Hispanic/Latino people, starting at early ages," said Martha Daviglus, M.D., Ph.D., principal investigator for the HCHS-SOL Chicago site, professor of preventive medicine at Northwestern University, and director of the Institute for Minority Health Research at the University of Illinois at Chicago.

"A better understanding of the relationship between traditional lifestyles, acculturation, and development of cardiovascular disease over time will provide us with the information needed to create programs that will reduce the burden of cardiovascular risk factors among Hispanics/Latinos," said Greg Talavera, M.D., M.P.H, principal investigator for the HCHS-SOL San Diego site and professor at the San Diego State University.

Findings from this phase of the study include self-reported history of heart disease and stroke, and clinically measured risk factors. The study team will continue to follow the participants to learn how risk factors change over time and how they influence the risk of developing cardiovascular disease.

HCHS-SOL activities were conducted by more than 250 staff members at four field centers affiliated with San Diego State University, Northwestern University and the University of Illinois at Chicago, Albert Einstein College of Medicine in New York City, and the University of Miami. The Collaborative Studies Coordinating Center at the University of North Carolina in Chapel Hill provided additional support.

HCHS-SOL is supported by the NHLBI and six other NIH institutes and offices, including the National Institute of Diabetes and Digestive and Kidney Diseases, National Institute on Minority Health and Health Disparities, National Institute on Deafness and Other Communication

Disorders, National Institutes of Dental and Craniofacial Research, National Institute of Neurological Disorders and Stroke, and the Office of Dietary Supplements.

HCHS-SOL is supported by contracts from the NHLBI to the University of North Carolina (N01-HC65233), University of Miami (N01-HC65234), Albert Einstein College of Medicine (N01-HC65235), Northwestern University (N01-HC65236), and San Diego State University (N01-HC65237).

## **NIH study points to higher mortality in African Americans**

Researchers from the NIH-supported Reasons for Geographic and Racial Differences in Stroke (REGARDS) study found that black men and women were about twice as likely to die from coronary [heart disease](#) (CHD) compared with their age-matched white counterparts. Black women had a higher incidence of fatal and nonfatal coronary disease than white women. The findings are based on an analysis of 24,443 men and women.

For the past nine years, the REGARDS study team has been tracking stroke risk and cognitive health in an ethnically and demographically diverse sample of more than 30,000 adults in the United States.

"This research shows clearly that there is much work to be done in addressing racial health disparities. We haven't been able to move the needle in this important population that is disproportionately affected by [coronary heart disease](#) and stroke," said Walter J. Koroshetz, M.D., deputy director of the National Institute of Neurological Disorders and Stroke (NINDS). "It highlights the need for a campaign to control known vascular risk factors that lead to premature death and loss of quality of

life."

The current analysis, spearheaded by researchers at the University of Alabama at Birmingham, also showed that the disparity in CHD deaths between blacks and whites is due largely to an excess burden of known cardiovascular risk factors among blacks. None of the participants had evidence of CHD at baseline and they were followed for four years. As shown in previous studies, death was far more likely to be the first indication of CHD in blacks than it was in whites, suggesting that there has been "little evidence of progress toward eliminating this disparity," according to the paper. "Well-established CHD [risk factors](#) among blacks could potentially reduce these disparities," the researchers concluded.

REGARDS is supported by the NINDS. This specific research project was supported by grants from the NIH's NHLBI (R01 HL080477) and the National Center for Research Resources (KL2 RR025776-04), as well as a cooperative agreement from NINDS (U01 NS041588). Additional support was provided by an investigator-initiated grant-in-aid from Amgen Corporation.

"These two reports send a powerful and sobering message," noted Michael Lauer, M.D., director of the Division of Cardiovascular Sciences at the NHLBI, in an accompanying *JAMA* editorial. "Despite 50 years of epidemiological knowledge and numerous therapeutic advances, risk factor burdens among minority populations are unacceptably high and consequential."

**More information:** *JAMA* paper about the Hispanic Community Health Study/Study of Latinos (HCHS-SOL):

[jama.jamanetwork.com/article.a...px?articleid=1389614](http://jama.jamanetwork.com/article.a...px?articleid=1389614)

*JAMA* paper about the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study: [jama.jamanetwork.com/article.a...](http://jama.jamanetwork.com/article.a...)

[px?articleid=1389611](#)

Provided by NIH/National Heart, Lung and Blood Institute

Citation: Two studies show power of epidemiology research: Underscore need to address health disparities (2012, November 6) retrieved 6 May 2024 from

<https://medicalxpress.com/news/2012-11-power-epidemiology-underscore-health-disparities.html>

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