

Investigating cardiovascular health among Asian Americans

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Garima Arora, M.D. Credit: University of Alabama at Birmingham

Physician-scientists from the University of Alabama at Birmingham and the University of Minnesota have recently collaborated to assess the prevalence of cardiovascular risk factors and key cardiovascular diseases among Asian Americans. Among their landmark findings, recently published in the journal *American Journal of Cardiology*, is that American-born Asian Americans had higher odds of poor diet and elevated blood pressure than foreign-born Asian Americans—including among the most educated and affluent.

Cardiovascular disease has been a major driver of morbidity and mortality in the United States for decades. There are also many research reports to describe a rapidly rising burden of cardiovascular risk factors and diseases in Asia in the last decade. Despite the data emerging from both continents, data to describe these trends in Americans from the Asian subcontinent, or Asian Americans, is lacking. Since Asian Americans are one of the fastest-growing minorities in the United States, cardiovascular clinicians and researchers have together decided that more data regarding the cardiovascular health is needed to define the state of cardiovascular health among Asian Americans.

The Centers of Disease Control and Prevention has led the charge to fill this unmet need. The National Health and Nutrition Examination Study, or the NHANES, is a highly respected and publicly available set of health care surveys that the CDC is responsible for administering.

The NHANES began selectively sampling Asian Americans in 2011, and the American Heart Association followed suit in 2018 by releasing a scientific statement calling for more research into Asian Americans' cardiovascular health. The authors used the NHANES data, along with guidance from the American Heart Association, to provide an in-depth analysis of cardiovascular health metrics among Asian Americans.

In their paper, the clinician-scientists tracked the prevalence of seven key metrics of ideal cardiovascular health, the American Heart Association's Life's Simple 7 metrics, among the Asian American subjects who participated in the NHANES between 2011-2016—smoking, physical activity, body mass index, healthy diet, cholesterol levels, blood pressure and fasting blood glucose.

The authors also evaluated the prevalence of key cardiovascular conditions like congestive heart failure, diabetes mellitus and chronic kidney

disease between 2011 and 2016. The authors further hypothesized that "that the prevalence of ideal [cardiovascular health](#) varied between American-born Asian Americans and foreign-born." The authors used the recently released results from the 2011-2016 NHANES survey periods to capture self-identified American-born Asian Americans and foreign-born Asian Americans.

Rajat Kalra, M.D., a clinician-scientist at the University of Minnesota and a graduate of UAB's Tinsley Harrison Internal Medicine Residency, was the first author of the study. He collaborated closely with the UAB investigators to devise the research plan and answer these pressing questions.

"We felt uniquely prepared to rise to the challenge that the American Heart Association posed with their recently scientific statement," Kalra said. "As cardiovascular clinicians, we are on the front line and constantly see the impact of uncontrolled [cardiovascular disease](#). We anecdotally noted that we were seeing an excess of uncontrolled cardiovascular risk factors and diseases among our Asian American patients. We also felt an important personal responsibility to study this topic further since we are all of Asian ancestry."

The researchers found that Asian Americans had a rising prevalence of low [physical activity](#) levels, unhealthy weight, congestive heart failure and chronic kidney disease during the survey periods. They also noted that American-born Asian Americans had higher odds of poor diet and elevated [blood pressure](#) than foreign-born Asian Americans. This troubling burden of cardiovascular diseases was evident despite the fact that Asian Americans in the NHANES surveys generally had high educational and health insurance attainment and belonged to middle and high socioeconomic strata.

"As Asian countries become progressively more industrialized, we are seeing declining rates of infectious diseases that are balanced by a higher rate of cardiovascular and metabolic diseases," said senior author Garima Arora, M.D., an assistant professor in UAB's Division of Cardiovascular Disease. "Our investigation's results suggest that Asian Americans are suffering from the same

trends right here in America, and that there are important differences in Asian Americans who were born in America and those who were born outside of America. Together, we hope these findings stimulate clinicians to aggressively screen and target treatment for the cardiovascular diseases in this growing ethnic sub-group."

Study limitations

Arora also noted that this study had several key limitations.

"The individual Asian ethnic sub-groups have tremendous differences in their cardiovascular risk profiles," she said. "Similarly, Asian Americans have vast differences in their lifestyle habits. Since such few Asian Americans have been formally studied until now, our ability to detect these differences in risk profiles and lifestyle differences between the Asian American ethnic sub-groups is highly limited."

Additionally, while NHANES is very rigorously conducted and highly respected, some outcomes are reported by the participants themselves. Self-recall of health data can introduce bias into reporting, according to Arora.

"Finally, we know from prior data that researchers have a hard time recruiting Asian Americans into health research studies," she said. "We sincerely hope our findings and involvement in health research can stimulate their interest, if only to a small degree."

More information: Rajat Kalra et al. Cardiovascular Health and Disease Among Asian-Americans (from the National Health and Nutrition Examination Survey), *The American Journal of Cardiology* (2019). DOI: [10.1016/j.amjcard.2019.04.026](https://doi.org/10.1016/j.amjcard.2019.04.026)

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