

## **Neighborhood Factors May Predict Cardiac Risks**

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### **Body**

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SAN FRANCISCO - Women who live in economically deprived neighborhoods or neighborhoods that lack social cohesion have higher rates of coronary artery calcification than other women.

In men, however, the association with coronary artery calcification is statistically significant only for those who live in neighborhoods characterized both by economic deprivation and lack of social cohesion.

"Neighborhood deprivation and low cohesion may predict very early coronary heart disease in younger, asymptomatic adults," Dr. Daniel Kim said at a conference sponsored by the American Heart Association. "These results are consistent with neighborhood deprivation and low cohesion as fundamental or root causes of coronary heart disease."

Women in the highest quartile of neighborhood deprivation had about a 2.5-fold risk of coronary artery calcification (CAC), compared with women in the lowest quartile. Similarly, women in the lowest quartile of neighborhood cohesion had about twice the risk of CAC as women in the highest quartile, Dr. Kim reported.

Neither neighborhood cohesion nor neighborhood deprivation alone was significantly associated with CAC in men, but those living in the lowest three quartiles of neighborhood cohesion who were also living in deprived neighborhoods were about three times as likely to have CAC as those living in deprived neighborhoods with the highest levels of cohesion.

Data from the study came from 2,974 adults participating in the **Coronary Artery Risk Development in Young Adults (CARDIA) study**, said Dr. Kim of the Harvard School of Public Health, Boston.

CARDIA is a prospective cohort study of young adults in four urban areas-Birmingham, Ala.; Chicago; Minneapolis; and Oakland, Calif.-who have been followed since 1985. Included in this study were those participants who had undergone measures of CAC in 2005 when they were 37-50 years old.

The investigators assessed neighborhood deprivation by combining six indicators: median household income; median value of housing units; percentage of households receiving interest, dividend, or rental income; percentage of adults who had completed high school; percentage of adults who had completed college; and percentage employed in executive, managerial, or specialty occupations.

They assessed perceived neighborhood cohesion from participants' answers to five survey items: people's willingness to help their neighbors, whether the neighborhood is "close-knit," whether people in the neighborhood can be trusted, whether they get along with each other, and whether they share the same values.

Investigators adjusted their results.

## Neighborhood Factors May Predict Cardiac Risks

**My Take****Access to High-Quality Food Is Key**

Dr. Kim's study is important because we don't pay enough attention to neighborhoods and their role in encouraging or discouraging good dietary practices. It's well known that economically deprived neighborhoods tend to have lots of fast-food emporia and not much in the way of first-class supermarkets.

I'm reminded that back in the 1940s two great congressmen, Sen. Lister Hill (1894–1984, D-Ala.) and Sen. Harold Burton (1888–1964, R-Ohio), were successful in passing the landmark Hospital Survey and Construction Act. This financed the construction and renovation of more than 9,200 medical facilities, many of which were in low-income communities.

The modern version of the law would be an act by Congress to finance the construction of first-class supermarkets in more communities. These supermarkets could stock high-quality food and make it available at low prices. This would allow people living in deprived communities to improve their diets and overcome their unfavorable cardiovascular risk status.

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**BOX STORIES****Vitals**

**Major Finding:** Women in the highest quartile of neighborhood deprivation had about 2.5-fold the risk of coronary artery calcification as women in the lowest quartile.

**Data Source:** The **CARDIA study** of 2,974 adults.

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