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## Association of hostility with coronary artery calcification in young adults: the CARDIA study. Coronary Artery Risk Development in Young Adults.

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### Abstract

**CONTEXT:** Psychosocial factors, including personality and character traits, may play a role in the development and expression of coronary artery disease.

**OBJECTIVE:** To evaluate whether hostility, a previously reported predictor of clinical coronary artery disease, is associated with coronary calcification, which is a marker of subclinical atherosclerosis.

**DESIGN:** Prospective cohort study.

**SETTING AND PARTICIPANTS:** Volunteer subsample from Chicago, Ill, and Oakland, Calif, consisting of 374 white and black men and women, aged 18 to 30 years at baseline, who participated in the Coronary Artery Risk Development in Young Adults (CARDIA) study. Cook-Medley hostility assessment data were collected at baseline from 1985 to 1986 and at year 5 examinations from 1990 to 1992. After the 10-year examinations in the 1995-1996 year, electron-beam computed tomographic scans were performed.

**MAIN OUTCOME MEASURES:** Presence of any detectable coronary artery calcification (coronary calcium score >0), and coronary artery calcium scores of 20 or higher.

**RESULTS:** In logistic regression analysis adjusting for age, sex, race, and field center comparing those with hostility scores above and below the median of the distribution of the present sample, the odds ratio of having any coronary calcification was 2.57 (95% confidence interval, 1.31-5.22), and the odds ratio of having a calcium score of 20 or higher was 9.56 (95% confidence interval, 2.29-65.9) for calcium scores of 20 or higher. The associations with any coronary artery calcification persisted after adjusting for demographic, lifestyle, and physiological variables. Results using a cynical distrust subscale were somewhat weaker than for those using the global hostility score. Power was inadequate to perform sex- or race-specific analyses.

**CONCLUSION:** These results suggest that a high hostility level may predispose young adults to coronary artery calcification. JAMA. 2000;283:2546-2551

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