Manuscript #261

1. Title:
The relationship of carotid artery atherosclerosis to family history of coronary heart disease in African-Americans and whites: The ARIC and FHS Studies.

2. Writing Group:
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4. Timeline:
Submit Proposal to Publications Committee 01/14/94
Complete analysis 02/14/94
Submit first draft to Publications Committee 04/14/94
Submit to Journal 07/14/94

5. Rationale:
The aggregation of coronary heart disease and its risk factors in white families is well documented. Little is known about familial aggregation of pre-clinical atherosclerosis and few familial aggregation studies exist in African-Americans. Given the association of risk factors with carotid artery indices of atherosclerosis and the familial aggregation of the major risk factors, it is reasonable to postulate an association between probands' risk factors and their family risk scores. There are, however, black/white gender specific differences in carotid artery intima-media thickness measures at the common, bifurcation and internal carotid sites. There are also major differences between blacks and whites in the levels of some of the risk factors. We propose to study the relationship of carotid wall thickness measures and selected risk factors to the family risk score, initially treating each as a continuous measure. Conditional on the nature of the risk functions disclosed, categorical analyses will subsequently be undertaken. These analyses will be carried out separately for probands with and without prevalent coronary heart disease, testing for risk function differences between blacks and whites.

6. Main Hypotheses:
Carotid wall thickness measures are associated with level of family history of CHD as assessed by the family risk score and this association is explained partially but not completely by the standard risk factors.

The associations are invariant across race and gender groups.