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1. Title:
   Social class and atherosclerosis risk in African Americans and Whites in the ARIC study

2. Writing Group:
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3. Background:
   Both the ARIC study (Diez-Roux et al, in preparation) and other studies (eg, Rose G, Marmot MG. Br Heart J 1981; 45:13-19, Wing et al, Am J Public Health 1988; 78:923-26), have shown an inverse relationship of social class to coronary heart disease (CHD). In the ARIC study, individuals with an annual income at baseline under $8,000 had a mean carotid wall thickness 0.026 mm greater than that of subjects with an income over $50,000 after adjustment for age, sex, race and several risk factors. Similarly, prevalence of CHD was 2.2 times greater for individuals with an income <$8,000 than for those with an income >$50,000 (Diez-Roux et al). In addition, not only socio-economic status differs markedly between blacks and whites, but in addition it may modify the relationship between ethnic background and risk factors, such as is the case with HDL. Thus, it is important to examine the relationship between ethnic background and atherosclerosis taking socio-economic status into consideration from the viewpoints of both confounding and effect modification.

   The ARIC study offers an unique opportunity to examine the association of race with prevalent clinical and subclinical atherosclerosis while simultaneously assessing the role of socio-economic status. It is also possible to examine indicators of occupational stress in blacks and whites, including complexity of work, physical demands and job insecurity. These variables have been recently examined using visit 1 data, and will be included in the workshop presentation (Muntaner et al, in preparation).

4. Hypothesis:
   Two questions will be explored: (1) To which extent can the difference in prevalent CHD and subclinical atherosclerosis between blacks and whites be explained by socio-economic status and occupational stress? (The availability of large samples of blacks and whites allows a much finer adjustment for socio-economic level than has been possible heretofore, thus decreasing the potential for residual confounding), and (2) Is the relationship between race and atherosclerosis modified by socio-economic status and occupational stress?

5. Data:
   Only visit 1 data will be used. Associations will be sought with both B-mode carotid atherosclerosis and prevalent CHD (ECG-MI, past history of MI, coronary heart surgery, or balloon angioplasty.) Main independent variables include income, education and occupational data. Adjustment variables include age, sex, and the traditional risk factors (blood pressure, smoking, lipids, BMI, history of diabetes, etc.) Given the overlap between field center and race, whites and blacks in Forsyth will be examined separately.