Manuscript #384

1. Title:
Occupational stress, fibrinogen and incident CHD

2. Writing Group:
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3. Timeline:
Analysis will be done immediately. A draft of the manuscript will be ready by fall 1996.

4. Rationale:
In previous cross-sectional analysis in the ARIC study, occupational stress (complexity of work, job
insecurity, and physical demands) were associated with IMT (Muntaner et al, submitted). There is some
evidence that occupational stress is associated with prevalence and incidence of CHD (see, for example,
Kaplan and Keil, Circulation 1993;88:1973-98). There is also a recent report documenting that
self-perceived job stress is associated with increased fibrinogen levels in a small sample of middle-aged
women (Davis et al, Health Psychol 1995;14:310-8). Lower SES has also been associated with higher
fibrinogen levels in men (Markowe et al, BMJ 1985;291:1312-4; Moller & Kristensen Arterioscl Thromb
1991;11:344-50). Not all studies agree, however. In Cardia, fibrinogen was only weakly correlated with SES
and indices of psychological stress, particularly when controlling for smoking (Folsom et al, Am J Epidemiol
1993;138:1023-36); in a Swedish study, occupational stress was not associated with fibrinogen levels
(Mattison & Lindgarde, J Int Med 1993;234:45-51).

The ARIC study data provides an opportunity to explore the relation between occupational stress and
incident CHD, and to examine whether this relationship is partially explained by increased fibrinogen levels.

5. Hypotheses:
1. Occupational level and high occupational stress are associated with incident CHD.
2. Occupational level and high occupational stress are associated with increased levels of plasma fibrinogen.
3. The association between exposure to occupational stress and CHD is partially explained by fibrinogen levels.

6. Data:
Visit one occupational status (Census category and Muntaner's linkage with occupational stress indicators)
Visit one hemostatic parameters.
CHD incidence data.
The main analytical strategy will be survival analysis. Using Cox proportional hazards models, the
independent effect of occupational stress vis-a-vis fibrinogen (and other potential confounders) will be
investigated.