ARIC MANUSCRIPT PROPOSAL FORM


Manuscript #564


l. Full Title:  Acute phase response lipids/lipoproteins as predictors of incident diabetes mellitus
  Abbreviated Title (length 26):  Lipids -- Incident Diabetes

2. Writing Group (list individual with lead responsibility first):
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3. Timeline:
5/98- 8/98

4. Rationale:
Low HDL-C and high triglycerides have been related prospectively to the development of diabetes mellitus in adults. The associations have been explained as resulting from the effects of obesity, central obesity and insulin resistance. Recently, it has been noted that this pattern of dyslipidemia constitutes part of the acute phase response.

The objective of this proposal is thus to describe the cross-sectional associations of the lipids and lipoprotein acute phase reactants with markers of inflammation and their prospective association with the development of diabetes mellitus.

5.  Main Hypotheses:
1)  Markers of inflammation at Visit 1 will correlate with elevated triglycerides; reduced HDL-C, especially HDL3-C; t elevated lipoprotein(a), elevated
    apolipoprotein B, and decreased apolipoprotein A1.
2)  Elevated triglycerides, lipoprotein(a), and the ratio of apolipoprotein B / apolipoprotein A1, and reduced HDL-C, especially HDL3-C, are independent
    prospective predictors of incident diabetes mellitus.

6. Data (variables, time window, source, inclusions/exclusions):

All ARIC subjects, Visit 1 baseline data and incident diabetes data.

Baseline data:  To define diabetes (fast0802, medication use, physician history, glucos01)

Incident diabetes: Equivalent variables from Visits 2-4.

Lipids: Triglycerides, HDL and its density subfractions, apo A1, apo B, Ip(a)

Markers of inflammation: Smoking, WBC, fibrinogen, Factors VII and vm, von Willebrand factor, aPTT, albumin, uric acid

Covariates: Gender, age, ethnicity, BMI, WHR, hypertension, physical activity, IMT, family history of diabetes, fasting insulin.