

ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #201

1. Title:

PP Lipids and Athero

Full Title: Postprandial lipemia and carotid atherosclerosis: the ARIC study

2. Writing Group:

(lead) AR Sharrett, N Anderson, LE Chambless, G Heiss, ML Messi, CC Paton, W Patsch, ARIC Investigators

3. Timeline:

Field work lab analysis and data closure for the PPL study are complete. Statistical analysis, to be performed at the Coordinating Center, can begin immediately.

4. Rationale:

Most research relating atherosclerosis to blood lipids is based on fasting measurements, yet lipids are altered throughout most of the 24-hr day in persons consuming typical high-fat diets. Animal and in-vitro studies and observations on humans with dysbetalipoproteinemia suggest that lipoproteins after a fatty meal may be particularly atherogenic. If proven, this hypothesis might help explain the occurrence of cardiovascular disease in persons without elevated fasting LDL-cholesterol.

5. Hypotheses:

- 1) Measures of postprandial lipemia (triglycerides, retinyl palmitate and apoB48) are associated with the relative odds of being a carotid thickness case after statistical adjustment for age, gender, study center, date of laboratory measurement, smoking, hypertension and fasting LDL-cholesterol.
- 2) These associations persist after adjustment for fasting lipids (e.g. triglycerides) known to influence postprandial lipemia.
- 3) The associations vary by race and sex and are stronger in persons at low risk with respect to traditional risk factors (smoking, hypertension, LDL-chol).

6. Subjects:

PPL Study carotid thickness cases and controls. Data: Postprandial lipids (triglycerides, retinyl palmitate, apoB48); Fasting lipids (LDL-chol, HDL-chol, HDL₂-chol, HDL₃-chol, apoB, apoA-1, Lp(a)); Covariates (demographics, smoking, BP, medications, data from PPL screening, lab and interview forms).