

ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #493

1. Title: Antioxidants and Cognition

Abbreviated: ANTIOXIDANTS – COGNITION

2. Writing Group (list individual with lead responsibility first):

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3. Timeline:

Summer 1997.

4. Rationale:

There is evidence that antioxidants may protect against oxidative damage in the brain, reducing damage to neurons and cognitive decline. A recent clinical trial has indicated that high dose Vitamin E therapy can slow the progression of Alzheimer's disease (N Engl J Med 1997;336:1216-22). A prospective study found that Beta-carotene was inversely related to cognition (Am J Epidemiol 1996;144:275-80). A case-control study found that plasma concentrations of Vitamins A and E were lower in AD patients than in non-demented controls (Age and Ageing 1992;21:91-4). ARIC has the potential to examine these associations cross-sectionally.

5. Main Hypothesis:

Compared to low dietary intake, higher dietary intake of vitamins A, C, and E (including supplement use) is associated with better cognitive function at visit 2.

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

Independent variables: Dietary antioxidant intake (obtained from visit 1 food frequency questionnaire) + Use of supplements (obtained from visit 1 and visit 2 medication survey).

Dependent variables: Cognitive function tests at visit 2 – 1) Word recall; 2) Digit/Symbol; 3) Word Fluency

Covariates: age, race, sex, center, education, total caloric intake, marital status, employment status, depression score, smoking, hypertension, diabetes, fibrinogen, carotid artery wall thickness, FEV-1, HRT

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