

ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #424

1. a. Full Title: Magnesium and Hypertension
b. Abbreviated Title: Magnesium-Hypertension

2. Writing Group:

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3. Timeline: Analyses can begin soon.

4. Rationale: About a half a dozen prospective studies have shown an inverse association between dietary magnesium and hypertension incidence. Clinical trials to lower blood pressure using magnesium are equivocal. The ARIC paper by Ma et al. showed a cross-sectional inverse association between serum magnesium and blood pressure. To our knowledge there is no prospective study of serum magnesium and hypertension incidence.

5. Main Hypothesis:

Baseline serum magnesium is associated with hypertension incidence through Visit 3.

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

Exclusion: Visit 1 hypertension.

Independent variable: Serum magnesium. V1 and V2 values can be considered simultaneously, and magnesium change also can be examined.

Dependent variable: Incident hypertension from Visits 2 and 3. Also may consider BP change, although medications confound.

Covariates: Age, race, sex, field center, baseline BP, BMI, waist/hip, alcohol, smoking, physical activity, BP medications, dietary magnesium and sodium, parental history of

hypertension.