Manuscript #615

1. Title:
Physical activity and the incidence of transient ischemic attacks (TIA)

2. Writing Group:
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3. Projected Timeline:
Submit proposal to Publications Committee September 1998
Complete analyses November 1998
Submit manuscript to Publications Committee Spring/Summer 1999

4. Rationale:
While there is evidence relating physical activity to established stroke risk factors, such as hypertension (1), evidence relating physical activity to stroke incidence is inconclusive. The American Heart Association 1996 Task Force on Prevention and Rehabilitation of Stroke recommended that researchers "clarify the relation between stroke risk and physical activity" (page 705) (2). In the 1996 Surgeon General's Report on Physical Activity and Health reviewers concluded that "the existing data do not unequivocally support an association between physical activity and risk of stroke" (page 103) (3).

ARIC manuscript #332 examines physical activity and incident stroke. In that work, clinical events were used as study endpoints. Other ARIC work has shown that TIA symptoms are related to incident clinical stroke events as well (4). Given this finding, it is logical to consider that physical activity's effect on clinical stroke may operate through an intermediate, subclinical condition measured as TIA. This line of research can overcome several factors related to the use of clinical stroke events. There is no reliance on hospitalization since apparently healthy individuals can be examined. Furthermore, identification of risk factors for subclinical events can lead to subclinical disease interventions which may halt the disease process before final insult.

5. Main Hypotheses:
This study will prospectively examine the relationship between physical activity and TIA among ARIC participants. It is hypothesized that TIA incidence will be reduced among physically active individuals.

6. ARIC Data:
After excluding participants with a positive or unknown history of stroke or a positive or unknown history of
TIA at baseline, 328 incident TIA cases had occurred by visit 2 or 3.

Outcome: TIA incidence

Exposure: physical activity measured by the Baecke questionnaire at the baseline visit

Potential Covariates: age, race, center, blood pressure, plasma glucose, uric acid, clotting factors, alcohol intake, lipids, hematocrit, smoking, gender, socioeconomic status, body mass index, waist-to-hip ratio

7. References Cited: