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POSTER PRESENTATIONS

P198 **Glucose Metabolism and Body Mass Index in Subjects Prior to the Development of Alzheimer's Disease.** C. Kuttner, MD*, D. Muller, MS, J. Roth, MD*, R. Andrea, MD*, C. Kawas, MD*; Johns Hopkins, 5505 Bayview Circle, Baltimore, MD 21224.

Objective To prospectively examine the relationship between glucose/insulin/body mass index (BMI) measurements and the development of Alzheimer's disease (AD).

Background Previous investigations have suggested

that higher plasma glucose may protect against the development of AD. These studies, however, examined AD patients after dementia diagnosis and may not be relevant to risk of developing AD.

Methods 2321 men and women from the Baltimore Longitudinal Study of Aging (BLSA), aged 41 to 96, who had biennial glucose determinations (fasting plasma glucose, 2 hr post prandial glucose, insulin area, and BMI) were included in the sample. Data from 3-6 yrs prior to diagnosis of AD (NINCDS criteria) was analyzed using Cox Proportional Hazards.

Results There was no relationship between fasting, 2 hr plasma glucose or insulin area and the development of AD in this cohort. Higher BMI was associated with a lower risk of AD 3 yrs before diagnosis of dementia, but was no longer significant 6 yrs prior to diagnosis. Diabetes was less frequent in patients with AD (2.8%) than in controls (5%).

Conclusions BMI, but not plasma glucose or insulin levels, may be related to risk of developing AD. Previous results suggesting a relationship may reflect

metabolic, nutritional or activity changes that take place after symptom onset.