

Prospective Study of Diet Quality and the Risk of Dementia in the Oldest Old

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Objectives: Studies investigating the associations between diet, in particular diet quality, and the risk of dementia are few, especially in populations of advanced age, most notably among the very old. We examined the associations between diet quality and the longitudinal risk of dementia in a prospective rural cohort among the oldest old.

Methods: In our present study, we included 2,232 participants that were ≥ 80 years of age at baseline, from the Geisinger Rural Aging Study, a longitudinal cohort residing in rural Pennsylvania. In 2009, diet quality was captured by a validated dietary screening tool consisting of 25 questions on food-related and behavior-specific items. Incident cases of dementia were identified using diagnosis codes. This approach was validated by a review of electronic health records. After adjusting for sociodemographic factors, anthropometric measures, and health and

lifestyle variables, we examined the associations between diet quality (in tertiles) and the incidence of dementia using Cox proportional hazards models to calculate hazard ratios (HRs) and 95% confidence intervals (CIs).

Results: Across a mean of 6.90 years of follow-up, we identified 408 incident cases of all-type dementia. Having higher diet quality was not significantly associated with lower risk for incident all-type dementia (adjusted HR for the highest compared with the lowest tertile: 1.01, 95% CI: 0.79, 1.29, P-trend = 0.95). Similarly, we did not observe a significant association between diet quality and altered Alzheimer's disease risk (P-trend = 0.86).

Conclusions: In our prospective cohort study, having higher diet quality was not significantly associated with a lower risk of dementia among the oldest old. These findings contribute to the limited understanding of the impact of overall diet quality on the longitudinal risk of dementia in at-risk, rural populations of advanced age.

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