BMI, MMSE, APOE AND MORTALITY AT AGE 70 YEARS AND OLDER: THE TREVISO LONGEVA (TRELONG) STUDY


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Introduction: The relative contributions and interrelationships of body mass index (BMI), cognition, disability, and APOE genotype on mortality in the elderly are unclear.

Aims: To explore these measures in relation to 7-year mortality in Italian elderly.

Methods: The TREVIso LONGEVA (TRELONG) Study, a representative, age-stratified, population sample in Treviso, Italy, was studied. Among 311 men and 357 women, age 70 years and older (mean age 84 ± 8 years), 7-year mortality, body mass index (BMI), Mini-Mental State Examination (MMSE) score, Activities of Daily Living (ADL) score, APOE genotype, and a variety of clinical and survey data were collected.

Results: BMI < 18.5, MMSE ≤24, and ADL < 6, were associated with greater 7-year mortality in separate age- and sex-adjusted analyses. In multivariate models, low MMSE and ADL scores were predictive of death and obesity was protective. After excluding those dying within 3 years of baseline, only an MMSE ≤24 was related to mortality at any level of BMI. At a prevalence of 16%, there was no effect of APOEε4 status on mortality.

Conclusions: Higher MMSE score, lower ADL score, and an obese BMI, independent of age, sex, and other factors, are markers for longer life among northern Italian adults age 70 years or older. Global cognitive impairment assessed by a short, simple test is a profound indicator of death within less than a decade. APOEε4 is not related to mortality in this population, perhaps due to low frequency of this allele.