**Supplemental Material S2. Description of the use of multiple imputation in our study**

Multiple imputation was carried out using SAS “proc mi” and “proc mianalyze” (1). Missing values were imputed using a logistic regression- based approach (i.e. using the “monotone logistic”- option of proc mi). The included variables were our study’s outcome (healthy aging), the mPNNS-GS score, overall energy intake, the number of provided dietary records, BMI, age at inclusion, sex, supplementation group (i.e. antioxidant supplementation or placebo), educational level. The variables with missing values (smoking status, living arrangement and occupation) were also included (so that, for example, the imputation of missing values concerning smoking status could also take into account available information on occupational category). As the above-described logistic regression- based approach requires the presence of a monotone missing data pattern, we first ran a proc mi- model with the “mcmc impute = monotone”- option in order to impute just enough missing values to obtain a monotone missing data pattern. This option uses a method based on the Markov Chain Monte Carlo (MCMC) - approach, which assumes multivariate normality. A total of 20 different sets of imputations were used.

**References**

 1. Graham JW (2009) Missing data analysis: making it work in the real world. *Annu Rev Psychol* **60**, 549-76.