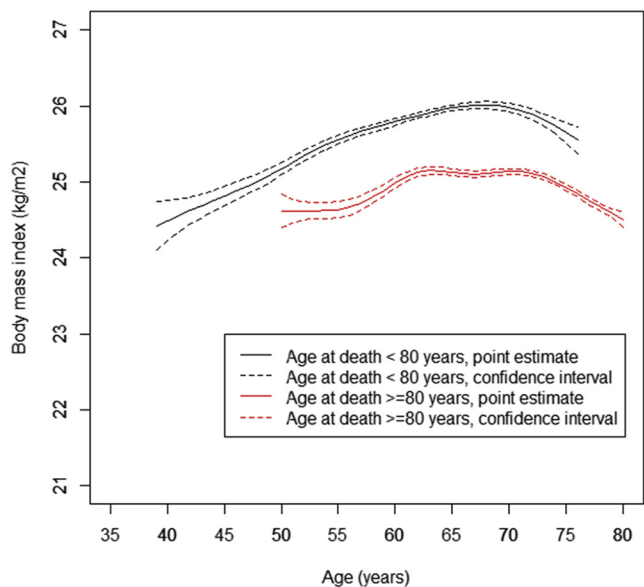
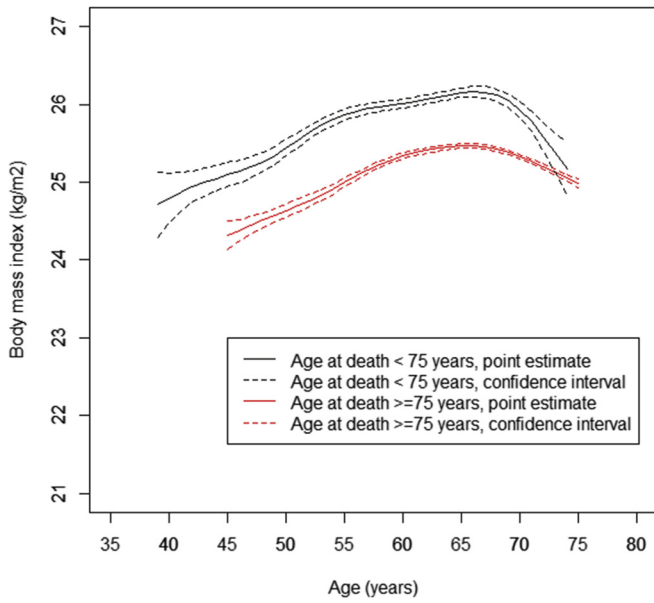


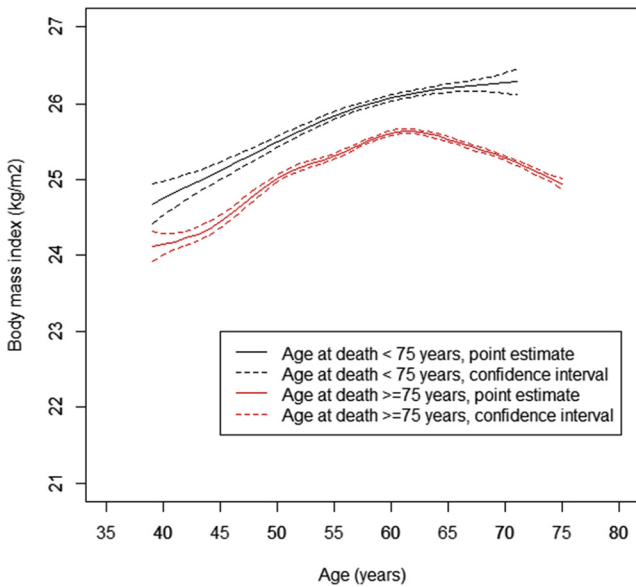
**Supplemental Fig. 1.** Kaplan-Meier survival curves of participants in the PHS II according to the divergence from the BMI trajectory with age at death 75 years or more developed in the PHS I. (A) All-cause mortality. (B) Mortality due to CVD.  $P < .001$  by log-rank test for all-cause mortality;  $P = .003$  by log-rank test for mortality due to CVD.



**Supplemental Fig. 2.** BMI trajectories through adulthood with age at death less than 80 years and 80 years or more in the PHS I. Generalized additive mixed model was used with smoothing function of age and adjusted for covariates including hypertension (yes vs. no), hypercholesterolemia (yes vs. no), diabetes (yes vs. no), race (Caucasian vs. other races), smoking status (current, past vs. never smoker), physical activity (frequency/day), red meat intake (serving/day), fruit and vegetable intakes (serving/day), and total energy intake (kcal/day). The within-individual correlation was accounted for by assuming random effects between individuals. The trajectories were estimated using mean value of all covariates summarized in [Table 1](#).



**Supplemental Fig. 3.** BMI trajectories through adulthood in the PHS I without censoring BMI after the development of CVD or cancer. Generalized additive mixed model was used with smoothing function of age and adjusted for covariates including hypertension (yes vs. no), hypercholesterolemia (yes vs. no), diabetes (yes vs. no), race (Caucasian vs. other races), smoking status (current, past vs. never smoker), physical activity (frequency/day), red meat intake (serving/day), fruit and vegetable intakes (serving/day), and total energy intake (kcal/day). The within-individual correlation was accounted for by assuming random effects between individuals. The trajectories were estimated using mean value of all covariates summarized in [Table 1](#).



**Supplemental Fig. 4.** BMI trajectories through adulthood in the PHS I additionally including 5021 participants whose age were less than 75 years (between 69 and 74 years) at the end of follow-up and assumed to live up to 75 years. Generalized additive mixed model was used with smoothing function of age and adjusted for covariates including hypertension (yes vs. no), hypercholesterolemia (yes vs. no), diabetes (yes vs. no), race (Caucasian vs. other races), smoking status (current, past vs. never smoker), physical activity (frequency/day), red meat intake (serving/day), fruit and vegetable intakes (serving/day), and total energy intake (kcal/day). The within-individual correlation was accounted for by assuming random effects between individuals. The trajectories were estimated using mean value of all covariates summarized in [Table 1](#).