Masters et al. (1) suggested that previous studies have misestimated the age pattern of the mortality risks of obesity. Although prior work has indicated that the mortality risks associated with obesity decline with age, Masters et al. argued that these risks rise with age. The authors reached their conclusion based on a model that included both age at survey and attained age over the follow-up period. They reported a positive interaction between attained age and obesity (i.e., the hazard ratios for obesity increased with increasing attained age).

An alternative explanation not considered by the authors is that the pattern of the obesity-mortality relationship observed as participants age over the follow-up period is attributable to interactions between obesity and time in study. When data are conditioned on age at survey, attained age is highly and positively correlated with time in study. Prior research using data from the National Health Interview Survey, the data used by Masters et al., showed that the mortality risks of obesity increase with increasing time in study (2). Other studies based on large prospective cohorts have also reported this finding (3, 4). A prominent explanation for this pattern is that reverse causal pathways (i.e., disease-induced weight loss) are stronger during the initial years of follow-up and subsequently weaken as individuals with pre-existing diseases die. These observations suggest that caution should be taken in drawing firm conclusions about the age pattern of the obesity-mortality relationship based on the authors’ approach.

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REFERENCES

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