



## Dietary carbohydrate intake and mortality: reflections and reactions

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Even if the Food Frequency Questionnaire had been robust and accurately reflective of what people had eaten during the whole 25-year study, a mean calorie intake of 1560–1660 kcal per day had been explained, and people had been allocated correctly to groups that reflected their actual carbohydrate consumption after a health diagnosis.

Even if carbohydrates did not mean many different things (from kale to cake), alcohol had been accounted for and adjusted for, and the study had adjusted for the whole diet of participants. Even if the study had managed to overcome the healthy person confounder and had analysed the groups fairly (as set out in the quintiles in the table of baseline characteristics). Even if the study had not benefitted from the small denominator advantage, the life expectancy had been calculated fairly without this substantial small denominator issue, and the reference group had been set at the most robust point of the Food Frequency Questionnaire quintiles (ie, at the extremes instead of the middle).

Even if the subject under examination—an entire macro-nutrient—were suitable for averaging across already limited Food Frequency Questionnaires, the strength of association had been double, and examination of the Bradford Hill criteria had established that causation might be likely. Even in the presence of all these factors, Seidelmann and colleagues<sup>1</sup> would then merely have had a hypothesis to test in a randomised controlled trial. The purpose of epidemiological studies is to establish associations that should then be tested in randomised controlled trials.

- 1 Seidelmann SB, Claggett B, Cheng S, et al. Dietary carbohydrate intake and mortality: a prospective cohort study and meta-analysis. *Lancet Public Health* 2018; 3: e419–28.

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