

Significance

Calorie restriction (CR) has been shown to extend the lifespans of various organisms. Consequently, a considerable amount of research has been performed to elucidate its mechanisms, especially in the yeast *Saccharomyces cerevisiae*. Here, we show that due to small sample sizes, large variation exists between measurements. In addition, the effect of CR on lifespan has been routinely overestimated in yeast due to the use of short-lived experimental controls, which together may explain why contradictory mechanisms were found to mediate CR-induced lifespan extension. Moreover, we did not observe any lifespan-enhancing effect of CR using an alternative measurement technique. The inability of CR to robustly extend lifespan suggests that calories alone do not modulate the lifespan of this important model organism.

For the full article go to PNAS site.