

# How calorie restriction may prolong life

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A new review proposes a theory to explain how calorie restriction can extend life across a variety of species.

When the body does not have enough glucose for energy, it burns stored fats, resulting in a build-up of molecules called ketone bodies.

Investigators suspect that [calorie restriction](#) extends life span at least in part through increasing levels of ketone bodies.

"Many aging-induced changes, such as the incidence of malignancies in mice, the increases in [blood glucose](#) and insulin caused by insulin resistance, and muscular weakness have been shown to be decreased by the metabolism of ketone bodies, a normal metabolite produced from fatty acids by liver during periods of prolonged fasting or [caloric restriction](#)," wrote the authors of the *IUBMB Life* review.

**More information:** Richard L. Veech et al, Ketone bodies mimic the life span extending properties of caloric restriction, *IUBMB Life* (2017). [DOI: 10.1002/iub.1627](https://doi.org/10.1002/iub.1627)

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