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

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