Intermittent energy restriction as a health promotion strategy to improve visceral adiposity and cardiometabolic health in obese older adults

Sir,

Excess abdominal fat is associated with imbalanced dietary pattern and excessive calorie intake among obese older adults. Intra-abdominal visceral fat lines hypertrophied adipocytes and they are characterized by augmented lipolytic activities which are resistant to the antilipolytic action of insulin.[1] Intermittent energy restriction (IER) is characterized by periods of marked energy restriction combined with normal energy intake. Energy restriction prevents type 2 diabetes mellitus and increases lifespan.[2] IER leads to improvements in insulin sensitivity, reduces lipids, and improves blood pressure.[3]

Unhealthy dietary patterns at old age coupled with the pathophysiology of aging increases central fat accumulation and adiposity. Aging adults often consume food at least 3 times daily; overconsumption of food with such eating patterns often leads to insulin resistance and poor cardiometabolic health, especially when associated with a sedentary lifestyle. IER for aging adults involves eating pattern of either 2 consecutive days of energy restriction per week or alternative days of energy restriction, 60%–85% below estimated rations, or a total fast on different days, with little or no energy intake, and foremost periods of normal food intake, on a recurring basis. One of the major benefits of IER is that the brain and other organs in the body have adapted to energy restriction, hence enhancing human performance, prevents chronic diseases, and increases longevity and neuroprotection. At least 60%–85% of IER combined with healthy dietary consumption such as Mediterranean diet every week can be effective in the management of obesity and its metabolic complications among older adults.

Increase in pro-inflammatory cytokines which is associated with aging results in an increase in oxidative stress, which causes endothelial dysfunction; this leads to cardiovascular disease and an increase in cardiovascular mortality among older adults.[4] However, IER reduced pro-inflammatory cytokines in healthy adults during Ramadan.[5] In conclusion, IER could be an effective health promotion strategy for improving weight loss, cardiometabolic health, quality of life, and longevity among obese older adults. Nevertheless, the biological effects of IER are not well established. Further experimental studies are needed to establish the long-term effects of IER on cardiometabolic risk factors in older adults. There is a need to stipulate the optimal fasting regimen, the duration of fasting interval, the number of fasting days per week, level of energy restriction needed on fasting days, guidelines for dietary consumption on non-fasting days, and the relationship between IER and physical activity in older adults.

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Conflicts of interest
There are no conflicts of interest.

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