

Letters to the Editor

Are Drastic Caloric Restrictions and Moderate-Intensity Physical Activity Still Relevant Lifestyle Interventions for Obese Patients With Type 2 Diabetes?

The Look AHEAD (Action for Health in Diabetes) trial published recently in the *New England Journal of Medicine* reported that intensive lifestyle intervention focusing on weight loss did not reduce morbidity and mortality in patients with obese type 2 diabetes over a 9.6-year follow-up period.¹ However, after the first year, body mass, waist circumference, and glycated hemoglobin levels again increased and physical fitness decreased, suggesting a lack of long-term adherence to interventions.¹

First, the requirement of replacing some meals (2-3 meals/day for 0-6 months and 1 meal/day thereafter) with liquid shakes and bars is questionable because it is not natural and is a behaviour that is hardly sustainable over time.¹ We believe that this, plus the fact that drastic caloric restrictions lower resting metabolic rate and increase appetite, must have contributed to decreasing long-term compliance to nutritional intervention and favoured weight regain. We believe that nutritional intervention that is reduced in calories but also aims at improving nutritional quality and satiety and preserving palatability, such as the (low-carbohydrate) Mediterranean diet, would have resulted in more sustainable clinical benefits. Such a diet was in fact shown to improve long-term weight loss and maintenance and to reduce cardiovascular events in patients with high cardiovascular risk.^{2,3}

Second, the prescribed physical activity in the Look AHEAD study cannot be considered intense, because of its high volume (≥ 175 min/wk) and moderate-intensity nature. Such a design is not optimal in promoting compliance and could have contributed to decreasing adherence to the exercise requirements (adherence to exercise intervention was not reported), thus providing insufficient training stimulus and accounting in part for the lack of major clinical benefits. Lower volume but more vigorous exercise, such as high-intensity interval training (HIIT),

could provide a stronger stimulus for physical fitness (one of the best established predictors of cardiovascular outcomes) and cardiometabolic profile improvements.⁴ Short-term interventions have shown that HIIT—being time efficient—favors exercise adherence and improves maintenance of cardiometabolic benefits.⁴ Future studies are, however, required to establish the long-term effects of such a training modality. From that perspective, the Look AHEAD trial results are not so surprising and should not be regarded as negative but should rather be used to optimize future trial designs and to promote the low-carbohydrate Mediterranean diet and HIIT interventions.

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Disclosures

The authors have no conflicts of interest to disclose.

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