

Personalized diet yields similar weight loss as low-fat diet at 6 months

Compared with a low-fat diet, a personalized diet targeting postprandial glycemic response did not lead to greater weight loss at 6 months among adults with abnormal glucose metabolism and obesity, according to study data.

“Growing evidence shows that interindividual variability in postprandial glycemic response after the same meals may be attributed to an individual’s physiological characteristics and lifestyle behaviors,” **Collin J. Popp, PhD, MS, RDN**, project manager in the department of population health at the Institute for Excellence in Health Equity at the Center for Healthful Behavior Change at NYU Langone Health, and colleagues wrote. “Specifically, the gut microbiome has been shown to contribute extensively to an individual’s postprandial glycemic response.”



Source: Adobe Stock

The Personal Diet Study was a single-center, population-based, 6-month randomized clinical trial that included 204 adults (mean age, 58 years; 66.8% women) aged 18 to 80 years with a BMI of 27 kg/m² to 50 kg/m² and an HbA1c of 5.7% to 8%. Researchers collected measurements at baseline and 3 and 6 months from February 2018 to October 2021.

Participants were randomly assigned to a low-fat diet (n = 97) consisting of less than 25% energy intake or a personalized diet (n = 102) based on estimates of postprandial glycemic response to foods using a machine learning algorithm and color-coded meal scores on estimations delivered via a mobile application. Researchers conducted 14 behavioral counseling sessions to both patient groups, and participants monitored their own dietary intake.

The primary outcome was the percentage of weight loss from baseline to 6 months. Secondary outcomes were body composition, resting energy expenditure and adaptive thermogenesis changes.

At 6 months, participants [assigned the low-fat diet](#) lost a mean of -4.31% of their baseline body weight compared with a mean weight loss of -3.26% among those following a personalized diet. These weight changes were not statistically significantly different, with a difference of 1.05 percentage points between the groups.

In addition, researchers did not observe any between-group differences in body composition and adaptive thermogenesis. However, researchers did observe a significantly greater reduction in resting energy expenditure among participants who followed a low-fat diet at 6 months (difference, 92.3 kcal/day; 95% CI, 0.9–183.8; $P = .05$).

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“Given that our study is fully in line with the mission of the Nutrition for Precision Health initiative and the 2020–2030 Strategic Plan for NIH Nutrition Research, future interventions should examine ways to increase dietary self-monitoring adherence and intervention exposure and consider the development and testing of a [weight loss-specific predictive algorithm](#),” the researchers wrote.

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February 11, 2020 3 min read

Small boosts to physical activity can prevent, reverse obesity

Consistently increasing physical activity level — even by small amounts — helped Taiwanese adults to avoid or reverse obesity, according to findings published in *Obesity*.

“Our study indicates that more benefits may be attained with a greater increase in physical activity,” **David Martinez-Gomez, PhD**, a researcher in the department of preventive medicine and public health at the Universidad Autónoma de Madrid/IdiPaz and CIBER of Epidemiology and Public Health in Madrid, and colleagues wrote. “In addition, our results demonstrate that maintaining high physical activity levels would be [important for health promotion](#).”

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