

Long-term weight-loss diet interventions may increase circulating adiponectin

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Increases in circulating adiponectin may be found with long-term weight-loss diet interventions with various macronutrient contents, study findings show.

The increases in circulating adiponectin may improve abdominal fat distribution and lipid metabolism independently of weight change, researchers wrote.

Lu Qi, MD, PhD, director of the Tulane University Obesity Research Center, and colleagues evaluated data from the Preventing Overweight Using Novel Dietary Strategies trial on 768 adults (mean age, 50.7 years) with overweight or obesity who had baseline adiponectin measurements available. Researchers sought to determine the effects of long-term weight-loss diets, with varying macronutrient compositions, on changes in circulating adiponectin concentrations and how these changes may affect cardiometabolic risk. Participants had circulating concentrations of adiponectin and cardiometabolic outcomes measured at baseline, 6 months and 2 years.

In the original study, participants were assigned to one of four diets: low-fat, average-protein; low-fat, high-protein; high-fat, average-protein; or high-fat, high-protein.

Researchers found positive correlations between adiponectin concentrations and HDL and total cholesterol and a weak correlation between adiponectin concentration and LDL. Compared with the high-fat diets, the low-fat diets resulted in lower LDL ($P = .006$) and total cholesterol ($P = .01$) after 2 years.

All diets reduced cardiometabolic risk factors and increased adiponectin concentrations during the intervention period. After adjustment for age, follow-up time, diet group, baseline BMI, baseline level of respective outcome trait and concurrent weight change, researchers found that increases in adiponectin were associated with reduction of waist circumference, LDL and an increase of HDL ($P < .001$ for all).

“Low-calorie weight loss diets varying in fat, carbohydrate and protein intakes may similarly affect secretion of adiponectin from adipose tissue, and subsequently improve central fat distribution and lipids,” Qi told Endocrine Today. –

This article originally appeared on www.healio.com and was reported by Amber Cox.