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ORIGINAL RESEARCH COMMUNICATION

Weight-loss diet that includes consumption of medium-chain triacylglycerol oil leads to a greater rate of weight and fat mass loss than does olive oil^{1,2,3}

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Background: Clinical studies have shown that consumption of medium-chain triacylglycerols (MCTs) leads to greater energy expenditure than does consumption of long-chain triacylglycerols. Such studies suggest that MCT consumption may be useful for weight management.

Objective: We aimed to determine whether consumption of MCT oil improves body weight and fat loss compared with olive oil when consumed as part of a weight-loss program.

Design: Forty-nine overweight men and women, aged 19–50 y, consumed either 18–24 g/d of MCT oil or olive oil as part of a weight-loss program for 16 wk. Subjects received weekly group weight-loss counseling. Body weight and waist circumference were measured weekly. Adipose tissue distribution was assessed at baseline and at the endpoint by use of dual-energy X-ray absorptiometry and computed tomography.

Results: Thirty-one subjects completed the study (body mass index: 29.8 ± 0.4 , in kg/m^2). MCT oil consumption resulted in lower endpoint body weight than did olive oil (-1.67 ± 0.67 kg, unadjusted $P = 0.013$). There was a trend toward greater loss of fat mass ($P = 0.071$) and trunk fat mass ($P = 0.10$) with MCT consumption than with olive oil. Endpoint trunk fat mass, total fat mass, and intraabdominal adipose tissue were all lower with MCT consumption than with olive oil consumption (all unadjusted P values < 0.05).

Conclusions: Consumption of MCT oil as part of a weight-loss plan improves weight loss compared with olive oil and can thus be successfully included in a weight-loss diet. Small changes in the quality of fat intake can therefore be useful to enhance weight loss.

Key Words: Obesity • weight loss • medium-chain triacylglycerols • olive oil • fat mass

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