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## Medium-chain triglycerides increase energy expenditure and decrease adiposity in overweight men.

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**OBJECTIVE:** The objectives of this study were to compare the effects of diets rich in medium-chain triglycerides (MCTs) or long-chain triglycerides (LCTs) on body composition, energy expenditure, substrate oxidation, subjective appetite, and ad libitum energy intake in overweight men. **RESEARCH METHODS AND PROCEDURES:** Twenty-four healthy, overweight men with body mass indexes between 25 and 31 kg/m<sup>2</sup> consumed diets rich in MCT or LCT for 28 days each in a crossover randomized controlled trial. At baseline and after 4 weeks of each dietary intervention, energy expenditure was measured using indirect calorimetry, and body composition was analyzed using magnetic resonance imaging. **RESULTS:** Upper body adipose tissue (AT) decreased to a greater extent ( $p < 0.05$ ) with functional oil (FctO) compared with olive oil (OL) consumption (-0.67 +/- 0.26 kg and -0.02 +/- 0.19 kg, respectively). There was a trend toward greater loss of whole-body subcutaneous AT volume ( $p = 0.087$ ) with FctO compared with OL consumption. Average energy expenditure was 0.04 +/- 0.02 kcal/min greater ( $p < 0.05$ ) on day 2 and 0.03 +/- 0.02 kcal/min (not significant) on day 28 with FctO compared with OL consumption. Similarly, average fat oxidation was greater ( $p = 0.052$ ) with FctO compared with OL intake on day 2 but not day 28. **DISCUSSION:** Consumption of a diet rich in MCTs results in greater loss of AT compared with LCTs, perhaps due to increased energy expenditure and fat oxidation observed with MCT intake. Thus, MCTs may be considered as agents that aid in the prevention of obesity or potentially stimulate weight loss.

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