

Conjugated linoleic acid supplementation in humans: effects on body composition and energy expenditure.

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Recent animal studies have demonstrated that dietary conjugated linoleic acid (CLA) reduces body fat and that this decrease may be due to a change in energy expenditure. The present study examined the effect of CLA supplementation on body composition and energy expenditure in healthy, adult women. Seventeen women were fed either a CLA capsule (3 g/d) or a sunflower oil placebo for 64 d following a baseline period of 30 d. The subjects were confined to a metabolic suite for the entire 94 d study where diet and activity were controlled and held constant. Change in fat-free mass, fat mass, and percentage body fat were unaffected by CLA supplementation (0.18+/-0.43 vs. 0.09+/-0.35 kg; 0.01+/-0.64 vs. -0.19+/-0.53 kg; 0.05+/-0.62 vs. -0.67+/-0.51%, placebo vs. CLA, respectively). Likewise, body weight was not significantly different in the placebo vs. the CLA group (0.48+/-0.55 vs. -0.24+/-0.46 kg change). Energy expenditure (kcal/min), fat oxidation, and respiratory exchange ratio were measured once during the baseline period and during weeks 4 and 8 of the intervention period. At all three times, measurements were taken while resting and walking. CLA had no significant effect on energy expenditure, fat oxidation, or respiratory exchange ratio at rest or during exercise. When dietary intake was controlled, 64 d of CLA supplementation at 3 g/d had no significant effect on body composition or energy expenditure in adult women, which contrasts with previous findings in animals.

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