SWACSM Abstract

The Effects of Alternate-Day fasting on physical activity

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ABSTRACT

Alternate Day Modified Fasting (ADMF) is an intermittent fasting approach that combines days of normal caloric consumption with days of low caloric consumption (~25% of daily requirements).While research has demonstrated the effects of ADMF on weight loss and metabolic health, research focused on the physical activity of participants has not been thoroughly evaluated. **PURPOSE**: The purpose of this study was to determine the extent that intermittent fasting can alter habitual physical activity patterns. **METHODS**: Forty two participants (male/female) completed 3 days of baseline testing followed by a two week treatment period where they followed a modified alternate-day fasting regimen that consisted of normal caloric intake days alternated with low caloric intake days (25% of daily requirements in one meal). Participants wore an accelerometer on their wrist for 12 consecutive days that tracked their movement and physical activity patterns. **RESULTS**: When comparing ADMF to control there was no difference between conditions for steps (-164 ± 821, P = 0.84), daily physical activity energy expenditure (100 ± 121, P = 0.41) or time spent in sedentary (-5.6 ± 30.1, P = 0.85), light, (-9.0 ± 25.8, P = 0.73) or moderate to vigorous physical activity (MVPA)(6.8 ± 17.8, P = 0.70). However, on fasting days compared to non-fasting days for ADMF participants expended 387 ± 180 fewer calories (T = 2.1, P = 0.03), spent 88 ± 41 more minutes sedentary (P = 0.03) and 66 ± 26 (P = 0.01) fewer minutes engaged in MVPA. In addition, on fast days they took 2603 ± 1121 fewer steps (P = 0.02). **CONCLUSION**: Participating in alternate day modified fasting does not result in significant changes in energy expenditure or time spent in sedentary, light, or MVPA activities. However, while fasting participants are less active. This reduction in activity seems to be compensated for with higher levels of activity on normal eating days.