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Format: Abstract

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Alternate day fasting (ADF) with a high-fat diet produces similar weight loss and cardio-protection as ADF with a low-fat diet.

Klempel MC¹, Kroeger CM, Varady KA.

Author information

Abstract

Alternate day fasting (ADF) with a low-fat (LF) diet is effective for weight loss and cardio-protection. However, the applicability of these findings is questionable as the majority of Americans consume a high-fat (HF) diet.

OBJECTIVE: The goal of this study was to determine if these beneficial changes in body weight and coronary heart disease (CHD) risk can be reproduced if an HF background diet is used in place of an LF diet during ADF.

METHODS: Thirty-two obese subjects were randomized to an ADF-HF (45% fat) or ADF-LF diet (25% fat), which consisted of two phases: 1) a 2-week baseline weight maintenance period, and 2) an 8-week ADF weight loss period. All food was provided during the study.

RESULTS: Body weight was reduced ($P < 0.0001$) by ADF-HF ($4.8\% \pm 1.1\%$) and by ADF-LF ($4.2\% \pm 0.8\%$). Fat mass decreased ($P < 0.0001$) by ADF-HF (5.4 ± 1.5 kg) and ADF-LF (4.2 ± 0.6 kg). Fat free mass remained unchanged. Waist circumference decreased ($P < 0.001$) by ADF-HF (7.2 ± 1.5 cm) and ADF-LF (7.3 ± 0.9 cm). LDL cholesterol and triacylglycerol concentrations were reduced ($P < 0.001$) by both interventions (ADF-HF: $18.3\% \pm 4.6\%$, $13.7\% \pm 4.8\%$; and ADF-LF: $24.8\% \pm 2.6\%$, $14.3\% \pm 4.4\%$). HDL cholesterol, blood pressure, and heart rate remained unchanged. There were no between-group

differences for any parameter.

CONCLUSION: These findings suggest that an ADF-HF diet is equally as effective as an ADF-LF diet in helping obese subjects lose weight and improve CHD risk factors.

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