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Health Effects of Three Weeks of Time-Restricted Feeding in Apparently Healthy, Normal Weight College-Age Females

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Intermittent fasting (IF) has recently gained popularity for a number of potential health benefits. While there is an increasing body of evidence demonstrating beneficial effects of IF on weight loss, blood lipids, and body composition in the overweight and obese, limited data are available about the effects of IF in normal weight individuals. **PURPOSE:** To examine the effects of a 3-week time-restricted feeding (TRF) (16/8) protocol on body composition, executive function, and cardiometabolic health in apparently healthy, normal weight, college aged females. **METHODS:** Twenty-two females were randomly assigned to the TRF or control group (CON). TRF subjects consumed 100% of their energy needs in an 8-h period of time each day. The remaining 16 h per 24-h period made up the fasting period. Subjects were tested before and after 3 weeks of the assigned diet for body composition, resting blood pressure, blood glucose, alanine aminotransferase (ALT) total cholesterol (TC), aspartate aminotransferase (AST), low-density lipoprotein cholesterol (LDL), very low-density lipoprotein cholesterol (VLDL), high density lipoprotein cholesterol (HDL), triglycerides (TG), kilocalories consumed, macronutrient distribution, and executive function. **RESULTS:** No adverse effects were attributed to TRF, and 100% completed the 3-week TRF protocol. At 3 weeks there were no significant between group differences in change in weight (mean \pm SD; TRF 0.2 ± 0.9 kg, CON -1.2 ± 4.1 kg), percent body fat (TRF $0.06 \pm 0.9\%$, CON $0.2 \pm 0.9\%$), systolic blood pressure (TRF -0.6 ± 9.6 mmHg, CON -3.5 ± 11.6 mmHg), diastolic blood pressure (TRF -5.1 ± 7.3 mmHg, CON -3.4 ± 7.3 mmHg), HDL (TRF -0.5 ± 5.1 mg/dl, CON 1.2 ± 6.9 mg/dl), LDL (TRF 0.1 ± 18.3 mg/dl, CON -13.7 ± 17.1), glucose (TRF -0.5 ± 6.7 mg/dl, CON 6.2 ± 12.3 mg/dl), and executive function ($p > 0.05$). **CONCLUSION:** Overall, TRF had no adverse effect on body composition, executive function, or indices of cardiometabolic health in normal weight college-aged females. Further research implementing larger sample sizes and longer duration TRF protocols is required.

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