Intermittent Fasting on Metabolism and Body Fat Composition in College-Aged Individuals

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Introduction: Intermittent fasting is an eating strategy that limits the time of food intake to 6-10 hours per day with 14-18 hours of fasting. This strategy has been shown to improve the health of individuals who experience issues with obesity, metabolism, and pre-existing medical conditions, sometimes through weight loss but also by improved insulin sensitivity. There might also be a positive psychological impact and more consistent energy levels with intermittent fasting. Most research has focused on middle- and older-age adults, but less is known about the effect of intermittent fasting in younger adults. **Purpose:** The purpose of this study is to determine whether intermittent fasting is an effective tool for improving exercise performance and decreasing body fat percentage in young, college-aged individuals. **Methods:** This study will involve participants (n=four; two female, two male) who are college-aged (18-22 years old). The participants use a 16:8 (fasting: feeding) protocol and will determine their designated eight hour feeding time and 16 hour fasting time that best suits their schedules. Food/beverage choices and calorie consumption are not restricted, only the time window in which they can consume these items. At baseline testing, five weeks and 10 weeks after beginning intermittent fasting, participants will perform the following physical fitness tests: maximum sit ups in two minutes, maximum pushups in two minutes, maximum burpees in two minutes, and a submaximal test to predict aerobic power (VO_2 max). Additionally, participants will measure body circumferences in order to estimate body composition. Males will measure neck and abdomen circumferences; and females will measure abdomen, neck, and hip circumferences. Finally, participants will be tracking calories and exercise throughout the 10 weeks of intermittent fasting. **Conclusion:** This

study hopes to determine whether intermittent fasting is an effective tool for body fat control, metabolic improvements, and improved exercise performance in young, college-aged adults. Results may be applied to young athletes to improve metabolism, body composition, and fuel utilization to maximize performance in athletics.