



TITLE: A Systematic Review on The Effectiveness of Intermittent Fasting on Promoting Weight Loss and Improving Lipid Profile for Cardio Protection

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ABSTRACT

Cardiovascular diseases (CVDs) are a leading cause of global morbidity and mortality, driven by various risk factors including overweight, high blood cholesterol levels, unhealthy diets, stress, diabetes, and smoking. Intermittent fasting (IF) has emerged as a promising dietary approach for mitigating these risk factors and preventing CVDs. This systematic review of randomized clinical trials (RCTs) aimed to comprehensively assess the effectiveness of IF in promoting weight loss and improving lipid profiles for cardio protection. A rigorous search of PubMed, Scopus, ScienceDirect, Dimensions, and Google Scholar databases from 2017 to 2021 yielded 844 studies, of which 18 met the inclusion criteria. Two investigators independently screened titles and abstracts, followed by critical appraisal of full texts to determine eligibility. Included studies comprised RCTs with adult participants reporting measures of body weight, body composition, lipid profile, and blood pressure, with a BMI exceeding 24kg/m² and no exclusion based on health status or age. The systematic review revealed significant reductions in body weight, body fat mass, and waist circumference across various IF methods, including Alternate Day Fasting (ADF), Exercise + Alternate Day Fasting (E-ADF), Intermittent Fasting (IF), Time Restricted Eating (TRE), and consistent meal timing (CMT).

Additionally, reductions were observed with Intermittent Energy Restriction (IER), Intermittent Calorie Restriction (ICR), continuous calorie restriction (CCR), and very low-calorie diet (VLCD). Notably, only one study reported no significant weight reduction post-IF intervention. Furthermore, improvements were observed in total cholesterol, triglycerides, and blood pressure levels following IF interventions. These findings underscore the potential of IF as an effective intervention for weight loss, blood pressure reduction, and lipid profile improvement among overweight and obese adults, thus potentially lowering the risk of CVDs. Future research should focus on specific subgroups, including individuals with pre-existing cardiovascular conditions, to better understand the effects of IF on cardiovascular risk factors.



BIOGRAPHY

Azizah Mat Hussin is a Senior Lecturer at Universiti Kuala Lumpur with a strong academic background and professional experience in the field. She holds a Bachelor of Science in Nutrition and Community Health, a Master of Science in Community Health from Universiti Putra Malaysia, and a PhD in Nutrition from Newcastle University, United Kingdom. Azizah's research interests span a wide range of topics in public health and nutrition, with a particular focus on maternal and child health, metabolic syndrome, and dietary patterns. She has contributed to numerous research projects and publications, including studies on the association of prenatal depression with dietary patterns and the effects of

vitamin D supplementation on endothelial function. In addition to her academic and research endeavors, she is actively involved in consultancy and external professional activities, as well as community service initiatives. She is committed to promoting health and well-being both within academia and the wider community, exemplified by her involvement in various outreach programs and activities aimed at raising awareness and improving health outcomes. Overall, Dr. Azizah Mat Hussin is a dedicated educator, researcher, and community advocate, with a passion for making a positive impact in the field of environmental healthcare and public health nutrition.

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