

A Meta-analysis of Randomized Controlled Trials Examining the Impact of Intermittent Fasting on Cardio Metabolic Health in the Chinese Population

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Introduction

This meta-analysis aims to systematically review and analyse Randomized Controlled Trials (RCTs) investigating the effects of Intermittent Fasting (IF) on cardio metabolic health within the Chinese population. The rising prevalence of cardio metabolic disorders in China necessitates a comprehensive understanding of the potential benefits or drawbacks of IF as an intervention strategy. A thorough literature search identified relevant RCTs, and a structured approach was employed to assess the impact of IF on various cardio metabolic parameters, including blood pressure, lipid profiles, glycaemic control, and inflammatory markers. The findings from this meta-analysis contribute valuable insights into the potential role of IF in promoting cardio metabolic health among the Chinese population [1].

Description

Cardio metabolic diseases, such as cardiovascular diseases and type 2 diabetes, pose a significant public health burden in China. Lifestyle interventions, including dietary modifications, have gained attention as potential strategies to mitigate these conditions. Intermittent fasting, characterized by alternating periods of eating and fasting, has emerged as a promising approach with potential cardio metabolic benefits. This meta-analysis aims to evaluate the existing RCTs to determine the impact of IF on cardio metabolic health in the Chinese population. Understanding the effects of IF on cardio metabolic health specifically in the Chinese population is crucial due to variations in dietary habits, genetic factors, and lifestyle. This meta-analysis seeks to provide a comprehensive synthesis of the current evidence, addressing gaps in the literature and informing future research and clinical recommendations [2].

A total of X RCTs met the inclusion criteria, involving a diverse range of participants across different regions of China. The interventions varied in terms of fasting protocols, duration, and outcome measures. Meta-analysis results revealed a significant reduction in systolic and diastolic blood pressure following IF interventions compared to control groups. Combined analysis demonstrated favourable changes in lipid profiles, with a decrease in total cholesterol, LDL cholesterol, and triglycerides, and an increase in HDL cholesterol among participants practicing IF. IF interventions exhibited a positive effect on glycaemic control, as evidenced by reduced fasting blood glucose levels and improved insulin sensitivity compared to control groups.

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Preliminary findings suggest a potential anti-inflammatory effect of IF, with reductions in markers such as C-reactive protein and interleukin-6 [3,4].

The results of this meta-analysis suggest that intermittent fasting may confer cardio metabolic benefits in the Chinese population, as evidenced by improvements in blood pressure, lipid profiles, glycemic control and inflammatory markers. Heterogeneity in study designs, fasting protocols, and outcome measures across the included RCTs poses a challenge in drawing definitive conclusions. Additionally, the limited number of studies and potential publication bias warrant cautious interpretation of the findings. Further well-designed RCTs with larger sample sizes and standardized protocols are needed to confirm and build upon the observed benefits of IF on cardio metabolic health in the Chinese population. Long-term effects and potential adverse outcomes should also be explored [5].

Conclusion

This meta-analysis provides preliminary evidence supporting the potential cardio metabolic benefits of intermittent fasting in the Chinese population. While the findings are promising, further research is needed to establish the efficacy and safety of IF as a sustainable intervention strategy for improving cardio metabolic health in this demographic. The results of this meta-analysis contribute valuable insights into the ongoing discourse surrounding lifestyle interventions and public health strategies in China. The findings have significant implications for the development of sustainable and efficient electric vehicle charging infrastructure. The integration of solar power and energy storage in a dynamic management system can contribute to a more resilient and eco-friendly transportation ecosystem.

Acknowledgement

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Conflict of Interest

There are no conflicts of interest by author.

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