INPLASY PROTOCOL

Corresponding author:
Guojie Ma

magj@snnu.edu.cn

Author Affiliation:
Shaanxi Key Laboratory of Behavior and Cognitive Neuroscience, School of Psychology, Shaanxi Normal University, Xi'an Shaanxi, China.

Review Stage at time of this submission: Data analysis.

Conflicts of interest:
None declared.

Time-restricted eating can lead to weight loss due to energy restriction: A systematic review and meta-analysis based on randomized, controlled trials

Chang, YW[1]; Du, TT[2]; Zhuang, XL[3]; Ma, GJ[4].

Review question / Objective: P: Adults with overweight or obesity; I: Time restricted eating with eating window less than 10 hours and with or without calorie restriction; C: People with eating window more than 12 hours; O: Weight loss, body composition, metabolic risk factors, energy intake and eating window.
Condition being studied: Adults with overweight and obesity.
Information sources: We search four databases including PubMed, Embase, Scopus and the Cochrane library.

INTRODUCTION

Review question / Objective: P: Adults with overweight or obesity; I: Time restricted eating with eating window less than 10 hours and with or without calorie restriction; C: People with eating window more than 12 hours; O: Weight loss, body composition, metabolic risk factors, energy intake and eating window.

Condition being studied: Adults with overweight and obesity.

METHODS

Participant or population: Adults with overweight and obesity.

Intervention: Time restricted eating with eating window less than 10 hours.

Comparator: People with eating window more than 12 hours.

Study designs to be included: RCTs and cross over studies.

Eligibility criteria: religious fasting will be excluded from this meta-analysis.

Information sources: We search four databases including PubMed, Embase, Scopus and the Cochrane library.

Main outcome(s): Weight loss.

Additional outcome(s): body composition(BMI, waist circumference, fat mass, fat free mass, body lean mass), metabolic risk factors(SBP, DBP, heart rate, TG, TC, HDL, LDL, HOMA-IR, fasting glucose, fasting insulin, HbA1c), energy intake and eating window

Quality assessment / Risk of bias analysis: RoB 2.0 for RCT and cross over studies.

Strategy of data synthesis: We use RStudio and R x64 4.0.3 to analysis coutcomes and perform the final results. The pooled effect size will be calculated as mean difference with 95% confidence interval. We also conduct subgroup analysis, sentivity analysis and meta-regression to explain the hetergeneity.

Subgroup analysis: We calssified the research base on the type of intervention(with or without prescribed calorie intake) and the time of intervention(early time-restricted eating or late time-restricted eating).

Sensitivity analysis: We also perform sentivity analysis to explore the heterogeneity.

Country(ies) involved: China.

Keywords: time-restricted eating, weight loss, energy restriction, meta-analysis

Contributions of each author:
Author 1 - Yuwen Chang.
Author 2 - Tingting Du.
Author 3 - Xiangling Zhuang.
Author 4 - Guojie Ma.