

INPLASY

Time-restricted eating for nonalcoholic fatty liver disease (NAFLD): a systematic review

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - The review has not yet started.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202380036

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 09 August 2023 and was last updated on 09 August 2023.

INTRODUCTION

Review question / Objective (P) Patients: patients with non-alcoholic fatty liver disease (NAFLD). (I) Interventions: time-restricted eating (TRE). (C) Control: without TRE. (O) Outcomes: the primary outcomes were the effects of TRE on body composition, body weight, plasma levels of lipids, glucoregulatory factors, and other factors like sleep quality. The second outcomes were the feasibility and safety of TRE for healthy subjects. (S) Study: clinical studies including non-RCTs and RCTs.

Condition being studied Nonalcoholic fatty liver disease (NAFLD) is a major worldwide public health problem, which affects approximately 20% to 30% of adults all over the world. It is estimated that more than 70% of patients with diabetes and obesity are comorbid with NAFLD. Previous

studies have demonstrated that NAFLD are associated with type 2 diabetes, obesity, hypertension, hyperlipidemia, and the increased risk of cardiovascular diseases. Dietary intervention has been proven to improve metabolic disorders and liver fat in patients with NAFLD. Intermittent fasting diets have become more and more popular, which can produce clinically significant weight loss, and improve the metabolic factors. Intermittent fasting diets are classified to three types including the 5:2 diet of five feast days and two fast days weekly, alternate day fasting (ADF) of feast days alternating with fast day, and time-restricted eating (TRE) of only eating within a specific consistent time each day. Among them, TRE has gained since it can enhance adherence and reduce weight. Several studies have investigated the effects of TRE for patients with NAFLD.

METHODS

Participant or population Patients with NAFLD.

Intervention TRE.

Comparator Without TRE.

Study designs to be included Clinical study.

Eligibility criteria (P) Patients: patients with non-alcoholic fatty liver disease (NALFD). (I) Interventions: time-restricted eating (TRE). (C) Control: without TRE. (O) Outcomes: the primary outcomes were the effects of TRE on body composition, body weight, plasma levels of lipids, glucoregulatory factors, and other factors like sleep quality. The second outcomes were the feasibility and safety of TRE for healthy subjects. (S) Study: clinical studies including non-RCTs and RCTs.

Information sources Our study was conducted according to Cochrane Collaboration guidelines and PRISMA criteria. We performed a comprehensive search for Embase, Pubmed and Cochrane databases from inception to May 31, 2023.

Main outcome(s) The effects of time-restricted eating for nonalcoholic fatty liver disease (NAFLD).

Quality assessment / Risk of bias analysis For RCTs, the risk of bias was evaluated according to The Cochrane Collaboration's Risk of Bias 2 (RoB2), which was with six aspects including selective outcome, the allocation concealment, blinding, sequence generation, incomplete outcome data, and other biases. For non-RCTs, ROBINS-I tools of seven domains including bias due to deviations from intended interventions, confounding, missing and in selection of the reported result, measurement of outcomes data, classification of interventions, selection of participants into the study was used. For cross-sectional study, the Agency for Healthcare Research and Quality (AHRQ) was used to evaluate the quality.

Strategy of data synthesis None.

Subgroup analysis None.

Sensitivity analysis None.

Country(ies) involved China.

Keywords TRE, NAFLD, systematic review.

Contributions of each author

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