

Abstract:

Title: The Impact of Time-Restricted Feeding on Hemoglobin A1C compared with an Ad Lib Eating Pattern in Adults with Type II Diabetes

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Objectives/Introduction: Time-Restricted Feeding (TRF) has gained popularity as a dietary intervention for weight loss and metabolic health and may impact Hemoglobin A1c (A1C) in people with Type II Diabetes (T2D). This review aims to evaluate the impact of TRF (8-12 hour eating window) on glycemic control and weight loss compared with an ad lib eating pattern in adults with T2D.

Design: Systematic Review with a structured approach to synthesize research evidence of articles on TRF on Hemoglobin A1C compared with an ad lib eating pattern in adults with T2D. Outcomes of interest were Hemoglobin A1C (mean % change) and weight loss (mean difference in kg).

Methods: The Review was developed following the PRISMA 2020 guidelines. Each article was screened independently by two team members and a third member resolved conflicts. Studies were evaluated for biases using the Cochrane Risk of Bias tool (RoB 2) for crossover and parallel randomized controlled trials (RCTs).

Results: Three RCTs were included in this review, too few studies to warrant meta-analysis. Both parallel RCT studies were rated as high quality. The crossover study has high risk of bias for period and carryover effects, lowering it to moderate quality. All three studies showed a significantly higher mean % change in A1C and a significantly higher mean difference in body weight in the TRF group compared to controls.

Conclusions:

This review indicates that time restricted feeding can significantly reduce Hemoglobin A1c and promote weight loss in patients with type 2 diabetes, even within the context of calorie restricted diets