23075 | The metabolic impact of time-restricted eating and ketogenic diet: a systematic review of clinical trials

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Background & Aim: Time-restricted eating (TRE) and Ketogenic diet (KD) are two dietary strategies that interfere considerably with metabolic outcomes. Therefore, they have been applied as part of weight loss approaches on overweight and obese adults. Nevertheless, dietary TRE or KD regimens are heterogenous in duration, nutritional composition and specific fasting - feeding protocols which hampers the extraction of robust conclusions. In this context, this systematic review intends to summarize evidence on literature of the metabolic impact of TRE or KD on overweight and obese adults, without any other comorbidity, while structuring different approaches for each dietary regimen. **Methods:** Data was collected from PubMed, Scopus and Web of Science. Included studies were clinical trials published between 2004 and February 2024 that report at least one of the following metabolic outcomes: fasting glycemia, oral glucose tolerance, Homa-IR or blood insulin, HbA1c, total, LDL or HDL cholesterol or triglycerides. Papers other than clinical trials, such as observational or pilot studies, short communications, letters to the editor, revisions (systematic or narrative with or without meta-analysis) were excluded. Quality of included studies will be assessed using the NHLBI Study Quality Assessment Tool for Controlled Intervention Studies. **Results and Conclusions:** With this review we expect to gather quality information evidencing the impact of TRE or KD on metabolic biomarkers and to establish a comparison of the metabolic impact between the dietary regimens. This will contribute to clarify how each one of these approaches can benefit the metabolic health of individuals with excess weight or obesity and to support clinical decisions and public nutrition recommendations.

Keywords: Time-restricted eating, Ketogenic diet, metabolic impact, excess weight, obesity.