Abstract

Title: Effect of intermittent fasting (5:2 diet) compared to even isocaloric energy restriction
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Background: Weight loss is associated with reduced risk of diabetes and some cancer forms. Intermittent energy restriction can be one easier method to lose weight for some individuals, and thus more have favourable effect in glucose metabolism and hormone levels.

Objective: To investigate the effect of intermittent fasting (5:2 diet) on IGF-1, fasting glucose and weight compared to daily isocaloric energy restriction.

Search strategy: The searches were made in two databases, Pubmed and Scopus and through snowball sampling. Latest search date: 2016-01-30. Keywords used were “intermittent fasting”, “weightloss”, “IGF-1”.

Selection criteria: The inclusion criteria’s were human studies, BMI>20 kg/m², a randomized study design (RCT), a control group with the same degree of energy restriction and endpoints fasting glucose, weight and/or IGF-1, leptin and insulin. The exclusion criteria’s were <19 years of age, pregnant or lactating females, and languages other than Swedish or English.

Data collection and analysis: The quality of the studies, was assessed by the SBU template for randomized controlled trials. An overall assessment of the strength of evidence for each outcome variable was made by means of a modified GRADE template provided by University of Gothenburg.

Main results: Three RCT studies were included in the weighing. All the studies showed no significant difference between the groups regarding IGF-1, fasting glucose and weight. All three studies showed a weight reduction, but no significant difference between the groups. Insulin and leptin showed no change between the groups.

Conclusions: There is no effect on IGF-1, fasting glucose, or weightloss of the intermittent fasting compared to even isocaloric energy restriction.

Keywords: intermittent fasting, IGF-1, weightloss, fasting glucose