

عنوان مقاله:

The Effect of Green Coffee Supplementation on Metabolic Syndrome Components : A Systematic Review and Meta-Analysis of Randomized Clinical Trials

محل انتشار:

هفتمین همایش بین المللی مطالعات میان رشته ای در صنایع غذایی و علوم تغذیه ایران (سال: 1402)

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خلاصه مقاله:

As there are no study reviewing the effect of green coffee supplementation on metabolic syndrome factors, this systematic review and meta-analysis were performed to summarize green coffee intervention on metabolic syndrome components in adults. A comprehensive systematic search was conducted in online databases including Web of Science, Scopus, PubMed/MEDLINE, EMBASE, and Persian databases such as SID and Magiran up to 20 March 2022. Also, a hand search was performed by one of the researchers to reduce the missing studies. All randomized clinical trials comparing the effect of green coffee on metabolic syndrome components between intervention and control groups were included. 20 randomized controlled trials with a total sample size of 804 individuals were included in the systematic review and meta-analysis. Pooled analysis indicated that green coffee supplementation significantly decreased fasting blood glucose (weighted mean difference: -2.824 mmHg, 95% CI: -4.40 , -1.24 , $p < 0.001$), systolic blood pressure (Standardized Mean Difference: -2.530 mmHg, 95% CI: -4.44 , -1.24 , $p = 0.001$), and diastolic blood pressure (Standardized Mean Difference: -2.867 mmHg, 95% CI: -4.26 , -1.46 , $p < 0.001$) levels. Moreover, high-density lipoprotein concentrations increased following green coffee intervention (weighted mean difference: 1.514 mg/dl, 95% CI: 0.45 , 2.57 , $p = 0.005$). However, waist circumference and triglyceride levels did not change significantly ($p > 0.05$). The results of the systematic review and meta-analysis showed that green coffee supplementation significantly decreased fasting blood glucose, systolic blood pressure, and diastolic blood pressure but increased high-density lipoprotein levels.

کلمات کلیدی:

Green coffee, Chlorogenic acid, Metabolic syndrome, Lipid profile, Glycemic indices

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