

Title: A double-blind clinical trial on the effect of *Citrus aurantifolia* extract on lipid profile of obese children

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Childhood obesity is becoming a global problem. Research on the role of dietary intervention with fruits containing vitamin C and flavonoid on controlling obesity and its adverse effects in childhood has not been yet defined. Lemon (*Citrus aurantifolia*) contain flavonoid, pectin and vitamin C. This study aims to compare the effects of lemon extract and placebo on cardiometabolic risk factors among adolescents with overweight and obesity. In this double blind, randomized controlled trial, 50 overweight/obese adolescents were enrolled in a 6-week trial. Eligible participants were randomly assigned into two groups of equal number receiving daily oral capsules containing lemon powder or placebo. Fasting blood sugar, lipid profile, as well as systolic and diastolic blood pressure were compared between the two groups before and after administration of medication and placebo. Of the total 50 enrolled patients, 22 and 23 patients in the lemon and control groups completed the study, respectively. The results of within-group analysis demonstrated a slight reduction in body mass index, LDL-C and systolic blood pressure in the lemon group, but no between group differences existed in the studied variables.This study showed that consumption of lemon extract has some beneficial effects for childhood obesity; however, no considerable effect was documented on anthropometric measures and biochemical factors. Future studies with longer follow up are recommended.

Biography

Parnian Poursafa is a student of Cellular and Molecular Biology in the University of Isfahan. She is interested to research studies, and is collaborating with projects related to genetic background of chronic diseases.

Roya Kelishadi is a Professor of Pediatrics in Isfahan University of Medical Sciences, Iran. She has more than 500 publications in English peer-reviewed journals. She is the chair of the Research Institute for Primordial Prevention of Non-Communicable Disease. She had presented her scientific works in several international conferences.

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