

FULL TEXT LINKS



[Meta-Analysis](#) [Medicine \(Baltimore\)](#). 2016 Aug;95(33):e4247.

doi: 10.1097/MD.0000000000004247.

The impact of grape seed extract treatment on blood pressure changes: A meta-analysis of 16 randomized controlled trials

Haili Zhang ¹, Shuang Liu, Lan Li, Shisong Liu, Shuqi Liu, Jia Mi, Geng Tian

Affiliations

PMID: 27537554 PMID: [PMC5370781](#) DOI: [10.1097/MD.0000000000004247](#)

Abstract

Backgrounds and objective: Several clinical trials have shown that grape seed extract can reduce blood pressure, but the results are often irreproducible. We therefore sought to systematically evaluate the impact of grape seed extract treatment on the changes of systolic/diastolic blood pressure (SBP/DBP) by meta-analyzing available randomized controlled trials.

Methods: Trial selection and data extraction were completed independently by 2 investigators. Effect-size estimates were expressed as weighted mean difference (WMD) and 95% confidence interval (CI).

Results: Twelve articles involving 16 clinical trials and 810 study subjects were analyzed. Overall analyses found significant reductions for SBP (WMD = -6.077; 95% CI: -10.736 to -1.419; P = 0.011) and DBP (WMD = -2.803; 95% CI: -4.417 to -1.189; P = 0.001) after grape seed extract treatment. In subgroup analyses, there were significant reductions in younger subjects (mean age < 50 years) for SBP (WMD = -6.049; 95% CI: -10.223 to -1.875; P = 0.005) and DBP (WMD = -3.116; 95% CI: -4.773 to -1.459; P < 0.001), in obese subjects (mean body mass index \geq 25 kg/m) for SBP (WMD = -4.469; 95% CI: -6.628 to -2.310; P < 0.001), and in patients with metabolic syndrome for SBP (WMD = -8.487; 95% CI: -11.869 to -5.106; P < 0.001). Further meta-regression analyses showed that age, body mass index, and baseline blood pressure were negatively associated with the significant reductions of SBP and DBP after treatment. There was no indication of publication bias.

Conclusion: Our findings demonstrate that grape seed extract exerted a beneficial impact on blood pressure, and this impact was more obvious in younger or obese subjects, as well as in patients with metabolic disorders. In view of the small sample size involved, we agree that confirmation of our findings in a large-scale, long-term, multiple-dose randomized controlled trial, especially among hypertensive patients is warranted.

[PubMed Disclaimer](#)

Figures

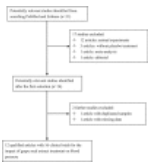


Figure 1 Flow diagram of search strategy...

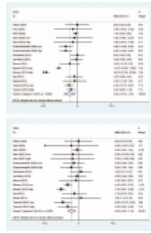


Figure 2 Forest plots of systolic (the...

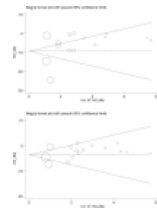


Figure 3 Begg funnel plots of systolic... plots of systolic...

Related information

[PMC images](#)

LinkOut - more resources

Full Text Sources

[Europe PubMed Central](#)

[Ovid Technologies, Inc.](#)

[PubMed Central](#)

[Wolters Kluwer](#)

Other Literature Sources

[scite Smart Citations](#)