

FULL TEXT LINKS



Review Pharmacol Res. 2022 Mar;177:106121. doi: 10.1016/j.phrs.2022.106121.

Epub 2022 Feb 7.

Turmeric and curcuminoids ameliorate disorders of glycometabolism among subjects with metabolic diseases: A systematic review and meta-analysis of randomized controlled trials

Fen Yuan ¹, Wenbin Wu ², Leyi Ma ², Dingkun Wang ¹, Meilin Hu ¹, Jing Gong ¹, Ke Fang ¹, Lijun Xu ¹, Hui Dong ¹, Fuer Lu ³

Affiliations

PMID: 35143971 DOI: [10.1016/j.phrs.2022.106121](https://doi.org/10.1016/j.phrs.2022.106121)[Free article](#)

Abstract

Background and aims: Metabolic diseases are globally popular, and a systematic review and meta-analysis of turmeric and curcuminoids on glucose metabolism among people with metabolic diseases was performed.

Design: We comprehensively searched Web of Science, PubMed, Ovid (including EMBASE and MEDLINE), Scopus, the Cochrane Library and two Chinese databases, Wanfang and CNKI for RCTs that focused on the effects of turmeric and curcuminoids on fasting blood glucose (FBG), hemoglobin A1C (HbA1c), fasting serum insulin (FSI) and HOMA-IR among patients with metabolic diseases. The FBG and HbA1c were the main outcomes to be analyzed. With random-effects models, separate meta-analyses were conducted by inverse-variance and reported as WMD with 95% CIs.

Results: Evidence from 17 RCTs including 22 trials showed that turmeric and curcuminoids lowered FBG by - 7.86 mg/dL (95% CI: -12.04, -3.67 mg/dL; P = 0.0002), HbA1c by - 0.38% (95% CI: -0.52%, -0.23%; P < 0.00001) and HOMA-IR by - 1.01 (95% CI: -1.6, -0.42; P = 0.0008). Moreover, they decreased fasting serum insulin by - 1.69 mU/L (95% CI: -3.22, -0.16 mU/L; P = 0.03) after more than 8 weeks of intervention in a subgroup analysis.

Conclusions: Turmeric and curcuminoids decrease FBG, HbA1c and HOMA-IR significantly among subjects with metabolic disease. Additionally, they may have an effect on FSI concentrations if the intervention period is more than 8 weeks. However, attention should be paid to these outcomes due to the significant heterogeneity.

Keywords: Curcuminoids; Glycometabolism; Meta-analysis; Metabolic diseases; Turmeric.

Copyright © 2022 The Authors. Published by Elsevier Ltd.. All rights reserved.

Related information

[MedGen](#)[PubChem Compound \(MeSH Keyword\)](#)

LinkOut - more resources

Full Text Sources

[Elsevier Science](#)[Ovid Technologies, Inc.](#)

Medical

[Genetic Alliance](#)