

Opium use and type 2 diabetes: a systematic review and meta-analysis

Piraiee Elahe, Hassanipour Soheil, Shojaie Layla, Vali Mohebat, Nikbakht Hossein-Ali, Rezaei Fatemeh, Ghaem Haleh.

Abstract:

Background: For many years, people and even some doctors believed that opium has beneficial effects on cardiovascular disease and diabetes. The effect of opium as a stimulator or inhibitor on the metabolic regulation system is challenging.

Objectives: This study aimed to investigate the relationship between opium and type 2 diabetes by meta-analysis.

Methods: The present study was conducted based on the PRISMA checklist for systematic review and meta-analysis studies. Two researchers independently searched for standard keywords from international databases, Scopus, PubMed, ProQuest, Embase, and Web of Science without any time limits until 2019. The Joanna Briggs Institute (JBI) checklist was used for quality assessment of included studies. Data were analyzed using the random-effects model and CMA software.

Results: Twenty-four studies met our inclusion criteria. The meta-analysis results revealed no significant negative relationship between increased opium intake and decreased fasting blood sugar ($P = ns$). There was a statistically significant positive relationship between opium consumption and HbA1C increase in patients with type 2 diabetes ($P < .05$).

Conclusion: Unlike past beliefs, opium consumption not only reduces fasting blood sugar but on the contrary, consumption of opium increases the level of glycosylated hemoglobin in patients with type 2 diabetes.

Keywords: Opium, diabetes mellitus, meta-analysis, systematic review, glycated hemoglobin
A