

Title: *Mangifera indica* Linn Leaves as a Anti-hyperglycemic Agent

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#### Abstract

Objective: This study examined the role of *Mangifera indica* Linn (mango) leaves' use in the control of elevated blood glucose levels.

Design: Systematic Review with Meta-analysis

Methods: PubMed, FSTA, Web of Science, CINAHEL and MEDLINE databases were searched using keywords diabetes\* OR "diabetes mellitus" OR "type 2" OR "blood glucose" OR insulin\* OR antidiabet\*OR "glucose level") AND (mango\* OR "mangifera indica" OR "mangifera indica L") AND (leaves OR leaf). Exclusion criteria included review articles, non-specific mango-related plants, and articles not examining glycemic status. Article inclusion criteria included extraction from *Mangifera indica* Linn leaves.

Results: Eight of 28 studies met the inclusion criteria. Approximately 86% were animal studies and 16%, human. The meta-analysis estimate value for combining normal rat groups was -0.1624, p-value = 0.5136 ( $p > 0.05$ , n.s). The confidence interval for normal rat groups was -0.65, 0.3250. The estimated value for streptozotocin-diabetic rats groups was 21.13 with a p-value of 0.05 which is significant ( $p < 0.05$ ). The confidence interval for streptozotocin-diabetic rats groups was 1.0161, 41.2480.

Conclusions: A potential role of mango leaves' nutraceutical properties as a hypoglycemic agent exists, so an anti-diabetic role for *Mangifera indica* Linn leaves and the nutraceutical mangiferin should be pursued.

Conflict of Interest: NA

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