



# A Blend of Sesame and Rice Bran Oils Lowers Hyperglycemia and Improves the Lipids

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## ABSTRACT

**BACKGROUND:** Considering the health benefits of sesame oil and rice bran oil, the study was conducted to determine the extent to which the daily use of this blend of oils controls hyperglycemia and improves the lipid profile.

**METHODS:** In this 8-week open-label randomized dietary intervention study, 300 type 2 diabetes mellitus patients and 100 normoglycemic subjects were grouped as 1) normoglycemic subjects (n = 100) treated with sesame oil blend Vivo (Adani Wilmar, Ahmedabad, Gujarat, India), 2) type 2 diabetes mellitus patients treated with sesame oil blend (n = 100), 3) type 2 diabetes mellitus patients treated with glibenclamide (n = 100; 5 mg/d), and 4) type 2 diabetes mellitus patients treated in combination of glibenclamide (5 mg/d) and sesame oil blend (n = 100). Twelve-hour fasting blood glucose, glycated hemoglobin (HbA1c), and lipid profile followed by postprandial blood glucose were measured at baseline. Sesame oil blend was supplied to the respective groups, who were instructed to use as cooking oil for 8 weeks. Fasting and postprandial blood glucose was measured at week 4 and week 8, while HbA1c and lipid profile were measured at week 8.

**RESULTS:** At week 4 and week 8, type 2 diabetes mellitus patients treated with sesame oil blend or glibenclamide or combination of glibenclamide and sesame oil blend showed significant reduction of fasting and postprandial blood glucose ( $P < .001$ ). HbA1c, total cholesterol, triglycerides, low-density lipoprotein cholesterol, and non-high-density lipoprotein cholesterol were significantly reduced ( $P < .001$ ), while high-density lipoprotein cholesterol was significantly increased at week 8 ( $P < .001$ ) in type 2 diabetes mellitus patients treated with the sesame oil blend or combination of glibenclamide and sesame oil blend; whereas glibenclamide-alone-treated type 2 diabetes mellitus patients showed a significant reduction of HbA1c ( $P < .001$ ) only.

**CONCLUSIONS:** A novel blend of 20% cold-pressed unrefined sesame oil and 80% physically refined rice bran oil as cooking oil, lowered hyperglycemia and improved the lipid profile in type 2 diabetes mellitus patients.

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interpretation of data; AA: edited and revised the manuscript; RS: study management, follow up patients' enrollment and data collection; SG: reviewing the manuscript.

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