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## Anti-diabetic activity of blackberry (Rubus fruticosus) leaves in streptozocin induced diabetic rats

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Introduction: Aqueous extract of the leaves of Rubus fruticosus was evaluated for anti-diabetic activity in streptozocin (STZ)–induced diabetic model in rats. Methods and material: The aqueous extract of blackberry leaves was prepared by maceration technique. 28 out of 35 male albino rats (200-250 grams) injected with 70 mg/kg STZ and those with blood glucose greater than 200 mg/dl were enrolled in the study. The extracts in two doses (100 and 300 mg/kg body weight) were given orally for 28 consecutive days. Control groups received glibenclamide and normal saline. Blood glucose levels were measured at time zero, 1 & 3 hours after drug administration, and every 7 days afterward. In the $14^{th}$ and $28^{th}$ days, serum components, and on the last day, the weight of liver, kidney and heart of animals were measured. Result: Within four weeks, blood glucose level in groups receiving the Rubus fruticosus extracts was significantly decreased compared to control groups. In groups receiving the extract, serum cholesterol and LDL level were also reduced and reduction of liver enzymes level was significant compared to glibenclamide. Discussion: According to these results, the aqueous extract of blackberry leaves exhibited a significant antihyperglycemic activity in STZ-induced diabetic rats and reduction of serum lipids and liver enzymes support the traditional use of R. fruticosus as a folk remedy in the treatment of diabetes.