

(Juglans regia)

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Study of hypoglycemic activity of the hydroalcoholic extract of Juglans regia in normal and diabetic rats

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Objective: Juglans regia leaves have been used in Iranian traditional medicine in the treatment of diabetes. In this study we investigated the hypoglycemic activity of the hydroalcoholic extract of Juglans regia in normal and diabetic rats. **Methods:** Wistar rats were allocated in two groups of normal and diabetic (induced in dose of 60mg/kg; ip of Streptozotocin). Animals in each group were subdivided into groups of 6 that received hydroalcoholic extract of Juglans regia leaves orally. In diabetic group the extract was administrated 48 hours after streptozotocin injection. The blood glucose was determined in 24 hours interval by using a Glucometer (One touch). The hydro alcoholic extract of Juglans regia leaves were administrated in doses of 125, 250, 500, 1000 mg/kg two times daily. **Results:** The extract in doses of 125mg/kg ($P<0.001$), 250mg/kg ($P<0.001$) and 500 mg/kg ($P<0.05$) decreased blood glucose level significantly, 24 hours after the first administration of extract and these effects were persistent during 72, 48, 24 hours respectively. In contrast, the extract did not show hypoglycemic effect in normal rats. **Conclusion:** The results indicate that Juglans regia leaves extract has significant hypoglycemic effects in low doses on type II model of diabetes in rat but, has no effect in normal rats.

Key words: Juglans regia, hypoglycemia, diabetes, blood glucose.

(mg/kg)

mg/kg

mg/kg ($P<0.05$), ($P<0.001$), ($P<0.001$)

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(Juglans regia)

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Shinoda

(Blepharitis)

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mg/kg

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(Zanosar; Phamacia & Upjohn;USA)

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(lifescan; Johson & Johnson Company; Germany) One touch

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/ (Coefficient of Variation)

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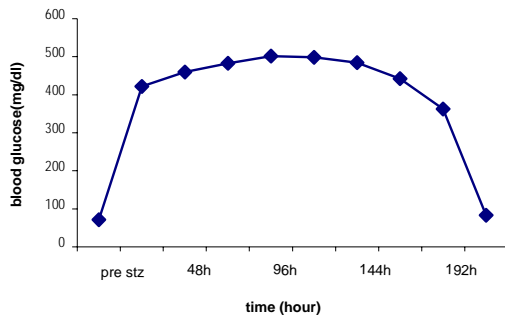
(mg/kg)

TLC

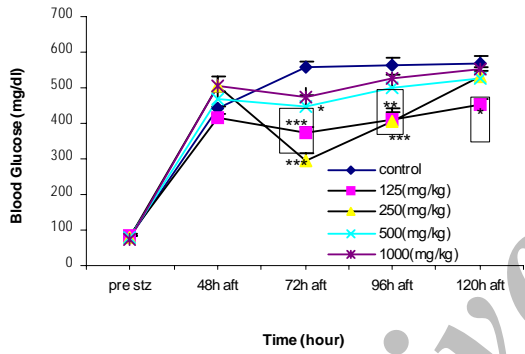
GF₂₅₄

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mg/kg



(mg/kg)



(mg/dL) (mg/kg))
 p<0.01** p<0.001 ***
 (.Aft.:after) p<0.05*

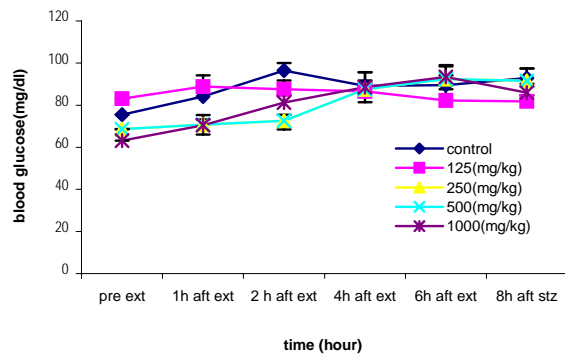
mg/kg
 (± / mg/dl) / ± / mg/dl
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mg/kg
 / ± / mg/dl
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 (p < /)
 mg/kg (p < /)

Mean ± SEM
 Paired student t test
 ordinary ANOVA
 student-newman-keuls

p < /

mg/kg



(mg/kg ,)
 (ext: extract, stz: Streptozocin)

mg/kg
 (p < /)
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 (p < /) (p < /)
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6- References

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