

***Evaluation of antihyperhomocysteinemic action of
Withania somnifera in l-methionine induced
hyperhomocysteinemia in rats***

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ABSTRACT

OBJECTIVE: The present study was designed to evaluate the effect of the methanolic extract of *Withania somnifera* on L-methionine induced hyperhomocysteinemia in rats.

MATERIALS AND METHODS: Albino wistar rats (250-300 gm) were given l-methionine (1 gm/kg, p.o) for 30 days to induced hyperhomocysteinemia. Thirty rats were randomly divided into 5 group of six animals each. Folic acid (100 mg/kg; p.o) was used as standard drug. Rats were given methanolic extract of *W. somnifera* (200 and 400 mg/kg, p.o) for the treatment of hyperhomocysteinemia. At the end of treatment period, the animals were evaluated for the various biochemical parameters like homocysteine, HDL, LDL, serum triglyceride and total cholesterol.

RESULTS: Administration l-methionine for 30 days significantly increase ($P < 0.01$) homocysteine, LDL, VLDL, serum cholesterol, triglyceride level and decrease HDL level as compare to vehicle control. Administration of methanolic extract of *Withania somnifera* (200 and 400 mg/kg, p.o) for 30 days significantly decrease homocysteine, serum cholesterol, triglyceride and LDL with increase HDL level in

hyperhomocysteinemic rats. The results were compared to those obtained with folic acid, standard drug for hyperhomocysteinemia.

CONCLUSION: The present results provide clear evidence that the methanolic extract of *Withania somnifera* treatment decrease homocysteine level and lipid levels against l-methionine induced hyperhomocysteinemia in rats.