

Antistressor Effect of Ingredient of PHYTOCEE® : *Withania somnifera*

OBJECTIVE

To evaluate the antistress activity of *Withania somnifera* on cold swimming stress test.

MATERIALS AND METHODS

Adult Wistar rats (150 –180 g) of either sex were used for the study. The aqueous suspension of commercially available powdered root of *Withania somnifera* was used at 100 mg/kg dosage in this study. The experimental animals were divided into four groups. Group 1 (n=10) were control rats. Group 2 (n=10) rats were given the drug orally by intragastric intubation for 7 days and sacrificed on the 8th day. Group 3 (n=6) animals were subjected to cold water swimming stress (10°C) till exhaustion and were sacrificed immediately. Group 4 (n=6) animals were pretreated daily with the drug orally for 7 days. On the 8th day, these animals were subjected to cold water swimming stress till exhaustion and sacrificed immediately. The blood samples were collected from the jugular vein in heparinised syringes for the estimation of plasma corticosterone. The phagocytic activity of polymorphonuclear leucocytes was estimated using heat killed *Candida albicans* and the phagocytic index and avidity index were calculated. The total swimming time for the rats subjected to cold swimming stress was also noted.

RESULTS

Stress Indices before and after *Withania somnifera* administration

Parameters	Group 1	Group 2	Group 3	Group 4
	Control	Drug alone	Stress	Stress and drug
Plasma Corticosterone ($\mu\text{g}/\text{dl}$)	98.65 \pm 0.51	98.95 \pm 0.27	107.20 \pm 0.38*	99.77 \pm 0.14
Phagocytic index	68.5 \pm 0.56	69.6 \pm 0.7	78 \pm 0.58*	68.83 \pm 1.2
Avidity index	2.261 \pm 60.1	2.519 \pm 0.08	3.840 \pm 0.13*	2.395 \pm 0.09
Total swimming time (min)			5.30 \pm 0.24	8.9 \pm 0.5*

Values are expressed as mean \pm SEM; *Significantly different at $p < 0.05$

CONCLUSIONS

This study results demonstrated that *Withania somnifera* treated animals show better stress tolerance.

OUTCOME

Hence, *Withania somnifera* possess a potent antistressor properties in the crude form used in this study, confirming the clinical use of the *Withania somnifera* as an antistressor agent.

Reference:

Archana R, Namasivayam A. Antistressor effect of *Withania somnifera*. J Ethnopharmacol. 1999;64(1):91-3.