

To study the effect of allium sativum on swimming endurance, anoxia tolerance and cold stress

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To study the effect of allium sativum on swimming endurance, anoxia tolerance and cold stress

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Abstract

The present study was carried out to evaluate the effect of ethanolic extract of *Allium sativum* (Alliceae) on swimming endurance and anoxia tolerance test in mice, cold induced stress in albino rats. The effect was assessed by swimming survival time and anoxia tolerance time, estimation of various biochemical parameters in cold stress like glucose, cholesterol, triglycerides and blood urea nitrogen (BUN), and by determining the weight of organ such as, liver, spleen, testes, adrenal gland, blood cell count (WBC) and also the differential count at a dose of 200mg/kg body weight per oral. It was found that ethanolic extract significantly ($p < 0.001$) increases swimming time and anoxia tolerance time. The extract showed significant ($p < 0.001$) decrease in blood glucose, cholesterol, triglyceride and BUN and also decreased the weight of organs. It also showed a significant ($p < 0.05$) decrease in weight of adrenal gland. A significant ($p < 0.01$) decrease in WBC count, polymorphs and monocyte and decrease in lymphocytes ($p < 0.05$) and eosinophils was observed, compared to control group. Thus the obtained results revealed that the *Allium sativum* has got a significant adaptogenic activity.

Keywords: Swimming, Anoxia, Cold stress, *Allium sativum*, Cortisol, WBC, BUN

Reference:

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