

Effect of a high dose of Sri Lankan black tea brew (*Camellia sinensis*) on body weight, liver and kidney functions in rats

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Abstract

*The aim of this study was to examine general, hepatic and renal toxicities with chronic daily administration of Sri Lankan black tea (*Camellia sinensis* L., Family Theaceae). This was tested in rats using black tea brew (BTB) made from Sri Lankan high grown Dust grade No: 1 black tea. Either a single heavy dose of BTB (501 mg/ml, equivalent to 9 cups) or water (control) were orally administered to two groups of rats (n = 9/group) daily for 8 weeks. These rats were observed daily for overt signs of clinical toxicity. Blood samples were collected at two weeks intervals and levels of serum proteins, GOT, GPT, creatinine, urea, Na⁺, K⁺, and Na⁺/K⁺ ratio were determined. Body weights of these rats were determined fortnightly and food intake were noted. The results show that BTB administration did not induce any overt signs of toxicity or produced significant (p > 0.05) change in any of the serum parameters investigated. On the other hand, a significant (p < 0.05) weight loss (6.6 - 10.4%) was evident in BTB treated rats after 2 weeks. It is concluded that chronic heavy consumption of Sri Lankan black tea appears to be non toxic to liver and kidney but it suppresses the body weight of a rats.*

Short running head: Sri Lankan black tea and toxicity

Key words: *Camellia sinensis*, liver toxicity, renal toxicity, body weight, Sri Lankan tea, black tea

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