

Black Tea Supplementation Improves Antioxidant Status in Rats Subjected to Oxidative Stress

Dileep Kumar and Syed Ibrahim Rizvi*

Department of Biochemistry, University of Allahabad, Allahabad, U. P. 211002, India.
E-mail: sirizvi@gmail.com

* Author for correspondence and reprint requests

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The protective effect of black tea extract (BTE) against HgCl_2 -induced oxidative damage in Wistar rats was investigated. Rats were injected with HgCl_2 (5 mg/kg body weight in 0.9% NaCl) to induce oxidative stress. The aqueous BTE (2.5%) was prepared from CTC (curl, tear, crush) grade tea. BTE was fed to control and HgCl_2 -treated rats by gavage at a dose of 1 ml/(100 g body weight d). Biomarkers of oxidative stress, such as the erythrocyte plasma membrane redox system (PMRS) activity, lipid peroxidation, and advanced oxidation protein products (AOPP), increased by 166, 31, and 373%, respectively, in response to HgCl_2 treatment, while intracellular glutathione and plasma antioxidant potential, *i.e.* ferric reducing ability (FRAP) decreased by 75 and 22%, respectively. BTE protected the rats against HgCl_2 -induced oxidative damage and raised the antioxidant potential in control rats. Due to its strong antioxidant effect *in vivo*, black tea intake may provide a significant health-promoting effect to humans.

Key words: Oxidative Stress, Black Tea, Antioxidants