

## Environmental contaminant bisphenol a toxicity study in swiss albino mice model

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Bisphenol A (BPA) enters environment as an industrial or domestic waste or byproduct of industrial processes. Bisphenol A (BPA) is a monomer of polycarbonate plastic used to manufacture plastic baby bottles and lining of food cans. BPA is also used in dental fillings and sealants. It has endocrine-disrupting potential and exerts both toxic and estrogenic effects on mammalian cells. The aim of this study was to investigate BPA induced oxidative stress and toxicity in the testicular mitochondria of adult male mice. Mice were exposed to standardized dose of BPA (5,10,100 mg/kg body weight), orally for 14 days. BPA caused lipid peroxidation (LPO) and decrease in reduced glutathione (GSH) content of testicular mitochondria. BPA also caused decrease in activities of marker mitochondrial enzymes such as succinate dehydrogenase, malate dehydrogenase, isocitrate dehydrogenase. Besides, it also affected activities of antioxidant enzymes such as superoxide dismutase, glutathione reductase and glutathione peroxidase. These effects were increased as the dose of BPA was increased. Ultra structural changes observed by transmission electron microscopy showed BPA caused abnormalities like deformed acrosome and nucleus of spermatids and apoptotic cells were observed in the testes of treated animals.

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