

Khat (*Catha edulis*) lowers plasma luteinizing hormone (LH) and testosterone secretion, but increases cortisol levels in male rabbits

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Abstract

This study investigated the effects of fresh khat extract on specific circulating hormones in male rabbits. Materials and methods: A total of 25 male New Zealand White rabbits were divided into five groups each comprising five animals. The first four groups were fed four doses (1.5 g/kg, 4.5 g/kg, 13.5 g/kg and 40.5 g/kg body weight) of khat extract twice a week for 5 weeks while the last group, serving as control, was fed only normal saline via intragastric tube. Blood samples were collected at 15 min interval for up to 3 h after khat extract administration and plasma assayed for luteinizing hormone (LH), testosterone and cortisol levels using radioimmunoassay technique. Results: Khat extract at all doses significantly lowered ($P < 0.05$) LH pulse frequency, area under LH curve, mean plasma LH and mean plasma testosterone levels. Plasma cortisol levels were significantly elevated ($P < 0.05$) in khat-treated rabbits in a dose-dependent manner. Conclusion: This study demonstrates that khat may impair reproductive function in male rabbits by interfering with sex hormone profiles.