

Effect of *Catha edulis* (khat) on behaviour and its potential to induce seizures in Sprague Dawley rats

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Date: 2007-05

Abstract:

BACKGROUND: Khat is a plant whose young shoots and leaves are habitually used in Eastern Africa and the Arabian Peninsula as a drug of recreation. Although it is used without any control in these regions, it contains two controlled substances, cathinone (schedule I) which is present in fresh khat and cathine (schedule VI) which is a degradation product of cathinone abundant in old khat. **OBJECTIVE:** To determine the effect of khat on locomotor behaviour and seizures in rats. **DESIGN:** Experimental study. **SETTING:** University of Nairobi. **SUBJECTS:** Adult male rats in groups of six were given fresh khat, old khat, methylphenidate and saline at varying doses and observed over three hours. **RESULTS:** Fresh khat at low doses and old khat at high doses stimulated locomotor activity. High doses of fresh and old khat induced stereotype behaviour and seizures. **CONCLUSION:** The results show that khat stimulates locomotor and stereotypic behavioural activity and can induce seizures; results similar to those observed with amphetamine analogs.