



Effects of bupropion on the reinstatement of nicotine-induced conditioned place preference by drug priming in rats

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Abstract:

Nicotine is one of the most widely consumed psychoactive drugs, and its consumption is currently associated with other drugs of abuse, such as opioids. The aim of the present study was to evaluate the efficacy of the atypical antidepressant drug bupropion (5, 10 and 20 mg/kg, *ip*) in blocking the reinstatement of nicotine-induced conditioned place preference (CPP) provoked by nicotine and morphine. It was shown that nicotine produced a place preference to the initially less-preferred compartment paired with its injections during conditioning (0.175 mg/kg, *ip*, free base, three drug sessions). Once established, nicotine-induced CPP was extinguished by repeated testing. Following this extinction phase, the reinstatement of CPP was investigated. Nicotine-experienced rats were challenged with nicotine (0.175 mg/kg, *ip*) or morphine (10 mg/kg, *ip*). These priming injections of both drugs induced a marked preference for the compartment previously paired with nicotine. Our results demonstrated that bupropion (10 and 20 mg/kg) attenuated the nicotine-induced reinstatement of nicotine-conditioned response. Moreover, bupropion (5 and 10 mg/kg) diminished the morphine-induced reinstatement of nicotine-conditioned response. The results of our studies suggest that bupropion may offer an interesting approach to the relapse-prevention pharmacotherapy of addiction, including nicotine and polydrug abuse.

Key words:

nicotine, morphine, bupropion, reinstatement, place conditioning, rats
