

AUTHOR APPROVED PRESS RELEASE

Adolescent Social Interactions Can Enhance the Rewarding Effects of Cocaine

Adolescence is a developmental time period of increased social interactions. These social interactions are essential in fostering healthy development. Adolescence is also a time of enhanced sensitivity to drugs of abuse which has been demonstrated for alcohol, nicotine, and cocaine. Several studies have also suggested that social context influences the rewarding effects of drugs of abuse and vice versa. How exactly these social interactions influence these drug effects is not well understood. In an article published in the current issue of "*Drug and Alcohol Dependence*", researchers found that social interactions in combination with a low dose of cocaine had a rewarding effect that was not observed when examined alone.

Janet Neisewander and Kenneth Thiel of Arizona State University (Tempe, AZ) and colleagues conducted a study using conditioned place preference (CPP; a rodent model for assessing reward) to examine the interactions between drug and social rewards in adolescent rats. In their first study, the authors assessed the parameters necessary to establish social reward in CPP including the number of conditioning sessions/day (1 or 2), the total number of sessions (2,4, or 16), and the duration of the sessions (10 or 30 min). Their results demonstrated that the social reward-CPP was similar using either the 1 or 2 conditioning sessions/day and the 10 or 30 min sessions but the social reward-CPP increased significantly as the number of social pairings increased. In their next study, they discovered that a low dose of cocaine (2 mg/kg) and a low number of social pairings (2 pairings) failed to produce CPP when examined alone, but together they produced a robust CPP, which demonstrated an interaction between these two rewards. Dextromethorphan (a non-rewarding drug in rodents) failed to enhance the social reward-CPP that was observed with cocaine, suggesting that drug-enhanced social reward-CPP is specific to rewarding drugs. The authors report that these findings have important implications for understanding the influence of social context on cocaine reward during adolescence.

Drug and Alcohol Dependence is the official journal of the College on Problems of Drug Dependence (www.cpdd.org), the largest and oldest organization for the scientific study of drug dependence. The peer-reviewed *Drug and Alcohol Dependence* (www.elsevier.com/locate/drugalcddep) is published by Elsevier Science Inc., a leading publisher of scientific, technical, and medical journals, books, and reference works. Elsevier Science is a member of the Reed Elsevier PLC group (www.reedelsevier.com), a leading publishing and information business.

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