bance in major depression. Idiosyncratic behaviors were positively related to MHPG in both environments. The implications of these results for the catecholamine hypothesis of affective disorders and the relations between overt behavior and MHPG are considered.

FIVE YEAR EFFICACY OF RAPID SMOKING TREATMENT IN CARDIOPULMONARY PATIENTS. David P. L. Sachs, Permanente Medical Group, San Jose, CA, Robert G. Hall, Palo Alto Veteran's Hospital, Palo Alto, CA, Sharon M. Hall and Neal L. Benowitz, University of California, San Francisco, CA.

In a previously reported study, 18 smokers with documented cardiopulmonary disease underwent rapid smoking (R. G. Hall *et al.*, 1984). No subject developed evidence of myocardial ischemia or significant cardiac arrhythmia during treatment. While only 56% were abstinent post-treatment this figure has changed little during follow-up. At two year follow-up we reported 50% abstinent as confirmed by carboxyhemoglobine, nicotine, cotinine and thyiocyanate. After four years, one subject is dead, seven others continued abstinent as verified by biochemical measures, and one subject relapsed after three years, but received four rapid smoking booster sessions and is abstinent one year later.

EFFECTS OF ETHANOL AND CGS 8216 ON JUMP-UP AVOIDANCE. Mark Galizio and Petra O. Weiser. University of North Carolina at Wilmington, Wilmington, NC.

The present study was designed to test the hypothesis that the effects of ethanol might be mediated by action at the benzodiazepine receptor. The effects of ethanol, alone, and in combination with the benzodiazepine antagonist CGS 8216, on extinction of a jump-up avoidance response in rats were studied. Moderate doses of ethanol stimulated and high doses depressed avoidance responding. CGS 8216 had no effect on extinction, and did not interact with ethanol. The results did not support the notion that either stimulatory or depressant actions of ethanol are mediated by specific action at the benzodiazepine receptor site.

DIFFERENTIAL MODIFICATION OF A PENTOBARBITAL STIMULUS BY *d*-AMPHETAMINE AND ETHANOL. Franci J. Schwartz and Alice M. Young. Wayne State University, Detroit, MI.

The ability of *d*-amphetamine and ethanol to alter the discriminative stimulus properties of pentobarbital was examined. Saline and pentobarbital (5.6 mg/kg) were established as discriminative stimuli for food-maintained responding in pigeons. In tests of stimulus generalization, *d*-amphetamine alone did not exert pentobarbital-like stimulus control, while ethanol alone produced variable results within and between subjects. Moderate to high doses of *d*-amphetamine appeared to increase the dose of pentobarbital required for stimulus control, but exerted opposite effects on response rate. Ethanol produced variable effects on the pentobarbital stimulus, with moderate doses generally decreasing, and high doses increasing, the dose of pentobarbital required for stimulus control.

EFFECTS OF CONCENTRATION AND CAFFEINE MANIPULATIONS ON HUMAN COFFEE SELF-ADMINISTRATION. Mary K. O'Keefe, David K. O'Leary and Roland R. Griffiths. Behavioral Pharmacology Research Unit, Johns Hopkins University School of Medicine, Baltimore, MD.

This series of experiments systematically evaluated human coffee drinking behavior as an instance of drug self-administration. Subjects residing on an in-patient research ward participated in experiments involving characterization of ad lib coffee intake (Experiment 1), manipulation of coffee concentration (Experiment 2), and manipulation of caffeine dose (Experiment 3). These experiments revealed coffee drinking to be an orderly form of drug self-administration, which was sensitive to manipulations of both coffee concentration and caffeine dose. Results from Experiment 3 suggest that caffeine produces a dose related suppression of coffee intake, and does not provide strong evidence for the reinforcing properties of caffeine. A fourth experiment (in progress), which is examining the effects of chronic decaffeinated coffee manipulations, should provide further understanding of the role of caffeine in the maintenence of coffee drinking.