

tions of points) for specified periods of time. Diazepam had no effect or slightly decreased non-aggressive monetary reinforced responses. Aggressive responses were increased or decreased in individual subjects particularly at the 10 mg/70 kg diazepam dose.

DOUBLE-BLIND PLACEBO CONTROLLED TRIAL OF NICOTINE GUM AND PSYCHOLOGICAL TREATMENT. Sharon M. Hall, Reese T. Jones, Chrystal Tunstall and Dorothy Ginsberg. Department of Psychiatry, University of California, San Francisco, CA.

Two levels of Psychological treatment (Intensive Behavioral vs. Low Contact Control) were crossed with two levels of nicotine gum (2 mg vs. placebo). We have completed treatment and 12 and 26 week follow-up of the entire sample (N=139). Preliminary results indicate treatment efficacy is dependent on dependence level. Highly dependent smokers attain excellent abstinence rates when given nicotine gum in a low contact group. For these smokers, the addition of behavioral treatment to gum decrease abstinence rates substantially. For smokers low dependence, results are less clear. However, preliminary data indicate behavioral treatment produces the highest abstinence rates for these smokers, independent of gum condition. These data indicate differential treatment effectiveness as a function of dependence level, and suggest that we will ultimately be able to match smoking treatment patients to appropriate therapies.

EFFECTS OF RITALIN SR20 ON THE BEHAVIOR OF ADD CHILDREN. JoAnn Hoza and William E. Pelham. Florida State University, FL.

Methylphenidate is the most commonly prescribed stimulant for the treatment of an attention deficit disorder. Due to the short half-life of the drug, a second dose of medication is typically administered to the child at school. To eliminate a second administration, a longer acting form of methylphenidate has been introduced. Prior to this study, no systematic evaluations of its effects were conducted. Analyses reveal that SR20's time course does not appear to be similar to the regular form of methylphenidate or an equivalent dose of pemoline. Further drug comparisons revealed considerable individual differences in response to medication.

PSYCHOSTIMULANT-INDUCED SOCIAL WITHDRAWAL IN ADD CHILDREN. JoAnn Hoza and William E. Pelham. Florida State University, FL.

Peer relations have been demonstrated to be the best predictors of adult adjustment and a pervasive problem for attention deficit disordered children (ADD). Psychostimulant medication, the most commonly used treatment for ADD, appears to induce social withdrawal for a subgroup of ADD children. Eleven percent of the children in this study displayed social withdrawal on direct observations of peer interactions, precluding the recommendation of the associated medication. Without the assessment procedure that yielded evidence of social withdrawal, inappropriate medication recommendations based on other data would have been made for 75% of the children. Implications for assessment are discussed.

REFINING INDICATORS OF ALCOHOL USE: GUTTMAN SCALING AND FACTOR ANALYSIS. Matthew Schall, Allon Shiff and Irving Maltzman. Behavior and Alcohol Laboratory, Department of Psychology, University of California, Los Angeles, CA.

A negative behaviors with alcohol use scale and a using alcohol to cope scale were examined for their relationship to alcohol use in a college student population. Factor Analysis and Guttman Scaling were used to refine these scales into better indicators of students' risk for alcohol abuse. Correlations between the original scale scores, the refined scale scores and alcohol consumption, indicate that the strength of association between the scale scores and the quantity of alcohol consumed was not reduced even though the size of the scales was considerably decreased.

ALCOHOL CONSUMPTION AND COGNITIVE ABILITIES. Allon Shiff, Matthew Schall and Irving Maltzman. Behavior and Alcohol Laboratory, University of California, Los Angeles, CA.

Approximately 200 undergraduate students were administered a battery of questionnaires on alcohol and drug use, personality, cognitive functioning and demographics. An examination of their total alcohol consumption and cognitive functioning was conducted using the Shipley Hartford Intelligence Scale. It was found that there was no significant correlation between the amount of alcohol consumed by an individual in a month and their performance on either the verbal or abstraction subtests of the scale.

MARIJUANA AND FOOD INTAKE IN A NATURALISTIC ENVIRONMENT. Richard W. Foltin, Joseph V. Brady and Marian W. Fischman. The Johns Hopkins Medical Institutions, Baltimore, MD.

One group of two and one group of three healthy adult male volunteers resided in a naturalistic laboratory environment for up to 25 days. Marijuana or placebo cigarettes were smoked daily. Four of the five subjects increased food intake by 10 to 30% following marijuana smoking. This increase was due to increased consumption of between-meal snacks and was greatest after smoking the drug cigarette in a social situation.

BEHAVIOR AND SYMPTOM CORRELATES OF MHPG EXCRETION IN PSYCHIATRIC PATIENTS. Kim T. Mueser, Camarillo State Hospital and Brentwood VA Medical Center, Alexander J. Rosen, Javaid I. Javaid and John M. Davis, University of Illinois at Chicago and Steve Y. Sussman, Brentwood VA Medical Center and University of Southern California.

The relations between urinary MHPG excretion, ward behavior in two environments (lunch and gym), and symptomatology were examined in 58 psychiatric inpatients. Manic patients and paranoid schizophrenics excreted the highest levels of MHPG. For the depressives, MHPG excretion correlated negatively with eating in lunch and positively with self-reported appetite loss, suggesting a relation between high norepinephrine turnover and appetite distur-

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 thiocyanate. 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 maintenance of coffee drinking.