

the session in all conditions. The greatest improvement occurred after smoking the medium nicotine delivery cigarette which was always the subject's usual brand. Accuracy on this task deteriorated after smoking a low-nicotine delivery cigarette. The results suggested a direct effect of nicotine dose on memory performance.

EFFECTS OF EXERCISE AND DIET ON NICOTINE CESSATION WEIGHT GAIN. Kathryn A. Popp. Uniformed Services University of the Health Sciences, Bethesda, MD.

One reason given by smokers for continuing to smoke in spite of health consequences is that smoking controls body weight. Finding ways to prevent smoking cessation-induced weight gain may help reduce the number of smoking-related deaths. This study examined the effects of exercise and the availability of sweet food on weight gain resulting from the cessation of chronic nicotine administration in rats. Exercise reduced rate of weight gain, proportion of body fat and fasting plasma insulin levels. Restricting access to sweet food reduced proportion of body fat and fasting insulin levels.

MULTIDIMENSIONAL SCALING FOR MEASURING ALCOHOL EXPECTANCIES. Bruce Rather, Brian Levine and Mark Goldman. University of South Florida, Tampa, FL.

Although expectancies for alcohol have been shown to influence drinking behavior, current expectancy questionnaires do not lend themselves to the study of how expectancies are represented in memory. Two studies are described which utilize statistical techniques (e.g., multidimensional scaling) that are designed to produce hypothesized representations of cognitive structures. In one study, the cognitive representation of effects for alcohol are presented for heavy versus light drinkers. In another study, drinkers' representations of the effects of alcohol are compared across situations. Both studies yielded "cognitive maps" which suggest mechanisms by which decisions to drink are made.

AGGRESSION ATTENUATES PSYCHOMOTOR STIMULANT EFFECTS OF d-AMPHETAMINE, MDMA AND PCP. M. Haney and Klaus A. Miczek. Tufts University, Medford, MA.

In a protocol that concurrently assessed drug effects on conditioned performance and aggressive behavior, d-amphetamine, and to a lesser degree MDMA and PCP increased FI responding. AMPH but not PCP or MDMA enhanced fighting in a subset of mice. MDMA's suppressive effects on conditioned performance and fighting are amplified following 5HT₂ receptor antagonism. D1 antagonists blocked the enhancing but not the suppressive effects of AMPH on schedule-controlled and aggressive behavior. Multiple fighting experiences also attenuated the stimulatory properties of amphetamines and PCP. Behavioral experiences that modify DA and 5HT systems alter sensitivity to psychomotor stimulants.

DEPRESSION AND ADJUSTMENT PROBLEMS IN COCAINE AND OPIOID ADDICTS. Robert M. Malow, Jeffrey A. West, Jose Pena and Criss W. Lott. VA Medical Center and Tulane University Medical Center, New Orleans, LA.

Affective and adjustment symptoms among compulsive cocaine users have not been thoroughly evaluated, and it is unclear how this subgroup might differ clinically from drug users currently abusing opioids. This study compared subgroups of cocaine and

opioid users on global measures of subjective distress, specifically anxiety and depression, and on various self-reported psychopathology symptoms. In contrast to compulsive cocaine users, opioid addicts were characterized by significantly greater problems with depression and adjustment. Results are consistent with earlier research indicating less psychopathology among cocaine abusers than opioid addicts.

ETHANOL CONSUMPTION AS A FUNCTION OF INCREASING FOOD ACCESS COST. Henry Marcucella, Paula Steffen and Anthony Liguori. Boston University, Boston, MA.

Rats were required to lever press in a simulated foraging environment for access to either water and food or water, ethanol and food. The procurement cost of food was manipulated by increasing the number of responses required to produce access to food. The food procuring behavior of the ethanol animals collapsed at much lower food access ratios than that of the animals with only water available. Once the animal shifted to ethanol it would work for food only at low procurement ratios. Below food access ratios of 2500, manipulating the food access ratio had only slight effects on ethanol consumption.

THE EFFECT OF ALCOHOL ON IMPULSIVE AND NON-IMPULSIVE INDIVIDUALS. Carolyn L. Morse and Vincent J. Adesso. The University of Wisconsin-Milwaukee, Milwaukee, WI.

Impulsive and nonimpulsive young, male, heavy drinkers received alcohol or a placebo beverage, and their performance on tests of behavioral impulsivity was measured. On detail-oriented tasks such as the Matching Familiar Figures Test (MFFT) and Projective Drawing, the alcohol/impulsives behave more impulsively than alcohol/nonimpulsives or placebo/impulsives. However, in a time estimation task, the placebo/impulsives underestimated intervals while both alcohol groups responded similarly, overestimating the intervals. The results are consistent with a multifaceted conceptualization of impulsivity, some aspects of which are detrimentally affected by alcohol and others which may be "normalized" by alcohol ingestion.

RESPONSE TO REWARD AND PUNISHMENT AND THE INHERITED RISK FOR ALCOHOLISM. Jordan B. Peterson, Peter Giancola and P. O. Pihl. McGill University, Montreal, Quebec.

Eleven nonalcoholic sons of male alcoholics (SOMAs) from families with extensive male-limited multigenerational family histories of alcoholism and 11 controls matched for age, sex, education level and drinking history were exposed to rest, reward and punishment while sober and while alcohol-intoxicated. Analysis of their cardiovascular and muscular response indicated 1) that the baseline resting heart-rate of the SOMAs was significantly elevated by alcohol consumption and 2) that the SOMAs were characterized by heightened susceptibility to the stress-dampening effects of alcohol on muscular response to punishment. This pattern of response supports the notion that alcohol may be reinforcing to SOMAs because of its interference with the activity in the limbic threat-response system.

ACUTE ETHANOL INTOXICATION, GENDER DIFFERENCES, AND PROSE PROCESSING. Jennifer Haut, Bill E.

Beckwith and Thomas V. Petros. University of North Dakota, Grand Forks, ND.

This study examined gender differences in the effects of acute ethanol intoxication and prose processing. Subjects were administered ethanol (0.0 or 1.0 ml/kg body weight) and read expository prose passages. Intoxicated subjects encoded prose slower and recalled less information than sober subjects. Males spent more time encoding text than females: females taking oral contraceptives (OC's) read longer than females not taking OC's. Intoxicated males recalled more than intoxicated females, although no difference was observed when sober. This suggests that ethanol impairs prose processing efficiency even when subjects encoded the material at their own rate. Possible explanations for the gender differences included neuroendocrine and cognitive factors.

EFFECTS OF DOSE ON THE REINFORCING EFFECTS OF CAFFEINE. William Hunt. Claremont McKenna College, Claremont, CA; John R. Hughes, Warren K. Bickel, Stephen T. Higgins and Sara L. Pepper. University of Vermont, Burlington, VT.

Thirteen moderate coffee drinkers (3–7 cups per day) were tested to see if caffeine at 25, 50, 100, 150, 200 mg could function as a reinforcer when ingested in coffee by them. Caffeine at 100 mg functioned as a reinforcer in 7 of the subjects. Among the subjects who received additional dose tests of caffeine, in 2 subjects 25 mg of caffeine functioned as a reinforcer, in 5 subjects 50 mg functioned as a reinforcer and in 3 subjects 150 mg functioned as a reinforcer. The two hundred mg dose did not function as a reinforcer in any subjects. These results replicate earlier findings with the 100 mg dose, and are the first to show that low doses, 25 and 50 mg can serve as reinforcers.

PARENTAL INTOXICATION AND USE OF PHYSICAL CONTACT WITH PROBLEM CHILDREN. Alan R. Lang and William R. Meadows. Florida State University, Tallahassee, FL; William E. Pelham. Western Psychiatric Institute and Clinic, Pittsburgh, PA.

Effects of alcohol intoxication on physical contact in management of boys exhibiting behavior problems were examined using 96 parents, including equal numbers of married fathers and married and single mothers who themselves had either only normal children or at least one child with a diagnosis of an externalizing disorder. Half the subjects from each group received an alcoholic beverage (0.95 ml ETOH/kg for males or 0.84 ml/kg for females) and half a nonalcoholic drink prior to a semi-structured interaction with a child confederate trained to portray externalizing behavior problems. Coding of videotaped interactions by raters blind to subject beverage condition revealed that intoxicated subjects used significantly more physical contact and control than did sober subjects.

SOBER HOUSING FOR RECOVERING SUBSTANCE ABUSERS. Dennis McCarthy. Department of Public Health, Boston, MA; Milton Argeriou. Stabilization Services Project, Boston, MA; Joseph Valley. Department of Public Health, Boston, MA.

Alcohol- and drug-free housing is critical to the maintenance of sobriety for many recovering substance abusers. The decreased availability of low cost housing over the past decade has created a

particular hardship for individuals in recovery seeking such housing. The Massachusetts Department of Public Health in collaboration with other state and private agencies has successfully employed a variety of strategies to develop alcohol- and drug-free housing. Three strategies are reviewed and discussed.

EFFECTS OF PRENATAL AND ADULT CAFFEINE EXPOSURE ON MAZE LEARNING. Charles E. Camp and W. Keith Douglass. Armstrong State College, Savannah, GA.

The effects of prenatal and/or adult caffeine exposure on maze learning were studied in 20 Holtzman albino rats. Compared to controls, subjects that received prenatal caffeine showed increased maze times and errors during maze training with decreased times and errors during adult exposure. Prenatal subjects had lower mean body weights. During postexposure, subjects that received prenatal and adult exposure had increased times and errors over all groups. Male and female subjects that received caffeine only as adults had faster times and fewer errors during adult exposure with increased times and errors during postexposure in comparison to controls.

CHANGES IN ENERGY EXPENDITURE FOLLOWING SMOKING CESSATION: SEX DIFFERENCES. Susan E. Winters, Mathilda C. Coday, Robert C. Klesges and T. Andrew Bailey. Memphis State University, Memphis, TN.

The present study measured the effect of smoking on resting energy expenditure (REE) in 30 (15 male, 15 female) smokers over two consecutive days. On day one, REE was measured for 20 minutes after a day of regular smoking. In addition, 30 (15 male, 15 female) nonsmokers who served as controls were run under identical conditions. Preliminary analyses performed on these data suggest that there are definite metabolic effects associated with smoking and smoking cessation and that these effects are greater in females compared to males.

METHADONE-TREATED DRUG ABUSERS: REDUCED HIV INFECTION AND RISK BEHAVIOR. George E. Bigelow, Robert K. Brooner and Lawrence Greenfield. The Johns Hopkins University School of Medicine, Baltimore, MD.

The prevalence of human immunodeficiency virus (HIV) infection and the rates and patterns of drug use-related HIV risk behaviors were compared in two populations of intravenous drug users (IVDUs)—one enrolled in methadone maintenance treatment (N=100), and one untreated and continuing drug use in the community (N=90). Volunteers' blood samples were tested for HIV antibodies as an index of infection, and quantitative histories of their drug injection and needle sharing behaviors for each month of the preceding year were obtained by interview. HIV seropositivity was significantly less prevalent in the methadone-treated population (3% vs. 17%, $p=0.003$). For each of the preceding 12 months the percentage of persons injecting drugs and the median number of injections per month were both significantly lower in the methadone-treated group than in the untreated group ($p<0.01$ in all cases). The median injections per month in the treated group was one-twelfth to one-fourth that of the untreated group. While these data are suggestive of a benefit from treatment such a conclusion would be speculative since the treated and untreated IVDU groups were self-selected and differed on demographic indices (minority group membership) that were themselves posi-