components of cigarette smoking topography (number of cigarettes, number of puffs, puff duration, pause duration, cigarette duration) as a function of a smoker's history of alcohol consumption Smokers were grouped as a function of their self-reported and observer-verified current drinking status over the three months prior to the study, as well as a history of alcohol abuse as assessed by DSM-III criteria Data analysis showed significant differences between groups for nicotine content of the cigarettes smoked ($p<0$ 0001), number of cigarettes smoked ($p<0$ 0001), cigarette duration ($p<0$ 002) The data indicate a history of alcohol use is associated with increased daily smoke exposure

THE EFFECTS OF SMOKING ON DISCRIMINATIVE FORCE EMISSION IN HUMANS Michael Klitzke, Thomas Lonbardo and Stephen Fowler University of Mississippi

In comparison to non-smokers, smokers exerted more force during a fine motor task after smoking a cigarette or when abstinent from smoking Task performance was assessed in terms of measured peak force exerted, duration of response, interresponse time, number of correct responses, and total number of responses Significant negative correlations were found between the number of years smokers smoked and peak force exerted during the smoking condition The findings suggest an important role for force measurement technology in human behavioral pharmacology research

THE ROLE OF PAVLOVIAN CONDITIONING IN OPIATE WITHDRAWAL IN RATS Jean A Paty Clinical Psychology Center, University of Pittsburgh, Howard D Cappell University of Toronto

Experiments were conducted to examine the hypothesis that conditioned compensatory responses (CR), which are hypothesized to mediate drug tolerance, are expressed as withdrawal when the drug is not present (Siegel, 1983) In Experiment 1, it was confirmed that saccharin aversion is a reliable, sensitive index of withdrawal from morphine In Experiment 2, animals were first made tolerant to a dose of 60 mg/kg morphine given in a distinctive environment (DR) They were then left for 30 days to recover from the withdrawal effects associated with the cessation of a chronic high drug dose These animals were then given a placebo, saline, in the DR If the CR was expressed as withdrawal then a saccharin aversion should have occurred in the presence of drug related cues The results did not confirm this prediction It is concluded that perhaps non-specific measures of withdrawal will not demonstrate a general withdrawal like effect in the presence of drug related stimuli

BEHAVIORAL EFFECTS OF CHRONIC COCAINE ADMINISTRATION Leonard L Howell Laboratory of Psychobiology, Harvard Medical School, Boston, MA 02115

Osmotic minipumps continuously infused cocaine (0 1 or 0 3 mg/kg/hr) during 14-day periods in three squirrel monkeys *(Saimiri sciureus)* trained under a fixed-interval 180-sec stimulus-shock termination schedule Cocaine was administered (IM) acutely using cumulative-dosing procedures once per week prior to and during chronic treatment Control response rates increased during chronic treatment (0 1 mg/kg/hr) but returned to pre-pump levels following termination of chronic treatment Tolerance developed to the gross behavioral effects observed initially in all subjects during chronic treatment (0 3 mg/kg/hr) and to rate-suppressing effects observed in one subject However, tolerance did not develop to the acute effects of cocaine

CLONIDINE, NEGATIVE CONTRAST AND NOVELTY-INDUCED STRESS Charles F Flaherty, Patricia S Grigson and Melissa K Demetrikopoulos Rutgers University

Rats were shifted from 32% to 4% sucrose solutions The resultant negative contrast effect in consummatory behavior was not alleviated by clonidine (0 00312, 0 00625, 0 0125, 0 025, 0 050 mg/kg) The lower doses had no effect on behavior, the higher doses reduced consumption in both shifted and unshifted rats In Experiment 2 clonidine (0 0625, 0 0125 mg/kg) raised plasma glucose levels in animals exposed to a novel environment These results are at variance with those obtained with chlordiazepoxide and other anxiolytics and suggest limits on the degree to which clonidine can be considered to function as an anxiolytic

PAPER SESSION
Human Psychopharmacology
Friday August 28, 1987 • 2 00 p m –3 50 p m
Marriott Marquis Hotel • Kern/Sullivan Room
Chair *Stephen A Daniel,* Mercy College

TOXICOLOGY SCREENING IN ACUTE SPINAL CORD INJURY Allen Heinemann Northwestern University Medical School, Sidney Schnoll University of Virginia, Roger and Mary Keen Northwestern Medical School

The validity of self-reported intoxication at time of spinal cord injury (SCI) was examined by comparing self-reports with the results of blood serum and urine analysis for 78 cases at admission to an acute SCI center Serum ethanol was the most frequently found substance followed by lidocaine, cocaine, cannabinoids, opiates, meperidine, morphine, and methadone While 51% of the sample reported being under the influence of some substance at the time of SCI, the relationship between these two measures was not statistically significant These results suggest that routine drug testing at admission to an SCI center will produce false negatives as well as false positives if presence alone is interpreted as evidence of intoxication

DRUG TYPE, PERSONALITY, PSYCHOPATHOLOGY AND EARLY TERMINATION IN SUBSTANCE ABUSE Michael J Stark Lewis & Clark College, Portland, OR, Barbara K Campbell CODA

This study examines the relationship between drug of choice, personality, psychopathology and early termination from treatment in substance abusing clients One hundred subjects were given the MCMI and the SCL-90R after a standard clinical intake interview in which demographic and drug use information was obtained Results revealed generally high levels of psychopathology There were few differences among the four types of substance abusers (marijuana, opiate, cocaine and amphetamine), namely, marijuana users were significantly younger while amphetamine abusers manifested high scores on the interpersonal sensitivity, hostility, paranoia and psychotiscism of the SCL-90 The amphetamine abusers with high levels of subjective distress were the clients least likely to return after the intake interview Mandated clients, even with high scores on the MCMI's Antisocial Scale, were the most likely to return as were clients who scored high on the MCMI's psychotic thinking and paranoid scale The results of this study support thorough, individualized assessment of substance abusers as part of the employment of individually tailored treatment plans

A PSYCHO-SOCIAL VIEW OF "CRACK" IN NEW YORK CITY Blanch Frank, Alan Kott, Gregory Rainone and Michael Maranda NY State Division of Substance Abuse Services, New York

Crack, a smokable form of cocaine, has had a rapid rise in popularity in New York City over the past year Given the intense effects of the drug and this mode of administration, a three-part study was undertaken to assess the impact of the Crack phenomenon First, this paper describes general findings about Crack use and its consequences from a survey of New York City residents Second, an ethnographic study of active Crack users in major copping areas and in "base" and Crack houses is discussed Finally, the results of a study of Crack users in treatment are presented with recommendations for treatment

CRACK ABUSE AND SUICIDE IS THERE A CORRELATION? George DeLeon and Nancy Jainchill Phoenix House Foundation, New York

The dramatic shift in drug preference to cocaine and crack use in recent years has important implications for diagnosis and treatment This study reports preliminary findings on the prevalence of suicide attempts among substance abusers admitted to long term residential therapeutic community treatment Comparisons across primary drug groups reveal that crack abusers have a significantly higher rate of suicide attempts These findings stress the need to identify psychological and psychopharmacological factors in cocaine associated behavioral problems

EFFECTS OF INHALED NICOTINE VAPOR FROM SMOKELESS CIGARETTES R Nemeth-Coslett and Jack E Henningfield Addiction Research Center, Baltimore, MD, and Samantha McBride Johns Hopkins University

Multiple physiologic measures and subject ratings were collected from seven volunteer cigarette smokers during 4 hour test sessions to assess the effects of smokeless cigarettes (SLC) Subjects inhaled nicotine vapor through the mouth piece of a manifold that simultaneously held 4 SLCs The dose conditions were either 0, 1, 2, or 4 standard SLCs mounted in the manifold Depending on the nicotine dose condition, either 4, 3, 2 or 0 denicotinized SLCs, respectively, were also mounted in the manifold Subjects were instructed to inhale according to standard procedures The main finding was that subjects reliably differentiated placebo from all active doses Ratings of the similarity of the SLC to tobacco cigarettes, as well as positive and negative effects, were also dose related Desire to smoke was significantly decreased after inhaling from the SLC but recovered to baseline within 30 min Changes in blood pressures were not significantly affected, however, changes in heart rate were significantly increased in a dose-related manner

COGNITIVE, SUBJECTIVE AND PHYSIOLOGIC EFFECTS OF NICOTINE IN NONSMOKERS Frederick R Snyder, R Nemeth-Coslett, Laurence P Shanet and Jack Henningfield NIDA/Addiction Research Center

Sixteen healthy nonsmokers, 9 males and 7 females, were each administered 3 doses of nicotine gum—0, 2, and 4 mg—in an ascending order Subjective, physiologic and cognitive measures were obtained prior to and after each dose administration Although no statistically significant effects were observed on the obtained measures of information processing, the group data showed a trend toward increasing response times (impairment) with increasing doses of nicotine All physiologic parameters—systolic and diastolic blood pressure, heart rate and skin temperature—showed a significant response to 4 mg nicotine gum, and systolic blood pressure and skin temperature were significantly affected by the 2 mg dose as well Nonsmokers detected the active doses of nicotine as compared to placebo, drug liking scores were not affected Interestingly, MBG scale scores (a measure of euphoria) showed a significant increase in the 4 mg condition which contrasts to results with smokers who typically show no change on this measure under similar conditions Results are discussed with regard to individual differences, tolerance, and possible factors relevant to the effects of nicotine on aspects of information processing

PAPER SESSION

Methylphenidate in Children

Saturday August 29, 1987 • 1 00 p m –1 50 p m
Marriott Marquis Hotel • Majestic Room

Chair *Mark D Rapport*, Department of Psychiatry and Behavioral Science, State University of New York at Stony Brook

DOSE-RESPONSE EFFECTS OF METHYLPHENIDATE ON IMPULSIVITY IN CHILDREN WITH ADDH Mark D Rapport State University of New York at Stony Brook, Gary Stoner University of Massachusetts

The present investigation examined the effects of methylphenidate (MPH) on impulsivity in children with Attention Deficit Disorder/Hyperactivity (ADDH) in school and on their Matching Familiar Figures test (MFFT) performance in