

THE EFFECT OF INCREASED COCAINE USE ON DRUG TREATMENT. John L. Black, Michael P. Dolan, Walter E. Penk, Ralph Robinowitz and Horace A. DeFord. Veterans Administration Medical Center, Dallas, TX.

Trends in illicit drug use were monitored in a methadone maintenance program over a 6-year period, along with primary drug use in an inpatient treatment program over a 9.5-year period. Cocaine was found to be the illicit drug used most frequently by methadone maintenance patients, and its use was found to have a very disruptive effect on methadone treatment. The percentage of cocaine users admitted for inpatient treatment showed a dramatic increase over the past 2-year period, while no other drugs showed an increase. Implications for treatment are discussed.

ACUTE DRUG EFFECTS ON SPEAKING IN ISOLATED HUMANS. Stephen T. Higgins, Maxine L. Stitzer and David K. O'Leary. Johns Hopkins School of Medicine and Francis Scott Key Medical Center, Baltimore, MD.

Drugs of abuse often facilitate human social interaction as is suggested by our cultural drug-use practices and has been demonstrated in controlled laboratory studies. The pharmacological and behavioral mechanisms controlling these effects, however, remain unclear. The present study examined the importance of a social context for obtaining drug-produced increases in human speech by studying the acute effects of ethanol, secobarbital, and diazepam on the amount of speech emitted by normal adult subjects who were producing spoken monologues in a socially isolated context. Secobarbital and ethanol produced dose-related increases in the total seconds of speech emitted, whereas diazepam produced decreases. These results suggest that a social context is not a necessary condition for drug-produced increases in human speech to occur. Additionally, the differences between drugs that were found should provide an important base for experimentally analyzing the controlling pharmacological and behavioral properties in drug-produced changes in human speech.

METHADONE EFFECTS ON BRIEF STIMULUS PREFERENCE BY PIGEONS. Thomas H. Kelly, Veterans Administration Medical Center, Shreveport, LA., and Travis Thompson, University of Minnesota, Minneapolis, MN.

Effects of methadone on the operant performance generated by a three component multiple schedule in pigeons were investigated. During two components (presented on separate keys), key pecks maintained by food presentation were supplemented with brief stimuli paired with or independent of food presentation. During the third component, twelve responses on either key (simultaneously illuminated) non-reversibly produced contingencies appropriate to the selected key. Drug effects on behavior were modified by both key position preference and current stimulus conditions during all components. Methadone increased preference for paired brief-stimulus schedules in a dose dependent manner when paired brief stimuli altered key preference.

TRANSREINFORCER BLOCKING OF LITHIUM- AND APOMORPHINE-BASED CONDITIONED FLAVOR AVOIDANCE. Linda A. Parker. University of New Brunswick, Fredericton (New Brunswick).

Prior conditioning of coffee avoidance based on a drug US (Phase 1) partially blocked the establishment of saccharin avoidance based on the same drug US (Phase 2) or one based on a different drug US when lithium and apomorphine served as the two US agents. The basic blocking effect and the transreinforcer blocking effect were demonstrated whether lithium (Experiment 1) or apomorphine (Experiment 2) served as the Phase 2 US agent. The results provide evidence that the US mechanisms responsible for lithium-based flavor avoidance and apomorphine-based flavor avoidance are similar.

NEGATIVE AFFECT AND HEROIN-ASSOCIATED STIMULI: EFFECTS ON WITHDRAWAL AND CRAVING. Jack Edward Sherman, University of Wisconsin, and Michael Zinser and Steven Sideroff, University of California, Los Angeles, CA.

The relative contribution of negative affect and heroin-associated stimuli on withdrawal symptoms and drug craving were studied in 35 male, drug-free, heroin addicts. All subjects were exposed to three classes of stimuli: heroin-related (H), anxiety-provoking (A), and boring (B). In response to H, subjects reported significantly increased drug craving, withdrawal sickness and negative affect (e.g., decreased pleasure, increased anxiety and arousal). Although A elicited comparable mood changes to that of H, neither withdrawal nor craving were elicited; B did not elicit them either. Increases in craving were unaccompanied by increases in withdrawal sickness for nearly half of the subjects.

NICOTINE AND STRESS: IS CIGARETTE SMOKING REALLY RELAXING? David E. Morse. University of Connecticut Health Center, Farmington, CT.

Habitual smokers frequently report that when they are stressed smoking helps them to relax. One explanation is that smoking (nicotine administration) may decrease sympathetic activity associated with stress. Rabbits, chronically exposed to nicotine, were used to examine the effect of nicotine on catecholamine and corticosterone responses to stress. Catecholamines and corticosterone are recognized indices of the stress response in humans and animals. Restraint stress without nicotine significantly increased plasma catecholamine and corticosterone concentrations. Nicotine administration during stress further increased catecholamine and corticosterone responses. Results suggest stress amelioration associated with smoking is *not* due to a reduction in peripheral sympathetic activity.

METHADONE DOSE PREFERENCES IN A CHOICE PARADIGM. Warren K. Bickel, Stephen T. Higgins and Maxine L. Stitzer. Johns Hopkins University School of Medicine, Baltimore, MD.

The present study describes a methodology for conducting abuse liability studies in opiate dependent subjects. A