been studied across imagined drinking situations, but researchers have not systematically investigated this process in in vivo situations. In this study, the Expectancy/Context Questionnaire (ECQ) was utilized in three imagined and two in vivo situations. Expectancies as measured by the ECQ were found to be sensitive to contextual variation as well as drinking behavior.

ETHANOL AS A FORAGEABLE COMMODITY: EFFECTS OF SEARCH COST. Anthony Liguori. Boston University.

Four rats searched on an FR schedule for any of six available commodity opportunities (low- or high-procurement-cost food, water, or ethanol), each of which could be subsequently obtained by responding 5 times (low-cost) or 50 times (high-cost) on the commodity's associated lever. As search cost rose from 5 to 400, high-cost acceptance rates rose for all three commodities; low-cost acceptance rates rose slightly from their previous high levels. Ethanol consumption inceased slightly while food and water consumption decreased. Results show that rats behave toward ethanol, water, and food as they do toward food alone when search costs increase.

RELATIONSHIP OF ANXIETY, DEPRESSION, AND DRUG USE TO HIV RISK BEHAVIOR. Robert M. Malow,*† Tanya M. Bannister,* Sheila A. Corrigan,*† A. Mark Calkins* and Jose M. Pena.*† *Veterans Affairs Medical Center, †Department of Psychiatry and Neurology, Tulane University of Medicine, New Orleans, LA.

This study extends prior investigations of risk behaviors for acquiring and transmitting HIV among treatment-seeking drug abusers by analyzing the relationship of HIV risk behavior to drug use and psychopathology variables. The Beck Depression Inventory, State-Trait Anxiety Inventory and measures of AIDS-related knowledge were administered to 112 inpatient admissions to a VA Drug Dependence Treatment Unit. Subjects with high anxiety and depression scores reported engaging in significantly more HIV drug risk behaviors than other subjects. Polydrug users also reported being at greater risk than subjects solely abusing cocaine. However, groups did not differ in HIV sexual risk behavior. The clinical implications of these findings are discussed.

PSYCHOPATHOLOGY DIFFERENCES BETWEEN COCAINE AND SPEEDBALL USERS. Robert M. Malow, Jeffrey A. West, Sheila A. Corrigan, Jose M. Pena and W. Criss Lott. VA Medical Center, New Orleans; Department of Psychiatry and Neurology, Tulane University Medical Center.

Affective distress and related psychopathology symptoms associated with coinjected cocaine and opioid ("speedball") use are incompletely explored, and the extent to which they diverge from problems shown by cocaine abusers who do not prefer opioids is unknown. This investigation compared groups of speedball and nonspeedball cocaine users on global measures of depression and anxiety and modal groupings of personality characteristics measured by the MMPI. Compared to men who use cocaine without opioids, compulsive speedball users evidenced significantly greater problems with depression, trait anxiety, and related symptomatology, and were more uniformly characterized by modal profiles reflecting severe psychopathology and maladjustment. These results agree with descriptions of severe pathology associated with speedball use.

CAFFEINE AND TIME OF DAY EFFECTS ON HUMAN PHYSIOLOGICAL TREMOR. L. Stephen Miller, Charles P. Stroble, James D. Griffin, Elizabeth A. Jenkins, Suzanne Hasseltine, Thomas W. Lombardo and Stephen C. Fowler. University of Mississippi, University, MS.

We tested the effects of consumptive levels of caffeine and time of day on physiological tremor of male university students. We found that caffeine significantly affected physiological tremor at moderate doses (3 mg caffeine/kg body wt.) but not at low doses (1 mg caffeine/kg body wt.). Physiological tremor was not affected by time of day or the interaction of caffeine and time of day. Our findings suggest that the ingestion of moderate levels of caffeine results in measurable changes in physiological functioning, and that physiological tremor may be a sensitive measure of physiological change due to drug effects. However, our results suggest that it may not reliably detect time of day changes in functioning.

FAMILY HISTORY AND ALCOHOL PROBLEMS IN IMPULSIVE AND NONIMPULSIVE INDIVIDUALS. Carolyn L. Morse and Vincent J. Adesso. The University of Wisconsin-Milwaukee, Milwaukee, WI.

Impulsive and nonimpulsive young, male, heavy drinkers were compared in their report of problems resulting from their drinking, their family history of alcohol problems, and personality variables. Impulsives had a higher score on the alcohol symptom checklist and a marginally higher global score reflecting family history of alcohol problems. The family history and symptom checklist scores were highly correlated. Of the personality variables, a measure of adult conduct problems was found to be the best predictor of both family history and alcohol symptoms. Individual symptoms and symptom categories as they relate to impulsivity and family history were also studied.

SCRATCHING INDUCED BY DOPAMINE D-2 AGONISTS IN SQUIRREL MONKEYS. Richardo Pellon and Jonathan L. Katz. NIDA Addiction Research Center, Baltimore, MD.

Four squirrel monkeys were tested under a cumulative dosing procedure to evaluate the ability of dopamine D-2 receptor agonists to produce scratching. Quinpirole and propylnorapomorphine produced dose-related increases in scratching; sensitivity to these drugs increased after initial observations. Propylnorapomorphine was always more potent than quinpirole in producing scratching. Dopamine D-1 receptor agonists, SKF 38393 and SKF 75760, as well as morphine, cocaine and *d*-amphetamine failed to produce dose-dependent increases in persistent and excessive scratching behavior. Scratching in squirrel monkeys appears to differentiate the behavioral effects produced by dopamine D-1 and D-2 receptor agonists, and may result in an important behavioral tool to investigate further compounds with different affinities for dopamine D-1 and D-2 receptors.

CAFFEINE EFFECTS ON ALERTNESS AND PERFORMANCE FOLLOWING SLEEP DEPRIVATION. D. M. Penetar, D. R. Thorne, U. D. McCann, J. B. Fertig, A. S. Schelling, M. L. Thomas, H. C. Sing and G. L. Belenky. Walter Reed Army Institute of Research, Washington, DC.

Caffeine (150, 300 or 600 mg/70 kg) or placebo was administered orally to 50 male volunteers following 49 hours of sleep