least 100-fold for naloxone; there was no difference for nalorphine, morphine, U 50,488, or pentobarbital, suggesting supersensitivity in non-dependent squirrel monkeys results, in part, from opioid antagonist actions.

AMNESTIC PROPERTIES OF THE BENZODIAZEPINES. William T. Kirk and Roland R. Griffiths. Dept. of Psychiatry, Johns Hopkins University.

The cognitive, subjective and psychomotor effects of two benzodiazepines and pentobarbital were examined, at doses that were selected to produce comparable levels of sedation, in healthy, male volunteers recruited from the community at large. Results demonstrated a time-related impairment in psychomotor performance (eye-hand coordination and balance) following administration of active compounds which were reflected in the subjective ratings of drug effects. Additional performance deficits in picture recognition and number recall were observed suggesting that these compounds have amnestic as well as sedative properties.

PHYSOSTIGMINE-INDUCED ANALGESIA IN MATURE AND SENESCENT RATS. Janet S. Knisely. Dept. of Pharmacology and Toxicology, Medical College of Virginia; and Robert J. Hamm. Virginia Commonwealth University.

To investigate the role of the cholinergic system in the production of analgesia during aging, rats (3-month, 17-month and 25-month) were injected with physostigmine (0.015625, 0.0625 or 0.25 mg/kg). Before drug administration, baseline pain sensitivity was assessed using three tail-flick trials. Following the injections, tail-flick latencies were measured at 5 minute intervals for 30 minutes and at 45, 60, 75 and 90 minutes. Post-drug tail-flick latencies were converted to percent maximum possible effect (% MPE) and were analyzed by a 3(Age) × 4(Dose) × 11(Time) analysis of variance. The analysis revealed no age-related change in physostigmine-induced analgesia however, there were main effects of Dose and Time and all interactions were significant ($p<0.001$) except Age × Dose. Thus, increasing the dose of physostigmine enhanced analgesia and the analgesia displayed, varied across time. A lack of age-related differences in analgesia produced by physostigmine is in agreement with other research which has demonstrated that stimulation of the cholinergic system produces an equivalent or increased pharmacological responsivity in aged animals.

AUTONOMIC HYPER-REACTIVITY, SENSITIVITY TO ALCOHOL AND GENETIC RISK FOR ALCOHOLISM. Peter R. Finn and Robert O. Pihl. McGill University.

A genetic predisposition in the etiology of alcoholism in some individuals is indicated from adoption studies of the sons of alcoholics. A high risk paradigm was used to compare the degree of autonomic nervous system (ANS) reactivity to signalled shock and the effect of alcohol on ANS reactivity in 3 groups (high, moderate and low risk) of 12 non-alcoholic males divided according to the extent of family history for alcoholism. The high risk subjects were significantly more reactive to the shock procedure on cardiovascular and electrodermal measures when sober, and alcohol significantly reduced their reactivity more so than the other two groups.

The methodology and results of this study have relevance for (1) the etiology of alcoholism in high risk males, (2) high risk paradigms in alcohol research, (3) tension reduction models of alcohol consumption.

VASOPRESSIN ENHANCES MEMORY FOR PROSE. Bill E. Beckwith, Thomas V. Petros, Paula Bergloff and Robin Staebler. University of North Dakota.

The effects of treatment with DDAVP on memory in healthy and adult human males was investigated. Each subject received 60 micrograms of DDAVP intranasally and then heard six narrative passages of prose presented at differing rates of presentation. Proportion of recall was measured at high, medium, and low levels of importance of idea units within the passage. Treatment with DDAVP facilitated recall for both high and medium importance idea units. Treatment did not interact with rate of presentation. These findings provide further evidence for the modest facilitation provided by acute administration of DDAVP on human memory.

THE THEORETICAL MODEL: AROUSAL, COERCION AND THERAPY AS PREVENTION METHODS. Arthur P. Sullivan. New York City Board of Education, New York, NY; Robert Guglielmo. NYC Family Court Mental Health Services, New York, NY; and Roxane Polak. Hofstra University.

Substance use is taxonomized into psychologically adaptive use (experimental and recreational) and maladaptive (abuse and addictive). Descriptors which differentiate persons who use substances abusively or addictively from those who do not and seem characteristically resistant are examined. Etiological considerations are used to construct three methods for preventing, in the sense of lessening the likelihood or intensity of, abuse and addiction. *Coercive* methods are proposed for the immature and unintelligent, consisting primarily in using group enforcement procedures to enforce drug-free norms imposed on the group from without. *Arousal* methods are suggested for those whose distress from which relief is sought in substance use is primarily environmental. *Therapy* or counseling procedures are recommended for those suffering imperceptible distress of which they do not become aware until the drug experience brings immediate but brief respite. Distress caused by inadequate self esteem is explored in terms of origin, course of treatment, and prognosis.

PEER-GROUP COUNSELING TO PREVENT SUBSTANCE ABUSE. Barbara A. Taylor. Lord Stirling School, Glen Ridge, NJ.

The New York Model for drug prevention is a multiphasic, multi-level program which includes primary and junior high school classroom education programs, with peer-group counseling for selected students. Peer-group counseling, led by trained personnel, can be an effective tool in preventing substance abuse in students who have personal, school, social or family difficulties. Initially, these students often feel vulnerable and inadequate in facing difficult situations so they often avoid any uncomfortable experiences (classwork, competition). They use maladaptive