PRENATAL OPIATE RECEPTOR BLOCKADE: CHANGES IN POSTNATAL BEHAVIOR AND DEVELOPMENT. Nancy A. Shepanek, Robert F. Smith, Linda A. Anderson, Catherine A. Medici and Shannon Dodson. George Mason University, Fairfax, VA.

We conducted a broad behavioral and developmental screen following prenatal exposure to naloxone (1 mg, 5 mg, or 10 mg/kg/day). Results indicated increases in adult body weights, (5 and 10 mg) suppression of open field activity (1 mg), facilitation of performance on DRL (10 mg), and increased sensitivity to pain (10 mg). The results of this study demonstrate that prenatal exposure to low and high doses of naloxone have different effects on postnatal development and behavior, and some of these changes persist well into adulthood. Further research is needed to determine the mechanisms underlying these changes.

PHYSICAL AND NEUROBEHAVIORAL DEVELOPMENT OF RHESUS NEONATES EXPOSED PRENATALLY TO COCAINE. Jane E. Ellis, Leonard L. Howell and Larry D. Byrd. Emory University, Atlanta, GA.

Clinical reports suggest that human neonates exposed in utero to cocaine exhibit atypical physical features and behaviors. The present study assessed effects of chronic prenatal cocaine exposure on physical and neurobehavioral development in rhesus monkeys under controlled conditions. Beginning 24 days postconception and continuing throughout gestation, females received via osmotic minipumps a specific concentration of cocaine. At parturition, infants' physical and behavioral states were assessed using a modified Apgar scale. Physical growth measures were recorded at birth and periodically thereafter. Modified Brazelton/Bayley scales characterized neurobehavioral capability. Physical and neurobehavioral deficiencies attributed to human neonates exposed prenatally to cocaine were not observed in cocaine-exposed rhesus neonates. (Supported by U.S. Public Health Service grants DA-01161, DA-06264 and RR-00165.)

CHARACTERIZING PRENATAL GROWTH AND DEVELOPMENT IN RHESUS MONKEYS USING ULTRASONOGRAPHY. Jane E. Ellis and Larry D. Byrd. Emory University, Atlanta, GA.

Ultrasound is used diagnostically to study development and visualize structural features in utero. Few data are available on development in rhesus monkeys throughout gestation; normative information can be important in evaluating effects of pharmacological agents on the fetus. In the present study, ultrasonography was performed on 16 time-bred rhesus monkeys at 26-day intervals beginning on gestational day 24. Physical growth measurements were taken using internal calipers and calculated via the ultrasound unit. Means ($\pm$SEM) were derived at increasing gestational age to provide fetal growth profiles. Internal organs were visualized to identify gross abnormalities. Ultrasonography provides information about development and effects of pharmacological agents on the developing fetus. (Supported by U.S. Public Health Service grants DA-01161, DA-06264 and RR-00165.)

OPIOID RECEPTOR SUBTYPES MEDIATE OPPOSING BEHAVIORS THROUGH THEIR DOPAMINE INTERACTION. Karen M. Ward and Priscilla Kehoe. Trinity College, Hartford, CT.

Neonatal opioid systems mediate affective responses such as isolation vocalizations, analgesia, and reward. Opioid receptor subsystems produce differential effects. Morphine, a μ agonist, decreases calls and activity, promotes positive associations, and increases dopamine release. Conversely, the κ agonist, U50,488H, increases vocalizations and activity, does not support preference behavior, and decreases dopamine. To assess behavioral differences and the opioid-dopamine interaction, apomorphine, a dopamine agonist, was administered; a dose (0.5 mg/kg) which had no effect itself blocked the U50,488H increase in vocalizations. These results suggest that apomorphine-induced dopamine release may counteract the negative affective response of κ stimulation.

THE INFLUENCE OF BUPRENORPHINE ON THE EEG OF HEROIN ADDICTS. Bonnie S. Koeppl,* Peter M. Koeppl† and Ronald I. Herning.‡ *National Institute on Drug Abuse Addiction Research Center, Baltimore, MD, †Hahnemann University, Philadelphia, PA, and ‡National Institute on Drug Abuse Addiction Research Center, Baltimore, MD.

The utility of buprenorphine, a partial opioid agonist employed as a chemotherapeutic agent in the treatment of opioid dependency, was assessed through the evaluation of the EEGs of heroin addicts. Two areas of interest were studied: a) buprenorphine as a withdrawal agent, and b) the effects of withdrawal from buprenorphine itself. Frequency and power measures were obtained for the δ, θ, α, and β EEG bands. Twelve opioid dependent males participated in a 54-day buprenorphine maintenance and withdrawal protocol. Findings included significant shifts in θ wave frequency and α, β, and θ wave power between maintenance and withdrawal.

DEPRESSION SECONDARY TO DECONGESTANT MEDICATION. Benzion Twerski. Elizabeth General Medical Center, Elizabeth, NJ.

Five cases are reported in which depressive symptoms could be attributed to phenylpropanolamine. This drug is widely available as a prescription and over-the-counter cold remedy and diet aid. It is said to be the fifth most popular medication. There are hundreds of reports of adverse reactions, both medical and psychiatric. Depression was only recently described among these. Although there are no empirical studies on this, it is suggested that clinicians include in assessment of medical history such items as allergies, chronic sinus conditions, and use of prescription and over-the-counter medication.

DOES UNRESTRICTED BENZODIAZEPINE AVAILABILITY LEAD TO WIDESPREAD USE? Miren Busto,* I. Ruiz,† A. Gacitua,* C. Roco,† F. Espinaoza* and U. Busto.‡ *CORSAPS, Santiago, Chile, †University of Chile, and ‡Addiction Research Foundation, University of Toronto, Toronto, Canada.

We tested the relation between unrestricted benzodiazepine availability and prevalence of use and long-term use in Santi-