

31 PREPARING MOTHERS AND THEIR YOUNG CHILDREN FOR HEART CATHETERIZATION. Lois Campbell, Stanley E. Kirkpatrick.

The purpose of the study was to determine if mothers can learn to reduce their anxiety and function as therapeutic allies in the hospital to reduce the stress experienced by their preschool children undergoing cardiac catheterization. It was designed to compare, singly and in combination, three models of patient preparation: 1) directed attention and information about hospitalization and catheterization, 2) supportive counseling, and 3) stress management training. Fifty mothers and their children were randomly assigned to 1 of 5 experimental groups. Group E served as the control group and received the current routine preparation for catheterization. Group D received the information model only. Group C received both the information and counseling models. Group B received both the information and stress management models. Group A received all three models. Assessment of treatment effects for both mothers and children included self-report measures completed by the mothers, behavioral observations recorded at key stress points by blind raters and physiologic responses recorded by a computerized biofeedback system. Results indicated significant treatment effects for all intervention models. The stress management model had the greatest effect as measured by positive changes in the mothers' self-reported anxiety scores, electromyographic readings and electrodermal responses. Both children and their mothers who received the stress management model demonstrated more adaptive behavior in the hospital and after discharge than those who did not. The study would suggest that although information and counseling reduce stress and anxiety related to hospitalization, stress management training can provide additional benefits.

Pediatric Cardiology Medical Group, Inc., Children's Hospital, San Diego

32 REFLEX MODIFICATION BY ACOUSTIC AND TACTILE SIGNALS IN NEONATES. Michelle E. Cohen, Howard S. Hoffman, and Endla K. Anday (Spon. by Maria Delivoria-Papadopoulos). Bryn Mawr College, Dept. of Psychology, and University of Pennsylvania School of Medicine, Dept. of Pediatrics, Phila., PA.

In recent efforts directed to the analysis of sensory processing in the newborn, neonates and adults were exposed to various reflex modification procedures. Previous work with adults had indicated that when a tone precedes a reflex eliciting stimulus by an appropriate interval the amplitude of the reflex is inhibited. If the tone is presented simultaneously with the reflex-eliciting event, response to amplitude is augmented. The eye-blink eliciting device consisted of a miniature solenoid with a teflon striker which could deliver a controlled tap; a miniature photo reflective densitometer attached to a TDH 39 earphone assessed the eye blinks. For each experiment, 15 healthy term appropriate-for-gestational-age infants were studied between 13 to 90 hrs of age during quiet sleep; 15 adults were studied for comparison. Four experiments employing identical reflex modification procedures on neonates and adults suggest a developmental difference in processing sensory stimuli. Neonates failed to exhibit reflex inhibition by either prior tactile or acoustic stimuli (either tone pulses or sustained tones). Adults exhibited robust reflex inhibition to these same stimuli. Neonates, however, exhibited reflex augmentation when mild tones (70 dB) were presented simultaneously with a tap, while for adults tones of at least 90 dB were necessary to obtain reliable reflex augmentation.

The present findings in conjunction with those of others suggest that neonates fail to exhibit inhibition because the neural system responsible for this effect are not fully developed at birth.

33 CONGENITAL CYTOMEGALOVIRUS (CMV) INFECTION AND INTELLECTUAL DEVELOPMENT, T. J. Conboy, R. F. Pass, S. Stagno, W. J. Britt, C. A. Alford, C. E. McFarland & T. J. Boll, University of Alabama School of Medicine, Dept. of Pediatrics, Birmingham, Alabama

Congenital CMV (C-CMV) infection occurs in around 1% of births and can result in a variety of CNS problems. Although symptomatic newborns usually have problems, 90% of C-CMV infected newborns are asymptomatic (ASX). Around 10% of them have hearing loss, but whether mental retardation (MR) or learning disability (LD) occur in the ASX group is not clear. We studied 18 normal hearing, school aged children with ASX C-CMV (15 black, 10 male), and 18 controls matched for age, sex, race, grade and socioeconomic status (predominantly middle class) as determined by the parents' education and occupation. Instruments included Wechsler Intelligence Scale for Children-Revised (WISC-R), the Wide Range Achievement Test (WRAT) and the Kaufman Assessment Battery for Children (K-ABC). LD was defined as FSIQ (WISC-R) or MPC (K-ABC) \geq 90 and a score on any WRAT subtests or K-ABC Achievement Scale two or more years below age-appropriate. Mean IQ's (WISC-R), MPC (K-ABC), WRAT scores and frequency of LD were:

	FSIQ	VIQ	PIQ	MPC	SPELL	ARITH	READ	#LD
ASX	100	97	103	98	108	103	106	2
Control	100	98	101	97	105	101	109	1

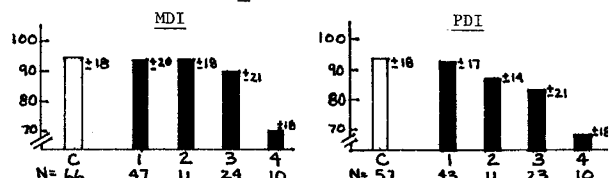
Multivariate analysis revealed no differences between groups on any measures. These findings, together with the fact that all mean scores are very close to national norms suggest that the 25,000 children born in the US each year with ASX-CMV and normal hearing are unlikely to have mental impairment.

34 IS DIABETES A PRECIPITANT OF EATING PATHOLOGY? Den Daneman, Gary M. Rodin, Liane E. Johnson, & Paul E. Garfinkel. (Spon. by Robert M. Ehrlich), Univ. of Toronto, Hosp. for Sick Children, Dept. of Pediatrics, Toronto

Recent case reports have led to speculation that eating disorders (anorexia nervosa(AN), bulimia(B), & their partial syndromes) may occur with increased frequency in association with diabetes(IDDM) & that these disorders may contribute to poor glycemic control. We report preliminary results of a systematic study of adolescent females with IDDM, since this is the age group of girls at greatest risk for eating pathology. 58 girls (age 17.6 yr, range 15-22) with IDDM of >1 yr duration (8.4 yr) underwent a battery of tests: a) Eating Disorders Inventory (EDI b) Eating Attitudes Test (EAT-26); & c) HbA1c to assess glycemic control. 27 (46.6%) subjects scored above the cut-off points of the EAT-26 & EDI frequently associated with eating pathology. These individuals then underwent a psychiatric interview: a diagnosis of AN was made in 4 subjects (6.9%); partial syndrome of B in 2 (3.4%); B in 4, & partial syndrome of B in 2. There was a strong correlation between HbA1c & bulimic symptoms, in those with high scores on the bulimia subscale of the EDI ($r=0.81, p<0.005$) this correlation was even stronger in those with clinical evidence of B ($r=0.93, p<0.001$). Clinically significant eating pathology was detected in 20% of this group of adolescent females with IDDM; this represents a 2-fold increase in eating disorder & 6-7-fold increase in AN compared to nondiabetic populations. The presence of eating pathology, particularly B, is associated with poor metabolic control. Thus IDDM may be a major risk factor for the development of eating disorders, which in turn impairs negatively upon metabolic control & physical well-being.

35 PATTERNS OF DEVELOPMENTAL FUNCTIONING IN EARLY CHILDHOOD FOLLOWING CEREBRAL INTRAVENTRICULAR HEMORRHAGE (IVH). Ruth Deddish, Kathleen Malee, William Burns, (Spon. by E.S. Ogata). Northwestern Univ. Med. School, Depts of Peds, OB/Gyn, Psych, Chicago, IL

Follow-up data of infants with IVH suggests a positive relationship between grade of IVH and severity of developmental handicap. Previous studies have focused on the number of hand capped children rather than describing the pattern of cognitive and motor functioning. We examined 92 infants with IVH and 66 non-IVH controls using the Bayley Scales of Infant Development at an average age of 15.2 \pm 9.5 months. Results follow:



MDI and PDI scores demonstrate a downward trend with increasing severity of IVH. Infants with Grade 3 IVH have significantly lower PDI scores than control infants ($t<.05$) but equivalent MDI scores. Grade 4 hemorrhage significantly lowers both MDI and PDI scores ($t<.001$). Our data suggest there is greater impairment in motor functioning than in mental functioning following IVH.

36 VIOLENCE AND SCHOOL FAILURE. Deborah J. Denno (Sponsored by Dr Roy D. Schmiekel).

Recent evidence in the pediatric and psychological literature suggests a strong link between poor academic performance and delinquency. The present study examined biological, psychological and sociological correlates of achievement and delinquency collected prospectively from birth to age 18 on a sample of 987 black youths whose mothers participated in the Collaborative Perinatal Project (CPP) in Philadelphia. Multivariate analyses showed that violent and persistent offenders of both sexes scored significantly lower on high school achievement test scores. However, no significant differences were found among offender groups in intelligence scores at early ages or enrollment in programs for the mentally retarded during adolescence. Violent offenders were disproportionately enrolled in programs for the remedial disciplined, however. Analyses of different biosocial variables across ages suggested that socioeconomic factors were the strongest predictors of delinquency for both sexes. It appears that low achievement test scores may be related to behavioral disorders which occur during adolescence and impede learning ability. In terms of policy, school programs geared toward decreasing delinquency should concentrate on disorders associated with behavior and hyperactivity, while encouraging the normal intellectual capacity of most problem adolescents.