559 PHARYNGEAL COLONIZATION WITH HAEMOPHILUS INFLUENZAE TYPE B (HIB) IN HOUSEHOLD CONTACTS OF COLONIZED CHILDREN ENROLLED IN DAY CARE (DC) FACILITIES ATTENDED BY A CHILD WITH INVASIVE HIB DISEASE. Karl I. Li, Barry Dashefsky, Ellen R. Wald. University of Pittsburgh School of Medicine, Pittsburgh, PA

Strategies for management of children attending DC facilities after occurrence of a case of HIB disease are controversial. The success of chemoprophylaxis has been variable. Failure of rifampin prophylaxis as currently recommended, may result from usage limited to direct contacts of the index case. This prospective study was designed to ascertain the extent of colonization in household contacts of colonized children attending DC facilities with an index case of HIB disease. Outer membrane protein (OMP) analysis was used to determine similarity between strains isolated from contacts and index cases. In DC children from 6 facilities, 15% were colonized with identical subtypes of HIB. In addition, 7% of children in the larger DC centers carried non-identical subtypes. Colonization with identical subtypes in children from DC homes was greater than in the larger DC centers (91% vs 8%, $p<0.00001$). Within families of children with identical OMP subtypes, 25% (17% of parents and 44% of siblings) were colonized despite lack of direct contact with the index case. This colonization rate was comparable to that of household contacts of index cases. Of household contacts of DC children with non-identical subtypes of HIB, 13% were colonized. We conclude that colonized household contacts are a potential source of HIB infection for susceptible DC children and may also warrant prophylaxis.

560 VIRAL INFECTIONS AND EXACERBATION OF NEPHROTIC SYNDROME (NS) IN CHILDHOOD. Noni E. MacDonald, Peter N. McLaine, Edmond Rossier, Norman Wolfish. University of Ottawa, Children's Hospital of Eastern Ontario, Department of Pediatrics, Ottawa, Canada. Spon. by Robert G. Peterson

Previous retrospective data have suggested that respiratory virus infections (URI) are associated with exacerbation of NS in childhood. Data interpretation is difficult since viral infections are common in childhood. This prospective 2 winter study of 32 children with NS (mean age 11.8 years, range 1.1 to 20.1 years; mean NS 4 years, range 1 month to 13 years; stable NS (no relapse previous year) 41%, unstable NS 50%) included pre and post season viral serologies, biweekly nose and throat viral cultures, daily urinalysis, biweekly telephone followup for URI and renal complaints, clinical assessments as indicated. Additional studies were done with relapses. 61 URI occurred with agent identification in 33 (51.6%) (RSV 14, influenza 5, parainfluenza 5, VZV 4, adenovirus 3, mycoplasma 1, chlamydia 1). 41 exacerbations occurred, 71% with URI, 29% no URI in preceeding 10 days ($p<0.01$). Full relapse occurred in 29 of 41 exacerbations; 69% with URI, 31% without URI ($p<0.01$). Unstable NS patients had more exacerbations than stable NS (79% vs 31%; $p<0.001$) and more URI (2.32/child vs 1.46). Exacerbations occurred in patients with minimal change 40%, mesangioproliferative 60%, and focal glomerulosclerosis lesions 64%. Exacerbations and relapses of childhood NS are temporally related to URI. Multiple viral agents were associated with exacerbations suggesting that nonspecific host response to infection, not viral antigen or antibody response, may be the link to NS.

† **561** DIETARY CALCIUM AND BLOOD LEAD IN 3513 ONE TO ELEVEN YEAR OLD BLACK AND WHITE CHILDREN: THE NHANES II STUDY. KR Mahaffey, P Gartside, CJ Glueck. NIOSH, GCRC, LRC, U.Cincinnati,Ohio.

Whether, and to what degree, dietary calcium is inversely associated with blood lead levels was examined in 3,513 one to eleven year old black and white children from the NHANES II survey.The data analysis took into account the sampling weights and the stratified design of the NHANES II survey. Blood lead levels were significantly higher in black than in white children, while in contrast, white children had significantly higher dietary calcium intake. In a multiple regression analysis, race (black) and sex (male) were positively associated with blood lead ($p<0.0001$ for both). The lower the family income and the more urban the family residence, the higher blood levels were ($p<.0001$, $<.02$). Height was inversely associated with blood lead ($p<0.0001$); dietary calcium intake was significantly and inversely associated with blood lead ($p=0.025$). Given the relative imprecision of the 24-hour dietary recall as a tool to quantitate calcium intake, and the relative precision of the other explanatory variables for blood lead including race, sex, poverty class, urban class and height, the finding that dietary calcium was significantly inversely associated with blood lead levels was all the more marked. The most direct strategy for prevention of childhood lead poisoning involves primary prevention to reduce exposure. However, increasing calcium intake might have value in secondary prevention of relative and absolute lead intoxication, particularly in low income black and white urban dwellers.

562 BLOOD PRESSURE AND SODIUM SENSITIVITY IN CHILDREN: THE MUSCATINE STUDY. Larry T. Mahoney, Julie Lee, William R. Clarke, Ronald M. Lauer. Departments of Pediatrics and Preventive Medicine, University of Iowa, Iowa City, Iowa.

In contrast to normotensive adults, borderline hypertensives do not demonstrate forearm vasodilation with a high sodium diet and show augmented neurogenic vasoconstrictor responses during baroreflex stimulation. Children from the lower (LoQ) and upper (HiQ) quintiles of blood pressure (BP) distribution were examined. Six adolescent males from each group were studied on each of three diets: ad lib, low sodium (10 mEq) and high sodium (310 mEq). Urinary sodium, aldosterone and kallikrein and plasma renin confirmed dietary compliance and sodium balance. Weight, BP and heart rate (HR) did not change. During high sodium, forearm vascular resistance (FVR) decreased from 16.2 to 10.4 U ($p<0.05$) in LoQ. However, HiQ did not show a decrease in FVR, 16.3 vs 15.6 U ($p>0.05$). Both groups responded similarly to cardiopulmonary baroreflex inhibition induced by lower body negative pressure with significantly ($p<0.01$) increased HR, decreased forearm blood flow and increased FVR. HR response was augmented during low sodium ($p<0.001$). Positive and negative pressure applied to the neck affected the high pressure baroreflex control of HR and BP similarly in both groups.

Children from HiQ appear to be unable to vasodilate in response to high sodium intake, but do not have altered baroreflex control. This abnormal vascular response to high sodium may be an important factor in the subsequent development of sustained hypertension.

563 EFFECT OF RACE ON MORTALITY FOR INFANTS WEIGHING < 2000 GRAMS. Michael H. Malloy and Karen Elder, (Spon. by D. Rassin) Department of Pediatrics and Office of Academic Computing, University of Texas Medical Branch (UTMB) Galveston, Texas.

We have begun to analyze several factors associated with mortality in the total population of livebirths to see how these risk factors affect mortality in the selected population of the Neonatal Intensive Care Unit (NICU). Of the 450 admissions to the UTMB-NICU in 1983, 210 infants weighed less than 2000 g and account for all infants <2000 g born at UTMB. The number of admissions, the number of small for gestational age infants (SGA) and the number of deaths by birthweight and race were as follows:

Weight	White			Black			Hispanic		
(g)	n	SGA	DEAD	n	SGA	DEAD	n	SGA	DEAD
<1000	11	1	7	19	6	8	3	1	0
1000-1500	29	5	5	24	7	1	11	2	2
1501-1999	49	11	1	47	8	0	17	4	0
Totals	89	17	13	90	21	9	31	7	2

Although race was related to birthweight ($p<0.005$) and birthweight to mortality ($p<0.0001$), race nor size were independently related to mortality at a statistically significant level. Using logistic regression analysis the overall risk of mortality (ROM) for black infants compared to whites was determined to be 0.793 ($p<0.5$). Adjusting the logistic equation for birthweight and size, the ROM for black infants decreased to 0.392 ($p<0.11$). Although, these data fail to support the contention at a statistically significant level that 'gram for gram black infants do better than whites', the trend is apparent and requires further study.

† **564** LOW FAT AND LOW CHOLESTEROL DIET IN CHILDREN FROM HIGH RISK FAMILIES WITH HYPERLIPIDEMIA Sudhir Mehta, I. Bruce Gordon, L. Graber, T. Swales, S. White, T. Riemenschneider, Case Western Reserve University, Cleveland Metropolitan General Hospital, Dept. of Pediatrics, Cleveland, Ohio.

This study evaluated the effect of a diet with or without pharmacological intervention on serum cholesterol in a group of children with a positive family history of hyperlipidemia or an coronary event before the age of 50 years in first degree relatives. A total of 91 studied children were divided into 5 groups. In Gr.I, both the parents had normal cholesterol levels (N=12). Twenty eight children had only the father (Gr.II,N=17) or the mother (Gr.III,N=11) with high serum cholesterol. In 51, father had myocardial infarction at a young age (50 yrs.) and mother had either normal (Gr.IV,N=40) or high serum cholesterol (Gr.V,N=11). During an average follow up of 14 months, 8 of the 12 children with abnormal cholesterol levels (mg%) in Gr.I showed slight but a non-significant decrease to dietary therapy (193 ± 33 to 183 ± 31). The results of dietary therapy alone on cholesterol levels were poor during an average period of 2 yrs. in all the other groups. Furthermore, in Gr.V, 5 children with initially abnormal and 4 with normal cholesterol levels demonstrated a significant increase from 222 ± 60 to 248 ± 63 ($p<0.04$) and 136 ± 4.7 to 182 ± 17.7 ($p<0.01$). An apparent but a non-significant effect of diet and medication was seen only in children from Gr.III and IV (312 ± 38 to 274 ± 11 and 383 ± 5 to 323 ± 65 respectively).

A dietary therapy should be tried in all. However, children with both affected parents should be treated more aggressively.