552 RIFAMPIN TREATMENT FOR GROUP A STREPTOCOCCAL CARRIERS. Robert Tanz, Stanford Shulman, Craig Willert, Martha Barthel, Ram Yogeve. Northwestern Univ. Med. School, Children's Mem. Hosp., Dept. of Pediatrics, Chicago.

Chronic pharyngeal carriage of group A streptococci (GAS) is of concern to many physicians and families. No therapy has proved effective in eliminating GAS from asymptomatic patients with positive cultures after penicillin (P). Rifampin (Rif) has excellent *in vitro* activity against GAS. Because Rif effectively terminates meningococcal and H. influenzae carriage, we evaluated Rif for GAS carriage. Otherwise healthy children 2 to 16 y.o. were defined as carriers when a throat culture 3 weeks after IM benzathine P (600,000 u <60 lbs., 1.2 million u >60 lbs.) for GAS pharyngitis showed persistence of the same GAS serotype. Thirty-seven carriers were randomly assigned to 3 groups: Group I (13 patients): no treatment; Group II (10): repeat IM benzathine P; Group III (14): repeat IM benzathine P and oral Rif (10 mg/kg BID x 8 doses). Groups were comparable in age, sex, and socio-economic status. Cultures were obtained every 3 weeks for at least 9 weeks. Group II and III patients culture-positive 3 weeks after treatment were crossed to the opposite group. At 3 weeks, 10/13 (77%) in Group I, 7/10 (70%) in Group II, but only 1/14 (7%) in Group III were GAS-positive. Group III differs from Group I ($p < 0.001$) and from Group II ($p < 0.01$). In the cross-over phase, 4/4 treated Group II patients were negative after P + Rif. Overall, P + Rif was successful in 17/18 courses, differing from Groups I and II (each $p < 0.005$). These data show oral Rifampin plus IM penicillin to be effective in eradicating chronic group A streptococcal carriage.

553 UNEXPLAINED IMMUNODEFICIENCY IN CHILDREN: A SURVEILLANCE REPORT. Pauline A. Thomas, Rebecca Reiss, Harold W. Jaffe, Thomas J. Spira.

In October 1982 the Centers for Disease Control (CDC) and the New York City Department of Health began surveillance of children with possible acquired immunodeficiency syndrome (AIDS) and serious opportunistic infection. So far, 35 children have been reported from 10 states, 5 major metropolitan areas. Mean age at onset of illness is 5 months, mean age at diagnosis 12 months. Thirteen children have at least one parent who is an intravenous drug user, and 6 have histories of blood transfusion in the first month of life. Three have a parent with AIDS. An additional 23 children have been reported to the New York City Department of Health, with onset in the first year of life of an illness that includes lymphadenopathy, pneumonitis, persistent oral thrush, elevated immunoglobulins, and decreased numbers of T-Helper cells. Five of these children have a mother or father with AIDS. A review of requests to the CDC for pentamidine isethionate revealed no requests prior to 1981 for children without underlying immunodeficiency. Since 1981, the number of requests in children without known cause for underlying immunodeficiency, who fit the case definition for AIDS in children, has increased from 2 (6%) in 1981 to 5 (21%) in the first half of 1983. Data suggest that AIDS is a new disease in children, who may contract the illness *in utero* or near the time of birth. Surveillance is ongoing.

554 AGE OF DPT IMMUNIZATION OF SPECIAL CARE NURSERY (SCN) GRADUATES. Betty Vohr, William Oh, Brown Univ., Women & Infants Hosp., Dept. of Ped. Providence, Rhode Island (RI).

DPT immunization data were collected on 103 SCN graduates in a Neonatal Follow-up Clinic to determine if DPT immunization schedules were significantly delayed relative to recommendations of the American Academy of Pediatrics (2, 4 & 6 mo.) Infants were divided into 4 groups by b.wt.(gm.): I. <1000, II. 1001 to 1500, III. 1501 to 2500, IV. >2501. Immunization schedules were left to the discretion of the primary pediatricians. As shown below, there is delay in immunization of SCN graduates. The infants weighing <1000 gm. at birth were particularly at risk with 27% partially immunized at 1 yr. of age.

Group	n	Age of Immunization (Months)			3 DPT by <1 Yr.
		DPT #1	DPT #2	DPT #3	
I.	11	6.5±6.1	8.5±6	11.3±9	73%
II.	49	3.9±1.1	6.4±3.8	9.7±6.2	82%
III.	20	2.9±0.9	5.0±1.25	6.9±1.2	95%
IV.	23	2.7±1.3	5.2±2.7	7.2±2.8	96%

Linear regression analysis demonstrated a significant inverse correlation between b.wt. and immunization age for DPT #1, $r = .319$, $p < .01$; DPT #2, $r = .205$, $p < .05$; and DPT #3, $r = .236$, $p < .05$. One infant (b.wt. 1070 gm.) had pertussis requiring hospitalization for 3 wks. at 5 mo. of age. The 1% attack rate for pertussis is considerably higher than the reported age specific pertussis attack rate of 0.08% in RI. These data identify a group of vulnerable infants at risk for pertussis and stresses maintenance of recommended immunization schedules.

555 LEGIONELLA PNEUMOPHILA SEROPOSITIVITY IN PATIENTS WITH CYSTIC FIBROSIS (CF) AND SIBLING CONTROLS (S). Elaine Wang, Charles Prober, Pauline Ewan, Kathy Bernard, University of Toronto, Toronto, and Laboratory Centre for Disease Control (LCDC), Ottawa, Ontario.

Sera collected from 49 CF and 19 S were screened after one year and two years of follow-up for antibody against *Legionella pneumophila* polyvalent antigen pools by an immunofluorescence assay. 6 CF (12%) had high antibody titers (1:256-1:2048) to multiple strains of *L. pneumophila*. Five of these patients were retested after 1 year and 4 had persistently high titers. These high and persistent titers had never been observed by LCDC among sera received from other laboratories across Canada. Five CF (10%) had low positive antibody titers (1:64-1:128). The difference in seropositivity frequency in CF (11/49) vs S(0/19) was statistically significant ($p < .01$). Seropositive CF were significantly older and had significantly poorer FVC, FEV₁, and MMEF compared with seronegative CF ($p < .01$). No seroconversions were noted when interim sera from the two year period were tested in parallel. Absorption with a pool of 3 *P. aeruginosa* strains reduced titers 2-8 fold. A pool of 3 *P. cepacia* strains or single *Pseudomonas* species (obtained from the tested patient) reduced titers 0-4 fold. In conclusion, 22% CF demonstrated *L. pneumophila* seropositivity indicating past infection. Antibodies persisted over the period of study. Although patients were frequently colonized with *P. cepacia* the mixture of *P. aeruginosa* was the most efficient in reducing titers. The high non-specific *L. pneumophila* antibody titers may in part be explained by cross-reacting antibody to *P. aeruginosa*.

556 ASSOCIATION OF RESPIRATORY VIRAL INFECTIONS WITH PULMONARY DETERIORATION IN PATIENTS WITH CYSTIC FIBROSIS (CF). Elaine Wang, Charles Prober, Barbara Manson, Mary Corey, Henry Levison. Hospital for Sick Children, University of Toronto, Ontario.

A 2 year prospective study examined the effect of respiratory viral infections on pulmonary function in 49 CF patients (mean age 15.4 yr). 19 non-CF siblings (mean age 15.3 yr) served as controls. Subjects were assessed quarterly and at the time of any respiratory illness. Each assessment included nasal washes for viral isolation and blood for respiratory virus serology. Pulmonary function tests were performed at least twice per year. Illnesses were noted significantly more often in CF patients (5.63/yr) vs siblings (2.7/yr) although the frequency of proven viral infections (1.67/yr) was identical. In the CF patients a strong correlation was observed between the number of viral infections over the study period and the % decline in FVC ($r = 0.84$, $p < 0.0001$), % decline in FEV₁ ($r = 0.84$, $p < 0.0001$) and the total duration of hospitalizations ($r = 0.83$, $p < 0.0001$). In summary the frequency of viral respiratory infections was closely associated with pulmonary deterioration in a group of 49 CF patients. Studies examining antiviral interventions in this population are warranted.

557 SERUM LIPID ABNORMALITIES AFTER SUCCESSFUL RENAL TRANSPLANTATION (TX). Gaston Zilleruelo, Michael Freundlich, Sung L. Hsia, Carolyn Abitbol, George Kyriakides, Joshua Miller and Jose Strauss. Departments of Pediatrics, Surgery and Biochemistry, University of Miami, Miami, Florida.

Hyperlipidemia (HL) with increase in triglycerides (TG) is frequently seen in uremic patients before TX. In order to assess the lipid abnormalities following renal TX, 22 patient (15 females) $\bar{x}$ age 17 years (range 5-21), with a functioning renal allograft (serum creatinine $\bar{x}$ 1.13 mg/dl, range 0.7-2.6) were studied at $\bar{x}$ 26 months (range 2-55) after renal TX. Serum total cholesterol (TC), TG, and lipoproteins VLDL, LDL and HDL were determined and compared to normal age and sex matched controls. Results ($\bar{x}$ mg/dl $\pm$ SD) are shown in table ($p < 0.01$).

	TC	TG	VLDL	LDL	HDL	HDL/LDL
TX Children	242±63†	133±84†	58±24†	115±40	69±22†	0.66±0.29
Controls	162±25	60±25	12±8	98±23	55±11	0.56±0.03

TC and TG were >95 percentile in 68% and 32% of the patients respectively. A significant correlation between HL and daily Prednisolone dose was found ($r = 0.55$; $p < 0.01$). These results demonstrate: 1) HL is commonly present following renal TX; 2) HL is mainly due to increased TC, but with a significant elevation of HDL and maintenance of normal HDL/LDL ratios. Based on the findings of normal HDL/LDL ratios, the presence of HL following successful renal TX in children may not increase their risk of premature atherosclerosis.