

Clippings

❑ Congenital CMV infection is symptomatic in about 10% of the infected neonates with clinically significant neurologic sequelae in almost half of them. In addition, neurologic defects will eventually develop in 8 to 13% of neonates with asymptomatic infection. Among women with a primary infection during pregnancy, the rate of fetal infection is approximately 40%. Although prenatal diagnosis of congenital infection is possible, no prenatal therapy is currently available. A prospective study was performed from 1995 to 2003 on pregnant women with a primary CMV infection. The therapy group comprised women whose amniotic fluid contained either CMV or CMV.DNA and who were offered intravenous CMV hyperimmune globulin at a dose of 200 U/kg of maternal weight. A prevention group, consisting of women with a recent primary infection before 21 weeks gestation or who declined amniocentesis, was offered monthly hyper-immune globulin (100 U/kg intravenously). It was seen that hyperimmune globulin therapy was associated with a significantly lower risk of congenital CMV disease compared to those who did not receive it. It was concluded that treatment of pregnant women with CMV-specific hyper-immune globulin is safe, and findings of this non randomized study suggest that it may be effective in the treatment and prevention of congenital CMV infection. *N Engl J Med* 2005; 353: 1350-1362.

❑ Little is known about the relative effectiveness of calcium supplementation from food or pills with or without vitamin D supplementation for bone mass accrual during the rapid growth period. This 2 year placebo controlled intervention trial randomly assigned

195 healthy girls at Tanner stage 1–11 aged 10–12 years, with dietary calcium intakes <900 mg per day to 1 of 4 groups: calcium (1000 mg) + vitamin D3 (200 IU), calcium (1000 mg), cheese (1000 mg calcium), and placebo. With the use of intention to treat or efficacy analysis, calcium supplementation with cheese resulted in a higher percentage change in cortical thickness of the tibia than did placebo, calcium or calcium + vitamin D treatment. Increasing calcium intake by consuming cheese appears to be more beneficial for cortical bone mass accrual than the consumption of tablets containing a similar amount of calcium. *Am J Clin Nutr* 2005; 82: 1115-1126.

❑ Of children with sore, throat, 15% to 36% have pharyngitis caused by group A beta-hemolytic streptococci (GABHS). Performance of a GABHS test prior to antibiotic prescribing is recommended for children with sore throat. This study was undertaken to measure rates of antibiotic prescribing and GABHS testing and to evaluate the association between testing and antibiotic treatment for children with sore throat. It was found that physicians prescribed antibiotics in 53% of an estimated 7.3 million annual visits for sore throat and non-recommended antibiotics to 27% of children who received an antibiotic. Physicians performed a GABHS test in 53% of visits and in 51% of visits at which an antibiotic was prescribed. Although there was a decrease in the proportion of children receiving antibiotics between 1995 and 2003, this was due to decreased prescribing of agents recommended for GABHS. It was concluded that GABHS testing was associated with a lower rate of antibiotics prescribing for children with diagnosis codes of pharyngitis,

tonsillitis and streptococcal sore throat, GABHS testing was underused. *JAMA* 2005; 294: 2315-2322.

□ Among term infants, hypoxic ischemic encephalopathy due to acute prenatal asphyxia remains an important cause of neurodevelopmental deficits in childhood. Treatment is currently limited to supportive intensive care. Reduction in brain temperature by 20°C to 50°C provide neuroprotection in newborn and adult animal models of brain ischemia. Brain cooling has a favorable effect on multiple pathways contributing to brain injury, including excitatory amino acids, the cerebral energy state, cerebral blood flow and metabolism, nitric oxide production and apoptosis. This randomized controlled trial evaluated whether whole body cooling initiated before 6 hours of age and continued for 72 hours in term infants with encephalopathy would reduce death or disability at 18 to 22 months of age as compared with infants given usual care. Whole body cooling was done to achieve a esophageal temperature of 33.50°C for 72 hours, followed by slow rewarming (hypothermia group). The incidence of serious adverse events was similar in the hypothermia and control groups. It was found that whole body hypothermia reduced the risk of death or disability in infants with moderate or severe hypoxic-ischemic encephalopathy. Cooling was well tolerated and not associated with an increase in death or serious adverse events. Also, there was no evidence of increased rates of moderate or severe disability at 18 to 22 months of age among infants treated with hypothermia. *N Engl J Med* 2005; 353: 1574-1584.

□ Growth retardation affects about a third of children younger than age 5 years in developing countries and is associated with poor development. The effects of early intervention on cognition and education on 103

stunted children was compared with 64 non stunted children who were aged 17 -18 years at the time of the study. There was no significant effects of nutritional supplementation. Compared with no intervention, stimulation resulted in higher full scale IQ scores and higher scores on the verbal subscale. Overall, stunted non-stimulated participants had significantly poorer scores than the non-stunted group on 11 of 12 cognitive and educational tests. It was concluded that stunting in early childhood is associated with cognitive and educational deficits in late adolescence, which are reduced by stimulation at a young age. *Lancet* 2005; 366: 1804-1807.

□ People with a low birth weight are at increased risk for the development of coronary heart disease. There is uncertainty about the effects of growth during early childhood, a time when rapid weight gain may predispose to later overweight. Data from a cohort of subjects in Helsinki was used to examine associations between growth in early childhood and later coronary events. The mean body size of children who had coronary events as adults was below average at birth. At two years of age the children were thin; subsequently their body - mass index (BMI) increased relative to that of other children and had reached average values by 11 years of age. Low BMI at 2 years of age and increased BMI from 2 to 11 years of age were also associated with raised fasting insulin concentrations. On average, adults who had a coronary events had been small at birth and thin at two years of age and thereafter put on weight rapidly. This pattern of growth during childhood was associated with insulin resistance in later life. The risk of coronary events was more strongly related to the tempo of childhood gain in BMI than to the BMI attained at any particular age. *N Engl J Med* 2005; 353: 1802-1809.

□ The objective of this study was to

determine the costs and effectiveness of selected child health interventions—namely, case management of pneumonia, oral rehydration therapy, supplementation or fortification of staple foods with vitamin A or zinc, provision of supplementary foods with counselling on nutrition and immunization against measles. Cost effectiveness ratios clustered in three groups with fortification with zinc or vitamin A as the most cost effective intervention and provision of supplementary food and counselling on nutrition as the least cost effective. Between these were oral rehydration therapy, case management of pneumonia, vitamin A or zinc supplementation and measles immunization. It was concluded that on the grounds of cost effectiveness, micronutrients and measles immunization should be provided routinely to all children, in addition to oral rehydration therapy and case management of pneumonia for those who are sick. *BMJ* 2005; 331(7526): 1177.

□ Total lymphocyte count has been proposed as an alternative to the percentage of CD4 + T cells to indicate when antiretroviral therapy should be started in children with HIV in resource poor settings. This meta analysis was aimed to assess thresholds of total lymphocyte counts at which antiretroviral therapy should be considered and compared monitoring of total lymphocyte count with monitoring of CD4-cell percentage. It was found that total lymphocyte count was a powerful predictor of the risk of disease progression despite a weak correlation with CD4-cell percentage. For children older than 2 years, the 12-month risk of death and AIDS

increased sharply at values less than 1500-2000 cells per μ l. Mortality risk was substantially higher at thresholds of total lymphocyte counts recommended by WHO than at corresponding thresholds of CD4 cell percentage. In this population, total lymphocyte counts was a strong predictor of short-term disease progression being only marginally less predictive than CD4 cell percentage. *Lancet* 2005; 366 (9500): 1868-1874.

□ Why do women stop breastfeeding? A random telephone survey of Israeli women aged between 25 and 42 who had children under the age of 18 was conducted. Women had an average of three children each and most breastfeed for less than three months. The most common reason given for not breastfeeding or breastfeeding less than 3 months was not enough milk'. A four factor solution was extracted from a factor analysis of the reasons that women gave for stopping breastfeeding before three months or for not initiating breastfeeding. The four factors were: personal concerns, need help, uncomfortable with breastfeeding and not confident (not enough milk). Women most frequently reported that they stopped breastfeeding because they have insufficient milk, yet the lack of any consistent sociodemographic conclusion indicates that this may be a universal way of expressing lack of confidence in breastfeeding. *Breastfeed Rev* 2005; 13: 7-13.

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