

## Clippings

❑ Antioxidants are being touted as the new wonder drugs. This study looked at the role of Nicotinamide (NA) & vitamin E (both antioxidants) in Type 1 Diabetes Mellitus. Recent onset Type 1 diabetes patients (n = 64, mean age 8.8 years) were recruited, 32 patients were randomized to NA at a dose of 25mg/kg b.w. plus vitamin E at a dose of 15 mg/kg; 32 patients acted as controls and received NA only at the same dose as above. Intensive insulin therapy was applied to both treatment groups. The authors concluded that the use of NA alone or in combination with Vit E along with intensive insulin therapy is able to preserve baseline C-peptide secretion for up to two years after diagnosis. *J Endocrinol* 2004; 150: 719.

❑ Osteogenesis imperfecta is a crippling disease associated with multiple fractures. Biphosphonate therapy seems to reduce the number of fractures in these patients. The researchers randomised 34 children, 16 boys and 18 girls with documented osteogenesis imperfecta to 2 years of daily oral olpadronate at a dose of 10 mg/m<sup>2</sup> or placebo. The 16 children treated with olpadronate experienced a 31% reduction in the relative risk of long bones fractures compared with the 18 children treated with placebo. The authors caution that the role of biphosphonates in altering functional outcome and natural course of the disease still remains to be proved by doing larger trials. *Lancet* 2004; 363: 1427.

❑ Are the blood pressure in children rising? It would seem so, at least according to the latest NHANES III survey in the US. Systolic blood pressure was 1.0 mm Hg higher and diastolic blood pressure was 2.9 mm Hg higher among young people aged from 8 to 17

years when comparing the earlier with the more recent values. This would indicate that the incidence of hypertension and its attendant complications are likely to increase. "Effective primary and secondary hypertension prevention programs aimed at children and adolescents that include prevention of overweight, weight loss, increased physical activity, and dietary modification need to be developed and implemented." *JAMA* 2004; 291: 2107.

❑ A non-surgical, physical therapy method may be highly effective for the treatment of clubfoot in children, regardless of the severity, say researchers. The functional treatment method for clubfoot consists of a sequence of gentle manipulations during the time the baby is relaxed or asleep. A series of 234 children, 350 cases of clubfoot, treated with the functional method (118 unilateral, 154 boys) were seen at birth, treated and then followed for an average of 14 years (range, 11-18). According to the researcher, the functional method produced good results in 77% of cases, whereas 23% of cases required surgery. They suggested that 3 months of treatment were sufficient for defining those feet for which the functional method would be efficient. For feet not showing improvement by 6 months, the prognosis will likely remain restrictive even after surgery. *J Pediatr Orthop B* 2004; 13: 189.

❑ What dose of epinephrine is the best during in-hospital cardiac arrest? High-dose rescue epinephrine does not appear to benefit children according to a prospective, double-blind trial conducted in Brazil. Among 68 children who experienced in-hospital cardiac arrest, half were randomised to a standard-dose

of 0.01 mg/kg epinephrine or a high-dose of 0.1 mg/kg epinephrine. "The rate of survival at 24 hours was lower in the high-dose group than in the standard-dose group". Of the 30 children with asphyxia prior to cardiac arrest, none in the high-dose group survived 24 hours, compared with 7 in the standard-dose group. The authors go on to state that among children with asphyxia-precipitated cardiac arrest, high-dose epinephrine appears to be harmful. *N Engl J Med* 2004; 350: 1722.

❑ Azithromycin for typhoid fever! This study shows that a 5-day course of Azithromycin is not only effective but has lower relapse rate than even ceftriaxone. The researchers recruited 149 children and adolescents, aged 3 to 17 years, with clinical typhoid fever. The children were treated daily for 5 days with either 20 mg/kg per day oral azithromycin, to a maximum dose of 1000 mg/day or 75 mg/day intravenous ceftriaxone, to a maximum dose of 2.5 g/day. Blood and stool positive patients for salmonella (n = 68) were included in the analysis, 32 had taken azithromycin. Cure rates were above 90 % for both groups, none of the patients taking azithromycin relapsed while 6 patients who received ceftriaxone did. However, the researchers noted that bacteremia took longer to clear in the azithromycin group than in the ceftriaxone group. The researchers add that future studies should determine whether the duration of therapy can be shortened further and whether the azithromycin dose can be decreased to 10 mg/kg per day. *Clin Infect Dis* 2004; 38: 951.

❑ Children who received early postnatal dexamethasone therapy for severe respiratory distress of prematurity have more neuromotor and cognitive function impairment and disability at school age than premature children not treated with dexamethasone. Seventy two preterm children were in the dexamethasone

group while 74 received placebo. These children were evaluated at a mean age of 8 year. The dexamethasone group, compared with controls, had significantly smaller head circumference, significantly lower mean height, poorer motor skills, motor coordination and poorer visual-motor integration. While dexamethasone therapy significantly reduced the incidence of chronic lung disease in preterm infants, "this therapeutic regimen should not be recommended because of its adverse effects on neuromotor and cognitive function and somatic growth at school age," the authors recommend. *N Engl J Med* 2004; 350: 1304.

❑ Another complication for mothers having a small for gestational age (SGA) baby! According to Swedish study featuring 410,021 deliveries, an increased risk of subsequent stillbirth has been detected in these women, and this risk was even greater when the first birth was also preterm. The odds ratio of stillbirth in the second pregnancy was 1.1 among women with a live, preterm first birth between 32 and 36 weeks gestation, and was 2.2 among those with a live preterm first birth before 32 weeks gestation, compared to normal. For women with SGA first baby at 37 weeks gestation or later revealed an odds ratio of 2.1 for second pregnancy stillbirth; 3.8 for women with first births between 32 and 36 weeks gestation and 6.3 for baby born before 32 weeks gestation. The authors note that in spite of the above mentioned statistics the overwhelming majority of women whose first infant was small for gestational age would deliver a live born second infant. *N Engl J Med* 2004; 350: 777.

❑ The optimum dosage schedule for the live, attenuated varicella vaccine remains controversial. This new study adds to previously available data that the first dose may be deferred to 15 months, and leaves a

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question mark as to whether a booster may be needed. The researchers assessed the effectiveness of the varicella vaccine in 339 children, ranging in age from 14 to 190 months, with clinically diagnosed chickenpox and a positive varicella-zoster virus test, and in 669 chickenpox-free controls. Overall, the vaccine was 87% effective. Of the vaccinated children who experienced breakthrough chickenpox, 87% had mild cases (versus 45% of the unvaccinated children). During the first post-vaccination year, the varicella vaccine was 97% effective. However, during the subsequent 2 to 8 years the vaccine showed

84% efficacy. Among children vaccinated while younger than 15 months the vaccine was effective in 73%, compared with 99% efficacy among children vaccinated at 15 months or older. The authors conclude that varicella vaccination has contributed to a reduction in chicken pox cases in the community but the optimum dosage schedule may need further research. JAMA 2004; 291: 851.

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