

 **Asthma and residential proximity to roads** (*Can J Public Health* 2012;103:113-8).

A large body of evidence tends to link asthma in children with traffic exposure. This study focuses on estimating the risk of asthma prevalence attributable to residing in proximity to major roads in Montreal, Canada. Asthma prevalence was taken from population-based studies. Population data were retrieved from Canadian census. Exposure was estimated using the proximity to major road and highway category of the Desktop Mapping Technologies Inc. database. Based on different studies, the percentage of prevalent asthma cases attributable to residing within 50 meters of a major road for children aged 2, 4 and 6 years varied between 2.4% (0-4.3), 5.6% (0.1-8.6) and 5.9% (0.1-9.0). For the 5-7 year age group residing within 75 m of a major road, the percent of cases was 6.4% (2.6-9.3). These numbers represent the best crude estimates and are an indication of a possible range of cases linked to residential proximity to major roads. Thus it appears that proximity of residence to roads along with other factors like genetic propensity may influence occurrence of asthma in children.

 **Obesity and dental caries** (*West Indian Med J* 2011;60:581-6)

This study aimed to evaluate the relationship between body mass index (BMI) and dental caries and to study the role of sweet consumption in predicting this relationship among adolescent children in Udupi district, India. The study population consisted of 463 school children in the 13-15-year age group. Anthropometric and caries measurements and decayed missing filled teeth (DMFT) index, were carried out by a trained recorder according to standard criteria. The majority of the children were having low normal weight (BMI < 25) with 18.6% classified as overweight (BMI 25-29.9) and 3.5% as obese (BMI > 30). The frequency of sweet consumption significantly increased from low normal weight children to overweight and obese children. Analysis showed that the obese group of children had more caries than the overweight and low normal weight children. Correlation analysis showed significant positive relation with BMI, decayed teeth [$r = 0.254, P < 0.001$] and DMFT ($r = 0.242, P < 0.001$). Binomial logistic regression showed that males, obese/overweight children and those who consumed sweets more than once a day were more likely to have high caries experience.

 **Outcomes after induction failure in childhood ALL** (*New Engl J Med* 2012;366:1371-81)

Failure of remission-induction therapy is a highly adverse event in children with acute lymphoblastic leukemia (ALL). Induction failure was defined by the persistence of leukemic blasts in blood, bone marrow, or any extramedullary site after 4 to 6 weeks of remission-induction therapy, in 1041 of 44,017 patients (2.4%) 0 to 18 years of age with newly diagnosed ALL. Patients with induction failure frequently presented with high-risk features, including older age, high leukocyte count, leukemia with a T-cell phenotype, the Philadelphia chromosome, and 11q23 rearrangement. With a median follow-up period of 8.3 years, the 10-year survival rate (\pm SE) was estimated at only $32 \pm 1\%$. An age of 10 years or older, T-cell leukemia, the presence of an 11q23 rearrangement, and 25% or more blasts in the bone marrow at the end of induction therapy were associated with a particularly poor outcome. High hyperdiploidy and an age of 1 to 5 years were associated with a favorable outcome in patients with precursor B-cell leukemia. Allogeneic stem-cell transplantation from matched, related donors was associated with improved outcomes in T-cell leukemia.

 **Vitamin D and pneumonia** (*Lancet* 2012;379:1419-27)

Vitamin D has a role in regulating immune function, and its deficiency is a suggested risk factor for childhood pneumonia. This study aimed to assess whether oral supplementation of vitamin D3 (cholecalciferol) will reduce the incidence and severity of pneumonia in a high-risk infant population. A randomized placebo-controlled trial was done to compare oral 100,000 IU vitamin D3 with placebo given to children aged 1-11 months in Kabul, Afghanistan. Vitamin D or placebo was given by fieldworkers once every 3 months for 18 months. Children presenting at the study hospital with signs of pneumonia had their diagnosis confirmed radiographically. The primary outcome was the first or only episode of radiologically confirmed pneumonia. 1524 children were assigned to receive vitamin D3 and 1522 placebo. There was no significant difference between the incidence of first or only pneumonia between the vitamin D and the placebo group; the incidence rate ratio was 1.06 (95% CI 0.89-1.27).

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