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A systematic review and meta-analysis (*Thorax* 2005;**60**:740–6) has confirmed the value of adding ipratropium bromide to inhaled β_2 agonist treatment for children and adults with acute asthma. Thirty-two randomised controlled trials (16 in children and adolescents) were analysed. The addition of ipratropium bromide reduced hospital admissions by 27% in children and by 32% in adults. It also resulted in significant improvements in spirometric measures 60–120 minutes after the last dose in both age groups.

An Italian questionnaire survey (*Occupational and Environmental Medicine* 2005;**62**:616–22) has confirmed an association between exposure to mould or damp in the home during infancy and later respiratory symptoms. Among younger children (mean age 7 years) a history of such exposure was associated with a significant 80% increase in risk of asthma. Among older children (mean age 13 years) there was a significant 90% increase. There were similar findings for rhinoconjunctivitis in the younger group and wheeze in the older group. In general, current exposure to mould or damp was less strongly related to respiratory symptoms.

Children who receive radiotherapy to the thyroid area for treatment of malignancy (Hodgkin's lymphoma, acute leukaemia, brain tumours, neuroblastoma, or non-Hodgkin's lymphoma) are at increased risk of subsequent thyroid cancer over the next 20 years. In a nested case control study based on the US Childhood Cancer Survivor Study (*Lancet* 2005;**365**:2014–23; see also comment, *ibid*: 1986–7) there were 69 cases (with thyroid cancer) and 265 matched controls. The risk of thyroid cancer, compared with children who had had no radiotherapy, rose with radiotherapy dose to reach a tenfold increase in risk at a dose of 20–30 Gy and then declined sharply with higher doses, suggesting a cell-killing effect. The dose-response curve was steeper and reached a higher peak in children who were younger (under 10 years) at the time of their first cancer. Hodgkin's lymphoma was the most common first malignancy to be followed by thyroid cancer but the thyroid cancers that followed Hodgkin's lymphoma tended to be smaller than after other types of malignancy. Children who have had radiotherapy to the chest or head and neck need long term follow up for early detection of thyroid cancer.

In a UK national case-control study of children with meningococcal disease (*BMJ* 2005;**330**:1475–8) the cases were 143 children who died and the controls 355 age-matched children who survived. Death was significantly associated with Glasgow meningococcal septicaemia prognosis score, organ failure, disease type (meningitis or septicaemia), non-recognition of complications, non-appreciation of disease severity, lack of supervision by consultants, lack of paediatric team involvement, and inadequate fluid and inotrope administration. On multivariate analysis there were three independent risk factors for death: not being under the care of a paediatrician, failure of consultant supervision, and failure to administer inotropes. The authors of this report emphasise the importance of following published protocols.

Maternal smoking in pregnancy may be a risk factor for juvenile idiopathic arthritis (JIA) in girls. In a Finnish birth cohort study that included 58 841 singleton births (*International Journal of Epidemiology* 2005;**34**:664–71, see also commentary, *ibid*: 671–2) there were 75 children who developed "rheumatoid arthritis or other inflammatory polyarthropathies" by the age of 7 years. High fetal exposure to tobacco smoke increased the risk 2.6-fold in girls but did not increase the risk in boys.

Orlistat, a gastrointestinal tract lipase inhibitor, reduces fat absorption by up to 30%. A multicentre North American trial (*Journal of the American Medical Association* 2005;**293**:2873–83; see also editorial, *ibid*: 2932–4) included 532 obese adolescents aged 12–16 years who were randomised to orlistat 120 mg or placebo, three times daily for 1 year. Both groups received advice on diet, exercise, and behaviour modification. Mean weight decreased in both groups initially but by the end of the study mean weight had increased by 0.53 kg in the orlistat group and 3.14 kg in the placebo group. Body mass index (BMI) decreased by 0.55 kg/m² (orlistat) and increased by 0.31 kg/m² (placebo). Higher proportions of subjects in the orlistat group had BMI reductions of 10% or more (13.3% vs 4.5%). Gastrointestinal adverse events were more common with orlistat.

If 23 proved interventions were available to all children in the 42 countries where 90% of all child deaths occur then 6 million children's lives could be saved

each year. That estimate by the Bellagio Study Group on Child Survival was published in the *Lancet* in 2003. Now a costing has been put on this proposal (*Lancet* 2005;**365**:2193–2200; see also comment, *ibid*: 2154–6). It is calculated that the intervention would need US \$5.1 billion each year in new resources. That is \$1.23 per head in the 42 countries and an average cost for each child life saved of \$887. The total cost could be as low as \$3.1 billion or as high as \$8.0 billion. The Millennium Development Goal for child survival (reduction of child mortality by two-thirds between 1990 and 2015) is affordable for both donors and developing countries but the likely limiting factors are scaling up of health delivery and lack of funds.

Antibodies against CD3 induce remission in mice with diabetes. Now a European placebo controlled trial of a humanised CD3 antibody (ChAglyCD3) has shown some effect in patients aged 12–39 years with type 1 diabetes (*New England Journal of Medicine* 2005;**352**:2598–608; see also editorial, *ibid*: 2642–4). The antibody treatment was more effective in patients with higher levels of residual beta-cell function at baseline. Over a follow up of 18 months the treatment preserved beta-cell function and stabilised insulin dosage. (Insulin doses increased in the control group.) All patients given the antibody had transient adverse effects, most noteworthy of which were an influenza-like syndrome and Epstein-Barr virus mononucleosis. The latter affected 30 of the 40 treated patients. Longer monitoring for adverse events will be necessary.

Three bacterial pathogens, *Haemophilus influenzae*, *Streptococcus pneumoniae*, and *Moraxella catarrhalis*, are recovered significantly more often from the eye swabs of children with acute conjunctivitis than from those of healthy children. In an Oxfordshire general practice study (*Lancet* 2005;**366**:37–43; see also comment, *ibid*: 6–7) one of more of these bacteria were grown from 78% of 325 children with acute conjunctivitis. Viruses (adenovirus or picornavirus) were recovered from 13%. The results of treatment with chloramphenicol eye drops (87% clinical cure by 7 days, 4% recurrence within 6 weeks) were not significantly different from those with placebo (83% clinical cure, 3% recurrence). These researchers conclude that children presenting with acute conjunctivitis in general practice do not need topical antibiotic treatment.