

# Lucina

In Leicestershire (*Lancet* 2001;357:1821–5) two postal questionnaire surveys, in 1990 and 1998, showed that the prevalence of wheezing in preschool children almost doubled between the two dates. The increase included both atopic (asthma) and nonatopic (early transient wheezing and viral wheezing) types of wheezing suggesting that there was an increase in bronchial responsiveness to environmental triggers, not necessarily involving atopy.

The urea cycle supplies arginine which is necessary for the synthesis of nitric oxide and nitric oxide is essential for the normal fall in pulmonary artery pressure to occur after birth. Researchers in Nashville, Tennessee (*New England Journal of Medicine* 2001;344:1832–8) have found low plasma concentrations of both arginine and nitric oxide metabolites in infants with pulmonary hypertension. They suggest that changes in the carbamoyl-phosphate synthetase gene might predispose to neonatal pulmonary hypertension though their genotype studies were inconclusive.

A large randomised trial in North America and Australia (*New England Journal of Medicine* 2001;344:1966–72) involving 1200 extremely low birthweight infants has confirmed that intravenous indomethacin reduces the incidence of patent ductus arteriosus and severe periventricular and intraventricular haemorrhage but does not alter the risk of death, cerebral palsy, cognitive impairment, deafness, or blindness up to a corrected age of 18 months.

The prevalence of myopia appears to be increasing in some countries, especially in east Asia. In military conscripts in Singapore it rose from 26% in the 1970s to 79% in the 1990s. Now a study of 429 such military conscripts (*British Journal of Ophthalmology* 2001;85:855–60) has confirmed that myopia is strongly and positively correlated with educational level and a high level of close up work (reading, writing, computer use, or video games) at age 7 years was associated with earlier onset of myopia. Whether close up work causes myopia is uncertain.

It has often been taught that typhoid fever mainly affects 5–12 year old children and is uncommon in younger children. Recent evidence, however, has contradicted this teaching and now a laboratory-based study in Dhaka, Bangladesh (*The Pediatric Infectious Disease Journal* 2001;20:521–4) has confirmed that blood cultures positive for *Salmonella typhi* are commonly from preschool children. Of 391 such blood

cultures 213 (54%) were from children under 5 years old and 105 (27%) from children under 2 years. Younger children were more likely to have heavier infections. Immunisation against typhoid fever should include young children.

It is uncertain whether reported increases in the prevalence of pervasive developmental disorders (autistic spectrum disorders) represent an increase in incidence of these conditions or are result of diagnostic changes. A recent survey of preschool children in Staffordshire (*Journal of the American Medical Association* 2001;285:3093–9) gave prevalences of 17 per 10 000 for autism and 46 per 10 000 for other pervasive developmental disorders. Previous surveys have usually given lower prevalence rates but two recent surveys reported rates similar to this study.

Iron deficiency is associated with developmental problems in infants and young children but its effects in later childhood are debated. Data from the third US National Health and Nutrition Examination of 1988–94 (*Pediatrics* 2001;107:1381–6) add support to the view that iron deficiency affects cognitive performance in school-age children. In a sample of 5400 children aged 6–16 years 3% were iron deficient. Mathematical ability was significantly lower in children with iron deficiency, with or without anaemia and independently of age, sex, race, poverty, lead status, or parental education.

The mother is clearly an important determinant of the quality of diabetic control in a child. An Edinburgh study of 78 children aged 5–17 years with type I diabetes (*Diabetic Medicine* 2001;18:364–9) has shown that diabetic control correlated with the mother's reading ability but not with the child's own intelligence.

A small study in Baltimore (*American Journal of Ophthalmology* 2001;132:76–80) has suggested that in the treatment of threshold retinopathy of prematurity the 7 year results may be better after diode laser photocoagulation than after cryotherapy.

A study of nine dyslexic adults (*Brain* 2001;124:1373–80) showed that they were slower than controls in processing visual stimuli in the left visual hemifield. It is suggested that this left sided "mini neglect" could indicate impaired function of the right parietal lobe.

Snoring in young children could have serious consequences. In Kentucky (*Pediatrics* 2001;107:1394–9) a questionnaire survey suggested that frequent and loud snoring between the ages of 2 and 6 years is associated with poor school performance at ages 13–14 years. Such snoring was reported by 13% of the parents of children in the lowest quartile for schoolclass ranking and 5% of those whose children were in the highest quartile. A history of tonsillectomy and adenoidectomy done because of snoring was more than three times more common in the children with lower school performance. Sleep-disordered breathing in early childhood could affect later school performance (or children destined to do worse at school could be more prone to sleep disordered breathing).

In a study in Manchester (*Lancet* 2001;358:188–93) strict environmental allergen avoidance during pregnancy and infancy significantly reduced the risk of wheezing in the first year of life for infants whose parents were both atopic.

In Alberta, Canada 40 children developed extremely tender and painful soles to their feet after using a public paddling pool (*New England Journal of Medicine* 2001;345:335–8). Their soles were diffusely erythematous and there were painful red-purple nodules on weight bearing surfaces. Spontaneous recovery occurred usually within a week. Identical strains of *Pseudomonas aeruginosa* were isolated from one child's pustule and from the pool water. The outbreak stopped after two attempts at disinfection and after sanding the rough surface of the pool floor. The name "pseudomonas hot-foot syndrome" has been suggested.

A registry in Canada (*New England Journal of Medicine* 2001;345:417–23) has included 160 children with cerebral venous sinus thrombosis in its first 6 years, an incidence of 0.67 per 100 000 children per year. Sixty-nine of the 160 were neonates and they most often presented with seizures and diffuse neurological signs whereas the older children most often presented with impaired consciousness, headache, and focal neurological signs. Acute or chronic systemic illness, prothrombotic states, and head and neck disorders (mostly infectious) were common contributing factors. Overall mortality was 8% and 38% had persisting neurological dysfunction. Venous infarction was associated with poor prognosis as were seizures at onset in older children but not in neonates.