

Highlights from this issue

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Fluids in shock

An article recently published in the *NEJM* by Maitland *et al* caused a stir, both among paediatricians and in the press: they claimed that, at least in the context of their trial with African children, giving intravenous bolus resuscitation fluids to critically ill children actually increased mortality.¹ This clearly flies in the face of standard teaching. Southall and Samuels present a critique of that study, arguing that many of their subjects were not in hypovolaemic shock at all, but just very ill with febrile illnesses such as pneumonia and malaria.

Although Maitland claims that these findings are applicable in Western health-care settings, Southall urges caution in making this extrapolation. This debate will go on, but it should certainly make us think carefully before automatically giving sick children large boluses, as seems to be increasingly popular. Other acute febrile illnesses can mimic the signs of shock, and too much fluid can indeed be harmful if the diagnosis is wrong. *See page 905*

Sex chromosomes and autism

Many of us will remember being taught that XYY males were disproportionately represented in prisons and mental institutions. This, and other early observations on the significance of sex chromosome trisomies, were biased by selection and gave a distorted impression.

Dorothy Bishop and colleagues have studied 135 children with XXX, XXY and XYY trisomies, identified by prenatal diagnosis. Short of population screening, this is the closest one might get to an unbiased sample. Children aged 4–16 were assessed by parental interview and compared to sibling controls. All groups were more likely to have educational difficulties, but in addition, those with XXY and XYY were more likely to be on the autistic spectrum. Earlier studies may have missed this as autism was not well-recognised then. These data are clearly important for pre- and post-natal parental counselling.

They speculate that extra copies of neuroligin genes, found on X and Y chromosomes, may be the mechanism. *See page 954*

Inactive because you're fat, not fat because you're inactive

We have all been faced with overweight children in our clinics and cheerily exhorted them to get more exercise. But how much good does it really do? Metcalf and colleagues from the Peninsula Medical School have gone a long way to answering the question of whether inactivity causes obesity or vice versa. In their long-term cohort study of Plymouth primary school children, they observed trends in body fat, measured using DEXA technology, and activity levels, measured objectively with accelerometers. Children with higher body fat tended to do less activity over time, but those who did more activity did not lose weight. The clear implication is that overweight children do not like, or are discouraged from, doing as much physical activity as their thin peers. This may be because a negative body image makes them less likely to participate, or that they simply feel more unwell when they exercise.

Exercise is still, obviously, to be encouraged but its benefits should be seen as improving general health, not reducing body fat. Only reduced calorie intake will do this.

This is important for public policy: to tackle rising childhood obesity, governments will have to confront the food industry and its advertising strategies rather than just telling kids to get on their bikes. *See page 942*

Cooling in encephalopathy: not just for neonates?

Paediatric intensivists are learning from neonatologist colleagues. Cerebral cooling, which has been found to be so effective in preserving brain function in neonates with hypoxic-ischaemic encephalopathy, may help older children too. Recent trials have found it to be of no value in traumatic brain injury in children, but acute encephalopathies may be different.

Cooling is used variably in Japanese paediatric intensive care units. Kawano and colleagues retrospectively compared outcomes in children with acute

encephalopathy or encephalitis. Many were post-flu or other viruses. They found significantly better gross neurological outcomes at 12 months post-encephalopathy in those that were cooled early, before 12 h. This study should be interpreted with caution as it was not a controlled trial, and the cooled and uncooled groups differed in a number of ways, but the results seem striking enough to justify a randomised controlled trial. This could be challenging given the small numbers involved. *See page 936*

NICEly inconsistent

Andrew Bush with three distinguished respiratory paediatrician colleagues launch a scathing indictment of the UK's National Institute for Health and Clinical Excellence (NICE), following its decision regarding use of omalizumab, an expensive anti-IgE monoclonal antibody treatment for severe asthma. NICE have denied it to 6–11 year-olds, while allowing it for older children. This differs from the advice given by the Scottish Intercollegiate Guidelines Network (SIGN) in Scotland (<http://www.sign.ac.uk/pdf/sign101.pdf>) on the same evidence. They attribute this unpopular decision to the system by which NICE reviews the evidence and makes decisions: they call for more involvement of specialists early on in the process.

RCPCH members who are unhappy about NICE or SIGN guidelines can join the college's consultation panel (http://www.rcpch.ac.uk/what-we-do/consultations/consultations-clinical-guidelines-and-standards/consultations-clinical-guid#Consultation_documents), or become more involved through their College Specialist Advisory Committees (or for generalists through the General Paediatrics CSAC), which are often asked to suggest volunteers to join working groups or comment on drafts of guidelines. *See page 912*

REFERENCE

1. Maitland K, Kiguli S, Opoka RO, *et al*. Mortality after fluid bolus in African children with severe infection. *N Engl J Med* 2011;**364**:2483–95.