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Highlights from this issue

R Mark Beattie, *Editor in Chief*

CATCH UP GROWTH AND METABOLIC OUTCOMES IN ADOLESCENTS BORN PRE TERM

It is well known that the pattern of growth during early childhood is associated with markers of the metabolic syndrome in later life with the risk being greatest for low birth weight babies and those with in utero growth restriction. The data in infants born preterm is less clear with a number of potential confounding factors—including the fact that early growth failure is common in preterm infants with (usually) later catch up in the pre/immediate post discharge period. Embelton and colleagues report the weight gain, body composition, growth and metabolic outcome of 153 children born preterm (mean gestation 31 weeks, median birth weight 1365 g) at age 11.5 years. Height and weight were similar to population averages and did not differ between infants when grouped according to the degree of catch up in the immediate post discharge period (up to 12 weeks). There were no significant associations between infant growth and metabolic outcome. In contrast there were strong associations between more rapid childhood weight gain (after age 1 year) and subsequent body composition and metabolic outcome (higher blood pressure, higher fasting insulin, lower insulin sensitivity). The dataset suggests that patterns of early growth in preterm infants are not strongly associated with adverse metabolic outcomes in early adolescence although excess weight gain during childhood (beyond infancy) is strongly associated with adverse metabolic outcome in adolescence. *See page 1026*

RECENT ADVANCES IN THE MANAGEMENT OF INFANTS BORN <1000 G

Berrington and colleagues review the many advances in the management of infants born <1000 g over the last 10–15 years. The primary drive to reduce mortality has been achieved with the emphasis now being on developing interventions to reducing morbidity (infection, necrotising enterocolitis and retinopathy of prematurity) and improvement in long term outcome (chronic lung disease, growth and neurodevelopmental outcome). In 2013 there were 3446 registered live births <1000 g in England and Wales; 0.5% of live births, 27% died at <28 days, 31% died before their first birthday. Cerebral palsy rate is just under 10%.

In the review the authors discuss recent advances that have improved the outcome or

have the potential to do so including the role of networks and pathways, delivery room management, respiratory management after the initial phase, nutrition and necrotising enterocolitis, infection, retinopathy and family integrated care. There have been many advances—increasing antenatal steroid use at the limits of viability, antenatal magnesium, delivery of care through networks with the smallest and most pre term infants being delivered in larger centres are just some in the antenatal period. Delivery room issues discussed include delayed cord clamping or ‘cord milking’, delivery room monitoring, reduced early intubation with early use of nasal continuous positive airways pressure, new methods of surfactant delivery. Many other topics are covered. This is an excellent update and highly relevant to clinicians in the field and clinicians who manage these infants outside the neonatal period during later infancy, childhood and adolescence. *See page 1053*

COMPARING PRE-PREPARED COMMERCIAL INFANT FEEDING MEALS WITH HOME COOKED RECIPES

This is an interesting and important question. Most infants are fed on a combination. Carstairs and colleagues compare the cost, nutritional content (per 100 g) and food variety of commercial meals (278) with published infant and young child home-cooked recipes (408). Breakfast foods and savoury snacks were excluded. The sample was analysed as a whole and then by ‘matched meals’. Commercial feeds are significantly more expensive (average £0.68/100 g versus £0.33 per 100 g). There was a wide variety of different content. Commercial meals had a greater vegetable variety score. Home cooked recipes were more energy dense (average 101 versus 67 kCal per 100 g)—this reflected a higher average carbohydrate (9 versus 8.4 g/100 g), fat (4.4 versus 2.2 g/100 g) and protein (5.9 versus 2.9 g/100g) content. The majority of home-cooked recipes exceeded energy density and dietary fat recommendations. The majority of commercial meals met the energy density recommendations but often failed to meet the minimum 30% of energy from dietary fats. How to interpret the data in the clinical setting is complex. Although within each feed group there is a huge variance the differences are significant and important to consider particularly with the increasing emphasis on the impact of diet in the infancy on the risk of obesity but also strategies to impact on infants and young

children with faltering growth. *See page 1037*

IS THE PREVALENCE OF HYPERTENSION IN OVERWEIGHT CHILDREN OVERESTIMATED

There is a high prevalence of hypertension in overweight and obese children and the recommendation is to screen overweight children for hypertension in view of the later cardiovascular morbidity and mortality. Wirix and colleagues explore different methods for screening and diagnosing hypertension in order to explore the impact on prevalence—969 overweight (including obese) and 438 non overweight children, median age 11.7 years. Hypertension was defined as >95th percentile. Three different screening methods were used—using the first blood pressure measurement, the mean of two measurements and lowest of three measurements on different occasions. Based on the first measurement alone 33% of overweight and 21% of non-overweight had hypertension. Based on the mean of two measures this fell to 28% and 16% and based on the lowest of three consecutive measures 12% and 5%. If the three measures were made on a second occasion this fell to 4% and less than 1%. In essence the prevalence is highly dependent on the definition used, measurement strategy and interpretation of results. The authors conclude that this dataset (and others) suggest that the prevalence of hypertension in overweight and obesity cited in the literature may be an overestimate. This is discussed further in the excellent accompanying editorial—Are we measuring blood pressure correctly in children, particularly in obesity? *See pages 998 and 990*

INTEGRATED CARE: A SOLUTION FOR IMPROVING CHILDREN'S HEALTH

Integrated care is about joining things up in order to meet health needs, and in ways that make sense to children and families. In essence it means using the available resource across the network or ‘patch’ to best deliver quality care with success requiring a strong drive to improve children’s health services and systems research. Ingrid Wolfe and colleagues discuss the background, practicalities, what needs to change and making happen. These are important issues and the article is essential reading for all who want to see children’s services continue to develop and deliver better outcomes for children and their families. *See page 992*