

Prevention of childhood obesity

Louisa J. Ells* BSc (hons), PhD

A School of Health and Social Care, University & Teesside, Middlesbrough TS1 3BA, UK

Karen Campbell BSc, Grad Dip Diet, Grad Dip Health promotion, Masters Public Health, PhD

School of Health Sciences, Deakin University, 221 Burwood Highway, Burwood, Vic. 3125, Australia

Jane Lidstone BSc (hons)

Sarah Kelly BSc (hons), PhD

Rebecca Lang BSc (hons), PhD, PG Diploma in Science Communication, RPHNutr

Carolyn Summerbell* BSc (hons), PhD, Advanced Diploma in Dietetics,
Research Management UCPPD

Professor

School of Health and Social Care, University of Teesside, Middlesbrough TS1 3BA, UK

Childhood obesity is a complex disease with different genetic, metabolic, environmental and behavioural components that are interrelated and potentially confounding, thus making causal pathways difficult to define. Given the tracking of obesity and the associated risk factors, childhood is an important period for prevention. To date, evidence would support preventative interventions that encourage physical activity and a healthy diet, restrict sedentary activities and offer behavioural support. However, these interventions should involve not only the child but the whole family, school and community. If the current global obesity epidemic is to be halted, further large-scale, well-designed prevention studies are required, particularly within settings outside of the USA, in order to expand the currently limited evidence base upon which clinical recommendations and public health approaches can be formulated. This must be accompanied by enhanced monitoring of paediatric obesity prevalence and continued support from all stakeholders at global, national, regional and local levels.

Key words: childhood; obesity prevention; physical activity; healthy diet; sedentary behaviour; ante/postnatal; body mass index; waist circumference; school; community; government.

* Corresponding author. Tel.: +44 1642 342973; Fax: +44 1642 342770.
E-mail address: l.ells@tees.ac.uk (L.J. Ells).

The preceding chapters have described the epidemiology, the potential causes, and the documented and projected physical, psychological and social impacts of the obesity epidemic engulfing us. Consistent with epidemics throughout history there has been a pervading sense of disbelief at the rapidity of change, a grappling with how to halt its spread, and—perhaps inevitably—a prolonged period of substantial inaction. The individual nature of both the genetic and behavioural determinants of obesity, coupled with the pervading belief that obesity development reflects the individual's imprudent behaviour, has promoted the belief at a population level that the prevention of this epidemic was the purvey of the individuals concerned. However, as demonstrated in the previous chapters, obesity prevention has eluded us, and the obesity epidemic will affect us all. We are challenged to consider obesity prevention in its broadest context.

Obesity genesis is complex and prevention is not simple.^{1,2} It is acknowledged that the treatment of childhood obesity is expensive and unlikely—at a population level—to be successful³, that obesity tracks strongly to adulthood^{4,5}, and that, irrespective of adult weight, adolescent overweight predicts a broad range of adverse health effects.⁶ Further, we recognize that many obesity-promoting behaviours are learnt in childhood and may track to adulthood.⁷⁻⁹ Given the insidious consequences of childhood obesity, understanding how best to prevent it remains the principal research priority. Indeed, a recent review of obesity in children and young people¹⁰ concluded that obesity prevention is 'the only feasible solution for developed and developing countries alike'. This chapter discusses the opportunities, challenges and barriers to obesity prevention in an environment that actively supports the promotion of fatness.

TARGET GROUPS

When developing and implementing childhood obesity prevention interventions, should we target the population as a whole or focus specifically on those children 'at risk'? Power et al¹¹ strongly advocated the population approach on the basis that it is extremely difficult to confidently identify all children at risk of developing obesity. It is also true to argue that interventions to promote a healthy diet and increased physical activity will benefit all children, irrespective of obesity risk. Certainly from a public health angle this population-based approach is undoubtedly preferable; however, this should not eliminate the use of more tailored interventions in groups with established risks.

Contrary to a popular misconception, fewer than 1% of childhood obesity cases are directly caused by a genetic disorder. Although genetics are undeniably important in obesity genesis, they form part of a complex interaction with many other environmental and behavioural factors, as illustrated by Bray¹² who commented that a child's genetic make-up 'loads the gun' while their environment 'pulls the trigger'. Parsons et al⁵ performed a systematic review to identify risk factors for obesity. The review concluded that parental fatness, social factors, birth weight, timing or rate of maturation, physical activity, dietary, and other behavioural or psychological factors all contributed to the onset of obesity. It has also been established that ethnicity and social and economic deprivation¹³ are important determinants of obesity development, as are special educational needs in children whose physical or learning disability may predispose obesity onset. However, the systematic review and meta-analytic literature on the management of obesity¹⁴ highlights the absence of evidence regarding

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