Management of Childhood Obesity

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Foreword

Childhood obesity is one of the most serious problems facing the developed world. It is damaging to the medical and psychological well-being of our children, and casts a shadow on their future health as adults, leading to serious illness and ultimately premature death.

This book, written by world-renowned leaders in the field, should be used as a practical tool in the management of the overweight child rather than left on the shelf to gather dust like some medical books. Its pages should become well-thumbed by front-line health care professionals, commissioners and policy-makers alike. It would even be acceptable to turn back the corners of the pages, and use light pencil markings on the margin to highlight important passages, because unlike many volumes, this represents first-hand experiences of practical childhood obesity management, combined with a profound scientific, clinical and social appreciation of the condition and its ramifications.

Weight management in children is one of the most difficult challenges faced by health care professionals who cannot change the environment which leads to the weight problems in the first place. Only the government, food, retail, advertising industry, schools, planners and other authorities can do that. Sweets and chocolates still appear at supermarket check-outs, fast food outlets still sell vast portions of cheap, unhealthy food at all times of day and night on every street corner. Many schools still provide inappropriate meals and too little physical activity for their students; many food and drink companies still use sports and entertainment idols to flog their wares, thereby putting enormous pressure on children to obey what is already a powerful instinct; to eat more and more. Whilst we are waiting for the environment to change, primary and secondary care workers have the job of managing the childhood obesity epidemic in our clinics, one person, and one family at a time.

As a general practitioner, I encounter childhood obesity every day, and it is one of the most difficult challenges I face. However, a successful result and a healthy and happy child are the most rewarding and satisfying outcomes for the primary care team and for the family. As well as providing the scientific and academic background to childhood weight issues, the authors share their

immense practical experience of what actually works in the management of the overweight child in a sympathetic and practical way, and for this reason, the book should be required reading for everyone involved with childhood weight problems.

David W. Haslam, MB BS
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Preface

When one of us first started working with overweight and obese children in the early 1970s the admission that she ran an obesity clinic for children was greeted with wry amusement or the comment 'You don't achieve anything do you?' Today the prevalence of childhood overweight and obesity in not only the UK but most westernized societies and increasingly in less affluent countries too has changed this attitude. The comment is now not whether we achieve anything but an imperative that we must achieve something if we are to prevent the present generation of young people having lifetimes of high morbidity and mortality as consequences of their excessive fatness. Yet, for all the concern about obesity, there is no 'magic bullet', 'wonder diet' nor consensus view on how to manage the condition. This book does not pretend to answer that dilemma but to present guidance which we hope will support those trying to help these children.

Throughout the book we use both overweight and obesity, often together, to describe children who are likely to have significant increases in percentage of body weight as fat. The mixed terminology relates to the fact that most children are diagnosed as 'obese' because they have a high body weight and thus an abnormal relationship between weight and height for age (whatever method is used). Technologies that have been developed to be more specific about body composition in most cases do not directly measure fat in the body (see Chapter 2). Estimates of body fat are largely confined to research studies. Thus we prefer to use overweight as a descriptive term for the presumed overfat children in whom we are concerned. The difference in the definitions of overweight and obese in practical terms is usually one of degree and has little significance for pathology except that the more severely affected – the obese – are generally more prone to the problems associated with being overfat. However we do recognize that there are problems with the clinical definition of overweight in that it can include children who have excess lean, rather than fat, tissue. In our modern, relatively inactive, society such children are distinguishable in most cases by their obvious athleticism or their extreme height for age. A further reason for not confining ourselves to the term 'obese' routinely is that some see this as a derogatory term. We have no wish to diminish further the self-esteem of a group in the population who

may already have a poor image of themselves and feelings of ostracization and who can justifiably argue that they deserve the respect that should be given to all.

The overweight/obese children who are the subjects of this book are those presenting in the community, in primary care or at a general paediatric clinic. Our advice is therefore aimed at health care practitioners (HCP) in the community. Perhaps we can also provide some help for those working in general paediatrics and, at the other end of the scale, for parents making their own efforts to cope with children whose rapid weight gains and increasing fatness are concerning. With obesity such a highly prevalent problem, the majority of those who need to control their weight will probably never get beyond advice at the primary care level. For this reason we deal no more than briefly with investigations and therapies likely to apply only to the relatively few obese children who receive hospital specialist care. However we see it as important to recognize and distinguish those overweight/obese children who do need detailed investigation or very specific, possibly invasive, management.

Modern medical management is perceived as needing an evidence base. The gold standard for evaluating management is the double-blind randomized controlled trial. The advice for the management of child obesity has a limited evidence base which has been extensively reviewed in the process of developing the UK National Institute of Health and Clinical Excellence (NICE) Guidelines on the management of obesity (NICE 2006). With such a multifaceted condition as obesity and with the variety of diets, activities, lifestyles and psychosocial considerations which contribute to the condition at the individual level, it may be impossible – at least in a free society – to put some aspects of management to the test. However overweight/obese children cannot be allowed to get progressively fatter just because there is no absolutely proven method of management. We have tried to follow those NICE (2006) Guidelines relevant to the children, families and communities we aim to reach. In addition we incorporate what we believe common sense and our experience in practice and research indicate as reasonable recommendations to support that management which already has an evidence base.

The expansion of research into childhood obesity which has taken place in recent years is a very positive development. A mass of evidence is being gathered and gradually being published – as the NICE (2006) Guidelines show. Research programmes developing effective management for childhood overweight/obesity do not always transfer easily into practices that are clinically and financially sustainable. There is still a long way to go before the obesity epidemic in children is under control. It is therefore important that all involved do all they can to reduce the effects of the epidemic on physical and psychosocial health. It is time to achieve change: something must be done. We make suggestions for what this 'something' might be.

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We are obviously indebted to the overweight and other children and their families who have provided us with clinical experience and opportunities for research over many years and without whom our comments would have no rational basis. However, in the immediate circumstances, our particular gratitude is to David W. Haslam of the National Obesity Forum who has taken time to read the book and give us his comments as well as providing a Foreword and to Louise Diss of TOAST (The Obesity Awareness and Solutions Trust) for likewise looking through the book and giving us her advice. As sole authors the responsibility for statements made in the book is ours alone.

Abbreviations

ALSPAC	Avon Longitudinal Study of Parents and Children
AR	adiposity rebound
%BF	percentage body fat
BI	bioelectrical impedance
BMI	body mass index
BMR	basal metabolic rate
BP	blood pressure
CDC	Center for Disease Control (USA)
CMO	Chief Medical Officer
CT	computerized tomography
DEXA	dual X-ray absorptiometry
DH	Department of Health
FFQ	food frequency questionnaire
FSA	Food Standards Agency
GDA	Guideline Daily Amount
GI	glycaemic index
GP	general practitioner
HCP	health care professional
HDL	high density lipoprotein
HFSS	high fat, high sugar, high salt
ICP	intracranial pressure
IOTF	International Obesity Task Force
ISC	Indian subcontinent
LBM	lean body mass
LDL	low density lipoprotein
MEND	Mind, Exercise, Nutrition and Do it
MET	metabolic equivalent
MRC	Medical Research Council
MRI	magnetic resonance imaging
NASH	non-alcoholic steatohepatitis
NHANES	National Health and Nutrition Examination Survey (USA)

NICE	National Institute for Health and Clinical Excellence
NIDDM	non-insulin-dependent diabetes mellitus
NIH	National Institutes of Health (USA)
NOF	National Obesity Forum
OSAS	obstructive sleep apnoea syndrome
PA	physical activity
PAL	physical activity level
PCOS	polycystic ovary syndrome
PCT	primary care trust
PE	physical education
PWS	Prader–Willi syndrome
RCGP	Royal College of General Practitioners
RCN	Royal College of Nursing
RCPCH	Royal College of Paediatrics and Child Health
RMR	resting metabolic rate
SES	socioeconomic status
SIGN	Scottish Intercollegiate Guidelines Network
SUFE	slipped upper femoral epiphysis
TLD	Traffic Light Diet
WC	waist circumference
WHO	World Health Organization
WHR	waist : hip ratio