

Care for Pregnant Women who are Obese

Care for Pregnant Women who are Obese

edited by Yana Richens and Tina Lavender



A division of MA Healthcare Ltd

Note

Healthcare practice and knowledge are constantly changing and developing as new research and treatments, changes in procedures, drugs and equipment become available.

The author and publishers have, as far as is possible, taken care to confirm that the information complies with the latest standards of practice and legislation.

Quay Books Division, MA Healthcare Ltd, St Jude's Church, Dulwich Road, London SE24 0PB

British Library Cataloguing-in-Publication Data
A catalogue record is available for this book

© MA Healthcare Limited 2010
ISBN-10: 1 85642388 5; ISBN-13: 978 1 85642 388 3

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission from the publishers

Printed by CLE, Huntingdon, Cambridgeshire

Contents

Editors		vii
List of Contributors		viii
Foreword		x
Chapter 1	Review of Obesity during Pregnancy	1
Chapter 2	Bariatric Surgery and Care of Pregnant Women	19
Chapter 3	Ultrasonography and the Obese Woman	29
Chapter 4	Antenatal Assessment and Care	41
Chapter 5	Nutrition in Pregnancy	59
Chapter 6	Common Medical Problems in Pregnancy Associated with Obesity	93
Chapter 7	Intrapartum Care of Obese Women	117
Chapter 8	Anaesthetic Management of the Obese Parturient	133
Chapter 9	Potential Problems for the Baby of the Obese Mother	141
Chapter 10	Effective Postnatal Care	153
Chapter 11	Obesity Related Lactation Problems	177
Chapter 12	Psychological Impact of being Overweight/Obese during Pregnancy	208
Chapter 13	Obesity: Lessons Learned from the Confidential Enquiries Into Maternal Deaths Report 2003 -2005	231
Index		241

For Ruth who is good with words

Editors

Yana Richens RGN, RM, BSc (hons) MSc

Yana is a Consultant Midwife at University College London Hospital. She is a member of the Chief Nursing Officers national advisory group, providing specialist advice on black and ethnic minority issues in the NHS, and was the first midwife to be awarded the prestigious Mary Seacole Fellowship, an award made by the DoH. Yana was a member of the National Institute for Health and Clinical Excellence (NICE) guideline development group for the guideline on puerperal/perinatal mental health, and a member of the new NICE Guideline group for women with complex social problems. Yana is the Joint Editor-in-Chief of the *British Journal of Midwifery* and Associate Editor of the *African Journal of Midwifery*. In 2005 she co-founded the Female Genital Mutilation clinical guideline group. She leads a clinic for women with raised BMI at University College London Hospital and also has an interest in perineal trauma.

Tina Lavender PhD, MSc, RM

Tina Lavender is Professor of Midwifery at the University of Manchester. She also holds an honorary contract at St Mary's Hospital, Manchester. She leads a programme of research exploring maternal experiences, expectations and outcomes; her main research focus being the management of prolonged labour and partogram use. Tina has published extensively in this field. Tina's other area of expertise is maternity related public health; obesity is one of her areas of research activity. She is Joint Editor-in-Chief of the *British Journal of Midwifery*, Associate Editor of the *African Journal of Midwifery* and Associate Editor of the *Pregnancy and Childbirth* Group of the Cochrane Collaboration. Tina is an Honorary Fellow of the Royal College of Midwives and European Academy of Nurse Science.

List of Contributors

Rory M H Bell, MBBS, FRCA. Consultant Anaesthetist and Clinical Lead for Obstetric Anaesthesia University College London Hospitals NHS Foundation Trust.

Debra Bick RM, BA, MedSci, PhD. Professor of Evidence Based Midwifery Practice, King's College London.

Jason Cronje MBBS FRCA Anaesthetic SpR University College London Hospitals NHS Trust.

Laura de Rooy MBCHB, MRCP, FRCPCH Consultant Neonatologist and Care Group Lead, St George's Hospital, London.

Jane Hawdon MA, MBBS, MRCP, FRCPCH, PhD Consultant neonatologist and Director of Clinical Education, University College London Hospitals. Clinical lead, North Central London Perinatal Network.

Julie Hogg MSc, BSc (hons), Dip H.E, RM, RN, General Manager, Maternity & Neonatology, University College London Hospitals NHS Foundation Trust.

Alberic Fiennes BSc, MS, FRCS. Late Director of Baraitric Surgery, University College London Hospitals NHS Trust, President British Obesity & Metabolic Surgery Society.

Christine Furber PhD, MSc, BSc, RN, RM, ADM, Cert Ed (FE), MTD Midwifery lecturer, School of Nursing Midwifery & Social Work The University of Manchester, Midwifery.

Cecilia Jevitt, CNM, PhD, ARNP, Associate Professor Midwifery and Nursing, University of South Florida Colleges of Nursing and Medicine, Tampa, Florida, USA.

Asma Khalil MB BCh, MD, MRCOG, Subspecialty Trainee in Maternal Fetal Medicine, Institute for Women's Health, University College London Hospitals.

Linda McGowan PhD, MSc, BSc, RN, RM, Lecturer in Women's Health, School of Nursing Midwifery & Social Work The University of Manchester, Midwifery.

Tracey A Mills BSc (Hons), RGN, RM, DPSM, MA, PhD Research Training Fellow, Maternal and Fetal Health Research Group, School of Clinical and Laboratory Sciences, The University of Manchester.

Pat O'Brien MB, BCh, BAO, FRCOG, FFSRH, FICOG, Consultant Obstetrician, Institute for Women's Health, University College London Hospitals.

Pranav Pandya BSc, MBBS, MRCOG, MD, Lead Consultant for Obstetrics & Fetal Medicine, University College London Hospitals NHS Foundation.

Daghni Rajasingam MA MRCOG, MBBS Consultant Obstetrician Guys and St Thomas' Hospital NHS Foundation Trust.

Hannah Rickard MBBS, BA(Oxon) Specialty Registrar in Obstetrics and Gynaecology Frimley Park Hospital NHS Foundation Trust.

Sheela Swamy MBBS, MRCOG, Senior Registrar, Department of Obstetrics and Gynaecology, Guys and St Thomas' Hospital.

Carina Venter B.Sc Dietetics, Post Grad Dipl in Allergy, PhD NIHR Post Doc Research Fellow, School of Health Sciences and Social Work, University of Portsmouth.

Foreword

The current obesity epidemic has led to a substantial increase in the numbers of obese pregnant women. This means that obstetricians and midwives need to understand the effect of being obese on pregnancy and neonatal complications and outcomes. They also need to understand the implications of the obesity epidemic to service delivery. Obesity affects many elements of antenatal, intrapartum and postnatal care and is a multisystem disorder. This means that a multi-disciplinary approach is needed to manage the overweight and obese pregnant women appropriately. This book answers the challenge of collating the information needed to care for obese pregnant women. It is a clear, comprehensive, multi-disciplinary and well referenced exposition on obesity in pregnancy. Collecting this diverse information in one publication is timely and an invaluable resource for the practicing and academically active obstetricians, midwives and health service managers.

Siobhan Quenby

*Professor of Obstetrics
University of Warwick*

Chapter 1

Review of Obesity in Pregnancy in the UK

Tracey Mills

Introduction

There has been a well documented rise in the prevalence of obesity in the UK and current estimates suggest almost 25% of the adult population are obese. The consequences for public health are significant, including a rapidly rising incidence of type II diabetes. The cost to the NHS of treating the consequences of obesity has been estimated at £3.3-£3.7 billion per year, predicted to rise to £5 billion by 2025 (Foresight 2007). The cause(s) of the current epidemic of obesity are complex but are thought to relate to changes in energy intake and expenditure, notably physical activity. The negative impacts of obesity on the reproductive health of women are less well recognised. Obesity among pregnant women is becoming significantly more common and this is important to monitor because maternal obesity confers increased risks of poor pregnancy outcomes for both mother and baby.

The rising prevalence of obesity in the UK

Definition and classification of obesity

Obesity can be defined as an abnormal or excessive fat accumulation which presents a risk to health. Specifically, obesity is a major risk factor for numerous diseases including type II diabetes, coronary heart disease, hypertension, cancer and stroke (Must et al 1999). Currently, the recommended measure of obesity is body mass index (BMI), which is calculated as weight (in kilograms) divided by the square of the height (in metres). The classifications from the World Health Organisation (WHO 1997) for BMI are:

- BMI of 18.5-24.9 is healthy weight