Aneurin Bevan University Health Board

Guideline for the care of Antenatal, Intrapartum and Postpartum women with a Body Mass Index greater than 35.

N.B. Staff should be discouraged from printing this document. This is to avoid the risk of out of date printed versions of the document. The Intranet should be referred to for the current version of the document.

Contents:

Introduction

Maternal obesity is one of the most commonly occurring risk factors in obstetric practice. Obesity is defined as a BMI of 30kg/m^2 or. It is associated with multiple risks during pregnancy and has been shown to be independently associated with higher odds of dying from specific pregnancy complications. BMI is categorized into 3 classes (see appendix 1), which recognizes the continuous relationship between BMI and morbidity and mortality. The 2020 MBRRACE report of the Confidential Enquiries into Maternal Deaths and Morbidity 2016-2018 found that over 26% of women who died were overweight and 29% obese.

The risks in pregnancy to the mother and baby associated with maternal obesity include:

- Miscarriage
- Cardiac disease
- Hypertension, pre-eclampsia and eclampsia
- Dysfunctional labour
- Gestational diabetes
- Venous thromboembolism
- Caesarean delivery and increased risk of requiring general anaesthesia
- Wound infection
- Post-partum haemorrhage
- Stillbirth and neonatal death
- Admission to neonatal unit
- Fetal macrosomia or small for gestational age
- Birth trauma (including shoulder dystocia)
- Prematurity
- Congenital abnormalities

Pre-pregnancy

- Pre-conception counselling should include information about the risks of obesity during pregnancy and childbirth.

- Women with a BMI ≥ 30 should be advised to take 5mg folic acid and 10micrograms of vitamin D daily, starting pre-conception and continuing throughout the first trimester.

- Weight-loss support programmes should be offered involving diet and exercise. Women should be supported to aim for a realistic target of losing 5-10% of their weight.

Ante Natal Care

- The management of women with obesity during pregnancy should be integrated into all antenatal clinics with multi-disciplinary care as needed.

- Offer referral to all women with a booking BMI >35 to a specialized weight management clinic and provide an information leaflet on managing your weight during pregnancy.

- Provide advice on physical activity and signposting to local exercise programmes (Pregnancy yoga/ aquanatal etc).

- Advise to take 5mg folic acid until 12 weeks, and 10 micrograms of vitamin D daily throughout pregnancy and while breastfeeding.

- Women with a BMI ≥35, or with a BMI ≥30 with additional moderate risk factors, should be commenced on 150mg aspirin from 12 weeks to continue until delivery.

- All women should be risk assessed for venous thromboembolism prophylaxis at booking, at any subsequent review, intrapartum and postpartum. Women with a BMI ≥ 45 at booking should be offered antenatal thromboprophylaxis with dalteparin with the depending on their booking weight.

- All women with a BMI > 35 should be offered oral glucose tolerance test 24 to 28 weeks.

- Women with a BMI ≥ 35 should be offered serial ultrasound assessment of fetal growth, liquor volume and umbilical artery dopplers at 28, 32, 36 and 39 weeks gestation.

- Women with a BMI of ≥45, or with BMI ≥ 40 with additional comorbidities, should be referred for anaesthetic review. An anaesthetic management plan for labour and birth should be discussed and documented.

- Ensure an appropriately sized arm cuff is used for blood pressure measurements.

- All women should have a repeat weight done at 36 weeks gestation.

- Women with a BMI >35 should be advised to deliver on a consultant-led obstetric unit. If weight gain is between 9-11kg in pregnancy, the BMI <40, and the woman wishes to transfer to midwife led care, recommend delivery in the alongside unit at Grange University Hospital.

- Where women with BMI ≥ 40, with normal growth scans and no other risk factors, request delivery in a midwifery led birth centre consider referral to the Birth Choices clinic and individual cases should be discussed with a birth centre manager/ senior midwifery manager.

Intrapartum Care

- Where there are no other obstetric or medical indications, obesity alone is not an indication for induction of labour or elective caesarean delivery.

- On admission in labour, establish early venous access and send full blood count and group and save. Seek early anaesthetic and senior obstetric review for the care of women with a BMI of ≥40.

- Consider a bedside scan for presentation.

- Consider application of fetal scalp electrode if there are difficulties with external CTG.

- Consider use of TRAXI pannus retraction device and cell salvage at elective or emergency caesarean section for women who have BMI ≥40.

- All women with BMI ≥30 should be encouraged to have active management of third stage of labour to reduce risk of post-partum haemorrhage.

Post Natal Care

- All women with a raised BMI should be offered TED stockings for the duration of hospital stay. Venous thromboembolism prophylaxis with dalteparin should be offered per ABUHB guidelines. (BMI ≥ 45 6/52 thromboprophylaxis, BMI ≥ 10 days thromboprophylaxis.
- Breast feeding – support initiation and maintenance.
- Dietary advice — reinforce message that breastfeeding naturally uses only 500Kcals a day and there is no need for increased calories.
- Encourage early mobilization.
- Discuss the importance of perineal hygiene, including frequent changing of sanitary pads, washing hands before and after this, and daily bathing or showering.
- Women with a booking BMI >30 should be encouraged to make healthy lifestyle choices and redirected to a weight management clinic 6-8 weeks post natal.
- Women diagnosed with gestational diabetes should be offered a 6-week postnatal glucose tolerance test.
- Contraception should be discussed before discharge – *Note that combined hormonal contraceptive pill use BMI of 30—34 is UKMEC Category 2 (can be used under careful follow-up) and >35 BMI is UKMEC Category 3 (requires expert opinion/advice). There are no restrictions on using any other methods based on obesity alone.*

Appendices

Appendix 1 Classification of Body Mass Index

Body Mass Index (kg/m^2)	NICE classification
<18.5	Unhealthy weight
18.5-24.9	Healthy weight
25.0-29.9	Overweight Obesity I
30.0-34.9	Obesity II
≥40	Obesity III

Appendix 2

Maternal and fetal risks in women with a BMI ≥30 kg/m² compared to women with a healthy BMI. From: Denison, FC, Aedla, NR, Keag, O, Hor, K, Reynolds, RM, Milne, A, Diamond, A, on behalf of the Royal College of Obstetricians and Gynaecologists. Care of Women with Obesity in Pregnancy. Green-top Guideline No. 72. *BJOG* 2018

Risk	Study	n	OR (95% CI)[a]
Gestational diabetes	NW Thames 1989–97[15] Aberdeen 1976–2005[24]	287 213 24 241	3.6 (3.3–4.0)[b] 2.4 (2.2–2.7)
Hypertensive disorders	NW Thames 1989–97[15] Aberdeen 1976–2005[24]	287 213 24 241	2.1 (1.9–2.5)[b] 3.3 (2.7–3.9)
Venous thromboembolism	Denmark 1980–2001[23]	71 729	9.7 (3.1–30.8)
Slower labour progress 4–10 cm	USA 1995–2002[201]	612	7.0 versus 5.4 hours[c] *P* < 0.001
Caesarean section	Meta-analysis of 33 studies[26]	1 391 654	2.1 (1.9–2.3)
Emergency caesarean section	NW Thames 1989–97[15] Cardiff 1990–99[24]	287 213 8350	1.8 (1.7–1.9) 2.0 (1.2–3.5)
Postpartum haemorrhage	NW Thames 1989–97[15] Aberdeen 1976–2005[24]	287 213 24 241	1.4 (1.2–1.6)[b] 2.3 (2.1–2.6)
Wound infection	NW Thames 1989–97[15]	287 213	2.24 (1.91–2.64)[b]

Risk	Study	n	OR (95% CI)[a]
Birth defects	Australia 1998–2002[9]	11 252	1.6 (1.0–2.5)
Prematurity	Aberdeen 1976–2005[24] Australia 1998–2002[9]	24 241 11 252	1.2 (1.1–1.4) 1.2 (0.8–1.7)
Macrosomia	NW Thames 1989–97[15] Sweden 1992–2001[26]	287 213 805 275	2.4 (2.2–2.5)[b] 3.1 (3.0–3.3)[d]
Shoulder dystocia	Sweden 1992–2001[26] Cardiff 1990–99[24]	805 275 8350	3.14 (1.86–5.31)[d] 2.9 (1.4–5.8)
Admission to neonatal intensive care unit	NW Thames 1989–97[15] Cardiff 1990–99[24]	287 213 8350	1.3 (1.3–1.4)[b] 1.5 (1.1–2.3)
Stillbirth	Meta-analysis of 9 studies[202]	1 031 804	2.1 (1.5–2.7)
	Denmark 1989–		

Notes

- [a] Unless otherwise stated.
- [b] 99% CI.
- [c] Median class I obesity or greater compared with normal weight.
- [d] OR for class III obesity.
- [e] Median prevalence in obese women.

Relevant information of risks associated with obesity in pregnancy – from maternal obesity in the UK: Findings from a national project:

- Importance of healthy eating and appropriate exercise during pregnancy for the management of weight gain

- Increased risk of hypertensive disorders, gestational diabetes and fetal macrosomia requiring an increased level of maternal and fetal monitoring
- The potential for poor ultrasound visualisation of the baby and consequent difficulties in fetal surveillance and screening for anomalies
- The increased risk of induction of labour
- The potential for intrapartum complications, including difficulty with fetal monitoring, anaesthesia and caesarean section which would require senior obstetric and anaesthetic involvement and an antenatal anaesthetic assessment, and potential for emergency caesarean
- The need to prioritise safety of the mother at all times
- The importance of breastfeeding and opportunities to receive additional breast-feeding support.

Recommendations from NICE weight management before, during and after pregnancy:

- At the earliest opportunity discuss her eating habits and how physically active she is. Find out if she has any concerns about diet and the amount of physical activity she does and try to address them.
- Advise that a healthy diet and being physically active will benefit both the woman and her unborn child during pregnancy and will also help her to achieve a healthy weight after giving birth. Advise her to seek information and advice on diet and activity from a reputable source.
- Offer practical and tailored information. This includes advice on how to use Healthy Start vouchers to increase the fruit and vegetable intake of those eligible for the Healthy Start scheme (women under 18 years and those who are receiving benefit payments).
- Dispel any myths about what and how much to eat during pregnancy. For example, advise that there is no need to 'eat for two' or to drink full-fat milk. Explain that energy needs do not change in the first 6 months of pregnancy and increase only slightly in the last 3 months (and then only by around 200 calories per day).
- Advise that moderate-intensity physical activity will not harm her or her unborn child. At least 30 minutes per day of moderate intensity activity is recommended.
- Give specific and practical advice about being physically active during pregnancy:

  - recreational exercise such as swimming or brisk walking and strength conditioning exercise is safe and beneficial
  - the aim of recreational exercise is to stay fit, rather than to reach peak fitness
  - if women have not exercised routinely they should begin with no more than 15 minutes of continuous exercise, three times per week, increasing gradually to daily 30-minute sessions
  - if women exercised regularly before pregnancy, they should be able to continue with no adverse effects.
- Explain to those women who would find this level of physical activity difficult that it is important not to be sedentary, as far as possible. Encourage them to start walking and to build physical activity into daily life, for example, by taking the stairs instead of the lift, rather than sitting for long periods.

References

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