

Document Control

| Title | | | |
|--|-------------|--------------------------------------|--|
| Obesity in Pregnancy Guideline | | | |
| Author Kerry Allen | | Author's job title Midwife | |
| Directorate Clinical Support & Specialist Services | | Department Maternity | |
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| 4.1 | Feb 2013 | Revision | Title changes of Specialist Risk Midwife to Clinical Risk Manager for the Maternity Services in audit |
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| 5.0 | Sept16 | Final | Amendments incorporated. |
| 5.1 | June 2020 | Revision | Full revision of document for re-approval in line with current national guidance. Re-structured for ease of clinical use. Inclusion of 'Key Points' section, glossary of terms. Updated risk factors. Additional ultrasound scans at 32 and 40 weeks- care pathways updated to reflect this. Care pathway appointments in line with Primiparous pathway. Aspirin increase to 150mg OD. Inclusion of elective IOL and LSCS. Use of the birthing pool updated for weight limit, not BMI (following risk discussion). Inclusion of management of third stage of labour. Inclusion of Appendix 3: information for discussion |

| | | | |
|--|-----------|---|---|
| | | | regarding pregnancy risks |
| 6.0 | July 2020 | Final | Approved by Maternity Specialist Governance Group |
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CONTENTS

| | |
|--|-----------|
| Document Control | 1 |
| Glossary of Terms | 3 |
| 1. Introduction | 5 |
| 2. Purpose | 5 |
| 3. Aims and Objectives | 5 |
| 4. Definitions | 6 |
| 5. Risks of Obesity in Pregnancy | 6 |
| Maternal | 6 |
| Infant | 7 |
| 6. Responsibilities of the Midwife | 7 |
| 7. Care Pathways | 8 |
| 8. Equipment | 13 |
| 9. Patient Information Leaflet | 14 |
| 10. Education and Training | 14 |
| 11. Consultation, Approval, Review and Archiving Processes | 14 |
| 12. Monitoring Compliance with and the Effectiveness of the Guideline | 15 |
| 13. References | 15 |
| 14. Associated Clinical Guidelines or Policies | 16 |
| Appendix 1 – Assessment for Care of Women with BMI 30- 39.9 in pregnancy | 17 |
| Appendix 2 – Assessment for Care Of Women with BMI > 40 in pregnancy ... | 18 |
| Appendix 3- Discussion around the increased risks in pregnancy | 19 |

Glossary of Terms

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|---------------------------------------|
| BMI- Body Mass Index |
| CLU- Consultant Led Unit |
| PPH- Post-partum Haemorrhage |
| DVT- Deep Vein Thrombosis |
| PE- Pulmonary Embolism |
| OGTT- Oral Glucose Tolerance Test |
| BP- Blood Pressure |
| FSE- Foetal Scalp Electrode |
| IV- Intravenous |
| LSCS- Lower Segment Caesarean Section |
| SFH- Symphysis Fundal Height |

GDM- Gestational Diabetes Mellitus

FBC- Full Blood Count

GAP= Growth Assessment Protocol

Key Points

- **BMI should be calculated for all pregnant women at booking, or at the earliest opportunity, and recorded in the handheld notes, on the antenatal summary and on Trakcare.
Formula: $\text{weight (kg)} / \text{height (m)}^2$**
- **Commence care following the appropriate care pathway in appendices.**
- **Women should be informed that most individuals with a raised BMI have straightforward pregnancies and healthy babies.**
- **Women advised to take 5mg Folic Acid up to 12 weeks of pregnancy.**
- **Vitamin D 10 micrograms daily for the duration of pregnancy and breastfeeding.**
- **A Pre-eclampsia risk assessment to be performed at booking.**
- **A Venous Thromboembolism risk assessment to be performed at booking.**
- **Blood Pressure monitoring should be carried out at each maternity appointment using the appropriate sized cuff.**
- **Offer screening for gestational diabetes at 24-28 weeks.**
- **Serial growth ultrasound scans 4 weekly from 28 weeks.**
- **Women with a BMI ≥ 40 should be offered an anaesthetic review between 28–34 weeks gestation, or before, if clinically indicated.**
- **The duty Anaesthetist and Obstetric Registrar should be informed when a women with a BMI ≥ 40 is admitted to labour ward.**
- **All women with a BMI ≥ 35 should be recommended to have active management of the third stage of labour.**
- **Women with a BMI ≥ 40 should have IV access early in labour with FBC and group and save taken.**

1. Introduction

- 1.1. Obesity in pregnancy is associated with an increased risk of adverse outcomes for mothers and babies. This includes thrombosis, gestational diabetes, high blood pressure and pre-eclampsia, stillbirth and miscarriage.
- 1.2. The MBRRACE-UK report “Saving Lives, Improving Mothers’ Care; lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2015-17” notes that 34% of women who died in 2015-2017 were obese and 24% were overweight.

2. Purpose

- 2.1. This document sets out Northern Devon Healthcare NHS Trust’s best practice guidelines for treating women who have a raised BMI.
- 2.2. This guideline applies to all pregnant women who book for maternity care with Northern Devon Healthcare Trust. It is for use by all staff within the maternity department and must be adhered to. Non-compliance with this guideline may be for valid clinical reasons only. The reason for non-compliance must be documented clearly in the patient’s notes.

3. Aims and Objectives

- 3.1. To promote checking and recording of BMI in pregnant women at booking or the first antenatal clinic appointment and commence care following the appropriate care pathway.
- 3.2. To provide a safe and quality service to pregnant women who present at booking with a raised BMI that is ≥ 30 .

Plan appropriate care for obese pregnant women

- Minimise the clinical risks for the women and the foetus
- Minimise the occupational health and safety risks for staff
- Maintain dignity and self-esteem for the patient.

4. Definitions

| Classification | BMI (kg/m ²) | Risk of obstetric/anaesthetic complications |
|----------------|--------------------------|--|
| Normal range | 18.5-24.9 | No increased obstetric or anaesthetic risk |
| Overweight | 25-29.9 | No increased obstetric or anaesthetic risk |
| Obese I | 30-34.9 | Mildly increased obstetric and anaesthetic risk |
| Obese II | 35-39.9 | Moderately increased obstetric and anaesthetic risk |
| Obese III | >40 | Significantly increased obstetric and anaesthetic risk |

4.1. Obesity is defined by the World Health Organisation (WHO) as a Body Mass Index (BMI) ≥ 30 (kg/m²). However those individuals with a BMI ≥ 40 are defined as having Morbid/Level III obesity and defined as Bariatric. The standard WHO classification is shown in the table below:

4.2. Formula: weight (kg) / height (m)²

Example: Weight = 68 kg, Height = 165 cm (1.65 m)

Calculation: $68 \div (1.65)^2 = 24.98$

5. Risks of Obesity in Pregnancy

Maternal

(RCOG, 2018)

- Miscarriage
- Gestational diabetes
- Hypertension / Pre-eclampsia
- Mental health problems
- Pre-term labour
- Induced labour
- Prolonged labour

- Venous thromboembolism
- Difficulty monitoring the foetus
- Increased rate of Caesarean section / instrumental deliveries
- Anaesthetic complications
- Shoulder Dystocia
- PPH
- Post caesarean section wound infection
- Mortality
- Intrauterine death / Stillbirth
- Lower breastfeeding rate

Infant

(RCOG, 2018)

- Early neonatal death
- Increased birth weight / macrosomia
- Prematurity
- Hypoglycaemia
- Meconium aspiration
- Child adiposity
- Fetal congenital abnormality
- Difficulty in assessment of fetal growth by both palpation and ultrasound
- Increased risk of developing obesity and metabolic disorders in childhood

6. Responsibilities of the Midwife

- 6.1.** BMI should be calculated for all pregnant women at booking, or at the earliest opportunity, and recorded in the handheld notes, on the antenatal summary and on Trakcare. Self-reported weights and heights should not be used as a substitute for accurate weight and BMI assessment.

- 6.2. The midwife should exercise professional judgment and apply knowledge and skills in each individual situation in which care is to be given. When obesity BMI ≥ 30 is identified, the woman should be carefully informed of the risks ([see Appendix 3](#)).
- 6.3. Women should be informed that most individuals with a raised BMI have straightforward pregnancies and healthy babies. Whilst women should be provided with the risks of raised BMI in pregnancy, in order to make informed decisions and choices, any discussions should be sensitive, empowering women to actively engage with health professionals and the services available to them. The use of language in such conversations is an important factor that contributes to the holistic approach to care and the experience women will have of maternity care.

7. Care Pathways

ANTENATAL MANAGEMENT

BMI 30-39.9

- 7.1. **If the woman's BMI is 30 – 39.9 commence care pathway in [Appendix 1](#), to be filed in the handheld notes.**
- 7.2. Advise women with a BMI of 35-39.9 with no additional risk factors to book under Modified Midwifery Led Care (See Antenatal Care Pathway Guidance). This is Midwifery Led Care with serial ultrasound scans included.
- 7.3. If BMI >35 with any additional risk factor as per the Antenatal Care Pathway Guidance, recommend referral for consultant led care.
- 7.4. If BMI > 35 , recommend place of birth in a CLU.

BMI ≥ 40

- 7.5. **If the woman's BMI is ≥ 40 commence care pathway in [Appendix 2](#), to be filed in the handheld notes.**
- 7.6. Recommend referral for consultant led care.

Screening for Hypertension and Venous Thromboembolism

- 7.7. An appropriate size arm cuff should be used for taking a blood pressure measurement at the booking appointment and for all subsequent consultations.
- 7.8. A pre-eclampsia risk assessment should be performed at the booking appointment and 36 week antenatal check. See Clinical Guideline: [Hypertensive Disorders in Pregnancy including HELLP Syndrome, and Acute Fatty Liver Disease](#)

- 7.9. A venous thromboembolism risk assessment should be performed at the booking appointment and 36 week antenatal check. See Clinical Guideline: [Reducing the risk of thrombosis and embolism during pregnancy and the puerperium Guidelines](#).

Vitamin Supplements

- 7.10. Advise the woman to take 5 mg folic acid supplementation daily until the 12th week of pregnancy. Prescription should be arranged by a general practitioner who will be notified by a community midwife.
- 7.11. Advise the woman to take Vitamin D3 10 micrograms daily in the form of a pregnancy vitamin for the duration of pregnancy and breastfeeding.
- 7.12. Women with at least two moderate risk factors or one high risk factor should be advised to take aspirin 150 mg/day from 12 weeks until birth.

| 150 mg Aspirin to be taken once per day in the evening from 12 weeks of pregnancy until delivery | | | |
|---|--|--|---|
| ✓ | One High Risk Factor for pre-eclampsia | Two or more Moderate Risk Factors for pre-eclampsia | ✓ |
| | Hypertensive disease during a previous pregnancy | First pregnancy | |
| | Chronic Kidney Disease | Maternal age 40 years or older at booking | |
| | Autoimmune disease such as systemic lupus erythematosus or antiphospholipid syndrome | Pregnancy interval of more than 10 years | |
| | Type 1 or Type 2 diabetes | Family history of pre-eclampsia | |
| | Chronic Hypertension | Multiple Pregnancy | |
| | Booking Systolic BP ≥ 140 or Diastolic BP ≥ 90 mmHg | BMI ≥ 35 at booking | |
| Requires aspirin independent of pre-eclampsia | | | |
| | Previous pregnancy with Small for Gestational Age Fetus | | |

Gestational Diabetes Screening

- 7.13. Offer testing for Gestational Diabetes with OGTT at 24 -28 weeks.

Diet and Lifestyle advice

- 7.14. There should be a sensitive, open, discussion on raised BMI in pregnancy, including associated potential complications/risks for the woman and the baby. This should be documented in the handheld notes.
- 7.15. A patient information leaflet should be provided to all women with a raised BMI, ([see section 9](#)).

- 7.16. Women should be advised on the benefits of moderate exercise and healthy eating. Refer to a dietician if necessary. There is a lack of consensus on optimal gestational weight gain. Until further evidence is available, a focus on a healthy diet may be more applicable than prescribed weight gain targets.
- 7.17. Weigh all women at 36 weeks gestation and document this. Each woman should have a plan of care for pregnancy, labour and delivery which should be clearly documented in the hand held notes.

Antenatal Fetal Monitoring

- 7.18. As per GAP, any women with a BMI of 30-35 should be referred for ultrasound scan to assess fetal growth and/or presentation if there is any uncertainty over fetal growth or liquor volume using customised GROW chart.
- 7.19. Women with BMI ≥ 35 are more likely to have inaccurate SFH measurements so should be referred for serial ultrasound scans at 28, 32, 36 and 40 weeks to assess fetal growth and presentation.

Anaesthetic Referral

- 7.20. Women with a BMI ≥ 40 , in addition to the requirements listed above, should be offered an anaesthetic review between 28–34 weeks gestation, or before, if clinically indicated. The discussion and management plan must be clearly documented in the health record.

Manual Handling and Tissue Viability

- 7.21. Women with a BMI of ≥ 40 should have an individual documented assessment in the third trimester of pregnancy using the Risk Assessment Tool to determine manual handling requirements for childbirth with consideration of tissue viability issues.
- 7.22. The midwife should assess the availability of suitable equipment for a woman with a raised BMI in all care settings.

Place of Birth

- 7.23. Women with a BMI 30-35 should have an individualised assessment for consideration of birth place setting by 36 weeks.
- 7.24. Any associated intrapartum risks and the additional care that can be provided in a CLU, should be discussed with the woman, so that they can make an informed choice about place of birth.
- 7.25. If BMI > 35 , NICE CG190 recommends that women are advised to birth in a CLU.

Elective Induction of Labour

- 7.26. Gaudet et al (2014) suggested that maternal obesity (BMI \geq 30) can be associated with fetal macrosomia and 'overgrowth'. Research has confirmed that an elective IOL at term may reduce the risk of macrosomia and reduce the risk of caesarean section without increasing the risks of adverse outcomes (Lee et al., 2016).
- 7.27. The option of induction should be discussed with each case taken on its own merit and in accordance with the woman's wishes (RCOG, 2018).

Elective Caesarean Section

- 7.28. The decision for a woman with a raised BMI to give birth by planned caesarean section should involve a multidisciplinary approach, following holistic care, taking into consideration the individual woman's comorbidities, antenatal complications and wishes (RCOG, 2018).
- 7.29. Risk of caesarean section is increased by 50% in overweight women and doubled in obese women (Poobalan et al. 2009). Cervical favourability should be taken into account when deciding plan for induction of labour in primigravid obese patients with poor Bishops Scores as their chance of a successful induction is lower (Wolfe et al., 2014).

INTRAPARTUM MANAGEMENT

- 7.30. All blood pressure measurements should be taken using the appropriate size arm cuff.
- 7.31. Complete a manual handling risk assessment to ensure the correct equipment is available and used. See [Moving and Handling Policy](#).
- 7.32. Measure and fit TED anti-embolism stockings. Consider calf compression device for all women with BMI \geq 40.
- 7.33. Assess pressure areas and maintain skin integrity.
- 7.34. Consider ultrasound scan to confirm fetal presentation.
- 7.35. Be alert to increased risk of shoulder dystocia.

Anaesthetics

- 7.36. The duty anaesthetist and duty obstetric registrar should be informed when a woman with a BMI \geq 40 is admitted to labour ward. This communication should be documented in the notes by attending midwife.
- 7.37. Women with a BMI \geq 40 should have IV access early in labour with FBC and group and save taken.

- 7.38. Women on antenatal LMWH may not have regional anaesthesia (epidural or spinal) until 24 hours after the last therapeutic dose or 12 hours after the last prophylactic dose. Therefore women should be advised to stop taking antenatal Enoxaparin the evening prior to induction, as soon as labour begins or when membranes rupture.
- 7.39. For women with a BMI ≥ 40 , prophylactic omeprazole should be administered as per prescription.

Fetal Monitoring

- 7.40. Raised BMI alone is not an indication for continuous fetal monitoring in labour. If there are no other co-morbidities, medical or obstetric complications. Intermittent fetal heart auscultation should be used as per NICE CG190 Intrapartum care for healthy women and babies.
- 7.41. Be aware of the difficulties of fetal monitoring. If loss of contact with fetal heart is an issue, a fetal scalp electrode should be considered.

Birthing pool

- 7.42. NICE (2017) guidance recommends all women are offered the opportunity to labour in water for pain relief. In the absence of other contraindicated factors, use of a birthing pool may be considered. For women with a BMI ≥ 40 wishing to use the pool, there must be an individualised risk discussion carried out by the consultant and documented in the notes, in the antenatal period.
- 7.43. All women must be able to safely, self-mobilise in, and out of the pool. All women must be measured for a hoist sling prior to entering the pool, in case use of the pool hoist is required in an emergency. The weight limit for the skyframe hoist is 160kg.
- 7.44. During labour, it is essential that individual assessment shows fetal heart auscultation is possible. A woman should be advised to leave the pool if adequate fetal heart auscultation is not safely achievable. See [Telemetry Management of High Risk Women in Labour and Birth using Water/Birthing Pool and Telemetry Standard Operating Procedure.](#)

Third Stage Management

- 7.45. All women with a BMI ≥ 35 should be recommended to have active management of the third stage of labour.

POSTNATAL MANAGEMENT

VTE prophylaxis

- 7.46. Women with a BMI ≥ 30 should be encouraged to mobilise as early as practicable following childbirth to reduce the risk of thromboembolism.

- 7.47. Carry out VTE risk assessment as per [“Reducing the risk of thrombosis and embolism during pregnancy and the puerperium Guidelines”](#).
- 7.48. Administer prophylactic LMWH as per risk assessment above, in dose appropriate to their weight.
- 7.49. TED stockings or calf compression devices to be worn throughout hospital stay regardless of mode of delivery for women with BMI ≥ 35 .
- 7.50. Give advice on signs of deep vein thrombosis and pulmonary embolism.

Breastfeeding support

- 7.51. Provide appropriate specialist advice and support regarding the initiation, maintenance and benefits of breastfeeding.

Infection

- 7.52. Assess wound and observe for signs of dehiscence.

Diet and Lifestyle

- 7.53. Advise on lifestyle modification, healthy eating and exercise.
- 7.54. Consider referral for postnatal physiotherapy where appropriate.
- 7.55. Discuss contraception.

Gestational Diabetic

- 7.56. Women with GDM will have a fasting plasma glucose or HbA1c taken at routine postnatal follow up.

8. Equipment

The NDDH maternity unit has access to bariatric equipment to protect patients and staff from injury. The weight limit for equipment in use in the maternity unit is as follows:

| Equipment | Safe working Load |
|--------------------------------|-------------------|
| Delivery bed - Hill Rom P3700 | 227 kg |
| Theatre bed - Eschmann T20M | 300Kg |
| Electronic bed - Hill Rom IPX4 | 185 Kg |

| | |
|---------------------------------------|--|
| Day Assessment Unit Couch Medi Plinth | 260kg |
| Hoist -Skyframe | 160 Kg |
| Adult Scales - Seca Delta | 200 Kg |
| BP cuffs | A variety of sizes available in clinical areas |
| Wheelchair – James Spence | 100 Kg |

- 8.1. For further information on bariatric care and available equipment, including weight limits, refer to [Back Care Team](#) site on BOB.
- 8.2. The Back Care Office is also contactable on extension 4126.
- 8.3. To arrange collection of equipment ring extension 5900 (porters).
- 8.4. All equipment is available for use. Ensure porters have updated the book about where the equipment is being used, and leave a message with the Back Care Office (4126).

9. Patient information leaflet

- 9.1. Signpost to RCOG patient information leaflets:
 - [“Being overweight during pregnancy and after birth”](#).
 - [“Why your body weight matters during pregnancy and after birth?”](#)

10. Education and Training

- 10.1. Staff should have yearly manual handling training and training on the use of specialist equipment for pregnant obese women.

11. Consultation, Approval, Review and Archiving Processes

- 11.1. The author consulted with all relevant stakeholders. See Document Control Report.
- 11.2. Final approval will be given by the Maternity Specialist Governance Group (MSGG).

- 11.3. The guidelines will be reviewed every 3 years. The maternity governance co-ordinator will be responsible for ensuring the guidelines are reviewed and revisions approved following correct protocol.
- 11.4. All versions of these guidelines will be archived in electronic format by the author within the Maternity Team policy archive.
- 11.5. Any revisions to the final document will be recorded on the Document Control Report.
- 11.6. To obtain a copy of the archived guidelines, contact should be made with the Maternity team. This guideline can be found on Bob.

12. Monitoring Compliance with and the Effectiveness of the Guideline

- 12.1. Monitoring of implementation, effectiveness and compliance with the obesity in pregnancy guideline will be carried out through audit and is the responsibility of the senior clinical/management team.

13. References

- 13.1. Association of Anaesthetists of Great Britain and Ireland and Obstetric Anaesthetists' Association. *OAA/AAGBI Guidelines for Obstetric Anaesthetic Services 2013*. London: OAA/AAGBI; 2013.
- 13.2. Begley CM, Gyte GM, Murphy DJ, Devane D, McDonald SJ, McGuire W. Active versus expectant management for women in the third stage of labour. *Cochrane Database Syst Rev* 2010;(7): CD007412.
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- 13.5. Knight M, Bunch K, Tuffnell D, Shakespeare J, Kotnis R, Kenyon S, Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. *Saving Lives, Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2015-17*. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2019
- 13.6. Lee VR, Darney BG, Snowden JM, Main EK, Gilbert W, Chung J, et al. (2016) Term elective induction of labour and perinatal outcomes in obese women: retrospective cohort study. *BJOG* 2016; **123**: 271– 8.

- 13.7. National Institute for Health and Care Excellence (2019) Hypertension in pregnancy: diagnosis and management. London: NICE
- 13.8. National Institute for Health and Care Excellence (2017). *Intrapartum care for healthy women and babies*. Clinical guideline CG190. Manchester: NICE; 2017.
- 13.9. National Institute for Health and Care Excellence (2014) Obesity: identification, assessment and management London: NICE
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- 13.12. Royal College of Obstetricians and Gynaecologists (2018) Green Top Guideline No. 72: Care of Women with Obesity in Pregnancy. London: RCOG
- 13.13. Royal College of Obstetricians and Gynaecologists (2015) Green-Top Guideline No. 37: Reducing the risk of venous thromboembolism during pregnancy and the puerperium London: RCOG
- 13.14. Royal College of Obstetricians and Gynaecologists. The Investigation and Management of the Small-for-Gestational-Age Fetus. Green-top Guideline no. 31. London: RCOG; 2014.
- 13.15. Wolfe H, Timofeev J, Tefera E, Desale S, Driggers RW. Risk of cesarean in obese nulliparous women with unfavorable cervix: elective induction vs expectant management at term. *Am J Obstet Gynecol* 2014; **211**: e1– 5.

14. Associated Clinical Guidelines or Policies

- [Antenatal and postnatal screening guideline](#)
- [Fetal Wellbeing and Monitoring Guideline](#)
- [Caesarean section guideline](#)
- [Intrapartum Care: Care of healthy women and their babies during childbirth including fetal monitoring in labour](#)
- [Diabetes in pregnancy- guidelines for management](#)
- [Hypertensive Disorders in Pregnancy including HELLP Syndrome, and Acute Fatty Liver Disease](#)
- [Moving and Handling Policy](#)
- [Shoulder Dystocia Guidelines](#)
- [Telemetry Management of High Risk Women in Labour and Birth using Water/Birthing Pool and Telemetry Standard Operating Procedure](#)
- [Reducing the risk of thrombosis and embolism during pregnancy and the puerperium Guidelines](#)

Appendix 1- Assessment for Care of Women with BMI 30 – 39.9 in pregnancy

| | | Date | Signature |
|----------------------|--|------|-----------|
| Booking Visit | <ul style="list-style-type: none"> Nutritional advice & referral to dietician if necessary Folic Acid 5 mg until 12 weeks Vitamin D3 10 micrograms (pregnancy multivitamin) during pregnancy & breast feeding Aspirin 150 mg once daily if any additional risk factors* VTE risk assessment as per guideline. Record BMI Discussion of increased risks in pregnancy Appropriate sized cuff for BP measurement following arm measurement (please ✓) Cuff Size <input type="checkbox"/> size 12 <input type="checkbox"/> Modified Midwifery Led Care * | | |
| 10-12 weeks | Dating Scan | | |
| 20 weeks | Anomaly scan | | |
| 25 weeks | BP check and plan for OGTT | | |
| 28 weeks | BP check and growth scan (≥ 35) Oral Glucose Tolerance Test (OGTT) | | |
| 31 weeks | BP check | | |
| 32 weeks | Growth scan (≥ 35) | | |
| 34 weeks | BP check | | |
| 36 weeks | <ul style="list-style-type: none"> BP check and growth scan (≥ 35) Recalculate BMI if > 40 refer to consultant care and follow Care of women with BMI > 40 Reassess VTE risk as per guideline | | |
| 38 weeks | BP check | | |
| 40 weeks | BP check and growth scan (≥ 35) | | |
| Intrapartum | <ul style="list-style-type: none"> BMI ≥ 35 consultant led unit Active management of 3rd stage | | |
| Postnatal | <ul style="list-style-type: none"> Reassess VTE risk as per guideline Breastfeeding support Advice regarding lifestyle, diet and nutrition Contraceptive advice If GDM, for a fasting plasma glucose or HbA1c at routine postnatal follow up | | |

*Age ≥ 40 at booking / first pregnancy/multiple pregnancy/ hypertensive disease during a previous pregnancy/ family history of PET/ last delivery more than 10 yrs ago/ booking diastolic BP >80 or Systolic BP ≥ 140 /pre-existing hypertension/ chronic renal disease/diabetes/autoimmune disease.
Reference: Joint RCOG/CEMACE Guideline: Management of women with obesity in pregnancy. March 2010.

** Modified Midwifery care as per Antenatal Care Pathway Guidance (for additional ultrasound surveillance).

If there are any additional risk factors at booking or at any stage of pregnancy refer to Consultant for Consultant Led Care.

Appendix 2 – Assessment for Care Of Women with BMI ≥ 40 in pregnancy

| | | Date Arranged | Signature |
|----------------------|--|---------------|-----------|
| Booking Visit | <ul style="list-style-type: none"> Nutritional advice & referral to dietician if necessary (BMI>40 or those who had gastric band operation) Folic Acid 5 mg until 12 weeks Vitamin D3 10 micrograms (pregnancy multivitamin) during pregnancy & breast feeding Aspirin 150 mg daily if any additional risk factors* VTE risk assessment as per guideline. Record BMI Refer for anaesthetic review (28-34 weeks) Discussion of increased risks Appropriate sized cuff for BP measurement following arm measurement (please ✓) Cuff Size <input type="checkbox"/> size 12 <input type="checkbox"/> Recommend delivery in a Consultant Led unit Consultant led care | | |
| 10-12 weeks | Dating Scan | | |
| 20 weeks | Anomaly scan | | |
| 25 weeks | BP Check and plan for OGTT | | |
| 28 weeks | BP Check and growth scan Oral Glucose Tolerance Test (OGTT) Refer for anaesthetic review | | |
| 31 weeks | BP Check | | |
| 32 weeks | Growth scan | | |
| 36 weeks | <ul style="list-style-type: none"> Growth scan Recalculate BMI Reassess VTE risk as per guideline Mode of delivery assessment Inform CDS/ theatre/Bassett ward re: manual handling and equipment needs | | |
| 38 weeks | BP Check | | |
| 40 weeks | BP Check and growth scan | | |
| Intrapartum | <ul style="list-style-type: none"> Inform anaesthetist of admission Senior obstetrician for LSCS IV access in labour Consider ultrasound to confirm presentation Consider FSE for fetal monitoring Prophylactic Omeprazole as per prescription Check pressure areas if epidural sited Active management of 3rd stage | | |
| Postnatal | <ul style="list-style-type: none"> Reassess VTE risk as per guideline Breastfeeding Support Advice regarding lifestyle, diet and nutrition Contraceptive advice If GDM, for a fasting plasma glucose or HbA1c at routine postnatal follow up | | |

* Age \geq 40 at booking / first pregnancy/multiple pregnancy/ hypertensive disease during a previous pregnancy/ family history of PET/ last delivery more than 10 yrs ago/ booking diastolic BP $>$ 80 or Systolic BP \geq 140/pre-existing hypertension/ chronic renal disease/diabetes/autoimmune disease.

Appendix 3- Discussion around the increased risks in pregnancy

Most individuals with a raised BMI have straightforward pregnancies and healthy babies.

However, potential complications that should be discussed:

- Increased risk of gestational diabetes, pre-eclampsia 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 potential for difficulty with intrapartum fetal monitoring, anaesthesia and caesarean section, which would require senior obstetric and anaesthetic involvement as well as an antenatal anaesthetic assessment.
- The need to prioritise the safety of the mother at all times.

Reference: Royal College of Obstetricians and Gynaecologists (2018) Green Top Guideline No. 72: Care of Women with Obesity in Pregnancy. London: RCOG