# OBESE WOMEN, MANAGEMENT OF IN MATERNITY

| Cross References (including NSW Health/ SESLHD policy directives) | NSW Health Guideline. Occupational Health & Safety Issues Associated with Management Bariatric (Severely Obese) Patients  
SGSHHS CLIN059 Bariatric Patient – Management of the  
SGSHHS CLIN W&CH (2012) Intrauterine Growth Restriction  
SGSHHS CLIN W&CH (2015) Postpartum Hemorrhage  
SGSHHS CLIN W&CH (2013) Risk Associated Pregnancy (RAP) Team - Criteria For Allocation  
SGSHHS CLIN W&CH (2015) Shoulder Dystocia  
SGSHHS CLIN W&CH (2013) Thromboprophylaxis in pregnancy and postpartum |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1. What it is</td>
<td>A guideline for management of obese women in pregnancy, during birth and the postnatal period</td>
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<tr>
<td>2. Risk Rating</td>
<td>Medium</td>
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</tbody>
</table>
| 3. Employees it Applies to | Registered Midwives, Student Midwives  
Registered Nurses, Student Nurses  
Medical Officers, Medical Students  
Anaesthetics Medical officers  
Dieticians |

## 4. Process

### 4.1 Antenatal care

At Booking:

- Calculate the BMI at booking using pre-pregnant or weight early in pregnancy. Enter weight & height into ObstetriX & BMI will be calculated
- Measure upper arm circumference and record in Antenatal Care Record
- Weight and gestational weight gain should be discussed at booking, and a plan agreed and documented.
- Discuss issues related to the effect of obesity on pregnancy and birth with tact and respect.
- Provide written information: “Weight management during pregnancy” to all women with BMI$>$30kg/m$^2$
- Discuss the importance of healthy eating and appropriate exercise during pregnancy in order to prevent excessive weight gain and reduce the risk of gestational diabetes
- Complete a Venous Thromboembolism Risk Assessment & file in Antenatal Care Record
- Refer obese women to the St George and Sutherland Weight Intervention Group (SSWInG) for antenatal care
Target weight gains:

<table>
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<tr>
<th>Pre-pregnancy BMI (kg/m2)</th>
<th>Rate of gain 2nd and 3rd Trimester (kg per week)*</th>
<th>Recommended total gain range (kg)</th>
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<tbody>
<tr>
<td>Less than 18.5</td>
<td>0.45</td>
<td>12.5-18</td>
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<tr>
<td>18.5-24.9</td>
<td>0.45</td>
<td>11.5-16</td>
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<tr>
<td>25-29.9</td>
<td>0.28</td>
<td>7-11.5</td>
</tr>
<tr>
<td>Greater than or equal to 30.0</td>
<td>0.22</td>
<td>5-9</td>
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*Calculations assume a 0.5-2 kg weight gain in the first trimester

- **For all women with booking BMI >30Kg/m²:**
  - Perform a 75g Glucose Tolerance Test (GTT) at booking only repeat at 28 weeks if first result normal
  - Advise 5mg/day folate 1 month prior to conception and 12 weeks into the pregnancy
  - Offer lactation consultant referral and encourage attendance at free antenatal breastfeeding class ph: 91132053. Document if declines
  - Can birth at TSH

- **In addition to above, women with booking BMI >35Kg/m²:**
  - Plan antenatal care and birth at St. George Hospital
  - Encourage weight measurement at every visit and document inter-pregnancy weight gain
  - Offer referral to dietician
  - Arrange ultrasound for fetal growth at 32-34 weeks gestation.
  - Schedule antenatal visits at least fortnightly from 28 weeks, and weekly from 36 weeks.
  - Refer to anaesthetist at 32-34 weeks gestation in the pre-admission clinic
  - Document a “Bariatric Management Plan” in the third trimester to determine manual handling and equipment requirements for birth (e.g. Hovermatt, bed, wheelchair etc). Notify theatre staff (if woman having caesarean), delivery suite and postnatal ward of these requirements. Discuss the management plan with the woman to reduce anxieties during labour.

- **In addition to the above, for women with booking BMI >45Kg/m²:**
  - Women should be reviewed in the RAP clinic at least once per trimester
  - Consider the use of antenatal enoxaparin (0.5mg/kg/day) in the third trimester
  - Arrange early anaesthetic review in the preadmission clinic
  - A careful review and assessment of co-morbidities (e.g., hypertension, ischaemic heart disease) is required.
  - The Delivery Suite MUM should be made aware of the woman, her Bariatric Management Plan and her Estimated Due Date
  - MUM 1 South should be made aware of the woman, her Bariatric Management Plan and her Estimated Due Date

### 4.2 Intrapartum Care

- Notify the O & G Registrar on admission (BMI >35). Registrar should be in Delivery Suite at the time of birth
- Notify the contact anaesthetist #999 when admitting all mothers with a BMI>40
- A Hovermatt should be used for lateral transfer and repositioning all obese women
- Confirm fetal presentation with ultrasound on admission if difficult to palpate
4.3 Postpartum Care

- Women with BMI 30-40 kg/m² require prophylactic enoxaparin 0.5mg/kg/day postpartum whilst in hospital following caesarean birth
- Women with BMI >40kg/m² should receive enoxaparin 0.5mg/kg per day until discharge regardless of mode of birth, and have calf compressors until mobile
- Women with BMI >45kg/m² should remain on enoxaparin 0.5mg/kg per day until 6 weeks postpartum
- Ensure women >30kg/m² wear anti-embolic stockings if possible
- Refer women with BMI>30kg/m² to Lactation Service after birth
- Consider referral to physiotherapist post caesarean section if woman had a general anaesthetic, is not ambulant, or medically unwell.
- Advise all obese women on weight loss measures prior to next pregnancy to reduce obstetric risk

4.4 Women who have had previous bariatric surgery

- If BMI remains > 30, manage as above
- If BMI < 30, provide standard antenatal care, but:
  - Weigh every visit
  - Perform ultrasound for fetal growth and wellbeing at 34-36 weeks, and monitor for fetal growth restriction as these women have a higher risk of this
  - If a gastric band, ensure they have been reviewed by the responsible specialist or team regarding the correct degree of tension in the band

4.5 Manual handing considerations

- Ensure staff are competent in the use of required equipment, and complete training and/or refresher in-service as required.
- A Hovermatt should be used for (lateral) transfer and repositioning all obese women
- Ensure availability of appropriate Bariatric equipment is available for use in all areas of maternity/SCN/Operating Theatres. See Workplace Place Instructions.

4.6 Equipment

- Hovermatt (if available)
- Theatre trolley/table in relation to woman’s BMI (see ‘Beds, Lifting Equipment and Ward Equipment including equipment for Large and Very Large Patients’, Policies and Procedures Manual)
- Manual sphygmomanometer with a large cuff and thigh cuff
- Weight-appropriate scales
• Height measure
• Bariatric appropriate equipment: see workplace instructions

4.7 Potential Risks
• Obstetric, medical and anaesthetic complications due to obesity (see below)
• Occupational injuries to staff
• Psychological trauma to staff

4.8 Documentation
• Clinical notes
• Postnatal pathway
• Antenatal cards
• Caesarean section information and booking form
• ObstetriX

4.9 Educational Notes
• Weight should be based on pre-pregnancy or early pregnancy weight.
• WH&S risks include: positioning and moving women, safe use of equipment such as lithotomy stirrups, operating tables.
• Obese women should be encouraged to breastfeed which may enhance maternal weight loss and reduce the likelihood of childhood obesity in the infant.
• The level of risk for a woman is directly related to the level of obesity and is associated with increased risk of antenatal, intrapartum, anaesthetic and postnatal complications. There is also an associated increased risk of morbidity and mortality for both mother and baby. These complications include the following:

Antenatal
  o Hypertension, pre-eclampsia
  o Gestational Diabetes
  o Thrombo-embolic events
  o Abnormal fetal growth: Macrosomia or intrauterine growth restriction
  o Unexplained Stillbirth from 28 weeks gestation
  o Undiagnosed fetal anomaly
  o Sleep apnoea

Intrapartum
  o Failure to progress in labour
  o Shoulder dystocia
  o Difficulties monitoring fetal heart and uterine contractions
  o Difficulty achieving adequate analgesia
  o Technical difficulties siting and establishing regional analgesia
  o Unsuccessful vaginal birth after caesarean
  o Increased risk of Emergency caesarean
  o Technically difficult Caesarean section, with associated increased morbidity and mortality.
  o Higher anaesthetic risks with emergency surgery
  o Difficulty with cannulation/Intravenous access

Postpartum
  o Wound infection
  o Thromboembolic events
  o Postnatal depression
  o Delayed lactation
An increase in Caesarean Section rate among obese women, with associated anaesthetic concerns such as:

- Patient positioning (since patient cannot lie flat) can be difficult. Positioning is vital to optimise maternal airway management and oxygenation
- Regional anaesthesia for surgery favoured but more difficult to site. There can be unpredictable spread of local anaesthetics, more likely to dislodge or be ineffective
- Airway maintenance can be difficult, endotracheal intubation may be impossible especially in the emergency setting
- Oxygenation difficult to maintain due to increased maternal oxygen consumption, increased abdominal pressure and significant decreased in maternal lung capacity
- Patient monitoring may be technically challenging especially BP.

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<tr>
<th>5. Keywords</th>
<th>Obesity, Bariatric, Thromboprophylaxis</th>
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<tr>
<td>6. Functional Group</td>
<td>Women’s and Children’s Health</td>
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<td>8. Consumer Advisory Group (CAG) approval of patient information brochure (or related material)</td>
<td>Women’s &amp; Children’s online CAG</td>
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<td>9. Implementation and Evaluation Plan Including education, training, clinical notes audit, knowledge evaluation audit etc</td>
<td>Staff will be notified of the revised CIBR at various meetings including ward staff meetings, management and education meetings, open forums, through direct email contact with clinicians and through in-service education where appropriate and necessary. Staff are required to sign an audit sheet in their clinical area to acknowledge they have read and understand the new CIBR. The CIBR will be uploaded to the W&amp;CH CIBR page on the intranet.</td>
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</table>
| 10. Knowledge Evaluation | Q1 – When should women with BMI >30 have GTTs, and what type? A 1– 75g Glucose Tolerance Test (GTT) at booking and repeat at 28 weeks if 1st result normal

Q 2– Should all obese women be in the RAP team? A 2– No. Refer obese women to the St George and Sutherland Weight Intervention Group (SSWInG) for antenatal care (unless RAP criteria met) |
| 11. Who is Responsible | Midwifery Unit Managers  
O & G Staff Specialists |
|------------------------|-----------------------------|

### Approval for OBESE WOMEN, Management of in Maternity* N/A where appropriate

| *Specialty/Department Committee | Committee title: Women’s & Children’s Protocols Committee  
Chairperson name/position | Louise Everitt CMC  
Date 25.11.2015 |
|------------------------|-------------------------------------------------|
| *Specialty/Department Committee | Committee title: Women’s & Children’s Protocols Committee  
Chairperson name/position | Dr Trent Miller O&G Senior Medical Officer  
Date 16.11.2015 |
| *Nursing/Midwifery Co-Director | Name/position Lorena Matthews Midwifery & Nursing Co-director W&CH  
Date 19.11.2015 |
| *Medical Co-Director | Name/position Prof Michael Chapman Medical Co-Director W&CH  
Date 16.11.2015 |
| Executive Sponsor | Name/Position Prof Michael Chapman Medical Co-Director W&CH  
Date 16.11.2015 |

### Contributors to CIBR development

e.g. CNC, Medical Officers (names and position title/specialty)

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Dr Izreen Mohamed Iqbal, Staff Specialist Anaesthetist, SGH  
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Dr Bob Fonseca, Director Paediatrics, SGH  
Dr Alys Swindlehurst, Paediatrician, TSH |
## Revision and Approval History

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision number</th>
<th>Author (Position)</th>
<th>Revision due</th>
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<tr>
<td>Sept 2008</td>
<td>1</td>
<td>Christine Catling-Paul (CMC policy development)</td>
<td>2011</td>
</tr>
<tr>
<td>July 2010</td>
<td>2</td>
<td>Christine Catling-Paul (CMC policy development)</td>
<td>2013</td>
</tr>
<tr>
<td>Nov 2014</td>
<td>3</td>
<td>Louise Everitt (CMC)</td>
<td>Nov 2017</td>
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<td>Nov 2015</td>
<td>4</td>
<td>Louise Everitt (CMC)</td>
<td>Nov 2018</td>
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## General Manager Ratification

<table>
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<tr>
<th>Name</th>
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<tr>
<td>Leisa Rathborne, SGH</td>
<td>18.12.15</td>
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<tr>
<td>Karen Becker, TSH</td>
<td>21.12.15</td>
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</tbody>
</table>
Increased BMI >35 Checklist

☐ Give weight management Brochure

☐ Recruit to SSWING group, give group dates & put in scheduler

☐ Booking 75 GTT form

☐ 28/40 75 GTT form

☐ Pre admission clinic (PAC) Appt ext.32925

☐ Growth U/S 34/40

☐ Lactation referral

☐ Dr R/V at 20-24/40    ☐ Dr R/V 30-34/40