Obesity in pregnancy (including post bariatric surgery)

Clinical Guideline Presentation v5.0

45 minutes

Towards CPD Hours

Clinical Excellence Queensland

Queensland Government

References:

Queensland Clinical Guideline: Obesity in pregnancy (including post bariatric surgery) is the primary reference for this package.

Recommended citation:

Queensland Clinical Guidelines. Obesity in pregnancy (including post bariatric surgery) clinical guideline education presentation E21.14-1-V5-R26. Queensland Health. 2021.

Disclaimer:

This presentation is an implementation tool and should be used in conjunction with the published guideline. This information does not supersede or replace the guideline. Consult the guideline for further information and references.

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Objectives

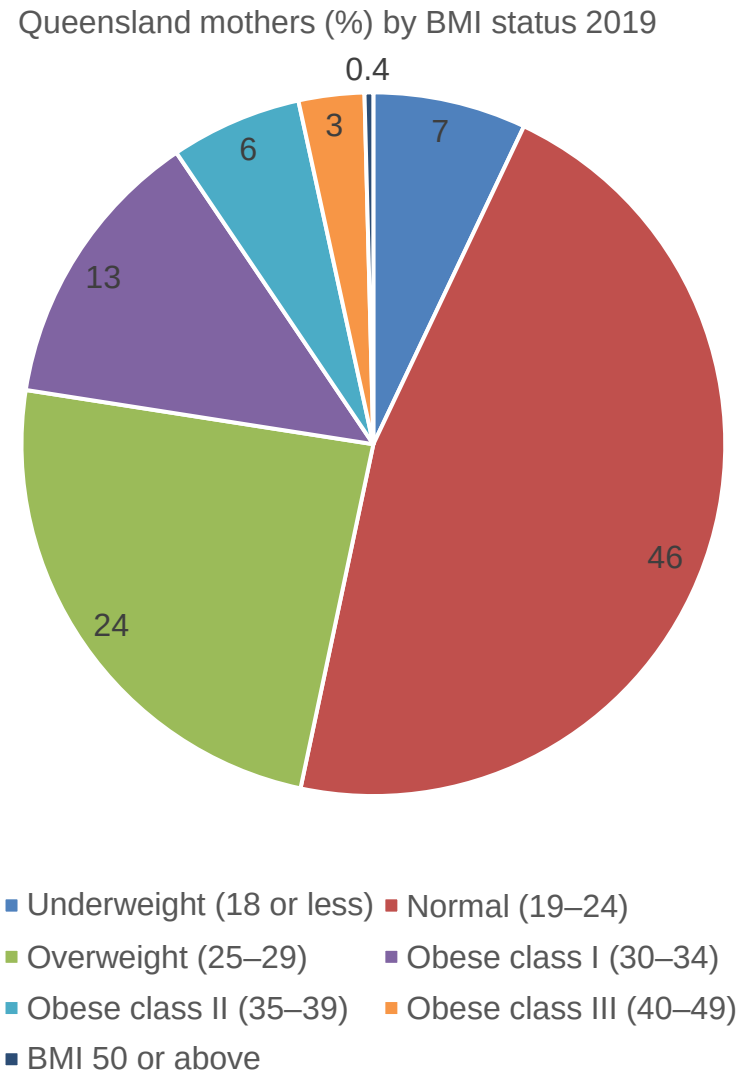
- Discuss recommendations for care
- Review the contextual complexities of obesity
- Define recommended nutritional supplements for women with a raised body mass index (BMI) and/or post bariatric surgery
- Identify strategies to build respectful partnerships and support lifestyle choices
- Apply your knowledge to a fictitious clinical case

Did you know?

- A BMI of 25 kg/m^2 or more, OR excessive gestation weight gain (GWG) is implicated in up to 30% of pregnancy complications

In Queensland:

  - 46.4% mothers had a BMI of 25 kg/m^2 or more (2019)
  - 0.5% of women birthing babies had pre-pregnancy bariatric surgery (2014–2019: *n*=1472)



Weight classifications and recommended gestational weight gain (GWG)

BMI classification (kg/m^2)	
• Underweight	< 18.5
• Normal	18.5–24.9*
• Overweight	25.0–29.9*
• Obese I	30.0–34.9*
• Obese II	35.0–39.9
• Obese III	> 40

*Variations for Asian background

GWG	
Trimester 1	kg
• All women	0.5–2.0
Trimester 2+3	kg/week
• Underweight	0.5
• Normal	0.4
• Overweight	0.3
• Obese	0.2

Total GWG	
Singleton	kg
• Normal	11.5–16
• Overweight	7–11.5
• Obese	5–9
Twin/triplet	kg
• Normal	17–25
• Overweight	14–23
• Obese	11–19

- For women with an Asian background use different BMI ranges:

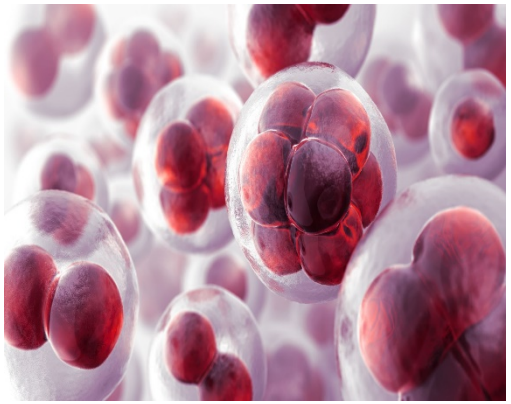
BMI classification (kg/m^2)	
• Underweight	< 18.5
• Normal	18.5–22.9
• Overweight	23.0– 27.5
• Obese	Greater than 27.5

Contextual factors

- Obesity is a multifaceted health condition often associated with other factors, such as:
  - Sub-optimal nutrition
  - Childhood adverse experiences
  - Mental health and/or eating disorders
- Obesity may result in metabolic alterations that perpetuate weight gain and generational obesity

Potential impact

- Evidence suggests obesity creates a cyclical pattern of:
  - Insulin resistance and hyperinsulinaemia
  - Inflammation
  - Oxidative stress
- Maternal metabolic environmental changes at a cellular level may impact:
  - Gene expression
  - Early placental growth
  - Placental function



Health impacts of obesity on the woman

The frequency of health impacts often increases as the BMI increases.

Aspect	Increased incidence
Pregnancy	• Longer time to conceive and infertility • Miscarriage and stillbirth • Gestational diabetes mellites (GDM) • Hypertension and pre-eclampsia • Thromboembolic disease (VTE) • Mental health disorders
Birth	• Preterm labour • Prolonged pregnancy • Induction of labour (IOL) • Assisted birth • Shoulder dystocia • Caesarean • Anaesthetic complications • Postpartum haemorrhage (PPH)
Postnatal	• Infection • VTE • Breastfeeding challenges • Postnatal depression (PND)

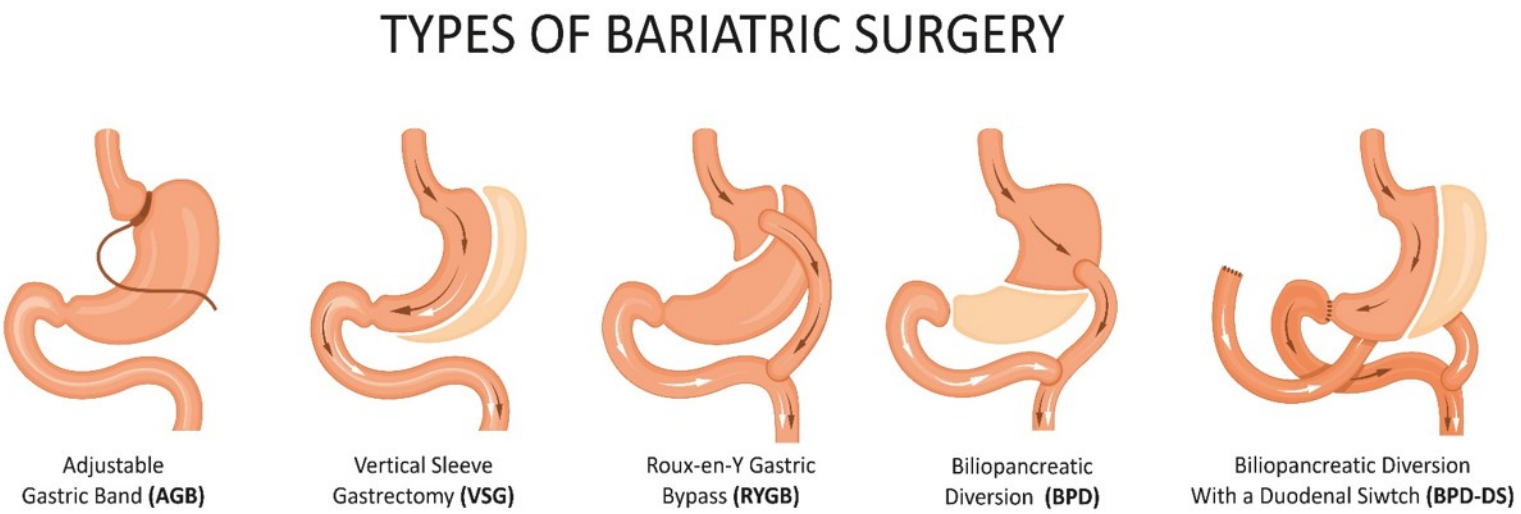
Impacts of obesity on the baby

The frequency of health impacts often increases as the BMI increases.

Aspect	Increased incidence
During pregnancy	• Congenital malformations (e.g. neural tube defect) • Difficulties with fetal surveillance and suboptimal ultrasonography • Large for gestational age (LGA) • Stillbirth
Postnatal	• LGA and associated birth injury • Preterm birth • Jaundice • Hypoglycaemia • Admission to neonatal unit • Respiratory distress • Neonatal and infant death
Longer term	• Childhood obesity, metabolic syndrome, diabetes • Neurodevelopmental differences • Language delay

Previous bariatric surgery

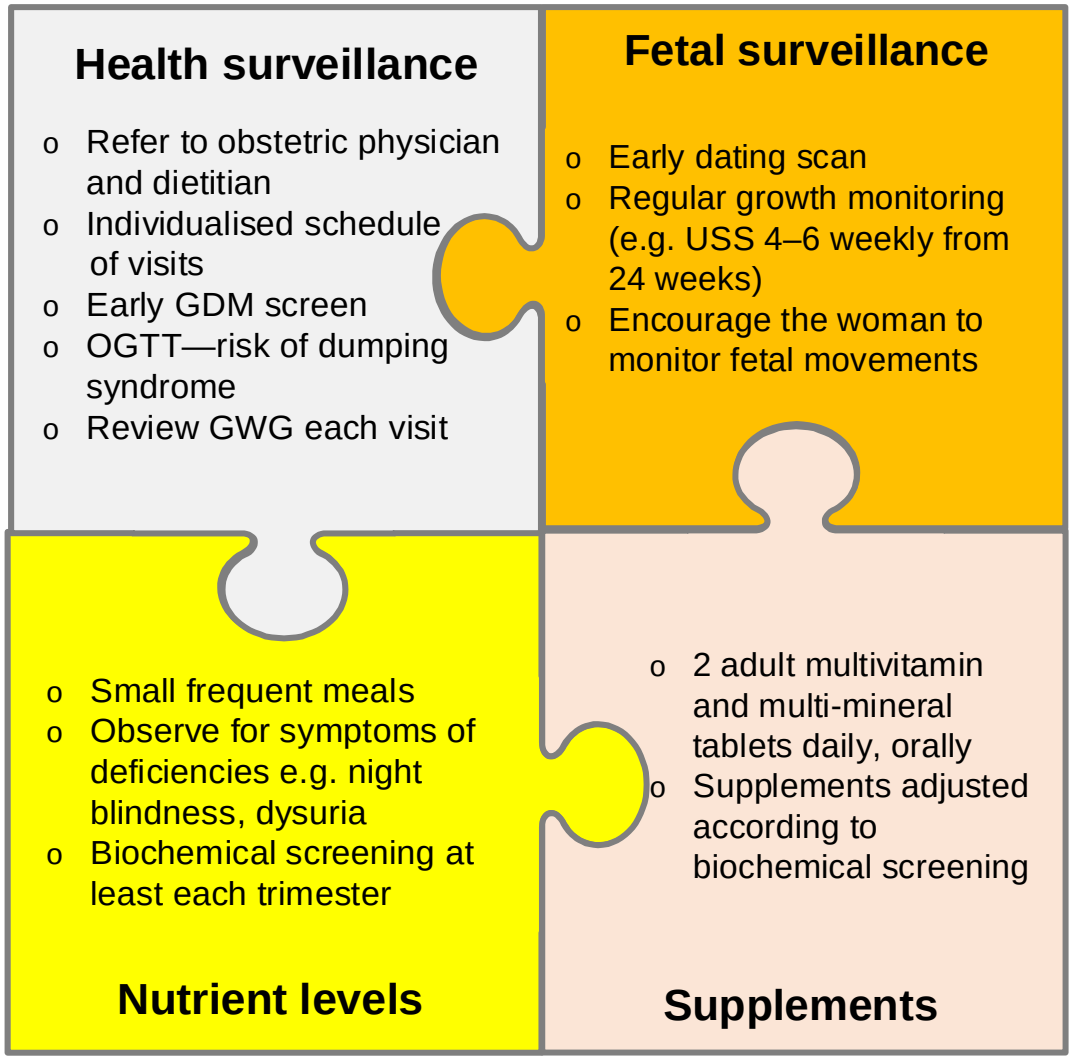
- Ascertain and document the type of bariatric surgery and details of the surgeon



Impacts of bariatric surgery on pregnancy

Aspect		Impact
Woman	Risk	• Increased rates: o Nutritional deficiencies and malabsorption o Unplanned pregnancy
	Benefit	• Reduced rates of: o GDM o Hypertensive disorders o IOL o Epidural use o Labour complications o PPH o Caesarean
Baby	Risk	• Increased rates of: o Congenital abnormalities o Fetal growth restriction/SGA infants o Preterm birth o Stillbirth o Neonatal unit admission
	Benefit	• Reduced rates of: o Neonatal resuscitation o LGA infants

Care additions – post bariatric surgery



Jasmine's care journey

Jasmine's history:

- Lives with partner
- G^4P^1
  - One four year old daughter, born 4.2 kgs
  - Assisted birth and PPH
  - Two miscarriages during the last three years
  - Previous pregnancy notes indicate three visits for antenatal care and a BMI of 32 kg/m^2
  - Jasmine declined being weighed and referrals to dietitian and social worker
- Depression and anxiety

Building a respectful partnership using supportive language

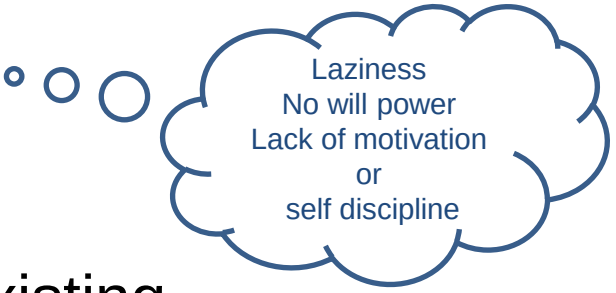
- Using language sensitively and in a supportive way may enable greater health care engagement
- Women have reported experiencing significant weight stigma when accessing maternity care
- Use language preferred by the woman
- Put the woman first in descriptions e.g. ‘the woman living with obesity’
- Avoid terms that could be viewed as offensive (e.g. ‘super’ or ‘morbidly’ obese)

Ask Jasmine her preference about the words used to describe weight

Document the woman’s language preferences clearly in health record

About weight stigma…

- Weight stigma occurs when people feel they have been treated differently because of their weight
- Beliefs based on societal stereotypes may underpin unfair treatment
  - Intentionally or subconsciously
- Weight stigma may accentuate pre-existing psychological factors



Jasmine feels embarrassed about her body weight. During her first pregnancy she was weighed in a public thoroughfare and she felt guilty about the things that could go wrong due to her weight.

Take a moment to reflect and consider:

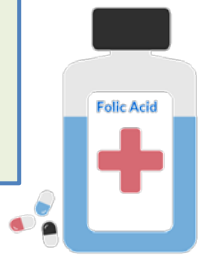
- *Your own views*
- *Stereotypical views of others*
- *How do these impact on health care?*

Preconception care

- Optimising weight and overall health **prior** to pregnancy offers the best opportunity to improve short and long term health for mother and baby
  - Weight loss of 3–5% followed by three months of weight stabilisation may reduce blood glucose and triglycerides
- Consider targeted pre-conception clinics

Jasmine visits her GP prior to her pregnancy, complaining of tiredness. The GP calculates a BMI of 36 kg/m^2 and recommends a full preconception screen plus tests to identify nutritional deficiencies for Jasmine (CHEM20,CRP, Iron studies, Folate, Vitamin D and B12).

On review, Jasmine was recommended to take a higher dose of folic acid, referred to a dietitian and encouraged to join into community health promoting activities.



Individualising antenatal care

- Design the care plan through participatory conversations, using the 5 A's:

Ask-Assess-Advise-Agree-Assist

- Discuss extras
  - Bariatric equipment, BP cuff size, schedule of visits
  - Describe added tests as a way of picking up things early

- Relate obesity risks to the woman's circumstances (e.g. family history of hypertension)
- Inform the woman of interventions that reduce risk (e.g. regular exercise)
  - This may increase the woman's sense of control

Antenatal surveillance

- Comprehensive history
  - Detailed menstrual history, family history, mental health concerns
- Assess for comorbidities
  - Hypertension, VTE, GDM, obstructive sleep apnoea, depression, eating disorders
- Establish baseline renal and liver function, nutritional status
- Weigh and review each visit
- If BMI 40 kg/m^2 or more, anaesthetic assessment third trimester

After weighing Jasmine in a private weighing area you notice Jasmine is losing weight. Jasmine says her partner has lost his job, they are short of money, and that eating less would keep the baby small and make this birth easier.

What actions would you take here and how would you discuss this with Jasmine?

Referral and transfer

- Involving multidisciplinary team (e.g. dietitian, social worker) enables focused pregnancy care by the midwifery/obstetric team
- Consider telemedicine
- When numerous appointments, try to align
- Use local criteria for transfers based on BMI
  - Determine the need for transfer prior to onset of labour
  - Review BMI earlier (e.g. 34 weeks gestation) rather than waiting until 36 weeks
  - Consult early with the receiving service

Jasmine agreed to see a dietitian; this gave her more time to discuss pregnancy things with the midwife (e.g. her last birth experience, strategies to keep active and be fit for birth). Jasmine expressed appreciation for pregnancy focussed care.

Promoting a healthy lifestyle

Healthy lifestyle choices

Encourage

- Setting realistic goals
- Moving more
- Eating differently
- Reducing worry
- Getting the woman's family and friends onboard

Monitor GWG

Discuss

- GWG for BMI
- Using a pregnancy weight graph
- Weighing and review each visit
- Weight loss is not recommended

Healthy movement

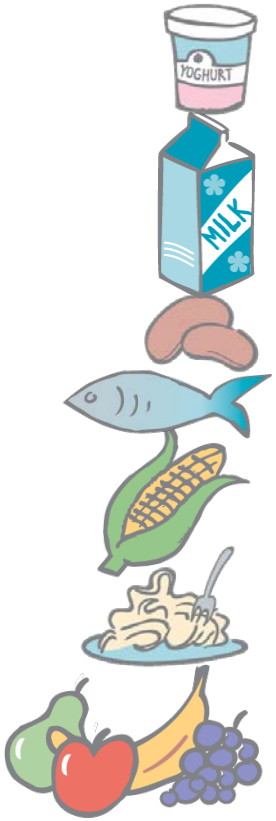
Encourage

- Building up activity slowly until meeting pregnancy exercise recommendations
- Joining community healthy activities groups
- Using pedometer/exercise journal
- Having fun!

Healthy food choices

Discuss

- Dietitian referral for dietary modelling, weight management plan
- Healthy, nutrient dense, low GI foods
- Meal planning
- A food diary



Fetal surveillance

- Accuracy and effectiveness decreased
- Symphysial-fundal height (SPH) may assist with identifying abnormal fetal growth
  - If BMI is over 40 kg/m^2, not recommended
- If BMI 30 kg/m2 or more
  - Morphology ultrasound scan (USS) at 20–22 weeks
- If BMI 35 kg/m^2 or more
  - Growth USS at 28–32 weeks
  - If growth issues, serial USS
  - Document BMI on test request forms

Breastfeeding preparation

Jasmine breastfeed her daughter for two weeks then used formula. She is considering using formula only this time, and says it is uncomfortable to breastfeed around others.

- Lack of self confidence about breastfeeding and breastfeeding challenges are more common
- Build self-confidence by discussing expectations:
  - Extra help with positioning and attachment
  - Possible delay of lactogenesis
- Discuss strategies to stimulate supply
- Consider discussing expressing from 37 weeks, especially if GDM

Jasmine and her midwife discuss feeding options. Her midwife offers to chat more about breastfeeding expectations if Jasmine decides to breastfeed and to show her some tips to build confidence.

Mode and timing of birth

- **Obesity alone is not** an indication for IOL or elective caesarean
- Increased risk of stillbirth (especially when suspected SGA) may result in a lower threshold for IOL
- Evidence relating to women experiencing obesity and IOL:
  - More likely to require multiple IOL methods and oxytocin
  - Obesity + comorbidities + IOL = decreased caesarean rates
  - Obesity + Bishops score less than 5 = greater rate of unsuccessful IOL and caesarean

Jasmine has a number of visits to the maternity unit, concerned about reduced fetal movements. Ultrasound results indicate a LGA baby and Jasmine is offered an induction at 39 weeks and five days.

Intrapartum care

- Bariatric equipment
- Support the woman to stay active and mobile, with regular rest periods
- If BMI 40 kg/m^2 or more use continuous fetal monitoring
  - Wireless/beltless monitoring may decrease discomfort and enhance mobility
  - FSE if trace is unsatisfactory
- Observe for PPH and shoulder dystocia
- Recommend active management of third stage
- Communicate clearly and early with multidisciplinary team members (e.g. anaesthetist)

Jasmine has a spontaneous vaginal birth with a second degree tear and PPH. Baby's weighs 4.5 kg. Jasmine decides to breastfeed following skin to skin contact.

Caesarean section

- Requires sufficiently skilled, experienced staff
- Anaesthetic risks are greater
- If BMI 40 kg/m^2 or more additional resources/staff
- Consider:
  - Requirement for procedures/devices to elevate the panniculus
  - Suturing of the subcutaneous tissue space
  - Use of negative pressure dressings on closure
  - Higher dose antibiotics for routine prophylaxis

Postpartum care

- More frequent clinical observation due to increased risk of:
  - Aspiration from airway compromise and/or obstructive sleep apnoea
  - Infection (chest, urinary, wound or breast)
- Actively assess requirement for VTE prophylaxis
- Encourage early mobilisation
  - Consider pressure area care

Breastfeeding

- Support active decision making
  - Some women perceive a lack of control after a high risk pregnancy and birth
- Allocate additional time to support effective positioning and attachment
- Mitigate mechanical challenges through comfortable positioning, different baby holds, props and pillows
- Refer early to lactation support services

Jasmine was breastfeeding comfortably following extra support with positioning her baby to achieve an effective latch. Initial home visiting was planned for ongoing support and Jasmine was referred to Community Child Health.

Discharge

- Discuss benefits of inter-pregnancy weight loss, such as:
  - Reduced rate of complications in future pregnancies
  - Less risk of lifetime obesity
- If hormonal contraception, conduct VTE risk assessment
- Recommend support for parenting and healthy lifestyle:
  - GP
  - Dietitian or allied health support (e.g. access via practice incentive programs)
  - Community based healthy lifestyle groups
  - Community Child Health

Jasmine's midwife sensitively discusses her rising BMI (32 to 36 kg/m^2) and encourages her to continue the lifestyle strategies that she adopted during pregnancy. She also advises that future pregnancy planning is best once Jasmine has reached the normal weight range.