Management of Women

With Body Mass Index BMI ≥ 30kg/m2

(At Booking Appointment)

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Contents

1. Purpose

The purpose of this guideline is to provide information to midwives and other health professionals to provide appropriate care for pregnancy, labour and puerperium to women with a Body Mass Index (BMI) ≥30kg, regardless of lead care provider e.g. Obstetric Led Care (OLC) or Midwifery Led Care (MLC).

It identifies clear guidance for women who have no other risk factor other than a BMI above healthy range, who can remain MLC whilst also supporting OLC for those women who have additional risk factors, to enable them to make appropriate birth choices.

2. Scope

These guidelines are intended to support measures for women with a BMI ≥ 30kg/m2 at booking, encouraging weight management in pregnancy whilst understanding the importance of a healthy activity in pregnancy. The pathways will support women with no other risk factors, remain Midwife Led Care (MLC) and encourage birth in low risk settings where appropriate. They also act as a guide for clinical care, to ensure women are directed to the most appropriate professional during pregnancy.

This guideline does not cover

- Women who are underweight or a BMI≤18.5
- Women BMI ≥50
- Women who have been diagnosed with or who are receiving treatment for existing medical conditions, e.g. Type 1 or Type 2 Diabetes.

3. Background

There are currently no UK-specific guidelines on safe weight gain in pregnancy. NICE (2010) outlines the recommendations for weight management, before, during and after pregnancy however it should be acknowledged that these are based on limited evidence. It should therefore be noted that in some individual cases weight loss through adopting healthy lifestyle approaches is not known to be detrimental during pregnancy but may have benefits for mother and baby.

Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Obesity is classified by the World Health Organisation as a body mass index (BMI) of ≥ 30 (1). There is substantial evidence that obesity in pregnancy contributes to increased morbidity and mortality for mothers and their babies. However, those individuals with a BMI≥ 40, defined as having morbid, level III obesity, are those most at immediate risk from a number of serious obesity-related non-communicable diseases including diabetes mellitus, cardiovascular disease, hypertension and certain forms of cancer. This group of women are at greatest risk of complications during pregnancy and childbirth

There are 5 classifications of obesity. This guideline covers classification I– III. For guidance of BMI above this threshold, please see guidance on Management of Super-obesity (Class IV and V Obesity) and women with previous Bariatric Surgery in Pregnancy.

Classification	BMI (Kg/m2)	Risk of obstetric Complications
Normal Range	18.5 - 24.9	No increased risk
Overweight	25 - 29.9	No increased risk
Obese I	30 - 34.5	Mildly increased risk
Obese II	35 - 39.5	Moderately increased risk
Obese III	40 - 49.9	Significantly increase risk

This calculation should be based on the BMI at the 1st booking assessment interview in early pregnancy, as BMI's measured in late pregnancy will be less accurate.

4. ALL women BMI ≥ 30kg/m2

- All women to have accurate height, weight and BMI recorded at booking and 36 weeks gestation. Measurements should be recorded on WPAS and maternity notes at both intervals. This should be measured by a health professional / support worker and not self-reported.
- All discussions with woman who have a raised BMI should be conducted in a non – judgmental manner. Acknowledge, that weighing and discussions around weight can be 'triggering' and extremely difficult and distressing for some women. Consider the 5A's obesity management framework (Appendix 1). Emphasis should always be based on personalised care rather than blanket recommendations based on BMI alone.
- At booking advice on healthy eating and healthy weight management during booking appointment Pregnancy and diet | British Dietetic Association (BDA).
- At booking advice on physical activity levels during pregnancy (Appendix 2)
- Healthy Start Scheme & Vitamins - Ensure low income pregnant women / in receipt of benefits have access to nutritional support through the scheme and access to vitamins. NHS Business Services News (nhsbsa.nhs.uk)
- Recommend Active Birth classes and Health and Foodwise in Pregnancy App.
- When discussing maternal weight gain NICE guidance recommendations are to follow the IMO guidance if needed (Appendix 3).
- Discuss and provide RCOG leaflet Why your weight matters during pregnancy and after birth – patient information leaflet | RCOG
- Discuss /arrange individual contraceptive plan
- Advise pregnant women though completion of risk assessment form, at high risk of pre-eclampsia, or with more than one moderate risk factor for pre-eclampsia to take 150mg of aspirin daily from 12 weeks until the birth of the baby
- All women should undergo a documented assessment using the SBUHB risk assessment tool of risk factors for VTE in early pregnancy or pre-pregnancy for advice on correct management. The assessment should be repeated if the woman is admitted to hospital for any reason or develops other problems. Risk assessment should be repeated again intrapartum or immediately postpartum.

Blood Pressure
Clinicians should be aware that women with class ≥II obesity and greater have an increased risk of pre-eclampsia compared with those with a normal BMI (RCOG, No 72).

On average, obese women have higher blood pressure in each trimester compared with those who are not experiencing obesity, even when an appropriately sized cuff is used. The difference is about 10 mmHg for systolic BP and 8 mmHg for diastolic (Macdonald-Wallis,et al 2015)

Good Practice for accurate BP measurement (FIGO)

- The woman must be positioned appropriately: seated, still, and with legs uncrossed, feet flat on the floor, and back resting on the back of the chair. Supine positioning has the potential to cause hypotension, and left lateral positioning has the potential to give a spuriously low reading, because the right arm is frequently elevated above the level of the heart during blood pressure measurement
- The woman should not talk, read, look at her phone/computer, or watch television.
- The arm should be resting at the level of her heart. This may require use of a pillow.
- The woman should rest for 5 minutes before her blood pressure is taken.
- The blood pressure cuff should be placed on the woman's bare upper arm, and not over clothing.
- The blood pressure cuff must be the right size. It must be long enough and wide enough. The length should cover two-thirds of the distance between the shoulder and elbow; the bottom should end up about 1–2 cm above the elbow. The width must be such that the inflatable part of the blood pressure cuff should go around about 80% of the woman's upper arm where the blood pressure is being measured. If the cuff is too small (e.g., a 22– 32 cm cuff used on a 35 cm circumference arm), it will overestimate systolic BP by 7–13 mmHg and diastolic BP by 5–10 mmHg.
- The blood pressure should be measured using appropriate machine.

5. Body Mass Index

Women with BMI ≥30 – 34.9 **NO** other risk factors Midwife led care (MLC)	Folic Acid 5mg from preconception until 12th week gestation (via GP) Vitamin D advised throughout pregnancy **<u>Advise Total Recommended Weight Gain should be 5-9kg</u>** Glucose Tolerance Test (GTT) 26 -28 weeks
BMI ≥ 35 – 39.9 **NO** other risk factors MLC – see Flowchart in Appendix	• If nulliparous consider Aspirin daily from 12 weeks gestation to reduce risk of hypertensive disorders • Folic Acid 5mg from preconception until 12th week gestation (via GP) • Follow Midwife Serial Scan Surveillance Clinic SOP • Vitamin D advised throughout pregnancy • **<u>Advise Total Recommended Weight Gain 5-9 kg</u>** • GTT 26-28 weeks

	• Growth Scans in accordance to midwife sonography pathway • Birth plan to include recommendation for Active 3rd stage of Labour due to increased risk of post-partum hemorrhage • For intermittent auscultation during labour where there are no other risk factors present e.g. diabetes
Women with BMI ≥ 35-39.9 **WITH ANY** additional medical risk factors **Obstetric Led Care**	Obstetric Led Care – To include all of above, including Obstetric individualised care plan
ALL Women with BMI ≥40 - 49-9 **Obstetric Led Care** (should this say with or without additional risk factors)	Early obstetric consultant appointment at 12 weeks GTT at 26-28 weeks Growth Scans in line with trust scanning guidelines. **<u>Advise Total Weight Gain 5-9 kg</u>** • If 36 weeks weight is over 150kg inform Central Delivery Suite (CDS) • Refer for an Anesthetic assessment in accordance with anesthetic guidelines – BMI ≥45 or BMI≥40 and any other medical conditions e.g. asthma. • Manual handling assessment to be completed and filed in maternity handheld record including tissue viability in 3rd trimester, determining any requirements for labour. • Birth plan to include recommendation for active 3rd stage of labour due to increased risk of post-partum hemorrhage. Consider the need for early venous access. • For BMI ≥50 refer to specialist OLC BMI ANC Singleton (not be seen at Llanelli or NPT hospital). This is in addition to any other specialised clinics such as diabetes or epilepsy clinics. Refer to Super obesity guideline for further information.

6. Mental Health

Mental health remains one of the leading causes of maternal death in pregnancy and the first postnatal year. Women with raised BMI can often have poor mental health. Conversations surrounding mental health should be discussed in accordance to the perinatal mental health pathway.

7. Place of Birth / Planning

All women should have a discussion surrounding place of birth and clear documentation of discussion. Women with a **BMI ≥ 30 – 39.9 with no other risk** factors may be suited to giving birth in midwifery-led birthing centres, particularly if they have previously given birth vaginally. It may also be appropriate for women with a **BMI 40-49.9 and no other risk factors** to birth in an MLU birth setting following discussion with their obstetric team and consultant midwife.

- Water Immersion guidelines for labour and birth, should be should be used and discussed as part of planning
- Women should be informed that fetal monitoring may be technically difficult with a raised BMI. An explanation should be provided that intrapartum fetal monitoring will be based on the woman's preference and obstetric indications (including antenatal care); in line with the NICE guideline on intrapartum care for healthy women and babies. For Women with a BMI ≥30 kg/m2 at the booking appointment and no medical complications, we recommend intermittent auscultation (NICE, 2017) in line with the fetal monitoring policy (SBUHB, 2021)There is no evidence that continuous cardiotocography improves outcomes compared with intermittent auscultation and it may be more difficult to achieve a reliable recording and limit mobility.
- Women should be encouraged to have an active birth and be as mobile and upright as possible in labour.
- Women should be advised that consideration may be given to a presentation scan at onset of labour if presentation is uncertain in women with BMI ≥ 30
- All women with a BMI ≥ 35 should be given information outlining the additional problems they may encounter with epidural, spinal and general anesthesia.
- As part of the birth plan the midwife will inform the senior obstetricians and anesthetists ~~need to be informed~~ when women with BMI ≥ 45 are in established labour.

8. Thromboprophylaxis (see Guidelines in COIN)

Ensure women are risk assessed appropriately for Thromboprophylaxis as per guidance on COIN or WISDOM - NICE Guidance No 89.

8.1 Antenatal Thromboprophylaxis

All women should be risk assessed at the first booking appointment and subsequently at **every** antenatal admission to hospital. VTE Assessment must be completed on the same proforma each admission to show ongoing management and changes.

8.2 Special consideration for women whose weight is over 150kg

It is important to inform ANC, ward 19, 20 and CDS of any women weighing more than 150kg to ensure appropriate equipment including chairs, beds / mattress, wheelchairs and hoists are available as needed. This should be done in line with manual handling policies as soon as this issue is identified. This will allow time to order equipment, provide any necessary training, whilst ensuring the woman's dignity is maintained at all times.

(Standard bed and mattress is 140kg but standard bed with appropriate mattress is 170kg).

9. Postnatal

- Encourage early ambulation / mobilization and good hydration
- Offer thromboprophylaxis according to Risk Assessment Score
- Beware of increased risk of wound infection and if necessary involve wound care team if any early signs of infection. If immobile ensure assessed for pressure wounds.

9.1 Infection

Infection: Following an operative birth, abdominal wounds are at increased risk of severe infection and dehiscence; particular care should be taken with wound hygiene.

Women with perineal tears should be advised about perineal hygiene to reduce the risk of infection. Regular review of perineal / wound healing whilst in hospital should occur. In the community, wound healing issues require prompt referral to the GP / obstetric unit in adherence to local policies on wound care.

9.2 Breastfeeding

All women should receive adequate support and information on the benefits of breastfeeding to mother and baby during the antenatal and postnatal period. Women who are overweight or obese are less likely to start breastfeeding and tend to breastfeed for a shorter length of time compared to mothers with a healthy BMI.

Maternal physical barriers include larger breasts, positioning difficulties, impact of caesarean birth, and delayed onset of lactation and perceived insufficient supply of milk. Maternal psychological barriers include low confidence in ability to breastfeed, negative body image, and concerns around breastfeeding in public and experiencing stigma of obesity. Women should be informed that early safe skin to skin contact and responsive feeding will increase milk supply and can enable breastfeeding confidence and longevity.

All women who are planning to breastfeed or who wish to give colostrum as the ideal first feed may benefit from antenatal expressing. It may be particularly beneficial to express colostrum in situations when babies are likely to be at risk of hypoglycaemia/feeding difficulty after birth or when mothers are known to be at risk of low supply. Antenatal expressing should be discussed with all women at 34 or 36 weeks. All women should be provided with syringes/sterile gallipot and the Health Board leaflet.

- Acknowledged that extra breastfeeding support may be required
- considered if referral to breastfeeding clinic or breast feeding specialist if required
- Encourage and facilitate ‘safe’ skin to skin and responsive feeding. Women should be reassured that a healthy diet and regular moderate- intensity physical activity and gradual weight loss will not adversely affect the ability to breast feed or the quantity or quality of breast milk.
- Women should be made aware that breastfeeding can reduce the chance of their child developing childhood obesity by 25% (WHO).Benefits to maternal and infant health should be outlined.

9.3 Contraception / Birth Planning

After childbirth, effective contraception should be discussed and offered prior to discharge from maternity services. Women should have been pre-counselled and discussions documented in the handheld record as part of 36 week discussion p.27. If women cannot be provided with their preferred method of contraception prior to discharge from maternity services, they should be offered effective bridging contraception and information about accessing local contraceptive services

The POP is the first go to contraception, it has the least risk to patients. There is no significant evidence that they causes people to put on weight but can sometimes increase appetite, so women need to be mindful of taking balanced diet with exercise.

Any progesterone based product can have an effect on bleeding patterns, including those with an implant and IUS devices and patients should be warned of this. Bleeding patterns could stop periods completely; they may experience spotting or have an irregular cycle. If prescribed the progestogen only pill, it should be emphasised that this needs to be taken at the same time every day. If missed or forgotten there is 12 hours in which to take it. Beyond this time and the mucus will thin and it will take a further 48 hours to build back up again for them to get protection and therefore need to take other precautions.

Women should be informed that weight loss between pregnancies reduces the risk of stillbirth, hypertensive complications and fetal macrosomia. Weight loss increases the chances of successful vaginal birth after caesarean (VBAC) section (RCOG, 7) Women with a BMI≥ 30 at booking, should continue to be offered nutritional advice following childbirth from an appropriately trained professional, with a view to weight reduction in line with NICE Public Health Guideline 27.D / Refer to NICE CG189.

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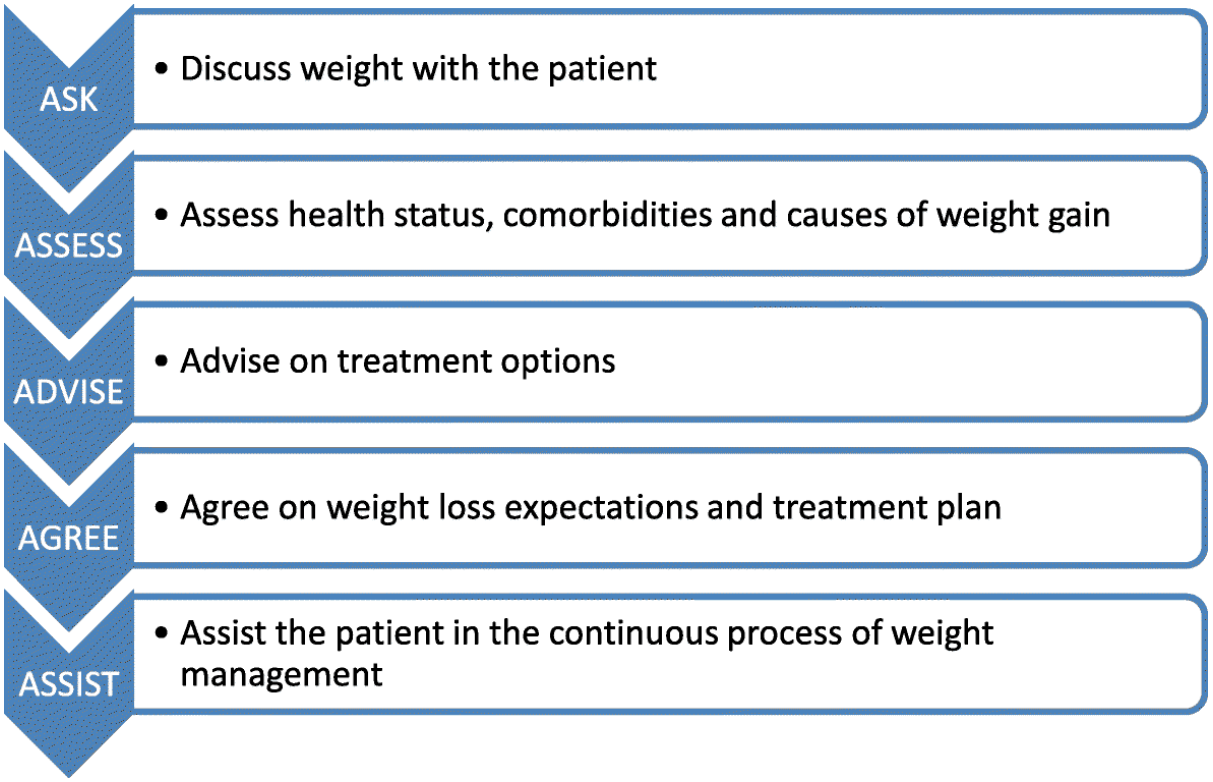
Appendices

Appendix 1



Appendix 2

11: PHYSICAL ACTIVITY AND PREGNANCY

Women may be concerned that physical activity during pregnancy is not safe. However, there is no evidence suggesting adverse maternal or infant outcomes for healthy pregnant women who undertake moderate intensity physical activity. Indeed, there are clear benefits for both mother and baby.[1-3]

The recommendation from the Physical Activity and Pregnancy Study Group[1], commissioned by the Department of Health CMO is to aim to accumulate at least 150 minutes of moderate intensity physical activity every week, in bouts of at least 10 minutes.

Key Benefits of Exercise During Pregnancy [1-3]

- Reduction in hypertensive disorders
- Improved cardiorespiratory fitness
- Lower gestational weight gain
- Reduction in risk of developing gestational diabetes

Further low – moderate quality evidence exists for the woman with reduced: [4,5,6]

- Pelvic and low back pain
- Pre-natal depression

Pre-Exercise Evaluation

There are very few absolute contraindications to exercise during pregnancy and these are mostly related to the pregnancy itself e.g. risk of premature labour or presence of pre-eclampsia.

However, there are a number of medical conditions where women need to be cautious and specialist input may be required[2] (box 1). In addition, any woman undertaking exercise for the first time should be screened in the usual way to consider any risk factors regarding their general health.

Box 1: Absolute Contraindications to Aerobic Exercise in Pregnancy[2]

- Haemodynamically significant heart disease
- Restrictive lung disease
- Incompetent cervix
- Multiple gestation at risk of premature labour
- Persistent bleeding in the 2nd or 3rd trimester bleeding
- Placenta praevia after 26wks of gestation
- Premature labour during current or previous pregnancies
- Ruptured membranes
- Pre-eclampsia/pregnancy induced hypertension
- Severe anaemia

Relative Contraindications to Aerobic Exercise in Pregnancy

- Anaemia
- Unevaluated maternal cardiac arrhythmia
- Chronic bronchitis
- Poorly controlled Type 1 diabetes, hypertension, epilepsy or hyperthyroidism
- Extreme morbid obesity BMI >40
- Extreme underweight BMI <12
- History of extreme sedentary lifestyle
- Intrauterine growth restriction in current pregnancy
- Orthopaedic limitations
- Heavy smoker

Risk Management

Outside the conditions listed, there is no evidence that there is an increased risk of complications for the mother or the baby if the woman exercises during her pregnancy; however, there are a few activities not recommended (box 2).[2]

Hyperthermia

Hyperthermia (>39.2°C): During the first trimester in particular, hyperthermia can increase the risk of developmental problems (e.g. spina bifida). There is no evidence that becoming slightly warm during exercise can cause this, however, the woman should be advised not to become uncomfortably hot. Keeping hydrated will help.[2]

Modifications and Considerations:[2]

Due to the production of relaxin, ligaments around the spine, hips and pelvis will soften in preparation for delivery which may slightly increase the risk of injury. Stability exercises (e.g. Pilates – as long as it is modified for pregnancy by an experienced instructor) will help to manage this. Also, this softening will effectively increase a woman's flexibility so in order to protect their joints, they should not stretch beyond their normal range.

Avoid exercising lying supine or standing still for long periods after 16/40 weeks, due to venous compression and hypotension[2].

The combination of increasing lumbar lordosis and weight puts more strain on the joints, especially in the back and pelvis. In addition, as the pregnancy progresses, stress incontinence will become more likely (prevalence 32-64%[8]). Stability and pelvic floor exercises will help to protect against this. Back and pelvic pain is not an inevitability during pregnancy (prevalence 45%[9]). As the woman progresses through the second and third trimesters they should reduce the amount of any weights they are lifting.

Box 2: Activities to avoid during pregnancy[2]

- Contact sports e.g. rugby, soccer, boxing, basketball and martial arts
- Sports where there is a risk of falling e.g. riding, skiing, off road cycling, gymnastics and horse riding
- Scuba diving
- Sky diving
- Exercising at high altitude (>6000feet)
- Exercising in hot temperatures (including 'hot yoga' or 'hot Pilates')

After first trimester:

- Sports where there is a risk of being hit in the abdomen by equipment e.g. tennis, squash
- Exercise involving lying supine after 16/40 due to venous compression and hypotension

When to stop exercising:[2]

Advise to stop if there is:

- Vaginal bleeding
- Regular painful contractions
- Amniotic fluid leakage
- Dyspnoea before exertion
- Dizziness
- Headache
- Chest pain
- Muscle weakness affecting balance
- Calf pain or swelling

'F.I.T.T.' For Pregnancy

As with any physical activity advice, consider the woman's activity history and preferences. During the first trimester morning sickness and fatigue may limit exercise ability, but most women will naturally reduce the intensity as it becomes more challenging.

FREQUENCY – most days of the week for aerobic work and twice weekly for performing 8 -12 repetitions of strengthening activities of all major muscle groups

INTENSITY – moderate: that is an activity that makes you feel warmer and breathe faster but still be able to hold a conversation. Those women who are training more seriously may be used to monitoring their heart rate in which case they should be advised to work at 50% - 70% of their maximum heart rate. However, there is no indication for someone to start monitoring their heart rate just because they are pregnant.

TIME – aim to accumulate at least 150 minutes of moderate intensity physical activity every week, in bouts of at least 10 minutes.

TYPE – mixture of aerobic, strength and stability, for example:

- Swimming / aqua aerobics (water temp not >32deg)
- Walking
- Jogging / running
- Yoga / Pilates – beware not supine after 16/40 / pelvic floor exercises
- Gym classes (inform the instructor)
- Dance

Advice for those not used to exercising regularly prior to becoming pregnant: walking is a good way to start. Begin with 10 minute walks every other day and then build up to 30 minutes on most days at a moderate intensity. Once used to doing some walking on a regular basis, they can add in other types of exercise. Women should also be advised to avoid prolonged sitting and to break up sedentary time.

Advice to a woman who is already active: these women can be encouraged to continue what they are doing and only adapt their activity if it is not recommended (box 2) or becomes necessary later, as pregnancy progresses.

NICE guideline CG 62 on Antenatal care for uncomplicated pregnancies recommend:[10]

Exercise in pregnancy

- Pregnant women should be informed that beginning or continuing a moderate course of exercise during pregnancy is not associated with adverse outcomes.
- Pregnant women should be informed of the potential dangers of certain activities during pregnancy, for example, contact sports, high impact sports and vigorous racquet sports that may involve the risk of abdominal trauma, falls or excessive joint stress, and scuba diving, which may result in fetal birth defects and fetal decompression disease.

Take home message:

Physical activity is an important part of any management for a patient who is pregnant, leading to:

- Reduction in hypertensive disorders
- Improved cardiorespiratory fitness
- Lower gestational weight gain
- Reduction in risk of developing gestational diabetes

Consider:

The importance of a healthy lifestyle should be reinforced throughout pregnancy. This should be discussed in some detail at the first booking appointment (typically with a midwife).

Benefits for Midwives, Health Visitors and GPs:

Reduced complications, cost benefits and improved future population health.

Use the CMO infographic to discuss the benefits of physical activity with all pregnant women. Download here

Extracted from the Wales HEIW CPD module on physical activity Motivate2Move. Now part of the RCGP Clinical Priority on physical activity and lifestyle. Review Dec 2022

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Appendix 3

Institute of Medicine 2009 Gestational Weight Gain Guidelines

	Total Weight Gain		**Incremental weight gain during the 2nd and 3rd Trimester ****	
Preconception BMI	**Range in kg**	**Range in lbs**	**Mean (range) in kg/wk**	**Mean (range) in lbs/wk**
Underweight (<18.5 kg/m^2)	12.5 – 18	28 – 40	0.51 (0.44 – 0.58)	1 (1 – 1.3)
Normal weight (18.5 – 24.9 kg/m^2)	11.5 – 16	25 – 35	0.42 (0.35 – 0.50)	1 (0.8 – 1)
Overweight (25.0 – 29.9 kg/m^2)	7 – 11.5	15 – 25	0.28 (0.23 – 0.33)	0.6 (0.5 – 0.7)
Obese (≥ 30.0 kg/m^2) *	5 – 9	11 – 20	0.22 (0.17 – 0.27)	0.5 (0.4 – 0.6)

***If your BMI ≥ 35 , you and your healthcare team may aim for lower than 5kg weight gain to reduce adverse risks to you and your baby**
**** Average weekly weight gain rate in second and third trimesters, this is assuming weight gain of 0.5kg-2kg in the first trimester.**

Maternity Services

Checklist for Clinical Guidelines being submitted for Approval

Title of Guideline:	Management of women with BMI of Above 30 kg/m2
Name(s) of Author:	Emma Richards - Public Health Midwife
Chair of Group or Committee supporting submission:	Antenatal Forum
Issue / Version No:	3
Next Review / Guideline Expiry:	November 2025
Details of persons included in consultation process:	All midwives and obstetric consultations
Brief outline giving reasons for document being submitted for ratification	In line with Welsh Government performance targets
Name of Pharmacist (consultation if drug regimen involved)	n/a
Please list any policies/guidelines this document will supercede:	n/a
Keywords linked to document:	Obese, Obesity, BMI
File Name: Used to locate where file is stores on hard drive	WISDOM