



York Teaching Hospital
NHS Foundation Trust

Raised Body Mass Index (BMI) In Pregnancy

Information for expectant mothers with a high BMI and the implications for pregnancy, birth and after your baby is born

① For more information, please contact:

Maternity Services

The York Hospital
Tel: 01904 726004
Wigginton Road, York, YO31 8HE

Scarborough Hospital
Tel: 01723 368111
Woodlands Drive, Scarborough, YO12 6QL

Caring with pride

Contents	Page
What is Body Mass Index (BMI)?	3
How is BMI calculated and what is the significance of the result?	3
What can I do to remain healthy and reduce the risk of pregnancy complications?	5
Exercise	6
What are the possible risks to me and my baby during pregnancy?	7
What are the possible risks to me and my baby during labour?	12
Why would I need to see an anaesthetist?	14
What are the possible risks to me and my baby after giving birth?	16
What should I do if I want to lose weight after pregnancy?	18
What if I have another baby?	18
Tell us what you think of this leaflet	19
Teaching, Training and Research	19
Patient Advice and Liaison Service (PALS).....	19

What is Body Mass Index (BMI)?

Body Mass Index or BMI is calculated using your weight and height, it is a ratio of these two measurements. A raised BMI in pregnancy can present higher risks to you and your baby throughout pregnancy, labour and after your baby is born.

How is BMI calculated and what is the significance of the result?

BMI is calculated by using the following formula - weight in kilograms divided by height in metres squared (BMI=kg/m²).

The World Health Organisation uses the following classifications:

- An underweight person would have a BMI of less than 18.5
- An appropriate or normal BMI is 18.5 to 24.9
- A person with a BMI 25 to 29.9 is classified as overweight
- A person with a BMI of 30 or more is classified as obese
- A person with a BMI of 50 or more is classified as super-morbid obese

Obesity can then be broken down further into the following classifications:

- Class 1 BMI - 30 to 34.9
- Class 2 BMI - 35 to 39.9
- Class 3 BMI - more than or equal to 40

The midwife at your booking appointment will measure and record your weight and height and will then calculate your BMI.

If your BMI is 35 or more the community midwife will then recommend that you are referred to see an obstetrician. This is because research has shown that women with higher BMIs at the start of pregnancy are at higher risk of complications during pregnancy, labour and following the birth of their baby.

The consultant obstetrician will discuss and develop a specific recommended plan of care for your pregnancy and the birth of your baby.

If your BMI is 30 or more it is recommended that you take 10micrograms (mcg) Vitamin D supplement daily during pregnancy and while breastfeeding and a higher dose of folic acid until after 12 completed weeks of pregnancy (5 milligrams as opposed to the routine recommended dose of 400 micrograms/0.4milligrams). Folic acid at 5 milligrams is only available on prescription and can be requested from your GP.

What can I do to remain healthy and reduce the risk of pregnancy complications?

The amount of weight women may gain during pregnancy can vary greatly. A healthy diet will benefit you and your baby. You should aim to:

- Base your meals on starchy foods such as potatoes, bread, rice and pasta, choosing wholegrain where possible
- Watch the portion sizes of your meals; do not eat for two
- Eat fibre rich foods, such as oats, beans, lentils, grains, seeds, fruit and vegetables as well as wholegrain bread, brown rice and past
- Eat at least five portions of fruit and vegetables
- Always eat breakfast

* You should not try actively losing weight in pregnancy as this may be harmful for your baby, however by making healthy changes to your diet you may not gain any weight during pregnancy and may even lose a small amount of weight. This is not harmful in general; you do not need additional calories for the first two thirds of your pregnancy, and it is only in the last 12 weeks that you need an extra 200 kcals per day.

If you need extra support, the RCM (Royal College of Midwives) recommend that you could work with Slimming World throughout your pregnancy – your midwife can give you details of local contacts.

Exercise

Being physically active during your pregnancy will benefit you and your unborn child.

- Try to make activities such as walking, swimming and cycling part of your everyday life, and build activity into your day by taking the stairs instead of the lift or going for a walk at lunchtime.
- Minimise sedentary activities, such as sitting for long periods.
- Physical activity will not harm your baby, however if you have not routinely exercised before, you should begin with no more than 15 minutes of continuous exercise three times per week, increasing gradually to 30 minutes sessions every day. A good guide that you are not overdoing it is that you can still hold a conversation whilst exercising.

What are the possible risks to me and my baby during pregnancy?

Blood Clots (Thrombosis)

All women who are pregnant have an increased risk of deep vein thrombosis (DVT). This risk increases further if you have a high BMI. Risk of pulmonary embolism (PE) is also increased (even without a DVT).

A DVT is blood clot that develops in the deep veins of the leg; there is then a risk that the blood clot can travel to the lungs causing a PE. A PE is serious and can be fatal.

Other factors (such as being a smoker, aged 35 or over, having had more than three babies previously, family history of DVT or PE or periods of immobility in pregnancy) can increase the risk further of DVT in pregnancy. Your midwife will make an assessment at your first booking appointment and calculate the number of risk factors that you have. Your midwife will refer you to an obstetrician in early pregnancy if you have more than three risk factors and the obstetrician may recommend that you have daily injections to help prevent any clots developing. These injections are called anti-coagulants.

You should be aware of the symptoms of a DVT (pain in the calf area of the leg, a red, hot or tender area or swollen leg). If you experience any of these symptoms you should see your GP or attend the A & E department straight away. Symptoms of PE are chest pain and breathlessness – again you should seek urgent medical assistance if you experience such symptoms.

If you do start medication, the medication is to reduce clot formation; this will reduce the risk of DVT in pregnancy but it is still possible to develop blood clots. Avoid crossing (or sitting) on your legs as this slows down your circulation. Keep active and drink plenty of fluids as this helps your circulation and talk to your midwife or GP if you are going on any long haul flights (longer than four hours duration).

Diabetes

Having a raised BMI can increase the risk of gestational diabetes (pregnancy induced diabetes). Your chance of developing diabetes in pregnancy is three times higher if your BMI is 30 or above. If your BMI is over 30 then your midwife will suggest and recommend that you have a glucose tolerance test (GTT) when you are 26 weeks pregnant. This test will assess how well your body is processing sugar and can diagnose gestational diabetes.

If you are diagnosed with gestational diabetes then you will be referred to a specialist ante natal clinic to see an obstetrician and endocrinologist, dietician and specialist nurse/midwife. It is very important that your blood sugar levels are well controlled and your pregnancy is managed appropriately as one of the risks of gestational diabetes is that your baby grows too big. If you develop gestational diabetes and this is well controlled then the risks to your baby can be reduced.

Having a good, healthy, well balanced diet and regular exercise (as described on page 6) and minimising your weight gain in pregnancy can reduce your risk of developing gestational diabetes.

Raised Blood Pressure

Anyone can develop a raised blood pressure in pregnancy but having a raised BMI increases the chances of this. Your blood pressure will be checked at every antenatal appointment. If your blood pressure is raised then you may be developing a condition called pre-eclampsia. This condition is a combination of raised blood pressure, protein in the urine and swelling (oedema).

It is also important therefore that you take a sample of urine to every ante natal appointment.

Some of the symptoms of raised blood pressure are headaches, visual disturbances, swelling of the feet, legs, hands or face or severe pain under the ribs on the right side. If you develop any of these symptoms you should contact your midwife or the maternity unit straight away to have your blood pressure checked.

Some women with a BMI over 35 will be advised to take low dose aspirin daily (75 milligrams) from the 12th week of pregnancy as this has been found to lower the risk of developing pre-eclampsia. Your midwife will discuss this with you at your first antenatal appointment.

Problems Checking the position and size of your baby

Having a raised BMI in pregnancy can make it more difficult for the midwife or doctor to detect if your baby is too big or too small and also for them to be able to confirm which way your baby is laying. Your obstetrician may recommend additional scans if your BMI is ≥ 40 to monitor the baby's growth in pregnancy.

You may require a scan to check the baby's position at the end of pregnancy.

Unclear Ultrasound scans

All women are offered two routine scans in pregnancy. However, when you have a raised BMI it can be more difficult for the sonographers to be able observe and measure your baby. The sonographers need to be able to see all your baby's organs and physical structure. When there is excess body fat the scan can be unclear and this can limit the ability of the sonographer to detect any abnormalities. Sometimes it may be necessary to repeat a scan – particularly the 20 week scan when all of the baby's anatomy is carefully checked.

What are the possible risks to me and my baby during labour?

Having a raised BMI during pregnancy can increase the chances of labour complications; specifically you are more likely to:

- Require Induction of Labour
- Have a longer labour
- Have a caesarean section
- There is an increased risk of shoulder dystocia (difficulty in delivering the baby's shoulders)
- Have heavier bleeding after your baby is born
- There is an increased risk of bleeding following birth therefore it is recommended that you should have active management of the third stage of labour (Injection to facilitate delivery of the placenta)
- Experience difficulties with the siting of epidurals and drips
- Experience poorer health outcomes for you and your baby
- Your midwife or doctor may also find it hard to locate and monitor your baby's heartbeat in labour. If this continues to be a problem then the midwives can place a small clip (FSE- fetal scalp electrode) on the baby's head so your baby's heartbeat can be monitored more clearly and accurately throughout your labour.

If your BMI is 35 or more, you will be advised to deliver in hospital. This is to ensure that if problems do occur, midwives, obstetricians and paediatricians are immediately available to respond to any concerns with you or your baby.

Within the hospital, we also have equipment available that is especially adapted to help and assist patients who have a raised BMI, for example electric beds that make it easier for you to sit up.

It is advisable that your obstetrician refers you to an anaesthetist in your pregnancy if your BMI is 40 or over.

Why would I need to see an anaesthetist?

One of the aims of care during pregnancy is to identify women who may need extra help during the birth of their baby. If your BMI is raised then you have an increased risk of having an induction of labour, a prolonged labour, and a caesarean section delivery so it is more likely that you may need the services of an anaesthetist.

The meeting between you and the anaesthetist will be an opportunity for you to be assessed and for you to discuss your options for pain relief in labour. This session is better conducted in relaxed, non-stressful surroundings before you have your baby rather than when you are in labour. The anaesthetist can document in your notes the plan you have made together so your obstetrician and midwife can be kept up to date. Following this appointment you will also see a midwife to assess your mobility and discuss pressure ulcer prevention.

The anaesthetist may recommend having an early epidural once labour is established so there is extra time for the procedure. If for any reason it is unsafe or it is not possible to perform an epidural the anaesthetist can help you with suggestions for other methods of pain relief.

If a caesarean section has been organised for you by your obstetrician it is important for you to be prepared and to discuss the anaesthetic with your anaesthetist. The anaesthetist will be able to discuss the procedure and the associated risks with you. An assessment can also be made of any potential difficulties with a general anaesthetic. A spinal or epidural anaesthetic (i.e. when you will remain awake) is the recommended method of anaesthetic for a caesarean delivery. Being awake has many advantages to you and your baby, both during and after the birth.

Medication for pain relief can be given with the spinal/epidural and is very effective so the amount of pain felt afterwards is often much less than after a general anaesthetic. In addition your partner can be with you to share the birth of your baby, you will be able to see your baby straight away and quickly start to feed your baby as your baby will not be affected by the anaesthetic (if you have a general anaesthetic this can make your baby very sleepy when it is born and then the baby can be more reluctant to establish feeding).

What are the possible risks to me and my baby after giving birth?

Breastfeeding

Can sometimes present difficulties as finding a comfortable position in which to feed your baby can be challenging. You may need extra support and guidance from midwives and family in the first few days. Persevering with the breastfeeding will have a great deal of rewards, as well as huge health benefits for your baby. Mums who breast feed lose weight much more easily and quickly after giving birth leading to a healthier BMI for future pregnancies.

Wound infections

Are more common if you have a raised BMI. If you have a planned caesarean delivery or an unexpected emergency caesarean delivery it is important that you take care of the wound once you are mobile and the dressing is removed. The midwives will encourage you to have a shower the day after delivery if you are physically well. They will ask to check your wound each day and will be able to give you advice on the best way of keeping the wound as clean and dry as possible to prevent infection in the postnatal period. To reduce the risk of infection make sure you wash your hands well before touching your wound and also wash your hands before changing your maternity pads and going to the toilet.

Blood Clots (Thrombosis)

All women who have had a baby have an increased risk of deep vein thrombosis (DVT) in the three months following childbirth. This risk increases further if you have a high BMI.

As mentioned previously the obstetrician may recommend that you have blood thinning injections for seven days following the birth of your baby to help prevent deep vein thrombosis. These are given as a preventative measure to all women who have an increased risk of thrombosis after delivery. It is important that you keep moving around, avoid crossing your legs (which slows down your circulation), drink plenty of fluids, do gentle leg exercises when resting or sitting for long periods and report any symptoms of DVT or PE (as described on page 7) to your midwife or doctor immediately.

Pelvic floor muscles

Are weakened and strained by the pregnancy, it is important to do pelvic floor exercises in the antenatal and postnatal period and beyond in order to prevent problems such as stress incontinence.

What should I do if I want to lose weight after pregnancy?

If you wish to continue losing weight, it is advisable for you to see your GP or discuss this with your midwife; they can direct you to safe methods and places offering support and encouragement to lose weight, especially if you are still breastfeeding.

What if I have another baby?

There is recent evidence that women who have a raised BMI in pregnancy increase the chances of heart disease and type 2 diabetes in their child's adult life. Having a normal BMI at the beginning of your next pregnancy can really reduce this risk and also of all the risks to yourself and your baby in a future pregnancy.

If your BMI is still over 30 when you have your next baby don't forget to ask your GP for a prescription for the higher dose of folic acid (5 milligrams). Ideally take this for three months before you conceive and for the first twelve weeks of pregnancy.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:
Midwifery Manager, Labour Ward, The York Hospital,
Wigginton Road, York, YO31 8HE or telephone
01904 726004.

Teaching, Training and Research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

Providing care together in York, Scarborough, Bridlington,
Malton, Selby and Easingwold communities

Please telephone or email if you
require this information in a different
language or format

如果你要求本資訊是以不同的語言
或版式提供，請致電或寫電郵

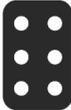
Jeżeli niniejsze informacje potrzebne
są w innym języku lub formie,
należy zadzwonić lub wysłać
wiadomość e-mail

Bu bilgiler değişik bir lisanda ya da
formatta istiyorsanız lütfen telefon
ediniz ya da e-posta gönderiniz



01904 725566

email: access@york.nhs.uk



Braille



Audio e.g.
CD



Large print



Electronic

Owner	Maternity Services and Anaesthetics Department
Date first issued	September 2007
Review Date	May 2020
Version	6 (issued June 2018)
Approved by	Sue Jackson, Midwife, Mr Jibodu, Consultant Gynaecologist and Obstetrician, Obstetrics and Gynaecology Clinical Governance Group
Document Reference	PIL 451 v6
© 2018 York Teaching Hospital NHS Foundation Trust. All Rights reserved	