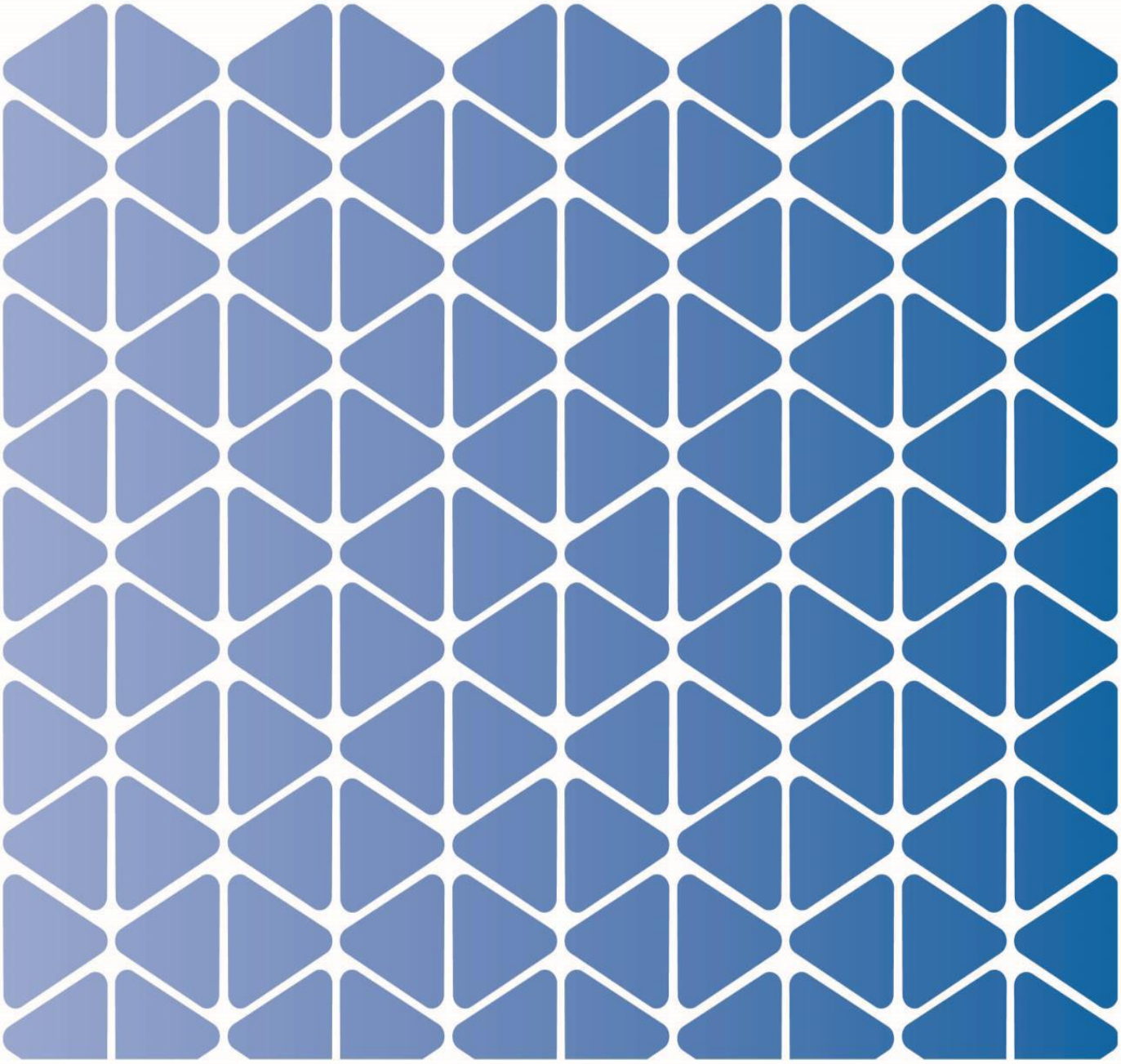
NHS
Worcestershire Acute Hospitals NHS Trust

PATIENT INFORMATION

GESTATIONAL DIABETES DIETARY INFORMATION



What is Gestational Diabetes?

Gestational diabetes (GD) is a condition that occurs during pregnancy, it is common, and affects at least 5 out of 100 women during pregnancy. It only lasts during your pregnancy and goes away after the birth of your baby. It can occur at any stage but is more common in the second or third trimester. GD affects the way your insulin works.

Insulin is the hormone that transports glucose (a type of sugar) from our blood, into our body cells so that it can be used as energy. An increase in hormones (which are needed for pregnancy) can affect the way insulin works, meaning glucose stays in our blood and causes high blood glucose levels. An additional increase in these pregnancy hormones can make it particularly difficult to control blood glucose levels at around 32-36 weeks.

This leaflet will look at some of the complications and interventions that may arise or be recommended during pregnancy due to GD. However, it is important to know that maintaining your blood glucose levels within the target ranges, reduces the chances of these complications or interventions happening.

Why is it important to control your blood glucose levels?

Most people who develop gestational diabetes have healthy pregnancies and healthy babies but occasionally gestational diabetes can cause serious problems, especially if it is not recognised or treated.

If your blood glucose levels are consistently high, the chances of you having an induced labour or caesarean section are increased when compared to the background population.

<u>There are also risks for both you and your baby.</u>

<u>The risks to your baby are:</u>

- Being bigger than average (which may lead to difficulties during the birth and increases the likelihood of needing induced labour or caesarean section)
- Shoulder dystocia (where your baby's shoulder gets stuck during birth).This occurs in around 3 out of 150 vaginal births for women with diabetes.
- Premature birth (Giving birth before the 37th week of pregnancy)

- Polyhydramnios (too much fluid around the baby, in the womb. Which can cause premature birth or problems at the time of birth)
- Stillbirth or the baby dying at or around the time of birth (however, this remains uncommon)
- Baby needing additional care once they are born, possibly in a neonatal unit
- Your baby developing low blood sugar or yellowing of the skin and eyes (jaundice) after he or she is born, which may require treatment in hospital
- Being at greater risk of developing obesity and/or Type 2 diabetes later in life

<u>The risks to you are:</u>

- Increased chance of developing Pre-eclampsia (a condition affecting your blood pressure, which can lead to complications if not treated)
- Increased chance of tears requiring repair during the birth (if your baby is bigger than average)
- Higher chance of having GD again in future pregnancies
- Developing Type 2 diabetes in the future

If you are diagnosed with gestational diabetes, you will be under the care of a specialist healthcare team and will be advised to have your baby in a hospital with a consultant-led maternity unit and a neonatal unit.

Your healthcare team may include a doctor specialising in diabetes, an obstetrician, a specialist diabetes nurse, a specialist diabetes midwife, a dietitian and your community midwife. You should start receiving extra antenatal care as soon as your gestational diabetes is diagnosed. Having gestational diabetes will mean more contact with your healthcare team. You may be offered more ultrasound scans to monitor your baby's growth more closely.

National guidelines advise women with GD should give birth before 40 weeks and 6 days. You may be offered induction of labour or caesarean section (if indicated) if you have not given birth before this time. If there are complications for you or baby, it may be recommended to give birth sooner than this. You will be able to discuss your individual circumstances with the team looking after you.

Controlling your levels of blood glucose during pregnancy and labour reduces the chances of these complications for you and your baby.

How can you control your blood glucose levels?

We can aim to control blood glucose levels through diet and physical activity, particularly through the amount of carbohydrates consumed.

Everyone is different, some people will benefit from small changes and others will need to make bigger changes to their diet.

Sometimes in addition to the advice in this leaflet you may require medications to help control your blood glucose levels during pregnancy, which can be in the form of tablets or insulin injections. This may be what your body needs and does not mean you have failed with lifestyle changes. Sometimes people wake up with high glucose due to the hormone levels, even though you have not eaten for many hours. Your hormone levels impact glucose levels as the pregnancy progresses and it gets harder to control them especially at around 32-36 weeks.

An important first step, when you have been diagnosed with Gestational Diabetes is to reduce your sugar intake.

How to reduce your sugar intake

Reducing sugary foods and drinks will help you to maintain normal blood glucose level. Sugar can be ‘hidden’ in some foods that you might not expect, so reading food labels can help you understand how much sugar different foods contain. Sugar may also be called sucrose, glucose, dextrose, fructose, lactose, maltose, maltodextrin, molasses. invert sugar, honey, syrup, corn sweetener on food labels, so be aware. You should reduce your intake of high sugar and processed foods and snacks.

Some examples of high sugar foods are:

- Chocolate, sweets, cakes, desserts, biscuits
- Breakfast cereals, especially honey/frosted options
- Fizzy drinks, fruit juice, smoothies, syrups in hot drinks

There are many low sugar alternatives available. They may be called ‘zero’, ‘light’, ‘diet’ or ‘free’ and often contain little or no sugar. Check labels to make sure this is the case. These alternatives are available for lots of different things such as deserts, drinks, yoghurts. But you do not need to buy special foods unless you want to.

Some breakfast cereals are high fibre but low sugar such as All bran or bran flakes.

If you have sugar in hot drinks, you can use artificial sweeteners instead, such as: Splenda (sucralose), Hermesetas, Truvia, Canderel or a supermarket own brand of these

Fruit also contains sugars, but it is important to keep this in your diet as it contains helpful vitamins. Choose fresh fruit or tinned fruit in natural juice or water and be mindful of portion size.

Carbohydrates

Carbohydrates are the foods that get broken down into glucose and therefore cause a rise in blood glucose levels.

There are 2 different types of carbohydrates:

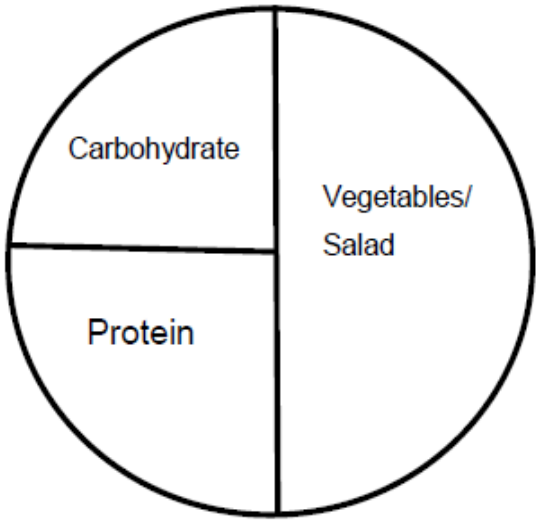
1. **Sugar/ sugary foods** including cakes, biscuits, sweets, sugary soft drinks, fruit smoothies/ juices.
   These foods raise your blood glucose levels very quickly and should be avoided.
2. **Starchy foods** including bread, bread products, potatoes, pasta, rice, oats and cereals.
   Whilst these foods can raise your blood glucose levels, they are a good source of energy for both you and your baby. We recommended having these foods in smaller quantities.

Carbohydrate consistency

To improve blood glucose control it is important to eat regular meals. It may be helpful to aim for three meals, plus 2-3 snacks throughout the day.

Having small portions of starchy carbohydrates at main meals helps to keep blood glucose levels more constant. Try to make your portion of carbohydrate cover a quarter of your plate (see below).

The carbohydrate content of foods, especially breads, cereals and sweet foods vary a lot. Reading food labels to find the total amount of carbohydrate in different foods is helpful. Aim for no more than 40g-50g of carbohydrate at each meal. Blood glucose readings tend to be higher at breakfast so it can help to have a smaller portion of carbohydrate with breakfast and spread the rest of your carbohydrates out over the rest of the day.

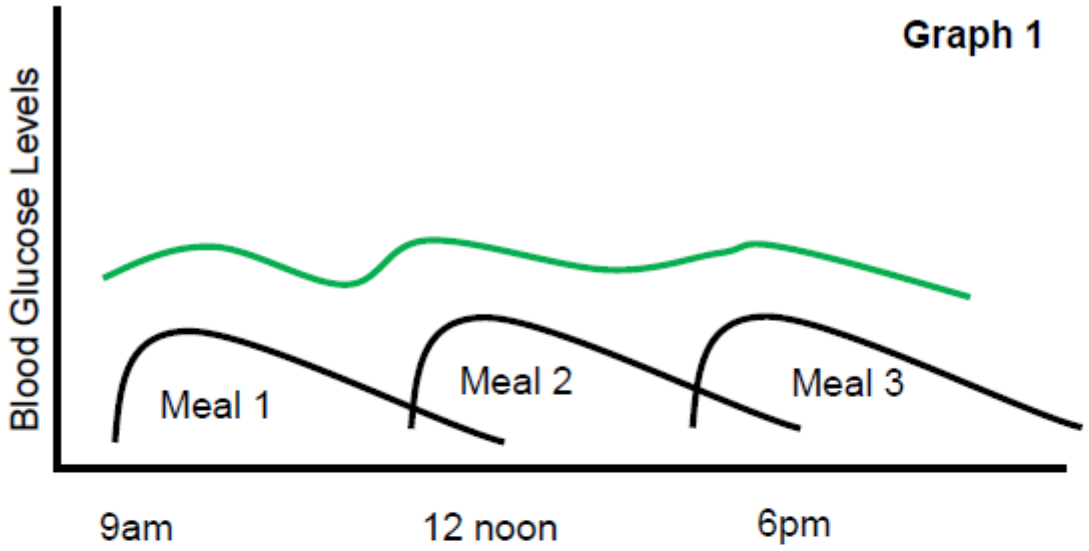


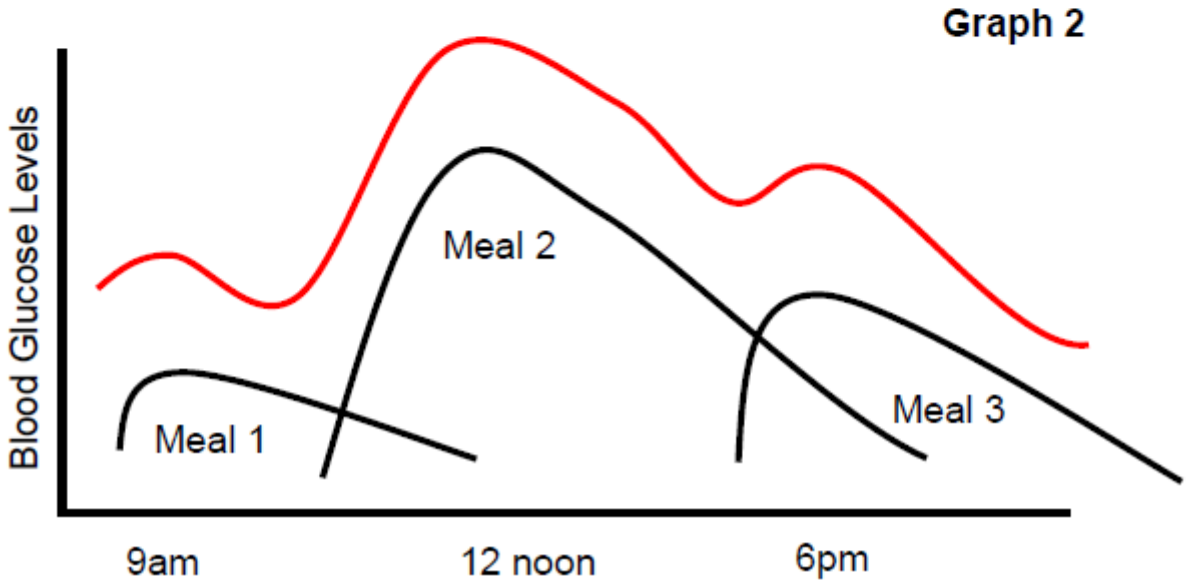
It can be helpful to divide your lunch and evening meal plate into sections, to keep your portions similar at each meal. Be careful that you do not add extra servings to your meal which might increase the portion of carbohydrate per meal.

Carbohydrate consistency continued

Graph 1 shows the effect of meals with a 40g portion of carbohydrate.

Graph 2 shows the effect of eating a much larger portion of carbohydrate at lunchtime.



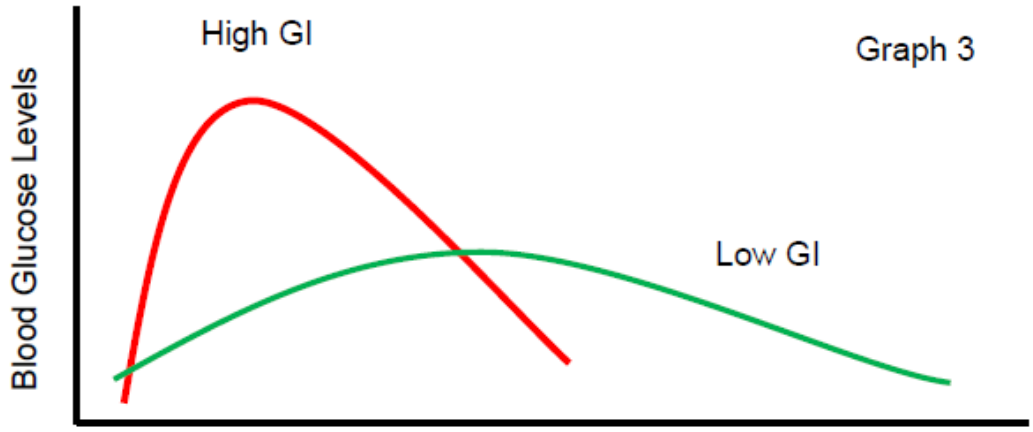


Glycaemic Index

Glycaemic index (GI) is a term to describe how quickly or slowly a food is broken down into glucose and is released into the body. Foods are categorised into low, medium and high GI.

Lower GI foods are broken down slowly, giving a slower release of glucose into the blood. Choosing these foods can help to keep your blood glucose steady, as graph 3 demonstrates.

Lower GI foods include muesli, porridge, multigrain/granary/seeded bread, new potatoes, sweet potatoes, pasta, basmati rice, noodles, yam, plantain, couscous, quinoa, beans, lentils, chick peas, dhal, most fruits and vegetables.



High GI foods are broken down quickly, giving a faster release of glucose into the blood.

High GI foods include sugary foods, drinks, sweets, fruit juice and smoothies so try to avoid these. White bread, jacket and mashed potatoes, and refined cereals such as cornflakes are also higher GI.

Adding protein or healthy fats to your meals will make the glycaemic index lower. This is because protein and fat sit in our stomach for a long time, which means that the foods we eat it with take a long time to digest. Some people find it helpful to have protein or healthy fats every time they have carbs.

Examples of this would be;

- Peanut butter on seeded toast
- Full fat greek yogurt with berries
- A few nuts or seeds with an apple as a snack

Remember! Portion size is key, even low GI foods will increase your blood glucose levels if the portion is too big.

Milk and Dairy Products

Dairy is a good source of calcium. It is recommended to have 2 to 3 portions of dairy a day. Milk does contain a small amount of natural sugars and you may you need to reduce the portion size.

A portion of dairy is classed as:

- one glass of milk (200ml)
- one small plain, Greek or natural yogurt (150g)
- matchbox sized medium fat cheese (30g)
- large pot of cottage cheese (200g)

Cheese contains minimal carbohydrate and is a good source of calcium and protein so is helpful to include in your diet.

If you choose plant based milk you should choose one that has got added calcium and no added sugars.

Eat moderate amounts of fruit

Fruit contains natural sugars which can affect your blood glucose levels. It is important to continue to have fruit in your diet as they contain vitamins and fibre, however we do recommend limiting quantities.

Limit fruit to no more than 2 - 3 portions per day. Try to spread them out throughout the day to avoid big spikes in your blood glucose levels. Avoid fruit juice and smoothies (homemade and shop brought), as they contain high amounts of natural sugars.

What is a portion? (approx. 15g carbohydrate)

- 1 medium apple, orange, pear or peach.
- Small palmful of grapes, maximum 15 .
- 1 small banana, or half of a large banana.
- 3 small plums or 3 fresh apricots.
- 2 kiwi fruits or 2 satsumas/clementines/tangerines.

- Large handful cherries, strawberries or other berries
- 1-2 inch slice of pineapple or melon.

Berries are lower in carbohydrate than tropical fruit.

Eat plenty of vegetables

Vegetables contain little to no carbohydrate and therefore have little to no effect on your blood glucose levels. They contain lots of fibre which helps to keep us full and maintain healthy bowels. Increasing the amount of vegetables in your diet can also help you to maintain a healthy weight, as they contain few calories.

Try to include vegetable portions at all meals; aim for your vegetables to cover a third to a half of your plate. Eating the vegetables before the carbs may help to slow the release of glucose into your blood and help you to feel full.

Vegetable sticks make great snacks too!

Snacks

You may include snacks as part of a healthy balanced diet, limit to no more than 15g of carbohydrate at a time. Read food labels to find the total amount of carbohydrate per portion.

Snack ideas (approx. 15g of carbohydrate)

- One portion of fruit (see previous page).
- 150 ml of skimmed or semi-skimmed milk.
- One small pot of natural or diet yoghurt.
- One cup of plain popcorn.
- Three plain breadsticks.
- 2 oatcakes or 2 rice cakes.
- 1 thin slice seeded/granary/multigrain bread.

Top tip

Add cream/cottage cheese, nut butter or hummus. Snacks that contain protein and carbohydrate will help you to feel fuller for longer and may help level out your blood glucose levels.

Low carbohydrate snack ideas

- Raw vegetable sticks, tomatoes, peppers.
- Sugar-free jelly.
- Pieces of chicken or ham.
- Cheese (only small amounts, as it is high in fat).
- Small handful of plain nuts (30 g portion).

Physical activity during pregnancy

Moving your body helps to reduce blood glucose levels. Other benefits of physical activity during pregnancy include:

- Improved circulation.
- Reduced likelihood of swelling (ankles, for example).
- Improved sleep.
- Reduced levels of stress and anxiety.

Aim for 150 minutes of moderate intensity activity per week, for example, 30 minutes, five times per week.

Walking for 30 minutes after main meals can help control your blood glucose levels, but even just getting up to move around at home or in the garden will help.

Top Tips

- Start gently and build up slowly.
- Simple moderate intensity activities that are safe in pregnancy include walking, swimming, gardening, aqua aerobics and pregnancy pilates/yoga.
- If you are used to regular exercise you can continue with the same intensity of exercise as before your pregnancy. Please discuss with your midwife.
- Be careful not to overexert yourself.
- If you are unsure, check with your healthcare team.

Do I need to eat ‘diabetic’ foods?

No. They offer no special health benefits, are expensive and may have a laxative effect.

Weight gain during pregnancy

Pregnancy is a time when women commonly gain excess weight which can be difficult to lose after the baby is born. Gaining excessive weight during pregnancy may lead to health problems for you and your unborn baby. You do not need to 'eat for two'. In the last three months of pregnancy, you only need an extra 200 Calories from food each day.

Healthy weight gain during pregnancy

The table below suggests healthy amounts of weight gain during pregnancy.

Body Mass Index (BMI) before pregnancy	**Expected weight gain**
<18.5kg/m2	12.5-18kg (28 – 40 lbs)
18.5 - 24.9kg/m2	11.5 - 16 kg (25 - 35 lbs)
25.0- 29.9kg/m2	7-11.5kg (15 – 25 lbs)
>30 kg/m2	5 - 9 kg (11 - 20 lbs).

After pregnancy

If you have Gestational diabetes, you are more likely to develop Type 2 Diabetes after pregnancy (Up to 50% chance within the 5 years after giving birth) Breast feeding your baby may lower your risk of developing this.

Other factors that will lower your risk of developing Type 2 Diabetes include:

- Eating a healthy, balanced diet.
- Maintaining a healthy weight and Body Mass Index (BMI).
- Keeping physically active

You should have a blood test to check for Type 2 diabetes 6 to 13 weeks after giving birth, and once every year after that, even if the result is normal.

For more information about Gestational Diabetes and recipes ideas look at:

RCOG Gestational Diabetes Information
https://www.rcog.org.uk/for-the-public/browse-our-patient-information/gestational-diabetes/

Diabetes UK website.
https://www.diabetes.org.uk/diabetes-the-basics/gestational-diabetes

For more information on healthy eating go to:
https://www.nhs.uk/live-well/eat-well/

For more information on eating during pregnancy go to:
https://www.nhs.uk/conditions/pregnancy-and-baby/healthy-pregnancy-diet/

This leaflet was developed using information from the following sources:

National Health Service (2022) Overview- Gestational Diabetes. Available at: https://www.nhs.uk/conditions/gestational-diabetes/ (Accessed: 12/08/24)

National Institute for Health and Clinical Excellence (2020) Diabetes in Pregnancy: management from preconception to the postnatal period guideline. Available at: https://www.nice.org.uk/guidance/ng3 (Accessed: 12/08/24)

Royal College of Obstetricians and Gynaecologists (2021) Gestational Diabetes. Available at :https://www.rcog.org.uk/for-the-public/browse-our-patient-information/gestational-diabetes/ (Accessed 12/08/24)

Worcestershire Acute Hospitals NHS Trust
Covering the Alexandra Hospital, Redditch, Worcestershire Royal Hospital and Kidderminster Hospital

IMPORTANT CONTACTS

Diabetes Specialist Nurse Teams:

- South Worcestershire 01905 760775

Email: wah-tr.wrhacutediabetes@nhs.net

- Wyre Forest 01562 826385

Email: wah-tr.wyreforestdiabetes@nhs.net

- Redditch/Bromsgrove 01527 505782

Email: Wah-tr.redditchbromsgrovediabetes@nhs.net

Maternity Triage (24 hours)

01905 733196

If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999.

Patient Experience

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

Feedback

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

Patient Advice and Liaison Service (PALS)

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

How to contact PALS:

Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net

Opening times:

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.