

Pregnancy and type 2 diabetes

Information for patients



Leeds
Maternity Care

Congratulations on your pregnancy

We want to support you managing your diabetes and your pregnancy. There are a number of links within this leaflet and a number of attachments that you may find useful. Please take time to read through this leaflet and the attachments.

Monitoring your blood glucose levels

Below is some information to get you started with monitoring your blood glucose levels.

When to check your blood glucose levels:

- Before breakfast
- One hour after your breakfast
- One hour after your lunch
- One hour after your evening meal

Blood glucose targets:

- Less than 5.3mmol/l before breakfast
- Less than 7.8mmol/l one hour after meals

This can be via a finger prick check and or using the Freestyle Libre Flash Blood Glucose Monitoring System. Details on both are summarised below and we will talk you through the details at your appointment.

Checking you blood glucose using a finger pricker

- In the pack you will find a box with a blood glucose meter, lancets, blood test strips and a sharps bin.

- Please watch the video and follow the instructions in the



box to start checking your blood glucose levels. This video works best on a platform such as Google Chrome - <https://youtu.be/NUskHI7APHE>

- We will set up a repeat prescription with your GP for all the equipment you need.

Checking your blood glucose using Freestyle Libre



An introduction to Freestyle Libre

<https://progress.freestylediabetes.co.uk/>



<https://abcd.care/dtn/flash-glucose-monitoring>



Using the Freestyle Libre system in pregnancy

https://www.youtube.com/watch?v=Jhv_CID-c-g

Time in range known as TIR

This means the amount of time your blood glucose is in the ideal range which is 3.5 to 7.8 mmol/l during pregnancy. You will need to change the settings on CGM or flash as they are usually set to none pregnancy targets 3.9 to 10 mmol/l

The table below shows how much time you are aiming to spend in each category:

Target	What does it mean
TIR 70% or more	17 hours a day in range (excellent)
Less than 4% time below range (TBR)	Less than one hour below 3.5 mmol (hypo)
Less than 1% time below range (TBR)	Less than 15 minutes below 3.0 mmol/l (hypo)
Every time you increase by 5% the time you are in range	It helps you have a healthier baby

Guidance on how to interpret your blood glucose readings and potential changes to treatment and new medications

If you have three or more blood glucose readings above target in a week and you feel you have made appropriate dietary changes....

- Contact the Diabetes team who will discuss the next stage of treatment and may recommend you start taking a medication called Metformin and/or insulin therapy.
- The usual starting dose of Metformin is 500mg (one tablet) twice a day - one tablet with breakfast and one tablet with evening meal.
- Metformin can be increased to a maximum dose of 1g (two tablets) twice a day if needed after a seven day period.
- Taking your Metformin with food can help minimise potential side effects such as an upset stomach, wind, bloating or diarrhoea. However, these usually settle after a few days.

Food choices

Below is a link to some introductory healthy eating in pregnancy to get you started.



<https://www.bda.uk.com/resourceDetail/printPdf?resource=pregnancy-diet>

Help us to keep in contact with you

- Your clinic appointments will be on a Thursday afternoon and will usually be a telephone call. We will let you know the date in advance.
- We will call you between 1.30pm – 4.30pm. Unfortunately, we are unable to give you a specific time, so please make sure you have your blood glucose readings to hand especially if you are out of the home.
- The phone calls will have a blocked caller ID, but please try and answer as this will help us enormously.
- If you need advice about your glucose levels and diabetes in between appointments, please call the Diabetes team: 0113 206 5068 (Open seven days a week, 8.30am - 4pm).

If you need advice relating to the pregnancy itself, contact your Diabetes midwife.

Understanding carbohydrate and blood glucose levels during pregnancy

- Blood glucose levels tend to run higher / can be more variable.
- How your body “handles” carbohydrate containing foods changes with pregnancy and as pregnancy progresses. Blood glucose swing up much higher after meals than pre-pregnancy and this seems to be particularly noticeable after breakfast.
- Being active for 15 - 20mins after your meal can reduce blood glucose levels by 2mmol/l.
- Overnight can be up to a 1/3 of your day and can really impact your time in range. Try and avoid having your evening meal too close to bedtime, i.e. aim to have it before 7.30pm / at least three hours pre bed, then only have carbohydrate free snacks if still hungry.
- Avoid eating for two! The body becomes very efficient at using energy when you are pregnant. You will have a small increased calorie need in the 3rd trimester.
- Take a pregnancy multivitamin / mineral preparation. This will provide you with the 10micrograms Vitamin D you need.
- For most ladies, a carbohydrate intake of 150 – 200g / day is the best range.
- If carbohydrate intake is over 200g per day this may make it more difficult to manage blood glucose levels.
- Suggested distribution of carbohydrate through the day:
 - 20-30g breakfast (after 16-18 weeks 30g often not tolerated and so reduce to 20g due to increasing insulin resistance)
 - All other meals 30 – 40g CHO
 - Snacks 10 – 20g

Smaller amounts of slow-release carbohydrate every 2-3 hours may be better tolerated.

Mixed meals can make it difficult to estimate carbohydrate accurately. e.g. pasta bakes, stir-fries, so try and serve rice / pasta etc separately.

If on multiple daily injections of insulin:

- Aim to give your meal time insulin at least 20 minutes before you food
- Consider eating the carbohydrate part of the meal towards the end of the meal giving the mealtime insulin time to work.
- Bulk up with protein as this keeps you full, slows down digestion and helps mop up the tail end of the mealtime insulin action.
- Keep well hydrated as good circulation gets the insulin where it needs to be.

Breakfast ideas (20 - 30g carbohydrate)

- One slice granary / seeded toast / bread topped with 1-2 poached / scrambled / boiled eggs or mushrooms, tomatoes, low fat cheese spread, peanut butter, ham or avocado.
- One small pot (125g) Natural / Greek yoghurt with one palm size piece of fruit chopped up or one cupful of berries, topped with nuts and seeds.
- 25g jumbo oats with crème fraiche and a cup of berries

Lunch / dinner / evening meal (30 - 40g carbohydrate)

- 2-3 slices medium cut bread
- 1-1^{1/2} medium pitta bread
- One medium teacake
- 3-4 egg size new potatoes
- One palm size jacket / sweet potato
- 3-4 scoops mashed potato
- 3-4 tablespoons rice, pasta, couscous
- 1-1^{1/2} boiled plantain
- 1^{1/2}-2 boiled Yam
- Two side plate size Roti
- One side plate size Chapatti

Snacks containing 10-20g carbohydrate

- One palm size piece of fruit - eg apple, orange, pear, banana
- One cupful of berries
- One slice of granary bread or one mini pitta bread with low fat spread / cheese spread or peanut butter

- Two Ryvita or 2-3 oat cakes / high fibre rice cakes / crackers, topped with low fat spread, low fat hummus, salsa or peanut butter
- Two plain biscuits
- 125g pot of healthy eating / diet / low fat / light / fruit or plain yoghurt
- One slice Malt loaf

Low carbohydrate / carbohydrate free snacks

- A handful of natural nuts and seeds
- Olives
- Avocado
- Chopped vegetables with low fat hummus, low fat cream cheese or salsa dip
- Cherry tomatoes
- Lean cooked meat / chicken mixed with peppers / tomatoes or other vegetables of your choice
- Corn on the cob
- One cupful of blueberries / raspberries / blackcurrants / cherries
- Boiled egg
- Sugar free jelly
- Cup -a- soup

Advice on physical activity

Studies show that exercise is safe for both you and your baby during pregnancy and carries many benefits including: boosting mood and energy levels, promoting better sleep, promoting muscle tone, strength and endurance for labour, preventing excessive weight gain and improving posture and backaches and fatigue.

- Recreational exercise such as swimming or brisk walking and strength conditioning exercise is safe and beneficial
- The aim of recreational exercise is to stay fit, rather than to reach peak fitness
- If you have not exercised regularly then you should begin with no more than 15 minutes of continuous exercise, three times per week, increasing gradually to daily 30-minute sessions
- If you have exercised regularly before pregnancy, then you should be able to continue with no adverse effects.
- Important not to be sedentary, as far as possible.
- Start walking and build physical activity into daily life, for example, by taking the stairs instead of the lift, rather than sitting for long periods



https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1054538/physical-activity-for-pregnant-women.pdf

The team will be in regular contact with you to support you throughout your pregnancy but any concerns contact your named Diabetes Midwife



What did you think of your care?

Scan the QR code or visit bit.ly/nhsleedsfft

Your views matter



© The Leeds Teaching Hospitals NHS Trust • 1st edition (Ver 1)
Developed by: Debbie Morris, Diabetes Midwife
Produced by: Medical Illustration Services • MID code: 20220926_008/BP

LN005455
Publication date
08/2023
Review date
08/2026