NHS
West Suffolk
NHS Foundation Trust

Patient information

Gestational diabetes diet advice

Background

Gestational diabetes is a type of diabetes that develops during pregnancy and usually goes away after giving birth. It commonly occurs in the second or third trimester; however, some women may be diagnosed earlier.

Risk factors can include:

- have had gestational diabetes in the past
- have had a very large baby in a previous pregnancy (4.5kg / 10lb or over)
- have a family history of diabetes
- being overweight or obese
- being from a South Asian, Black or African Caribbean or Middle Eastern background.

During pregnancy your body makes large amounts of hormones to help your baby grow, which can prevent insulin from working properly. Insulin allows us to obtain energy from the carbohydrate foods we eat by letting glucose (sugar) enter our cells.

If your insulin is not working in the way it should your body is unable to regulate your blood glucose (sugar) levels. This is called insulin resistance.

Uncontrolled gestational diabetes can lead to problems in the development and delivery of your baby (please speak with the medical team for further information).

As such it is usually necessary to make lifestyle changes during pregnancy. Diet changes and physical activity are important parts of the treatment of gestational diabetes. Additional

Putting you first

treatment usually involves medications (such as metformin) and/or insulin.

To enable your baby to grow and develop properly you should aim to keep your blood glucose (sugar) within the following target ranges:

Table 1

Time	**Blood glucose target**
Fasting (upon waking)	5.3mmol / L or below
1 hour after main meals	7.8mmol / L or below

Do not aim to lose weight during pregnancy as this could be unsafe for you or your baby. If you were overweight or obese prior to conception it is important to avoid excessive weight gain during pregnancy. This will help improve your diabetes management and also reduce risk of developing complications.

Summary of diet advice

Table 2

Summary	Explanation
Eat regularly	• Aim for three meals each day and include a starchy carbohydrate food at each meal e.g. bread, cereal, pasta, rice and potatoes. Choose high fibre, low glycaemic index (low GI) varieties. See '**Glycaemic Index'** section.
Avoid added sugars	• Found in sugary foods and drinks. • For examples and alternatives please see '**food swaps'** in Table 3.
Portion control	• Depending on your current intake and blood glucose levels you may need to reduce or alter the amount and / or types of carbohydrate foods consumed. See '**Carbohydrate'** section.
5-a-day	• Vegetables and salad help reduce the rise of blood glucose levels following a meal due to high fibre content. There is no limit on the number of portions of vegetables to have daily. • Fruits contain naturally occurring sugars called fructose which impact blood sugar levels. • Aim to have no more than two 'handful-size' fruit portions daily and spread intake throughout the day. Fresh, frozen or tinned in natural juice are all suitable. • Avoid fruit juice due to concentrated sugar contents causing rapid rise in blood glucose levels.
Dairy	• Good source of calcium. Aim to have two to three portions a day. A portion equates to a small matchbox size of hard cheese, 1/3 pint or 200mls of milk and 125g pot of yoghurt (choose plain/Greek/natural). • Milk and yoghurt contain naturally occurring sugar called lactose which impact on blood sugar levels therefore spread intake throughout the day and avoid flavoured milk/yoghurts due to added sugars.
Protein	• Protein foods include meat, poultry, fish, eggs, tofu, nuts, seeds, peas, beans and pulses (eg

	chickpeas). • Including protein foods within a meal can help to reduce the post-meal rise in blood sugar levels.
Fat	• Adding foods high in fat to meals can help to reduce the post-meal rise in blood sugar levels however consider limiting these foods if you are avoiding excessive weight gain (high calorie content).
Hydration	• Drink at least 6 to 8 glasses of fluid (1.5 to 2 litres) daily to help avoid constipation and to ensure you are well hydrated. Choose sugar-free options only.
Other	• Avoid “diabetic” food products as they can contain added sugars, are expensive and can have laxative effects.

Food swaps – *remember that portions still need to be considered!*

Table 3

Avoid (high sugar/low fibre)	**Instead choose (low sugar/high fibre)**
Sugar (any type), fructose and sugar alcohol sweeteners including sorbitol, mannitol and xylitol eg *Sucron®, Half Spoon®*	No-calorie artificial sweeteners in tablet, liquid or granulated form eg *Stevia®, Truvia®, Splena®, Canderel®, Sweetex®, Hermesetas®, Flix®, Natrena®, Sweet’N Low®, NutraSweet®*
Jam, marmalade, lemon curd, honey, corn, maple or golden syrup, high fructose corn syrup, agave nectar, treacle	Reduced sugar varieties of jams, marmalades and pure fruit spreads. Spread thinly
Tinned fruit in syrup or light syrup.	Tinned fruit in natural juice (drained) or water. No more than two portions of any fruit a day and spread throughout the day.

Avoid (high sugar/low fibre)	Instead choose (low sugar/high fibre)
Cakes, biscuits and pastries	Semi-sweet biscuits, rice cakes, crispbreads, wholegrain crackers, oat cakes and unsweetened popcorn.
Chocolate, sweets, sugary puddings and flavoured yoghurts	Fruit, sugar-free gum, homemade milk puddings with sweeteners, sugar free whips, sugar free jelly and plain, natural or Greek yoghurt.
Non-diet fizzy drinks, fruit juice, ordinary squash, Hi-Juice, or low sugar varieties eg Ribena® Light and Lucozade® light	Low calorie, sugar-free, diet and/or slim line variety fizzy drinks and sugar-free squash.
Sugary or honey-coated breakfast cereals eg Granola®, Crunchy Nut®, Sugar Puffs®, Frosties®, Frosted Shreddies®, Coco Pops®	Plain cereal eg porridge, All Bran®, Shredded Wheat®, Shreddies®, Weetabix®, Oatabix®, no-added sugar muesli/granola.
Drinking chocolate, Horlicks®, Ovaltine®	Cocoa made with mild and suitable sweetener or low calorie instant drinks eg Carnation Hot Chocolate Light®, Cadbury Highlights®, Options®, Galaxy Light Style® or supermarket brands of 40 calories chocolate drinks.

Carbohydrates

All carbohydrate foods need to be taken into account; it is not just sugar in the diet that affects blood glucose levels. All carbohydrates are broken down to sugar (glucose) when ingested.
'Carbohydrates' include:

Starchy foods (digested to glucose)	Naturally occurring sugars	Added sugars
• Bread • Pasta • Rice • Potatoes • Cereals • Oats / quinoa, etc	• Fruit (fructose) • Milk and yoghurt (lactose)	• Sweets • Chocolate • Sugary drinks • Cakes / biscuits • Desserts / puddings etc

Keep portion size of carbohydrate similar at each meal, aiming for around 40g of carbohydrates at each meal *(NB: the weight of the food does not equal the amount of carbohydrate it contains).*

Everyone is individual in blood glucose response to carbohydrate foods and tolerance levels can change during pregnancy. Some women may be able to tolerate more than 40g of carbohydrates. You may wish to trial starting with 40g carbohydrate and increasing amount by 10g at a time, check blood sugar levels one-hour post meal and if above 7.8mmol/L to decrease back to previous amount.

If you are hungry between meals have no-carb or low-carb snacks, aiming for no more than 10-15g carbs. See 'Low carbohydrate snack ideas' diet sheet.

Methods of carb counting

Carbs & Cals

-Order the book online or use the mobile phone application
-Photos of foods and the amount of carbs they contain
-Have a look at the website: www.carbsandcals.com

Handy measures

10g carbs is approximately equal to: 1 medium tablespoon of cooked rice or pasta / 1 x egg-sized potato / 1 x ice-cream scoop mashed potato / 200ml milk or yoghurt;
1 slice bread = 15g carbs

Reading Food Labels

- Look for Total Carbohydrates (not just *"of which is sugar"*) and consider your portion – will you have the portion/serving recommended or will you weigh out a specific portion?
- *amount of carbs per 100g ÷ 100 x weight of your portion = amount of carbohydrate per your portion*

Glycaemic Index

Glycaemic index (GI) is a measure of how quickly carbohydrates are broken down into glucose and how quickly the blood glucose levels rise in response.

Carbohydrates with a low GI are broken down more slowly and cause a slower release of glucose into the bloodstream and a gentle rise in blood sugar. Carbohydrates with a high GI are broken down quickly causing a rapid rise in blood glucose levels.

Choose lower GI carbohydrates more often. These tend to be higher in fibre, for example porridge, granary bread, granary crackers, brown or basmati rice, wholegrain cereals, new potatoes with skins and wholegrain pasta.

Adding foods containing fibre, protein or fat to carbohydrates can lower the overall GI of the meal and cause a gentler rise in blood sugar. It is more important to include a low GI food with each meal than avoiding foods with a high GI.

Foods that do not increase your blood glucose levels are meat, poultry, fish, cheese, eggs, nuts, seeds, beans (except baked beans due to the sugary sauce), pulses, lentils, vegetables and salad. So when reducing your carbohydrate portion at meals you can increase your intake of these foods.

Nuts, seeds and cheese are high in fat. Restrict your portion size of these if you are gaining more than the recommended weight.

What happens after the birth?

In the vast majority of cases diabetes disappears once the baby is born. However, your risk of developing diabetes in later life is increased.

You should have another fasting blood glucose level check to ensure that your gestational diabetes was not a presentation of type 2 diabetes. This could be taken on the ward as long as you are eating a normal diet.

If your result is within the normal range (less than 6mmols/L) then you should continue to follow a healthy lifestyle. Ensure that you have a fasting blood glucose test at your GP surgery once a year.

If your level is above the normal range then the Diabetes Centre or your GP will organise another fasting sample at about four to six weeks later.

It is important to follow a healthy lifestyle by continuing to ensure healthy eating habits, maintaining
a healthy weight and partaking in physical activity regularly.

For further information visit *diabetes.org.uk* or consider purchasing *Carbs and Cals 'Gestational Diabetes'* book online or in store. Alternatively you could request your local library to order a copy.

West Suffolk NHS Foundation Trust is actively involved in clinical research. Your doctor, clinical team or the research and development department may contact you regarding specific clinical research studies that you might be interested in participating in. If you do not wish to be contacted for these purposes, please email info.gov@wsh.nsh.uk. This will in no way affect the care or treatment you receive.

If you would like any information regarding access to the West Suffolk Hospital and its facilities please visit the website for AccessAble (the new name for DisabledGo) https://www.accessable.co.uk/organisations/west-suffolk-nhs-foundation-trust

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