



# Gestational Diabetes

Dietary Information for patients  
Adult Diabetes Service



## GESTATIONAL DIABETES

Gestational Diabetes is a type of Diabetes that is usually diagnosed during the second or third trimester of pregnancy. If you have had Gestational Diabetes in a previous pregnancy, it is likely that you may be tested earlier.

Gestational Diabetes occurs when your body has difficulty in keeping your blood glucose levels within a particular range during pregnancy. Insulin is a hormone that helps to control glucose levels in the blood. Some women are unable to produce enough insulin to meet with the demands of pregnancy -called insulin resistance. This causes blood glucose levels to rise and results in a diagnosis of Gestational Diabetes.

### RISK FACTORS

You are at increased risk of developing Gestational Diabetes if you have:

- ❖ a Body Mass Index of greater than 30 kg/m<sup>2</sup> (BMI)
- ❖ already had a baby weighing more than 4.5 kg
- ❖ had Gestational Diabetes in a previous pregnancy
- ❖ a family history of Diabetes
- ❖ a family origin of South Asian, African, Caribbean or Middle Eastern

## **IMPORTANCE OF BLOOD GLUCOSE CONTROL**

Gestational Diabetes can cause problems during and after birth for both you and your baby. If your blood glucose levels are raised any extra glucose will be passed across the placenta. This causes the baby to grow quickly especially in the last three months. This can lead to problems for you during delivery; for example, a greater chance of a caesarean section or a forceps delivery. It could also mean that your baby is more likely to be born prematurely, or have problems controlling blood glucose levels immediately after birth.

If blood glucose levels are well managed, the risk of such problems is reduced. Following a diagnosis of Gestational Diabetes you will be given detailed dietary and lifestyle advice to help you control your blood glucose levels during

## MONITORING BLOOD GLUCOSE

You should check your blood glucose levels fasting or before breakfast, pre-meals and before going to bed on a daily basis. In addition to this, you may be advised to check your blood glucose levels two hours after meals on three days of the week.

### BLOOD GLUCOSE TARGETS

Recommended blood glucose targets are outlined below:

<b>Time of Day</b>	<b>Blood Glucose</b>
Fasting or Before Breakfast	$\leq 5.5$ mmol/l
Before Meals	$\leq 5.5$ mmol/l
2 Hours After Meals	$\leq 6.4$ mmol/l
Before Bed	$\leq 5.5$ mmol/l

You should aim to keep your blood glucose levels within this range. If your blood glucose levels remain over this range despite making lifestyle changes, the doctor may advise you take a tablet (Metformin), or Insulin to manage your blood glucose.

## **GENERAL HEALTHY EATING FOR PREGNANCY**

It is especially important to follow a healthy eating plan to help provide your body with energy and essential nutrients

Your midwife will also discuss which foods you should avoid while you are pregnant. Your 'Ready Steady Baby' book has more information.

For more information see your Ready Steady Baby book or online at NHS Inform

[www.nhsinform.scot/ready-steady-baby/pregnancy/looking-after-yourself-and-your-baby/eating-well-in-pregnancy](http://www.nhsinform.scot/ready-steady-baby/pregnancy/looking-after-yourself-and-your-baby/eating-well-in-pregnancy)

## EATING AND GESTATIONAL DIABETES

When you have Gestational Diabetes making small changes to your diet and lifestyle can help to keep your blood glucose levels well controlled.

There is only one group of foods that directly affects blood glucose levels. These are carbohydrate containing foods and drinks.

Carbohydrate is a nutrient that is an important source of energy.

During digestion, all carbohydrates will be broken down into glucose, which is then absorbed directly into the blood and is used as the body's preferred source of energy.

The actual amount of carbohydrate the body needs varies depending on your age, weight and activity levels. The more carbohydrate you eat, the bigger the impact on your blood glucose levels. Balancing your carbohydrate intake evenly throughout the day and choosing foods that the body breaks down slowly, can help to keep your blood glucose levels under control.

## CARBOHYDRATES

Carbohydrates can be classified into two main types: starchy and sugary. The majority of your daily intake should come from starchy carbohydrates and where possible you should choose wholegrain and wholemeal varieties. Sugary food should only be consumed occasionally in small amounts.

### 1. STARCHY CARBOHYDRATES

Starchy carbohydrates are found in foods such as:

- Bread/Naan/Chapattis/Rolls/Baguette/Wraps
- Potatoes/Sweet Potatoes
- Cous Cous, Cracked Wheat, Quinoa
- Breakfast Cereals
- Pizza
- Yams
- Pasta
- Noodles
- Rice
- Oats

#### Advice on Starchy Carbohydrates

Starchy carbohydrates are a good source of energy and nutrients so they are important to include in your daily food choices. When digested they will be broken down into glucose and have an impact on your blood glucose level. If you notice that your blood glucose levels are less than 5.5 mmols at a meal time, but higher than 6.4 mmols two hours after eating, you could reduce the amount of carbohydrate you eat as part of your meal. If you do reduce the amount of starchy carbohydrate at a meal, this can sometimes make you feel hungry later on. To help prevent this, you could try and fill up on extra vegetables or salad with your meals or include small snacks in between meals.

### **Example of reducing carbohydrate starchy portions at evening meal**

You have a large plate of spaghetti bolognese with three slices of garlic bread for your evening meal and you notice that every time you do your blood glucose levels are greater than 6.4 mmols two hours later. To try to stop this from happening the next time you could have less pasta and one slice of garlic bread with a side salad. Consider adding more of the protein source for example the bolognese sauce. These changes will reduce the total amount of starchy carbohydrate at your meal and can help to lower your blood glucose level.

## **2. SUGARS**

### **Added sugars**

This type of carbohydrate is referred to as sucrose and is best known as table sugar, which is commonly used to sweeten foods and drinks. Although you don't need to completely omit foods such as biscuits, chocolates, cakes and desserts, it is strongly advised to avoid large quantities.

### **Natural sugars**

There are two different sources of naturally occurring carbohydrate, lactose and fructose. Lactose is contained within milk which is essential in providing protein and calcium. Fructose is contained within fruit and is particularly important in providing fibre, as well as important vitamins and minerals. Although these products contain natural sugar it is important to include in your daily intake.



## **Advice on sugary carbohydrates**

- Do not add sugar to foods and drinks
- It is safe to use an artificial sweetener as a replacement to sugar for example; Candarel, Sweetex, Truvia, Splenda or Hermesetas
- Avoid full sugar and energy drinks, opt instead for diet or no added sugar varieties
- Avoid large quantities of fruit juice and smoothies, by limiting yourself to one small glass (150mls) of unsweetened fruit juice per day and spread other fruit portions across the day
- Avoid large quantities of sweets, biscuits and cakes. If you want to have some, choose a small portion and monitor the impact on your blood glucose level
- Yoghurts contain both added and natural sugar - to limit the impact on your blood glucose levels avoid low fat yoghurts and choose diet or light options instead.

## **The Glycaemic Index**

There are many different types of carbohydrate, which all behave differently in the body. All carbohydrate containing products will have a Glycaemic Index (GI) value. This describes the speed at which the body digests carbohydrates into glucose and how quickly this is absorbed into the blood.

Carbohydrate foods that break down quickly during digestion raise blood glucose more rapidly and have a higher GI value. Foods that break down more slowly during digestion raise blood glucose more slowly and have a lower GI value. Only foods that contain carbohydrate will have a GI value. Foods that have little or no carbohydrates such as; cheese, meat, fish and eggs will have no GI value. The table below highlights examples of both higher and lower GI alternatives.

## GI options of every day foods

<b>Food Item</b>	<b>Higher GI Option</b>	<b>Low GI Option</b>
Bread	French stick, white bread and bagel	Multigrain, granary, rye, seeded, wholegrain, oat, pitta bread and chapatti
Potatoes	Instant potatoes, baked potatoes and french fries	New potatoes in skins, sweet potato and yam
Pasta	All pasta cooked well	All pasta cooked al dente
Rice	Instant rice	Basmati rice, long grain and brown rice
Cereals	Krispies, cornflakes, and cheerios,	Traditional porridge oats, muesli and sultana bran

Choosing lower GI foods as part of a balanced approach to healthy eating can help to reduce fluctuations in your blood glucose levels. A healthy way to use the GI approach is to include a range of lower GI carbohydrates that are also low in fat and calories as part of your meals. Although the GI of a food will impact on blood glucose, it is important to remember that the biggest impact on your blood glucose level is the total amount of carbohydrate you eat with your meals and snacks.

## SNACKS

It is not necessary to have snacks between meals or at bedtime. If you do opt for a snack, those which contain carbohydrate will impact on your blood glucose level and your weight. Take snacks that contain less than 10 grams of carbohydrate and 100 calories. If weight gain is a concern it is best to opt for snacks that have less than 100 calories.

### Carbohydrate Containing Snacks

<b>Snack Item</b>	<b>Kilocalories (kcal)</b>	<b>Carbohydrate (grams)</b>
2 Apricots	34	8
2 Satsumas/Kiwis/Plums	44	10
Small Apple/Pear	40	10
1 Medium Peach	46	11
1 Medium Orange	30	7
80g fresh Pineapple	37	8
Strawberries (10)	38	8
Prunes (2)	48	10
1 Rice Cake	30	7
1 Breadstick	20	4
1 Cheddar Biscuit	26	3
1 Cream Cracker	33	6
1 Digestive	61	9
Low Fat Natural Yoghurt (100g)	60	9
Dried Fruit and Nuts (22g)	99	11
Options Hot Chocolate	40	6
Cadbury Freddo Bar	95	10

If you continue to feel hungry between meals consider including the following to fill you up. These foods will not increase your blood glucose levels.

### Non Carbohydrate Containing Snacks

Snack Item	Kilocalories (kcal)	Carbohydrate (grams)
Sugar Free Jelly (140g)	8	0
Vegetable Sticks	0	0
Chicken Drumstick (1)	139	0
Ham/Turkey Slice (1)	64	0
Cheddar Cheese (25g)	104	0
Boiled Egg (1)		80 0
1 Babybel		61 0

If you decide to opt for a snack, it is important to think about when you plan to include these. Snacks should be eaten ideally two hours after and one hour before the next main meal to minimise the impact on blood glucose levels.

#### **'DIABETIC FOODS'**

Specialist 'diabetic products' are not recommended as they are expensive, can be higher in calories than standard versions and may also have a laxative effect.

## **PHYSICAL ACTIVITY**

Mild to moderate exercise is good for you and your developing baby and most healthy women will find moderate exercise beneficial during their pregnancy. Physical activity will also help to manage your Gestational Diabetes.

Every woman will have a different fitness level before they become pregnant and if you are used to exercising you can continue with your normal routine if you feel well.

Pregnancy can be a good opportunity to improve your overall fitness. If you are not used to exercising, you may wish to start with some low impact exercise or activities such as walking or swimming. You may wish to attend a specific pregnancy exercise class with a qualified specialist instructor for example aqua natal, antenatal yoga or antenatal pilates.

As your pregnancy progresses remember it is natural to slow down. You should avoid any activity which causes significant pain.

For more information on exercise in pregnancy visit:

[https://pogp.csp.org.uk/system/files/publication\\_files/POGP-FFPregnancy.pdf](https://pogp.csp.org.uk/system/files/publication_files/POGP-FFPregnancy.pdf)

## **HEALTHY LIFESTYLE IN PREGNANCY SERVICE**

An extra service for women with a Body Mass Index (BMI) of 30 and above is available in Lanarkshire called, 'Healthy Lifestyle in Pregnancy Service' which is run by a dietitian, midwife and physiotherapist. If you want more information about this service, speak to your midwife or your Diabetes Specialist Dietitian.

# Physical activity for pregnant women



Helps to control weight gain



Helps reduce high blood pressure problems



Helps to prevent diabetes of pregnancy



Improves fitness



Improves sleep



Improves mood

**Not active?**

Start gradually

**Already active?**

Keep going



Do **muscle strengthening** activities twice a week

**Every activity counts**, in bouts of at least 10 minutes

**No evidence of harm**

**Listen to your body and adapt**



**Don't bump the bump**

UK Chief Medical Officers Recommendations 2017: Physical Activity in Pregnancy. [bit.ly/startactiveinfo](http://bit.ly/startactiveinfo)

## AFTER YOUR BABY IS BORN

50% of women diagnosed with Gestational Diabetes will develop Type 2 Diabetes within the next five years. To reduce this risk, it is important to continue with the positive dietary and lifestyle changes that you have made during your pregnancy. If you need support with this you should contact your local diabetes Dietitian (see contacts section).

You should have your blood glucose checked six weeks after the delivery of your baby and annually after this. This is to detect if you have developed Type 2 Diabetes. Arrange to speak with your GP or practice nurse if you develop any of the following symptoms:

- Passing urine more often, especially during the night
- Extreme tiredness
- Increased thirst
- Unexplained weight loss
- Slow healing of cuts or wounds

### **Diabetes Dietitian Contact Details**

University Hospital Hairmyres	01355 585230
University Hospital Monklands	01236 712430
University Hospital Wishaw	01698 687750

## FURTHER INFORMATION

[www.diabetes.org.uk/diabetes-the-basics/gestational-diabetes](http://www.diabetes.org.uk/diabetes-the-basics/gestational-diabetes)

<https://elearning.mydiabetesmyway.scot.nhs.uk>

<https://www.nhsinform.scot/ready-steady-baby/pregnancy/looking-after-yourself-and-your-baby/eating-well-in-pregnancy>

<https://www.parentclub.scot>

<https://www.nlleisure.co.uk/fitness-classes/weigh-to-go>

[https://www.southlanarkshire.gov.uk/SLLC/info/148/sllc\\_gyms/848/weigh\\_to\\_go](https://www.southlanarkshire.gov.uk/SLLC/info/148/sllc_gyms/848/weigh_to_go)

<https://www.bda.uk.com/resource/pregnancy-diet.html>

<https://www.carbsandcals.com>

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[www.careopinion.org.uk](http://www.careopinion.org.uk)

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